

The Trustees of Columbia University in the City of New York

**Report on Federal Awards in Accordance with
OMB Circular A-133**

For the year ended June 30, 2014

Employer Identification Number 13-5598093

The Trustees of Columbia University in the City of New York
Report in Connection with OMB Circular A-133
For the year ended June 30, 2014
Table of Contents

	Page(s)
Independent Auditor's Report	1
Consolidated Balance Sheets as of June 30, 2014 and 2013	2
Consolidated Statement of Activities for the year ended June 30, 2014 with comparative totals for the year ended June 30, 2013	3
Consolidated Statements of Cash Flows for the year ended June 30, 2014 and 2013	4
Notes to the Consolidated Financial Statements	5 – 39
Supplemental Schedule of Expenditures of Federal Awards for the year ended June 30, 2014	40 – 212
Notes to Supplemental Schedule of Expenditures of Federal Awards for the year ended June 30, 2014	213 – 214
Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Auditing Standards</i>	215 – 216
Independent Auditor's Report on Compliance with Requirements That Could Have a Direct and Material Effect on Each Major Program and on Internal Control Over Compliance in Accordance with OMB Circular A-133	217 – 218
Summary of Independent Auditors' Results	219
Schedule of Findings and Questioned Costs	220 – 221
Status of Prior Year's Findings	222
Management's View and Corrective Action Plan	223 - 224



Independent Auditor's Report

To The Trustees of Columbia University in the City of New York

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of The Trustees of Columbia University in the City of New York (the "University"), which comprise the consolidated balance sheet as of June 30, 2014 and the related consolidated statements of activities and of cash flows for the year then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the University's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of The Trustees of Columbia University in the City of New York at June 30, 2014, and the changes in their net assets and their cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

We have previously audited The University's 2013 financial statements, and we expressed an unmodified opinion on those audited financial statements in our report dated October 15, 2013. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2013 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards for the year ended June 30, 2014, is presented for purposes of additional analysis as required by Office of Management and Budget Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations* and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards for the year ended June 30, 2014 is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated October 14, 2014 on our consideration of The Trustees of Columbia University in the City of New York's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters for the year ended June 30, 2014. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering The Trustees of Columbia University in the City of New York's internal control over financial reporting and compliance.

PricewaterhouseCoopers LLP

October 14, 2014

The Trustees of Columbia University in the City of New York
Consolidated Balance Sheets
At June 30, 2014 and 2013
(in thousands of dollars)

	June 2014	June 2013
Assets		
Cash and cash equivalents	\$641,318	\$783,733
Accounts receivable, net:		
Government agencies	127,793	144,618
Patient receivables	79,524	72,604
Other	264,713	232,120
Investment income receivable, net	2,566	2,830
Receivable for securities sold	112,189	32,572
Cash and securities held in trust by others	5	2,850
Pledges receivable, net	762,098	833,726
Student loans receivable, net	99,918	97,775
Collateral for securities loaned		3,057
Investments, at fair value	9,259,511	8,190,902
Institutional real estate	837,576	828,990
Land, buildings, and equipment, net	3,375,792	3,068,544
Other assets	224,907	204,700
Net assets held by CPMC Fund, Inc.	70,516	66,555
Interest in perpetual trusts held by others	187,596	163,366
Total assets	\$16,046,022	\$14,728,942
Liabilities		
Accounts payable and accrued expenses	\$277,769	\$270,740
Liabilities for securities purchased	8,541	37,565
Securities loan agreement payable		3,057
Prepaid tuition and other deferred credits	61,278	49,640
Deferred revenue and unamortized bond premium	102,157	109,622
Refundable advances	91,130	96,447
Capital lease obligations	124,096	120,427
Conditional asset retirement obligations	110,893	106,290
Accrued employee benefit liabilities	156,545	196,026
Federal student loan funds	79,652	79,603
Actuarial liability for split-interest agreements	43,802	44,410
Bonds and notes payable	1,422,724	1,478,896
Other long-term liabilities	462,623	435,522
Total liabilities	2,941,210	3,028,245
Net assets		
Unrestricted	5,727,139	5,105,563
Temporarily restricted	4,654,194	4,057,273
Permanently restricted	2,723,479	2,537,861
Total net assets	13,104,812	11,700,697
Total liabilities and net assets	\$16,046,022	\$14,728,942

See accompanying notes to the consolidated financial statements.

The Trustees of Columbia University in the City of New York
Consolidated Statements of Activities
For the Year Ended June 30, 2014, with Comparative 2013 Totals
(in thousands of dollars)

	Unrestricted	Temporarily Restricted	Permanently Restricted	June 2014	June 2013
Operating activities					
Revenues and support					
Tuition and fees	\$1,215,249			\$1,215,249	\$1,137,592
Less financial aid grants	(327,884)			(327,884)	(315,262)
Net tuition and fees	887,365			887,365	822,330
Government grants and contracts:					
Direct	586,277			586,277	605,211
Indirect	183,371			183,371	195,807
Private gifts, grants and contracts:					
Direct	236,151	\$90,972		327,123	396,297
Indirect	19,805			19,805	20,786
Revenue from other educational and research activities	254,763			254,763	224,830
Patient care revenue	937,188			937,188	874,883
Investment income and gains utilized	348,706	149,144		497,850	463,609
Sales and services of auxiliary enterprises	147,512			147,512	133,577
Other sources	1,728			1,728	1,356
Net assets released from restrictions	257,745	(257,745)			
Total operating revenues and support	3,860,611	(17,629)		3,842,982	3,738,686
Expenses					
Instruction and educational administration	1,412,326			1,412,326	1,296,089
Research	549,481			549,481	556,940
Patient care expense	769,544			769,544	747,032
Library	64,587			64,587	62,221
Operation and maintenance of plant	208,083			208,083	207,508
Institutional support	212,418			212,418	230,558
Auxiliary enterprises	126,403			126,403	106,858
Depreciation expense	191,984			191,984	182,013
Interest expense	47,162			47,162	47,386
Other	23,791			23,791	23,412
Total expenses	3,605,779			3,605,779	3,460,017
Change in net assets from operating activities	254,832	(17,629)		237,203	278,669
Nonoperating activities					
Endowment gifts			\$118,858	118,858	210,670
Current year realized and unrealized capital gains (losses)	509,430	842,709	1,949	1,354,088	861,776
Endowment appreciation utilized	(130,268)	(231,973)		(362,241)	(354,336)
Change in net assets held by CPMC Fund, Inc.	(7,247)	10,317	891	3,961	(12,359)
Change in funds held by others in perpetuity			24,230	24,230	10,198
Present value adjustment to split-interest agreements	745	(503)	(2,554)	(2,312)	(4,474)
Changes in pension and post retirement obligations	30,328			30,328	45,028
Other					13,474
Reclassification	(36,244)	(6,000)	42,244		
Change in net assets from nonoperating activities	366,744	614,550	185,618	1,166,912	769,977
Change in net assets	621,576	596,921	185,618	1,404,115	1,048,646
Net assets at beginning of year	5,105,563	4,057,273	2,537,861	11,700,697	10,652,051
Net assets at end of period	\$5,727,139	\$4,654,194	\$2,723,479	\$13,104,812	\$11,700,697

See accompanying notes to the consolidated financial statements.

The Trustees of Columbia University in the City of New York
Consolidated Statements of Cash Flows
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

	June 2014	June 2013
Cash flows from operating activities		
(Includes adjustments to reconcile change in net assets to net cash provided by operating activities):		
Change in net assets	\$1,404,115	\$1,048,646
Depreciation expense	191,984	182,013
Interest on capital lease obligations and CARO	10,960	10,906
Institutional real estate depreciation	20,510	20,543
Realized and unrealized (gains) losses	(1,354,088)	(861,776)
Partnership distributions	325,833	344,931
Contributions restricted for permanent investment, plant, and split-interest agreements	(159,451)	(336,755)
Contributions other than cash	(1,834)	(36,846)
Present value adjustments to split-interest agreements	2,312	4,474
Accreted interest on bonds	653	851
Change in fair value of net assets held by CPMC Fund, Inc.	(3,961)	12,359
Change in fair value of interest in perpetual trusts held by others	(24,230)	(10,198)
Change in operating assets and liabilities:		
Accounts receivable, net	(22,688)	(64,514)
Investment income receivable, net	264	(700)
Pledges receivable, net	71,628	86,469
Other assets	(20,207)	(10,334)
Accounts payable and accrued expenses	(17,051)	40,876
Prepaid tuition and other deferred credits	11,638	2,359
Deferred revenue and unamortized bond premium	(7,465)	2,683
Refundable advances	(5,317)	10,627
Accrued employee benefit liabilities	(39,481)	(33,902)
CARO and other long-term liabilities	9,792	20,786
Net cash provided by operating activities	393,916	433,498
Cash flows from investing activities		
Proceeds from sales of investments	2,483,831	2,238,795
Purchases of investments	(2,631,949)	(2,286,671)
Collections from student notes	12,603	11,244
Student notes issued	(14,746)	(15,706)
Investment in cash and securities held in trust by others	2,845	85,242
Purchases of institutional real estate	(31,604)	(35,421)
Purchases of plant and equipment	(448,233)	(350,950)
Net cash used by investing activities	(627,253)	(353,467)
Cash flows from financing activities		
Proceeds from contributions for:		
Investment in endowment	113,256	74,664
Investment in plant	41,396	258,309
Investment in split-interest agreements	4,799	3,782
Investment income on split-interest agreements	3,234	4,442
Payments on split-interest agreements	(6,154)	(5,950)
Payments on capital lease obligations	(8,833)	(8,325)
Repayment of bonds and notes payable	(118,000)	(57,855)
Proceeds from commercial paper issuance	61,175	
Net change in federal student loan funds	49	
Net cash provided by financing activities	90,922	269,067
Net change in cash and cash equivalents	(142,415)	349,098
Cash and cash equivalents at beginning of year	783,733	434,635
Cash and cash equivalents at end of year	\$641,318	\$783,733
Supplemental disclosure of cash flow information:		
Equipment and space acquired through capital leases	\$7,156	\$9,060
Cash paid during the year for interest	\$76,608	\$77,080

See accompanying notes to the consolidated financial statements.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

1. Organization

The Trustees of Columbia University in the City of New York (the “University”) is a private, nonsectarian, nonprofit institution of higher education whose activities are concentrated at two locations in New York City and extend around the globe. The University provides instruction through sixteen undergraduate, graduate, and professional schools. It operates a variety of research institutes and a library system to support its teaching, learning, and research activities. The University performs research, training, and other services under grants and contracts with agencies of the federal government and other sponsoring organizations. The University enrolls approximately 29,250 full-time and part-time students and employs approximately 15,407 full-time employees, including 5,721 full-time faculty members and research staff. Of these, 1,519 hold positions in the arts and sciences; 3,362 hold health science positions; and the remainder hold positions in the other professional schools.

The University is a nonprofit corporation under Section 501(c)(3) of the Internal Revenue Code.

2. Columbia University Medical Center

Columbia University Medical Center (“CUMC”), a division of the University, located in the Washington Heights section of northern Manhattan, is one of the largest academic medical centers in the United States. It is composed of four schools: College of Physicians and Surgeons, Mailman School of Public Health, College of Dental Medicine, and School of Nursing.

CUMC has three primary areas of focus: patient care, scientific research, and education. CUMC offers a wide variety of degrees, certifications, and continuing education in health sciences. Faculty patient care services, sponsored research, tuition, endowment income, patent royalties, and gifts provide the majority of CUMC’s revenues. Approximately 4,376 students are enrolled at CUMC, with a full-time faculty of 2,209, of whom approximately 290 are tenured. Additionally, CUMC’s staff includes 3,556 part-time faculty instructors, 1,114 full-time researcher staff members, 200 part-time researchers, 269 post-doctoral research trainees and 1,660 post-doctoral clinical trainees. Approximately 65 percent of the full-time faculty and 27 percent of the part-time faculty hold clinical appointments and have admitting privileges at New York-Presbyterian Hospital (“NYP”).

Patient care activities include patient visits performed by Columbia full-time faculty through its medical faculty practice plan, as well as clinical, educational and administration services provided to hospitals and other health care institutions through contractual agreements for services.

CUMC maintains several clinical and education affiliation agreements with other organizations. The most significant affiliation agreements are with NYP, St. Luke’s–Roosevelt Hospital Center, which terminated as of December 31, 2013, Bassett Medical Center, and Harlem Hospital. Certain faculty physicians also provide patient care and supervision of residents at NYP network hospitals and other affiliates. In addition, through interinstitutional “medical service agreements,” CUMC faculty provide patient care in specialty and subspecialty areas at hospitals in the tristate area and occasionally in other parts of the country and the world.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

In fiscal 2014, the clinical faculty handled approximately 1.9 million outpatient and emergency room visits and participated in instruction and supervision of 645 University medical students and 911 residents and fellows at NYP. CUMC physicians generated approximately 62,000 NYP hospital admissions during the year.

Payments for patient-care services provided by the full-time faculty in both institutional and private office settings are derived mainly from third-party payers, including managed care companies (55 percent), Medicare (17 percent), Medicaid (13 percent), commercial insurance (5 percent), and other (1 percent). Direct patient payments comprise 9 percent of total payments.

3. Summary of Significant Accounting Policies

The significant accounting policies of the University are as follows:

Basis of Consolidation

The accompanying consolidated financial statements of the University include the accounts of all academic and administrative departments of the University. Additionally, the consolidated financial statements include the net assets and activities of the following entities, for which the University maintains managerial and financial control:

- Columbia Investment Management Company, LLC—Columbia Investment Management Company, LLC is a New York limited liability company formed by the University to manage the University's investment assets under the supervision of a Board appointed by the Trustees of the University and subject to the oversight of the Committee on Finance of the Trustees.
- Columbia University Press—Columbia University Press is a not-for-profit corporation formed to promote the study of economic, historical, literary, philosophical, scientific, and other subjects and to encourage and promote the publication of literary works embodying original research in such subjects.
- Reid Hall, Inc.—Reid Hall, located in Paris, France, was donated to the University in 1964. Reid Hall, Inc., a corporation organized under New York membership corporation law as an educational and charitable organization, operates Reid Hall to promote, facilitate, and aid the educational, cultural, and social interests of students studying in France.
- The University holds a number of other New York limited liability companies, Delaware not-for-profit corporations, and international organizations, which are established to facilitate various program and research objectives.

The University provides investment custodial services and manages all of the assets of Columbia Presbyterian Medical Center Fund, Inc. ("CPMC Fund, Inc."), a not-for-profit corporation that was created to hold and receive gifts for the University and NYP. The consolidated financial statements reflect the University's interest in the net assets of CPMC Fund, Inc. as well as the assets and amounts due NYP.

The University is also the sole corporate member of two not-for-profit practice entities, Columbia Ophthalmology Consultants, Inc., and Columbia University Healthcare, Inc., and a professional corporation, Columbia Doctors of New Jersey, and as such, consolidates these entities into the University's consolidated financial statements.

All significant intercompany accounts have been eliminated in consolidation.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Accrual Basis

The consolidated financial statements of the University have, in all material respects, been prepared on an accrual basis.

Basis of Presentation

The University maintains its accounts in accordance with the principles of fund accounting. Under this method of accounting, resources for various purposes are classified into funds that are consistent with activities or objectives specified by donors. Separate accounts are maintained for each fund.

For reporting purposes, the University prepares its consolidated financial statements in accordance with accounting principles generally accepted in the United States of America (“GAAP”) that requires resources be classified for reporting purposes based on the existence or absence of donor-imposed restrictions. This is accomplished by classification of fund balances into three categories of net assets – unrestricted, temporarily restricted, and permanently restricted. Periodically, donor redesignations may result in reclassifications of net assets. Descriptions of the three net asset categories and the type of transactions affecting each category follow.

Unrestricted—Net assets that are not subject to donor-imposed restrictions. This category includes unrestricted gifts, certain endowment income balances, certain board-designated endowment principal balances, including capital appreciation on such balances, certain plant funds, University-designated loan funds, and other unrestricted designated and undesignated current funds.

Temporarily restricted—Net assets that are subject to legal or donor-imposed stipulations that will be satisfied either by actions of the University, the passage of time, or both. These net assets include gifts donated for a particular purpose, certain other balances with donor-imposed restrictions, amounts subject to time restrictions such as funds pledged for future payment, or amounts subject to legal restrictions, such as the portion of a donor-restricted permanent endowment fund that is not classified as permanently restricted net assets, as required by the New York Prudent Management of Institutional Funds Act (“NYPMIFA”), adopted on September 17, 2010. Once the time and purpose restriction are satisfied, or have been deemed to have been satisfied, those temporarily restricted net assets are released from restrictions.

Permanently restricted—Net assets that are subject to donor-imposed stipulations that will be invested to provide a perpetual source of income to the University. Donors of these assets require the University to maintain an endowment fund in perpetuity. The University classifies as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) realized and unrealized gains and losses to the permanent endowment when stipulated by the donor gift instrument.

Revenues and Expenses

Revenues are reported as increases in unrestricted net assets unless the use of those assets is limited by donor-imposed restrictions. Expenses are reported as decreases in unrestricted net assets. Gains and losses on investments are reported as increases or decreases in unrestricted net assets, unless their use is restricted by explicit donor stipulation or by law.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Tuition and Fees and Financial Aid

Tuition and fees are derived from degree programs as well as executive and continuing education programs. Tuition and fee revenue is recognized as operating income in the period in which it is earned. Tuition and fee receipts received in advance are recorded as deferred revenue. Net tuition and fees are computed after deducting certain scholarships and fellowships awarded to students. In order to assist students in meeting tuition and other costs of attendance, the University administers a variety of federal, state, institutional, and private programs. Financial aid packages to students may include direct grants, loans, and employment.

Contributions

Contributions for University operations and plant, including unconditional promises to give (“pledges”), are recognized as operating revenue in the period earned. Contributions to endowment are recognized as nonoperating revenue in the period earned. Pledges that are expected to be collected within one year are recorded net of an allowance for uncollectable pledges. Amounts expected to be collected in future years are recorded at the present value of estimated future cash flows. The discounts on those pledges are computed using an interest rate for the year in which the promise was received and considers market and credit risk as applicable. Subsequent years’ accretion of the discount is included in contribution revenue. Conditional promises to give are not recognized as revenue until such time as the conditions are substantially met.

Patient Care Revenue and Expense

Patient care activities relate to three distinct areas: medical faculty practice plans, affiliation agreements, and medical service agreements.

Patient Care expenses include direct expenses associated with providing patient care services, as well as administrative functions within the University’s faculty practice organization. Patient Care expense does not include rent or utilities in clinical space, as those costs are aggregated with all University space costs within “Operations and Maintenance of plant”.

The University provides medical care to patients via its faculty practice through CUMC, primarily under agreements with third-party payors. Agreements with third-party payors, including health maintenance organizations, provide payment for medical services at amounts different from rates established by the University. Medical faculty practice plan revenue is reported net of two items: (a) contractual allowances from third-party payors for services rendered and (b) estimates of uncollectible amounts. Included within the faculty practice revenues and expenses are financial arrangements associated with several physician professional corporations.

The University maintains several clinical and education affiliation agreements with other organizations. The University provides medical, professional, and supervisory staff as well as other technical assistance. Revenues and expenses from these agreements are accounted for in patient care and education categories of the operating activity in the Consolidated Statement of Activities.

Grant and Contract Income

The University receives grant and contract income from governmental and private sources. The University recognizes revenue associated with the direct costs of sponsored programs as the related costs are incurred. Recovery of facilities and administrative costs of federally sponsored programs are at reimbursement rates negotiated with the University’s cognizant agency, the Department of Health and Human Services. The University and the federal government are currently operating under an agreement that provides for facilities and administrative cost rates under federal grants and

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

contracts through June 30, 2014. The agreement provides for provisional facilities and administrative cost rates under federal grants and contracts which will be effective on July 1, 2014 and which remain in effect until such time as a new agreement is reached.

Research and Development

The University engages in numerous research and development projects, partially or fully sponsored by governmental and private funds. These costs are charged to operating expense as incurred. The University periodically funds and develops patents for certain technologies, then licenses the usage of these patents to companies over several years. The revenue, net of payments due to third parties, is recorded in "Revenue from other educational and research activities" in the Consolidated Statement of Activities. Costs incurred with developing and maintaining these patents are expensed as incurred.

Institutional Support

Institutional Support expense includes central administrative functions and expenses that support the management of the University. This category also includes any net operating surplus or deficit of the University's benefit pool, as recoveries from units across the University may be less than or greater than benefits paid in a given year.

Cash and Cash Equivalents

Cash and cash equivalents are recorded at fair value and include several depository accounts, checking accounts, institutional money market funds, and similar temporary investments with maturities of three months or less at the date of purchase.

Investments

The University's investments, consisting primarily of publicly traded fixed income and equity securities, alternative investments, and cash held for reinvestment, are stated at fair value as of June 30, 2014 and 2013. Alternative investments include investments in absolute return strategy funds, private equity funds, and real asset funds (collectively, the 'funds'). The management of the respective fund provides the fair value of the investment. The University reflects its share of the partnerships or corporations in the consolidated financial statements.

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The University believes that the net asset value of its alternative investments is a reasonable estimate of fair value as of June 30, 2014 and 2013. Because alternative investments are not marketable, the estimated value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market for the investment existed. Such differences could be material. The amount of gain or loss associated with these investments is reflected in the accompanying consolidated financial statements based on the University's proportionate share in the net assets of these investments.

The University records both the assets and corresponding liabilities generated by securities lending transactions as "Collateral for securities loaned" and "Securities loan agreement payable". The loaned securities are returnable on demand and are collateralized by cash and cash equivalents.

The University's presentation in the Consolidated Statement of Cash Flows for limited liability partnerships, limited liability corporations, and other similarly structured investments is consistent

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

with the accounting for equity method investments as it represents the underlying nature of these investments in which the University has a capital account.

The University records purchases and sales of securities on a trade-date basis. Realized gains and losses are determined on the basis of average cost of securities sold and are reflected in the Consolidated Statement of Activities. Dividend income is recorded on the ex-dividend date, and interest income is recorded on an accrual basis.

Split-Interest Agreements

The University's split-interest agreements with donors consist primarily of charitable gift annuities, pooled income funds, and irrevocable charitable remainder trusts for which the University serves as custodian and trustee. Assets are invested and payments are made to donors and/or other beneficiaries in accordance with the respective agreements. In the case of irrevocable split-interest agreements whose assets are held in trusts not administered by the University (third-party charitable trusts), the University will recognize its beneficial interest when it is provided sufficient reliable information and documentation that establishes the trust's existence.

Contribution revenues for split-interest agreements are recognized at the dates the agreements are established net of the present value of the estimated future payments to be made to the beneficiaries, if applicable, under these agreements. The discounts on those agreements are computed using an interest rate for the year in which the promise was received and considers market and credit risk as applicable. Assets related to these agreements are recorded in "Investments, at fair value," and categorized as Level 2 and Level 3. The liability for the present value of the estimated future payments to be made to the beneficiaries is recorded in "Actuarial liability for split-interest agreements." Adjustments to the fair value of these agreements are recorded in the Consolidated Statement of Activities under "Present value adjustment to split-interest agreements."

Institutional Real Estate

Institutional real estate consists primarily of properties proximate to the University's Morningside and Washington Heights campuses, the primary purpose of which is to house faculty, staff, and graduate students. The income earned on this investment is used primarily to finance operating expenditures. The properties are valued at cost and depreciated over a useful life of fifty years.

Land, Buildings, and Equipment

Land, buildings, and equipment are stated at cost net of accumulated depreciation. Depreciation is calculated on a straight-line basis over useful lives ranging from ten to forty years for buildings and improvements and three to twenty years for equipment, consistent with the method used for government cost reimbursement purposes. Capitalized software costs are amortized over seven years. Upon disposal of assets, the costs and accumulated depreciation are removed from the accounts, and the resulting gain or loss is included in operations.

Other Assets

Prepaid expenses, bond issuance costs, the University's investment in the Medical Center Insurance Company ("MCIC"), and insurance recovery receivable are categorized within other assets. Bond issuance costs are amortized over the expected holding period of the specific debt issue.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Collections

Collections at the University include works of art, literary works, historical treasures, and artifacts that are maintained in the University's galleries, libraries, and buildings. These collections are protected and preserved for public exhibition, education, research, and the furtherance of public service and, therefore, are not recognized as assets on the Consolidated Balance Sheet. Costs associated with purchasing additions to and maintaining these collections are recorded as operating expenses in the period in which the items are acquired.

Interest in Perpetual Trusts Held by Others

The University is the beneficiary of certain perpetual trusts administered by others. These trusts are recognized as permanently restricted contributions upon receipt of documentation evidencing that the trust has been established and a statement of its assets, and adjusted to fair value each year. The fair value of the interest in the perpetual trust is based on the University's share of the income generated by the trust, ascribed to the fair value of assets reported by the trust. Gains and losses resulting from the change in fair value of trust assets are reported as nonoperating activity in the Consolidated Statement of Activities.

Capital Lease Obligations

Capital lease obligations are recognized for equipment and space where substantially all of the risks of ownership have been transferred to the University. The obligations extend up to five years for equipment and up to fifty years for space.

Conditional Asset Retirement Obligations

Conditional asset retirement obligations ("CARO") are recognized for remediation or disposal of asbestos, underground storage tanks, soil, and radioactive sources and equipment as required by law. The fair value of the liability for a conditional asset retirement obligation is recognized in the period in which it occurred, provided that it can be reasonably estimated.

Other Long Term Liabilities

Other long term liabilities are obligations that extend beyond one year, or operating cycle, whichever is longer. The obligations for the medical malpractice liabilities, self-insurance reserves, the fixed payor swap agreement and other commitments are categorized in other long term liabilities.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. The most significant estimates include valuation of investments without readily determinable public markets, estimated useful life of land, buildings and equipment, actuarially determined costs associated with split-interest agreements, pension, postemployment and postretirement benefits, contractual allowances for patient receivables, allowances for doubtful accounts, insurance obligations and conditional asset retirement obligations.

2013 Presentation

While comparative information is not required under GAAP, the University believes that this information is useful and has included comparative financial information from the consolidated

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

financial statements for 2013. Within the Statement of Activities prior year presentation of restricted asset categorization has been condensed for comparative purposes. There has been no change in total by net asset class. This summarized information is not intended to be a full presentation in conformity with GAAP, which would require certain additional information. Accordingly, such information should be read in conjunction with the University's audited consolidated financial statements for the year ended June 30, 2013. In addition, certain amounts in the summarized consolidated financial statements for fiscal year 2013 have been reclassified to conform to the fiscal year 2014 presentation.

New Authoritative Pronouncements

In January, 2013, FASB issued Accounting Standards Update No. 2013-01, Balance Sheet (Topic 210): Clarifying the Scope of Disclosures about Offsetting Assets and Liabilities which clarifies the scope of Accounting Standards Update No. 2011-11 as it applies to derivatives accounted for in accordance with Topic 815, Derivatives and Hedging, requiring additional disclosures for derivative portfolios including disclosing the gross amounts of recognized financial assets and financial liabilities, amounts offset in the balance sheet and subject to an enforceable master netting arrangement. The University has adopted the standard in fiscal year 2014 and disclosures pertaining to this topic have been included in the consolidated financial statements.

In October 2012, FASB issued Accounting Standards Update No. 2012-05, Statement of Cash Flows (Topic 230) Not-for-Profit Entities: Classification of the Sale Proceeds of Donated Financial Assets in the Statement of Cash Flows, which defines the financial reporting for the receipt of donated securities in the Statement of Cash Flows. Donated securities with no donor-imposed restrictions and converted nearly immediately into cash, are to be included in the operating section of the statement, while donated securities with donor-imposed long-term restrictions should be included in the financing section. The University has adopted the standard in fiscal year 2014.

4. Operating Measurement

The University divides its Consolidated Statement of Activities into operating and nonoperating activities. The operating activities of the University include all income and expenses related to carrying out its educational and research mission. Operating revenues include investment income and endowment appreciation utilized to fund current operations, the largest portion of which is the distribution of funds budgeted in accordance with the endowment spending rule.

Nonoperating activities include current year realized and unrealized gains and losses on investments, including realized gain distributions from fund investments, less amounts withdrawn from endowment appreciation to fund operations. Nonoperating activities also include new gifts to permanently restricted endowments, changes in net assets held by CPMC Fund, Inc., changes in perpetual trusts held by others, present value adjustments to split-interest agreements, changes in pension and postretirement obligations, other items and reclassifications.

5. Patient Care Revenue

The University's affiliation agreements with area hospitals generated \$275.6 million and \$247.6 million of revenue for the years ended June 30, 2014 and 2013, respectively. As of June 30, 2014 and 2013, accounts receivable includes \$93.4 million and \$82.2 million, respectively, relating to these agreements.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Medical faculty practice revenue is reported at the estimated net realizable amounts from patients, third-party payors, and others for services rendered. Medical faculty practice revenues are \$622.1 million and \$586.2 million for the years ended June 30, 2014 and 2013, respectively. As of June 30, 2014 and 2013, patient accounts receivable amounts to \$79.5 million and \$72.6 million, respectively. Medical service agreements generated \$22.8 million and \$22.8 million of revenue for the years ended June 30, 2014 and 2013, respectively and other patient care activities generated \$16.7 million and \$18.3 million of revenue for the years ended June 30, 2014 and 2013, respectively.

6. Long-Term Investments and Fair Value

The University values its investments in accordance with GAAP and consistent with the FASB official pronouncement on *Fair Value Measurements* for financial assets and liabilities. The pronouncement defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. GAAP establishes a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the entities own assumptions about how market participants would value an asset or liability based on the best information available. Valuation techniques used to measure fair value utilize relevant observable inputs and minimize the use of unobservable inputs.

The University follows a fair value hierarchy based on three levels of inputs, described below:

Fair value for Level 1 is based upon quoted prices in active markets that the University has the ability to access for identical assets and liabilities. Market price data is generally obtained from exchange or dealer markets. The University does not adjust the quoted price for such assets and liabilities.

Fair value for Level 2 is based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, or inputs other than quoted prices that are observable.

Fair value for Level 3 is based on valuation techniques that use significant inputs that are unobservable as they are not actively traded.

Investments categorized as Level 2 and Level 3 include the University's ownership in funds that invest in alternative assets (i.e. absolute return strategy funds, private equity funds, and real asset funds) and funds that invest in equity and fixed income strategies. The value of the University's investments in these funds represents the University's ownership interest in the net asset value (NAV) of the respective fund. The University is permitted under GAAP to estimate the fair value of an investment at the measurement date using the NAV reported by the fund without further adjustment, provided the NAV has been calculated in accordance with or in a manner consistent with GAAP, and provided further that the University does not expect to sell the investment at a value other than NAV. The University has various processes and controls in place to ensure investment fair value is reasonable and performs additional procedures and due diligence procedures of its investments including an assessment of applicable accounting policies, a review of

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

the valuation procedures employed, and consideration of redemption features and price transparency.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. In determining the categorization of the University's investments within the fair value hierarchy, the University has considered market information, including observable net asset values, and the length of time until the investment will become redeemable. Investments which can be redeemed at NAV by the University up to 180 days beyond the measurement date are classified as Level 2. If the redemption period extends beyond 180 days, the investment is categorized as Level 3. The categorization of a financial instrument within the hierarchy is based upon the pricing transparency of that instrument and does not necessarily correspond to the University's perceived risk of that instrument.

In addition, the University holds direct real estate investments categorized as Level 3. Valuation for material directly held real estate investments is determined from periodic valuations prepared by independent appraisers or broker opinions.

The following tables present assets and liabilities measured at fair value at June 30, 2014 and June 30, 2013.

Assets	2014			Total
	Level 1	Level 2	Level 3	
Investments:				
Cash and cash equivalents	\$ 217,316	\$ 400,871		\$ 618,187
Global equities	927,965	292,421	\$ 630,302	1,850,688
Fixed income	21,755	345,718	88	367,561
Absolute return strategies	22,693	1,088,510	1,641,615	2,752,818
Private equity		2,170	1,998,678	2,000,848
Real assets	37,600		1,631,809	1,669,409
Investments, at fair value	<u>1,227,329</u>	<u>2,129,690</u>	<u>5,902,492</u>	<u>9,259,511</u>
Interest in perpetual trusts held by others			187,596	187,596
Total assets at fair value	<u>\$ 1,227,329</u>	<u>\$ 2,129,690</u>	<u>\$ 6,090,088</u>	<u>\$ 9,447,107</u>
Liabilities				
Swaps payable		\$ 58,085		\$ 58,085
Total liabilities at fair value		<u>\$ 58,085</u>		<u>\$ 58,085</u>

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Assets	2013			
	Level 1	Level 2	Level 3	Total
Investments:				
Cash and cash equivalents	\$ 118,153	\$ 387,016		\$ 505,169
Global equities	860,252	278,278	\$ 506,531	1,645,061
Fixed income	21,655	327,778	350	349,783
Absolute return strategies	15,488	1,087,415	1,402,494	2,505,397
Private equity		1,916	1,751,751	1,753,667
Real assets	10,444		1,421,381	1,431,825
Investments, at fair value	<u>1,025,992</u>	<u>2,082,403</u>	<u>5,082,507</u>	<u>8,190,902</u>
Interest in perpetual trusts held by others			163,366	163,366
Total assets at fair value	<u>\$ 1,025,992</u>	<u>\$ 2,082,403</u>	<u>\$ 5,245,873</u>	<u>\$ 8,354,268</u>
Liabilities				
Swaps payable		\$ 55,213		\$ 55,213
Total liabilities at fair value		<u>\$ 55,213</u>		<u>\$ 55,213</u>

Cash and cash equivalents

Cash and cash equivalents includes government securities and money market instruments and are valued at amortized cost which approximates fair value.

Global Equities and Fixed Income

Global equities and fixed income consists of investments in publicly traded U.S. and foreign common and preferred equities, funds that invest in equity and fixed income based strategies, and cash held in separate accounts committed to these strategies. The fair value of these investments is based on quoted market prices. Investments that are listed on an exchange are valued, in general, at the last reported sale price (or, if there is no sales price, at the last reported bid price, or, in the absence of reported bid prices, at the mean between the last reported bid and asked prices thereof). Fund investments in equity and fixed income based strategies are valued in accordance with valuations provided by the investment managers of the underlying funds. If the University has the ability to redeem from a fund up to 180 days beyond the measurement date at NAV, the investment is categorized as Level 2. If the redemption period extends beyond 180 days, the investment is categorized as Level 3.

Alternative Investments

Alternative investments include interests in absolute return strategy funds, private equity funds, and real asset funds. These private equity funds include large market, leveraged buyout and venture capital based strategies. The University values these investments in accordance with valuations provided by the investment managers of the underlying funds. These funds may make investments in securities that are publicly traded, which are generally valued based on observable market prices, unless a restriction exists. In addition, interests in a private equity fund may be publicly traded and valued based on observable market prices. As a general rule, managers of funds invested in alternative investments value those investments based upon the best information available for a given circumstance and may incorporate assumptions that are the investment manager's best estimates after consideration of a variety of internal and external factors. If no public market exists for the investments, the fair value is determined by the investment manager taking into consideration, among other things, the cost of the investment, prices of recent significant placements of similar investments of the same issuer, and subsequent developments concerning the

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

companies to which the investments relate. The University's management may consider other factors in assessing the fair value of these investments. If the University has the ability to redeem from an absolute return strategy fund up to 180 days beyond the measurement date at NAV, the investment is categorized as Level 2. If the redemption period extends beyond 180 days, the investment is categorized as Level 3. All private equity funds and real asset funds, with the exception of directly-held public securities, are categorized as Level 3 given that the University does not have discretion for timing of withdrawal.

The fair value of the alternative investment funds in the table above represents the amount the University would expect to receive at June 30, 2014 and 2013, if it had liquidated its investments in the funds on these dates. The University has performed due diligence around these investments and believes that the NAV of its alternative investments is a reasonable estimate of fair value as of June 30, 2014 and 2013. Alternative investments may allocate a high percentage of their assets in specific sectors of the market in order to achieve a potentially greater investment return. As a result, the investments may be susceptible to economic, political, and regulatory developments in a particular sector of the market, positive or negative, and may experience increased volatility in net asset values.

Absolute return strategies also include separate accounts with direct investments in fixed income (which include mortgage back securities, collateralized mortgage obligations, and convertible bonds) and cash committed to these strategies. The fair value of these investments is based on the last reported bid price obtained from pricing sources or broker quotes and is categorized as Level 2.

Perpetual Trusts

The fair value of interest in perpetual trust held by third parties is based on the University's share of the income generated by the trust, ascribed to the fair value of the assets reported by the trust.

Derivatives

Investment fund managers may invest in derivatives, and the value of these positions is reflected in the NAV of the respective funds. Separately, the University employs derivatives primarily to hedge its risks and to rebalance its market exposures. Derivatives used may include futures, swaps, options, and forward contracts and are reflected at fair value following the definition of Level 1 and Level 2 assets as described above. Certain derivative positions held within the endowment portfolio are subject to master netting agreements included within an International Swap and Derivatives Association, Inc. ("ISDA") master agreement with each of the counterparties. These positions are reflected on a net basis within Investments, at fair value on the Consolidated Balance Sheet. The equity derivatives held directly by the University within the endowment portfolio had a net fair value of (\$2.4) million and (\$14.1) million at June 30, 2014 and 2013, respectively. At June 30, 2014 and June 30, 2013 the fair value of the derivatives was comprised of gross assets of \$4.5 million and zero, respectively and gross liabilities of \$6.9 million and \$14.1 million, respectively. As of June 30, 2014 and 2013, the University has provided counterparties with collateral of \$33.7 million and \$42.9 million, respectively, related to these derivative positions.

As of June 30, 2014 and 2013, the notional amounts of long equity derivative contracts were \$739.0 million and \$797.7 million, respectively, and the notional amounts of short equity derivative contracts were \$247.9 million and \$363.8 million, respectively. The fair value of the equity swap assets were \$3.7 million and (\$7.6) million at June 30, 2014 and 2013, respectively. In addition, the University also held currency derivative contracts with notional amount of \$129.3 million at

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

June 30, 2013. There were no currency derivative contracts outstanding at June, 30, 2014. The fair value of the currency contracts was (\$1.2) million on both a gross and net basis as of June 30, 2013.

Outside of the endowment portfolio, the University entered into a fixed payor interest rate swap as described in Footnote 16. The estimated fair value of the agreement was (\$58.1) million and (\$55.2) million at June 30, 2014 and 2013, respectively, and is included in "Swaps payable" in the tables above. The derivatives are reflected as a receivable or payable, as appropriate, on the Consolidated Balance Sheet. Unrealized gain or loss from derivative investments is a component of the current year realized and unrealized capital gains (losses) in the Consolidated Statement of Activities.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the University believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

The following table is a rollforward of the Consolidated Balance Sheet amounts for financial instruments classified by the University within Level 3 of the fair value hierarchy defined above at June 30, 2014 and 2013.

	June 30, 2013	Transfers In/Out	Purchases	Sales	Realized gain/loss	Unrealized gain/loss	June 30, 2014
Global equities	\$ 506,531		\$ 30,563	\$ (57,912)	\$ 42,367	\$ 108,753	\$ 630,302
Fixed income	350			(262)			88
Absolute return strategies	1,402,494	\$ (95,910)	238,721	(109,241)	58,038	147,513	1,641,615
Private equity	1,751,751		189,426	(365,551)	185,955	237,097	1,998,678
Real assets	1,421,381		294,592	(232,281)	59,206	88,911	1,631,809
Total level 3 investments	\$ 5,082,507	\$ (95,910)	\$ 753,302	\$ (765,247)	\$ 345,566	\$ 582,274	\$ 5,902,492

	June 30, 2013	Disburse- ments	Realized/ Unrealized gain/loss, net	June 30, 2014
Interest in perpetual trusts held by others	\$ 163,366	\$ (8,025)	\$ 32,255	\$ 187,596

	June 30, 2012	Transfers In/Out	Purchases	Sales	Realized gain/loss	Unrealized gain/loss	June 30, 2013
Global equities	\$ 336,822		\$ 91,395	\$ (10,351)		\$ 88,665	\$ 506,531
Fixed income	125		231	(6)			350
Absolute return strategies	1,077,306		314,486	(187,956)	61,828	136,830	1,402,494
Private equity	1,766,982	(273)	153,252	(364,766)	217,512	(20,956)	1,751,751
Real assets	1,277,711		268,925	(200,569)	60,844	14,470	1,421,381
Total level 3 investments	\$ 4,458,946	\$ (273)	\$ 828,289	\$ (763,648)	\$ 340,184	\$ 219,009	\$ 5,082,507

	June 30, 2012	Disburse- ments	Realized/ Unrealized gain/loss, net	June 30, 2013
Interest in perpetual trusts held by others	\$ 153,168	\$ (8,168)	\$ 18,366	\$ 163,366

All net realized and unrealized gains (losses) in the tables above are reflected in the Consolidated Statement of Activities. Net unrealized gains (losses) relate to those financial instruments held by the University at June 30, 2014 and 2013. The University's policy is to recognize transfers in and transfers out as of the end of the period. The transfer from Level 3 to Level 2 is reported at gross, due to the criteria described above. There were no significant transfers between Level 1 and Level 2 for the years ended June 30, 2014 and 2013.

Certain investments in global equities and alternative investments may be subject to restrictions that i) limit the University's ability to withdraw capital after such investment and ii) limit the amount that may be withdrawn as of a given redemption date. The redemption terms of the University's investments in absolute return strategy funds vary from daily to triennial, with a portion of these investments designated as "illiquid" in "sidepockets" and that portion may not be available for withdrawal until liquidated by the investing fund and redemption notice periods range from 0 days to 180 days. Generally, as noted above, the University has no discretion as to withdrawal with respect to its investment in private equity and real asset funds; distributions are made when sales of

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

assets are made with the funds. The remaining life of these private equity and real asset funds is up to 12 years.

The University is obligated under certain investment fund agreements to advance additional funding up to specified levels over a period several years. These commitments have fixed expiration dates and other termination clauses. At June 30, 2014, the University had unfunded commitments of approximately \$1.8 billion as displayed in the table below.

Asset class (\$ in millions)	Remaining life	Unfunded commitments	Timing to draw commitments
Global equities	N/A	\$ 78	1 to 8 years
Absolute return strategies	N/A	126	1 to 5 years
Private equity	1 to 12 years	636	1 to 12 years
Real assets	1 to 12 years	969	1 to 12 years
Total		<u>\$ 1,809</u>	

Management's estimate of the lives of the funds could vary significantly depending on the investment decisions of the external fund managers, changes in the University's portfolio, and other circumstances. Furthermore, the University's obligation to fund the commitments noted above may be waived by the fund manager for a variety of reasons including market conditions and/or changes in investment strategy.

The University does have various sources of internal liquidity at its disposal, including cash, cash equivalents, marketable debt and equity securities and lines of credit, which are available to fund the committed drawdowns.

Securities Lending

At June 30, 2014, there were no securities lending arrangements outstanding. At June 30, 2013, investment securities valued at \$2.8 million were loaned to various brokerage firms through a securities lending agent. The loaned securities were returnable on demand and were collateralized by cash and cash equivalents. The University recorded the value of the collateral received of \$3.1 million and an offsetting liability for the return of the collateral on the Consolidated Balance Sheet at June 30, 2013.

Investment Return

Investment income and gains utilized on the Consolidated Statement of Activities contains interest and dividend income net of fees, institutional real estate revenue net of operating expenses and depreciation, other investment income, and endowment appreciation utilized to fund the spending rule. Endowment appreciation utilized was \$362.2 million and \$354.3 million during 2014 and 2013, respectively. The nonoperating section of the Consolidated Statement of Activities contains realized and unrealized gains reduced by endowment appreciation utilized to fund the spending rule.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

7. Endowment Funds

The University's endowment consists of approximately almost 5,000 separate funds established over many years for a wide variety of purposes. The endowment includes permanent endowments, term endowments, and funds designated by the Board of Trustees to function as endowments. As required by GAAP, net assets associated with endowment funds, including funds designated by the Board of Trustees to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The University employs a market value unit method of accounting for pooled general investments. Each participating fund enters and withdraws from the pooled investment account based on monthly unit market values. Changes in the market value of investments are distributed proportionately to each fund that participates in the investment pool. Net investment income distributed during the year is allocated on a per unit basis to each participating fund.

Relevant Law

Under NYPMIFA, the University may appropriate so much of an endowment fund as it deems prudent, considering the specific factors set forth in NYPMIFA and subject to the intent of the donor as expressed in the gift instrument. Unless stated otherwise in the gift instrument, the earnings in an endowment fund are donor-restricted assets until appropriated.

The University continues to classify as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) realized and unrealized gains and losses to the permanent endowment when stipulated by the donor gift instrument. In accordance with NYPMIFA and authoritative guidance, the remaining portion of the donor-restricted endowment funds not classified in permanently restricted net assets which had previously been classified as unrestricted net assets is now classified as temporarily restricted net assets.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

The composition and changes in the University's endowment net assets as of June 30, 2014 and 2013, are as follows:

	2014			Total
	Unrestricted Net Assets	Temporarily Restricted Net Assets	Permanently Restricted Net Assets	
Changes in University endowment net assets				
Opening balance - June 30, 2013	\$ 2,951,047	\$ 2,992,999	\$ 2,253,834	\$ 8,197,880
Investment return:				
Investment income	81,146	2,175		83,321
Net appreciation	451,711	824,662	24,113	1,300,486
Total investment return	532,857	826,837	24,113	1,383,807
New gifts	4,657	13,086	123,911	141,654
Appropriation for expenditure	(257,987)	(274,490)		(532,477)
Other Changes:				
Transfers to create endowments	17,471	16,678	2,694	36,843
Other / Reclassifications	(41,269)	6,937	29,672	(4,660)
	<u>(23,798)</u>	<u>23,615</u>	<u>32,366</u>	<u>32,183</u>
Closing balance - June 30, 2014	<u>\$ 3,206,776</u>	<u>\$ 3,582,047</u>	<u>\$ 2,434,224</u>	<u>\$ 9,223,047</u>
University endowment composition				
Endowment funds		\$ 3,303,036	\$ 2,220,571	\$ 5,523,607
Funds functioning as endowment:				
Departmental funds	\$ 1,333,495	234,585		1,568,080
University funds	1,473,320			1,473,320
Institutional real estate, net	399,928			399,928
CPMC Fund, Inc.	33	44,426	26,057	70,516
Interests in perpetual trusts held by others			187,596	187,596
University's endowment value	<u>\$ 3,206,776</u>	<u>\$ 3,582,047</u>	<u>\$ 2,434,224</u>	<u>\$ 9,223,047</u>

Note: The tables above do not include split-interest agreements, net of \$127,142 and pledges receivable, net of \$263,310.

Reconciliation to *Investments, at fair value*

Investments, at fair value		\$ 9,259,511
Add:		
Interests in perpetual trusts held by others	187,596	
CPMC Fund, Inc.	70,516	
Institutional real estate, net	399,928	
Investment receivables and payables	<u>101,357</u>	759,397
Subtract:		
Other long-term investments	(546,205)	
Split-interest agreements	(183,912)	
Funds held on behalf of others	<u>(65,744)</u>	(795,861)
University's endowment value		<u>\$ 9,223,047</u>

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

	2013			
	Unrestricted Net Assets	Temporarily Restricted Net Assets	Permanently Restricted Net Assets	Total
Changes in University endowment net assets				
Opening balance - June 30, 2012	\$ 2,800,423	\$ 2,702,975	\$ 2,150,754	\$ 7,654,152
Investment return:				
Investment income	52,025			52,025
Net appreciation	256,037	515,320	10,199	781,556
Total investment return	308,062	515,320	10,199	833,581
New gifts	3,733	14,053	83,029	100,815
Appropriation for expenditure	(183,146)	(272,508)	(131)	(455,785)
Other Changes:				
Transfers to create endowments	53,778	17,798	896	72,472
Other / Reclassifications	(31,803)	15,361	9,087	(7,355)
	21,975	33,159	9,983	65,117
Closing balance - June 30, 2013	\$ 2,951,047	\$ 2,992,999	\$ 2,253,834	\$ 8,197,880
University endowment composition				
Endowment funds		\$ 2,704,190	\$ 2,065,303	\$ 4,769,493
Funds functioning as endowment:				
Departmental funds	\$ 1,221,530	254,699		1,476,229
University funds	1,316,558			1,316,558
Institutional real estate, net	405,679			405,679
CPMC Fund, Inc.	7,280	34,110	25,165	66,555
Interests in perpetual trusts held by others			163,366	163,366
University's endowment value	\$ 2,951,047	\$ 2,992,999	\$ 2,253,834	\$ 8,197,880

Note: The tables above do not include split-interest agreements, net of \$105,405 and pledges receivable, net of \$257,707.

Reconciliation to Investments, at fair value

Investments, at fair value	\$ 8,190,902
Add:	
Interests in perpetual trusts held by others	163,366
CPMC Fund, Inc.	66,555
Institutional real estate, net	405,679
Investment receivables and payables	(19,582)
Subtract:	
Other long-term investments	(394,783)
Split-interest agreements	(160,886)
Funds held on behalf of others	(53,371)
University's endowment value	\$ 8,197,880

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Return Objectives and Risk Parameters

Endowment assets include those assets of donor-restricted funds that the University must hold in perpetuity or for a donor-specified period(s) as well as Board-designated funds. Under the University's investment policies, as approved by the Board of Trustees, the endowment assets are invested in a manner that is intended to produce performance which exceeds that of relevant indices for each asset class while assuming a moderate level of investment risk.

Strategies Employed for Achieving Objectives

The University relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized) and current yield (interest and dividends). The University targets a diversified asset allocation to achieve its long-term return objectives within prudent risk constraints.

Endowment Spending Rule

The endowment spending rule utilized by the University is designed to be directly responsive to both investment returns and the current level of price inflation. Its long-term objectives are:

- To protect the corpus of the endowment by spending no more than the real investment return;
- To cushion spending against market volatility; and
- To provide specific spending instructions and multiyear spending projections based on explicit future investment return assumptions.

The current endowment spending rule is based on two factors: first, the market value multiplied by a 5 percent target spending rate, which provides a response to investment market conditions; and second, the prior year's spending plus inflation, which ties spending increases to operating needs and cushions spending against market volatility. This allows the University to maintain the purchasing power of the endowment assets held in perpetuity or for a specified term as well as to provide additional real growth through new gifts and investment return.

As a general policy, each fiscal year's distribution is calculated by adding together the following:

- a. The market value of the endowment at a point twelve months prior to the beginning of the given fiscal year, multiplied by the 5 percent target spending rate, multiplied by a 40 percent weighting; and
- b. Endowment spending in the year immediately preceding the given fiscal year, grown or reduced by an inflation factor, which is defined as the Higher Education Price Index ("HEPI"), multiplied by a 60 percent weighting.

The Trustees conduct a special review in any year in which either projected endowment distributions are 0.5 percent higher or lower than the 5 percent target spending rate, or if the increase in endowment distributions over the previous year is more than 3 percentage points higher or lower than HEPI.

In addition to the base spending rate described above, two additional payout components were approved as temporary measures by the Trustees in 2008. The first is an increase in annual spending of up to 1.75 percent of the prior year beginning market value of endowments that are designated for undergraduate financial aid support. This increase began in fiscal 2009 and will be

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

phased out as new endowments substitute for this funding source. The amount of the incremental payout for the coming year is approved annually by the Trustees' Committee on Finance as part of the budget process. The second component is 0.70 percent of the prior year beginning market value for certain endowments in categories key to the University's current development efforts, primarily unrestricted endowment and endowments for financial aid and faculty support. This second component is reviewed by the Trustees every two years and has currently been extended through the end of fiscal year 2016.

8. Accounts Receivable

Accounts receivable, net, consists of the following as of June 30:

	2014	2013
Patient receivables, net of contractual allowances	\$ 132,734	\$ 117,534
Government agencies	136,655	149,344
NewYork-Presbyterian Hospital	101,891	93,043
Patent and licensing	22,452	21,302
Student receivables	40,302	25,051
Other receivables, gross	114,757	103,258
	<u>548,791</u>	<u>509,532</u>
Less: Allowance for doubtful accounts	(76,761)	(60,190)
Accounts receivable, net	<u>\$ 472,030</u>	<u>\$ 449,342</u>

Patient receivables for medical services are net of an allowance for contractual reserves in the amount of \$115.1 million and \$102.2 million at June 30, 2014 and 2013, respectively.

9. Student Loans Receivable and Financial Aid

The University participates in various federal loan programs, in addition to administering institutional loan programs. Loans receivable from students as of June 30 are as follows:

	2014	2013
Government revolving loans	\$ 74,250	\$ 74,387
Institutional loans	27,077	24,908
Gross student loans	101,327	99,295
Less: Allowance for doubtful collections	(1,409)	(1,520)
Student loans receivable, net	<u>\$ 99,918</u>	<u>\$ 97,775</u>

In addition to the loans identified above, the University processes and authorizes loans to students through the Stafford Loan program and Federal Plus Loan program. These loans are not recorded in the University's consolidated financial statement since the University does not guarantee any federal loan funds related to these programs. The amount of loans issued under these programs was \$253.7 million and \$258.0 million for the years ended June 30, 2014 and 2013, respectively.

Government revolving loans are funded principally with federal advances to the University under the Perkins Loan Program and certain other programs. Advances under the Perkins Loan Program totaled \$68.4 million and \$67.1 million and advances under the other federally sponsored loan programs are \$11.3 million and \$12.5 million as of June 30, 2014 and 2013, respectively. These advances are classified as liabilities on the Balance Sheet. Interest earned on the revolving and

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

institutional loan programs is reinvested to support additional loans. The repayment and interest rate terms of the institutional loans vary considerably.

Management regularly assesses the adequacy of the allowance for credit losses by performing ongoing evaluation of the student loan and student accounts receivable portfolios. Loans receivable under federally guaranteed student loan programs are subject to significant restrictions.

Undergraduate financial aid represents packages for all or part of a student's tuition, fees, room, and board. Graduate financial aid represents packages for all or part of a student's tuition and fees. Funding from external sources is obtained through government and private grants and contracts as well as private gifts and payout from certain endowment funds.

	2014			2013		
	University Sources	External Sources	Total Financial Aid	University Sources	External Sources	Total Financial Aid
Undergraduate	\$ 94,829	\$ 45,124	\$ 139,953	\$ 92,173	\$ 45,070	\$ 137,243
Graduate	112,513	75,418	187,931	113,960	64,059	178,019
Total financial aid grants	<u>\$ 207,342</u>	<u>\$ 120,542</u>	<u>\$ 327,884</u>	<u>\$ 206,133</u>	<u>\$ 109,129</u>	<u>\$ 315,262</u>

Agency activities such as tuition aid grants, federal supplemental educational opportunity grants, federal Pell, SMART, and ACG grant program are not included in the University's consolidated financial statements. Receipts from agency transactions were \$12.6 million and \$12.7 million, and disbursements were \$12.6 million and \$12.7 million in fiscal year 2014 and 2013, respectively.

10. Pledges Receivable

Unconditional promises to give appear as pledges receivable and revenue of the appropriate net asset category. Pledges are recorded after recognizing an allowance for uncollectible contributions and a discount to reflect the net present value based on projected cash flows. Periodically unconditional promises to give are reviewed for collectability. As a result, the allowance for uncollectible contributions may be adjusted and some contributions may be adjusted or cancelled. Such changes will be reflected in the consolidated financial statements.

The June 30 balances of unconditional promises to give are:

	2014	2013
Less than one year	\$ 250,642	\$ 243,477
One to five years	462,521	521,249
More than five years	<u>216,339</u>	<u>233,004</u>
Total unconditional promises	929,502	997,730
Less: Allowance for doubtful contributions	(48,039)	(22,602)
Less: Net present-value discount	<u>(119,365)</u>	<u>(141,402)</u>
Net pledges receivable	<u>\$ 762,098</u>	<u>\$ 833,726</u>

New pledges recorded in 2014 and 2013 were discounted at an average annual rate of 1.88 percent and 1.89 percent, respectively, using a rate that considers market and credit risk. Credit risk is also considered in the allowance for doubtful contributions.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Pledges receivable are intended for the following purposes:

	2014	2013
Endowment for educational and general purposes	\$ 263,309	\$ 257,707
New construction and modernization of plant	135,399	130,686
Support of University operations	363,390	445,333
Net pledges receivable	<u>\$ 762,098</u>	<u>\$ 833,726</u>

The University also has other outstanding pledges of \$315.5 million as of June 30, 2014. These pledges represent either conditional gifts for which the probability of meeting the conditions is uncertain, verbal pledges, or other pledges that have not met the requirements for recognition.

11. Land, Buildings, and Equipment

Investments in land, buildings, and equipment, net, consisted of the following at June 30:

	2014			2013		
	Total Assets	Accumulated Depreciation	Net Assets	Total Assets	Accumulated Depreciation	Net Assets
Land	\$ 454,549		\$ 454,549	\$ 437,927		\$ 437,927
Building and building improvements	4,017,707	\$ 2,076,685	1,941,022	3,888,216	\$ 1,925,059	1,963,157
Construction in progress	807,215		807,215	488,883		488,883
Equipment	361,575	188,569	173,006	382,137	203,560	178,577
	<u>\$ 5,641,046</u>	<u>\$ 2,265,254</u>	<u>\$ 3,375,792</u>	<u>\$ 5,197,163</u>	<u>\$ 2,128,619</u>	<u>\$ 3,068,544</u>

The University uses componentized depreciation to calculate depreciation expense for buildings and building improvements for research facilities included in operations. The costs of research facilities are separated into the building shell, building service systems, and fixed equipment, and each component is separately depreciated.

Equipment includes physical assets owned by the University as well as capitalized software costs and moveable equipment acquired through capitalized leases.

Building and building improvements include physical assets owned by the University as well as leasehold improvements, capitalized space leases, and construction in progress. Capital space leases at June 30, 2014 and 2013 were \$83.5 million and \$86.1 million, respectively.

12. Accrued Employee Benefit Liabilities

Accrued employee benefit liabilities arise from employment at the University. These include liabilities for pension, postretirement benefits, postemployment benefits, unused vacation, and deferred compensation.

Postemployment benefits relating to workers' compensation, short-term disability, and continuation of medical benefits for those on long-term disability are provided to former or inactive employees after employment but before retirement. The University records the costs of such benefits on an accrual basis if the employee has provided the services from which those benefits are derived. In 2014 and 2013, the University recognized actuarially computed liabilities of \$37.3 million and \$37.3 million, respectively.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

13. Pension and Other Postretirement Benefit Costs

Pension Plan Benefits

The University has five non-contributory pension plans (the “pension plans”) for supporting staff employees. Four of the pension plans are subject to collective bargaining agreements. The fifth pension plan covers former employees of the Arden Conference Center, which closed in 2005. Three of the plans include defined benefits plans for past service, and in the case of two plans, defined benefit for future service. Two of the pension plans provide defined benefits for service prior to 1976 (January 1, in one case, and prior to July 1, 1976, in the other). For these two pension plans, future benefits are provided by defined contribution plans. Charges to expenditures for the defined contribution segments of the plans amounted to \$5.3 million and \$5.6 million for the years ended June 30, 2014 and 2013, respectively.

In addition, the University provides retirement benefits for full-time faculty, officers, and certain other employees under a separate defined contribution plan (the “officer plan”). Charges to expenditures for the officer plan amounted to \$103.4 million and \$97.0 million for the years ended June 30, 2014 and 2013, respectively.

Postretirement Health Care and Life Insurance Benefits

The University provides postretirement health care and life insurance benefits for certain employees. The University accrues the estimated cost of these benefits over the years that eligible employees render services.

Obligations and Funded Status

The University adopted authoritative guidance, which requires the recognition on the Balance Sheet of the difference between benefit obligations and any plan assets of the University’s defined benefit and other postretirement benefit plans. In addition, the authoritative guidance requires unamortized amounts (e.g., net actuarial gains or losses and prior service cost or credits) to be recognized as changes to unrestricted net assets and that those amounts be adjusted as they are subsequently recognized as components of net periodic pension cost.

Amounts recognized in unrestricted net assets are as follows:

	Pension Plan Benefits		Other Postretirement Benefits	
	2014	2013	2014	2013
Net actuarial loss	\$ 42,335	\$ 44,562	\$ 22,780	\$ 61,536
Prior service cost	578	670	(15,624)	(26,371)
Total amount recognized	<u>\$ 42,913</u>	<u>\$ 45,232</u>	<u>\$ 7,156</u>	<u>\$ 35,165</u>

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

The components of accrued benefit costs for pension benefits and other postretirement benefits are as follows:

	Pension Plan Benefits		Other Postretirement Benefits	
	2014	2013	2014	2013
Change in benefit obligation:				
Benefit obligation, beginning of year	\$ 146,178	\$ 152,733	\$ 188,503	\$ 202,876
Service cost	4,879	5,314	7,218	7,907
Interest cost	7,227	6,654	8,802	8,473
Plan participants' contributions			5,581	4,885
Actuarial (gain) loss	10,781	(13,589)	(18,981)	(23,396)
Federal subsidy			307	382
Net disbursements and transfers	(6,028)	(4,933)	(12,990)	(12,624)
Benefit obligation, end of year	<u>\$ 163,037</u>	<u>\$ 146,179</u>	<u>\$ 178,440</u>	<u>\$ 188,503</u>
Change in plan assets:				
Fair value of assets, beginning of year	\$ 117,360	\$ 109,817	\$ 143,721	\$ 129,292
Actual return on plan assets	17,665	5,466	26,788	18,293
Employer contributions	9,370	7,340	7,400	4,209
Plan participants' contributions			5,581	4,885
Net disbursements and transfers	(6,369)	(5,263)	(12,990)	(12,958)
Fair value of assets, end of year	<u>\$ 138,026</u>	<u>\$ 117,360</u>	<u>\$ 170,500</u>	<u>\$ 143,721</u>
Net amount recognized	<u>\$ (25,011)</u>	<u>\$ (28,819)</u>	<u>\$ (7,940)</u>	<u>\$ (44,782)</u>

Weighted-average assumptions used to determine end of year benefit obligation

	2014	2013
Discounted rate	3.55% to 4.45%	3.90% to 4.95%
Rate of compensation increase	2.39% to 3.25%	2.8% to 3.25%

The accumulated benefit obligations for the underfunded pension plans at June 30, 2014 and 2013 were \$137.5 and \$119.8 million, respectively.

At the end of 2014 and 2013, the projected benefit obligation exceeded the pension plan assets for three of the five plans. The projected benefit obligation for the pension plans with a benefit obligation in excess of plan assets were as follows:

End of year	2014	2013
Projected benefit obligation	\$ 151,918	\$ 134,375
Fair value of plan assets	124,824	104,075

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

The accumulated postretirement benefit obligation for the other postretirement benefit plan and the fair value of plan assets with an accumulated postretirement benefit obligation in excess of plan assets were as follows:

End of year	2014	2013
Accumulated postretirement benefit obligation	\$ 178,440	\$ 188,503
Fair value of plan assets	170,500	143,721

A 6.75 percent annual rate of increase in the per capita cost of covered health care benefits for the other postretirement benefit plan was assumed for 2015. The rate was assumed to decrease gradually to 5 percent for 2019 and remain at that level thereafter. Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates would have the following effect:

	1%-point increase	1%-point decrease
Effect on accumulated postretirement benefit obligation	\$ 24,545	\$ (19,765)

The asset allocation for the two defined benefit plans for both past and future service at June 30, 2014 and 2013, and the target allocation for 2015, by asset category, follows:

Asset category	Target allocation 2015	Percentage of plan assets at year's end 2014	2013
U.S. large cap equity and global equity funds	24% - 27%	24%	20%
International equities (non-U.S.)	12% - 13%	15%	15%
High yield fixed income securities	9% - 10%	13%	16%
U.S. core fixed income	55% - 50%	48%	49%
	<u>100%</u>	<u>100%</u>	<u>100%</u>

The asset allocation for the two defined benefit plans for prior service only at June 30, 2014 and 2013, and the target allocation for 2015, by asset category, follows:

Asset category	Target allocation 2015	Percentage of plan assets at year's end 2014	2013
U.S. large cap equity	10%	4%	8%
International equities (non-U.S.)	5%	8%	3%
High yield fixed income securities	5%	11%	5%
U.S. core fixed income	80%	77%	84%
	<u>100%</u>	<u>100%</u>	<u>100%</u>

The retirement plan for the employees of Arden Conference Center was invested in equity securities, including mutual funds, 29 percent, and debt securities, 71 percent as of June 30, 2014.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

The following presents investments of the pension plans as of June 30, 2014. The Plans' investments in common collective trusts and mutual funds are included as Level 2 because fair value is based on quoted prices for similar instruments or other observable inputs. Level 3 assets represent fixed income related investment contracts with a major life insurance company.

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Common collective trust funds				
Global equity		\$ 48,971		\$ 48,971
Fixed income		85,811		85,811
Mutual funds		927		927
Fixed income investment contracts			\$ 2,317	2,317
Investments, at fair value		<u>\$ 135,709</u>	<u>\$ 2,317</u>	<u>\$ 138,026</u>

The following table is a roll forward of the amounts for investments classified within Level 3 as described above.

	<u>June 30, 2013</u>	<u>Purchases (Gross)</u>	<u>Sales (Gross)</u>	<u>Investment gain/(loss)</u>	<u>June 30, 2014</u>
Investment contracts	\$ 2,234	\$ 103	\$ (130)	\$ 110	\$ 2,317
Total level 3 investments	<u>\$ 2,234</u>	<u>\$ 103</u>	<u>\$ (130)</u>	<u>\$ 110</u>	<u>\$ 2,317</u>

The following presents investments of the pension plans as of June 30, 2013.

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Common collective trust funds				
Global equity		\$ 37,125		\$ 37,125
Fixed income		77,212		77,212
Mutual funds		789		789
Fixed income investment contracts			\$ 2,234	2,234
Investments, at fair value		<u>\$ 115,126</u>	<u>\$ 2,234</u>	<u>\$ 117,360</u>

The following table is a roll forward of the amounts for investments classified within Level 3 as described above.

	<u>June 30, 2012</u>	<u>Purchases (Gross)</u>	<u>Sales (Gross)</u>	<u>Investment gain/(loss)</u>	<u>June 30, 2013</u>
Investment contracts	\$ 2,177	\$ 86	\$ (148)	\$ 119	\$ 2,234
Total level 3 investments	<u>\$ 2,177</u>	<u>\$ 86</u>	<u>\$ (148)</u>	<u>\$ 119</u>	<u>\$ 2,234</u>

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

The asset allocation for the other postretirement benefit plan at June 30, 2014 and 2013, and the target allocation for 2015, by asset category, follows:

	Target allocation	Percentage of plan assets at year's end	
Asset category	2015	2014	2013
U.S. large cap equity and global equity funds	50%	59%	59%
International equities (non-U.S.)	10%	16%	16%
U.S. fixed income	30%	25%	25%
Other assets	10%		
	<u>100%</u>	<u>100%</u>	<u>100%</u>

The following presents investments of the other postretirement benefit plan as of June 30, 2014. The Plans' investments in common collective trusts are included as Level 2 because the fair value is based on quoted prices for similar instruments or other observable inputs.

	Level 1	Level 2	Level 3	Total
Common collective trust funds				
Global Equity		\$ 127,843		\$ 127,843
Fixed Income		42,657		42,657
Investments, at fair value		<u>\$ 170,500</u>		<u>\$ 170,500</u>

The following presents investments of the other postretirement benefit plan as of June 30, 2013.

	Level 1	Level 2	Level 3	Total
Common collective trust funds				
Global Equity		\$ 107,906		\$ 107,906
Fixed Income		35,815		35,815
Investments, at fair value		<u>\$ 143,721</u>		<u>\$ 143,721</u>

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Net Periodic Pension Cost

The components of net periodic benefit cost for pension benefits and other postretirement benefits are as follows:

	Pension Plan Benefits		Other Postretirement Benefits	
	2014	2013	2014	2013
Components of net periodic benefit cost				
Service cost	\$ 4,879	\$ 5,314	\$ 7,218	\$ 7,907
Interest cost on projected benefit obligation	7,227	6,654	8,802	8,473
Expected return on assets	(7,257)	(6,703)	(10,702)	(9,479)
Amortization of prior service cost	93	93	(10,747)	(10,824)
Amortization of unrecognized net losses	2,941	4,414	3,275	7,002
Net periodic benefit cost	<u>7,883</u>	<u>9,772</u>	<u>(2,154)</u>	<u>3,079</u>
Other changes in plan assets and benefit obligations recognized in the Consolidated Statement of Activities				
Current year actuarial (gain)/loss	713	(12,022)	(35,480)	(32,321)
Amortization of actuarial gain/(loss)	(2,940)	(4,414)	(3,275)	(7,002)
Amortization of prior service credit/(cost)	<u>(93)</u>	<u>(93)</u>	<u>10,747</u>	<u>10,824</u>
Total recognized in nonoperating	<u>(2,320)</u>	<u>(16,529)</u>	<u>(28,008)</u>	<u>(28,499)</u>
Total recognized in net periodic benefit cost and nonoperating	<u>\$ 5,563</u>	<u>\$ (6,757)</u>	<u>\$ (30,162)</u>	<u>\$ (25,420)</u>

Amounts in net unrestricted assets expected to be recognized in net periodic pension cost in fiscal 2015 are as follows:

	Pension Plan Benefits	Other Postretirement Benefits
Actuarial (gain)/loss	\$ 3,041	\$ 615
Prior service (credit)/cost	<u>71</u>	<u>(9,199)</u>
	<u>\$ 3,112</u>	<u>\$ (8,584)</u>

Weighted-average assumptions used to determine net periodic pension cost

	2014	2013
Discount rate	3.90% to 4.95%	3.90% to 4.95%
Expected return on plan assets	5% to 7.5%	5% to 7.5%
Rate of compensation increase	2.39% to 3.25%	2.80% to 3.25%

To arrive at assumptions for expected long term rates of return on assets in the pension plan and the postretirement benefit plan, the University considered historical returns and future expectations for returns in each asset class in the asset allocation for the previously described pension and postretirement benefit portfolios.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Assumed health care cost trend rates have a significant effect on the amounts reported for the other postretirement benefit plan. A one-percentage-point change in the assumed health care cost trend rates would have had the following effect:

	1 - %-point increase	1 - %-point decrease
Effect on total service and interest cost	\$ 2,901	\$ (2,440)

Expected Cash Flows

Information about the expected cash flows for the plans is as follows:

	Pension Benefits	Other Postretirement Pension Benefits
University contributions:		
2015 (expected)	\$ 7,568	\$ 4,667
Expected benefit payments:		
2015	6,159	9,330
2016	6,447	9,384
2017	6,777	9,477
2018	7,119	9,406
2019	7,474	9,223
2020-2024	43,776	48,452
Total	<u>\$ 77,752</u>	<u>\$ 95,272</u>

Total benefits expected to be paid include both the University's share of the benefit cost net of Medicare subsidies and the participants' share of the cost, which is funded by participant contributions to the other postretirement benefit plan. The University receives a Medicare Part D subsidy from the federal government as reimbursement for certain retiree health benefits paid to plan participants of approximately \$0.3 million per year.

14. Lease Obligations

The University is the lessee of various equipment and space under noncancelable operating and capital leases. Capital lease obligations at June 30, 2014 and 2013, were \$124.1 million and \$120.4 million, respectively. Operating lease rental expense for the years ended June 30, 2014 and 2013 were approximately \$35.9 million and \$37.0 million, respectively. Space leases contained customary escalation clauses, which are included in annual aggregate minimum rentals.

Future aggregate minimum rental payments under operating and capital leases are as follows:

	Operating	Capital
Future minimum rental payments:		
2015	\$ 33,417	\$ 8,949
2016	27,570	8,601
2017	25,293	8,234
2018	23,581	6,774
2019	22,313	5,843
Thereafter	258,667	244,118
Less: Interest at 1.48 percent to 5.31 percent		<u>(158,423)</u>
Capital lease obligations at June 30, 2014		<u>\$ 124,096</u>

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

15. Conditional Asset Retirement Obligations

Conditional asset retirement obligations are a legal obligation to perform an asset retirement activity in which the timing and/or method of settlement are conditional on a future event that may or may not be within the control of the entity. Uncertainty with respect to the timing and/or method of settlement of the asset retirement obligation does not defer recognition of a liability. GAAP requires that the fair value of a liability for a conditional asset retirement obligation be recognized in the period in which it occurred if a reasonable estimate of fair value can be made.

Conditional asset retirement obligations related to remediation or disposal of asbestos, underground storage tanks, soil, and radioactive sources and equipment were \$110.9 million and \$106.3 million at June 30, 2014 and 2013, respectively. For June 30, 2014, the University increased its obligation for certain environmental remediation that was not reasonably estimable as to the amount of the potential obligation in prior years.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

16. Bonds and Notes Payable

Bonds and notes payable outstanding at June 30, 2014 and 2013, are as follows:

	2014	2013
Dormitory Authority of the State of New York, tax exempt revenue bonds, Columbia University issues		
Series 2012 A, 3.00% to 5.00%, maturing 2023	\$ 137,935	\$ 137,935
Series 2011 A, 3.00% to 5.00%, maturing 2042	300,000	300,000
Series 2009 A, variable rate, 0.02% to 0.10%, maturing 2040	117,000	117,000
Series 2008 A, 5.00%, maturing 2038	200,000	200,000
Series 2006 A, 4.75% to 5.25%, maturing 2031	183,860	190,630
Series 2006 B, 4.125% to 5.25%, maturing 2022	110,050	122,970
Series 2004 A2, 5.00%, maturing 2014		12,150
Series 2004 B, 4.75% to 5.125%, maturing 2024		66,130
Series 2004 C, 5.00%, maturing 2029	48,270	48,270
Series 2003 B, variable rate, 0.02% to 0.11%, maturing 2028	30,000	30,000
Series 2002 C, variable rate, 0.05% to 0.10%, maturing 2027	23,300	23,300
	<u>1,150,415</u>	<u>1,248,385</u>
Taxable Series 2012, 3.827%, maturing 2043	100,000	100,000
Taxable commercial paper		
2008, variable rate, 0.10% to 0.12%, maturing 2015	61,175	
Dormitory Authority of the State of New York, tax-exempt commercial paper		
Series 1997, variable rate, 0.03% to 0.09%, final maturity 2015	1,225	7,440
New Jersey Economic Development Corporation		
Series 2002, variable rate, 0.05% to 0.10%, final maturity 2028	6,770	7,155
Medium-Term Notes, Taxable Series C 6.53% to 7.36%, maturing 2022	77,709	90,239
Empire State Development Corporation Issues:		
Interest-free, maturing 2029	7,330	7,577
Interest-free, maturing 2016	8,100	8,100
Economic Development Corporation		
Interest-free, maturing 2016	10,000	10,000
	<u>272,309</u>	<u>230,511</u>
Total bonds and notes payable	<u><u>\$ 1,422,724</u></u>	<u><u>\$ 1,478,896</u></u>

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

Estimated principal payments on bonds and certificates are summarized below:

Year	Principal
2015	\$ 96,284
2016	68,253
2017	33,169
2018	47,037
2019	59,924
Thereafter (through 2043)	1,118,057
Total	\$ 1,422,724

At June 30, 2014, the University's bonds and notes payable had a carrying amount of approximately \$1.4 billion, compared to an estimated fair value of \$1.5 billion. The estimated fair value of bonds and notes payable was calculated using a discounted cash flow method, where the estimated cash flows were based on contractual principal and interest payments. The discount rates used were based on the University's borrowing rate for similar obligations. Fair values represent the lower of the estimated value at call or maturity of each respective issue.

As of June 30, 2014, the University had a \$100 million operating line of credit, which expires in December, 2014. Additionally, as of June 30, 2014, the University had two \$100 million standby lines of credit supporting self-liquidity for variable rate debt outstanding, one that expires in January, 2016 and a second that expires in January, 2017. Each of the lines is with a different lending institution and, as of June 30, 2014, no balances were outstanding on the lines of credit.

The University issues most of its tax-exempt debt through the Dormitory Authority of the State of New York ("DASNY"). The University has not issued tax-exempt debt since 2012.

The University chose to redeem Series 2004B bonds totaling \$61.2 million with a call date of July 1, 2014. The redeemed bonds were legally defeased and, as such, are not reflected in "Bonds and notes payable" at June 30, 2014.

The University has a \$150 million taxable commercial paper program. In June 2014, the University funded the redemption of its Series 2004B bonds with taxable commercial paper. As of June 30, 2014, \$61.2 million of taxable commercial paper was outstanding.

On October 1, 2008, the University entered into a \$200 million notional value forward starting, fixed payor swap agreement to protect against the risk of interest rate changes. The estimated fair value of the liability was (\$58.1) million and (\$55.2) million at June 30, 2014 and 2013, respectively. The fair value of the swap is obtained by taking the present value of all future cash flows on the swap implied by the forward curve.

The University has administrative covenants with which it was in compliance as of June 30, 2014 and 2013.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

17. Insurance

In connection with managing financial risks through various third-party insurance programs, the University is self-insured in certain areas. Funded self-insurance liabilities primarily cover deductibles on general liability and property insurance claims. Self-insurance liabilities are actuarially calculated on an annual basis. The University's core liability coverage is purchased through Pinnacle RRG, a Vermont-based risk retention group with fifteen other universities.

The University obtains medical malpractice insurance through MCIC and MLMIC. MCIC is a group-captive insurance company owned by the University, Johns Hopkins, Yale, Rochester, and Weill Cornell Medical School and their respective major teaching hospitals, including NYP. MLMIC is a mutual company where policyholders are owners, with full voting rights to elect the company's Board of Directors, thereby having direct input into vital areas of operation. The governing Board is comprised primarily of practicing physicians, dentists, and hospital administrators. More than 1,134 of the University's faculty physicians and dentists are enrolled in MCIC or MLMIC. The University has recorded self-insurance and medical malpractice liabilities of approximately \$257.7 million and \$254.3 million as of June 30, 2014 and 2013, respectively. The medical malpractice liabilities of approximately \$175.0 million and \$173.2 million as of June 30, 2014 and 2013, respectively, are reported gross with an offsetting receivable for anticipated recoveries of \$111.1 million and \$109.0 million, respectively, recorded in Other assets.

18. Related Party Transactions

The University maintains several clinical and education affiliation agreements with other organizations. Revenues and expenses from these agreements are accounted for in the operating activities segment of the Consolidated Statement of Activities. The most significant affiliation agreement is with NYP.

The University has an alliance dating back to 1921 with Presbyterian Hospital, which merged with New York Hospital effective January 1, 1998, and formed the new corporate entity called New York-Presbyterian Hospital. The University provides NYP with medical, professional, and supervisory staff as well as other technical assistance. These services are reimbursed by NYP. NYP provides funding to the clinical departments for specific purposes, including administration, supervision, and teaching of the NYP resident staff and salary support for faculty and staff providing services to NYP. In addition, NYP provides funding for clinical programs that the University and NYP would like to see developed or expanded. NYP also provides the departments with certain facilities and services (outpatient faculty practice offices, nursing, telecommunications, etc.) for which the University is invoiced on a monthly basis. Finally, the University and NYP collaborate and fund joint projects for which specific agreements are negotiated.

In addition the University and NYP negotiate a joint budget, which forms the basis for the reimbursement agreement. The fiscal year 2014 joint budget was approximately \$243 million. The payments to NYP for goods and services were \$87 million. The majority of revenues received pursuant to this reimbursement arrangement for services rendered are reflected in the consolidated financial statements as a portion of "Patient care revenue." The majority of the expenses related to this agreement are reflected in "Patient care expense."

The University records both receivables from and payables to NYP on the Consolidated Balance Sheet. The University has no liability for obligations and debt incurred by NYP.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

The University has financial arrangements with several physician professional corporations (“PCs”), whereby the University provides facilities and other services to these PCs for a negotiated fee. These PCs provide clinical services to patients and are owned and controlled by physicians who are also faculty members of the University. These non-controlled PCs generated revenue of approximately \$72 million and \$70 million during fiscal year 2014 and 2013, respectively, which has not been consolidated into the University’s consolidated financial statements. The University is also the sole corporate member of two not-for-profit practice entities and a professional corporation and as such, consolidates these entities into the University’s consolidated financial statements.

Pursuant to the consent of the Trustees of the CPMC Fund, Inc., during fiscal 2013, the CPMC Fund, Inc. transferred to the University eight endowments previously held for CPMC Fund, Inc. for the University. The value of the endowments at the time of transfer was \$13.4 million, with \$2.7 million being permanently restricted. There were no transfers from the CPMC Fund, Inc. to the University during fiscal 2014.

19. Contingencies and Commitments

From time to time, various claims and suits generally incident to the conduct of normal business are pending or may arise against the University.

In the opinion of counsel and management of the University, after taking into account insurance coverage, losses, if any, from the resolution of pending litigation should not have a material effect on the University’s financial position or results of operations.

All funds expended in connection with government grants and contracts are subject to audit by government agencies. While the ultimate liability, if any, from audits of government grants and contracts by government agencies, claims, and suits is presently not determinable, it should not, in the opinion of counsel and management, have a material effect on the University’s financial position or results of activities.

The University is subject to laws and regulations concerning environmental remediation and will, from time to time, establish reserves for potential obligations that management considers probable and for which reasonable estimates can be made. As of June 30, 2014, the University has recorded \$110.9 million for conditional asset retirement obligations. These estimates may change depending upon the nature and extent of contamination, appropriate remediation technologies, and regulatory approvals. The University is not aware of any existing conditions that it currently believes are likely to have a material adverse effect on the University’s financial position, changes in net assets, or cash flows.

The University’s capital improvement program and related commitments includes projects that address the major strategic objectives of the University. As part of the capital improvement program, the University has entered into contracts to purchase properties with an aggregate value of \$37.4 million. As of June 30, 2014 approximately \$29.6 million is still outstanding.

The University has made commitments related to its expansion in Manhattanville, certain of which are based upon events in the future which would result in cash and in-kind payments from the University.

The Trustees of Columbia University in the City of New York
Notes to the Consolidated Financial Statements
For the Years Ended June 30, 2014 and 2013
(in thousands of dollars)

The University offered a loan program for students and families to pay tuition, fees and other costs. Loans were issued by a private lending institution and are guaranteed by the University. Upon default by the borrower, the University is required to pay all or a portion of the outstanding loan balance. The amount guaranteed is \$2.3 million and \$2.9 million as of June 30, 2014 and 2013, respectively.

The University has performed an evaluation of subsequent events through October 14, 2014, which is the date the consolidated financial statements were issued.

20. Expense Allocation by Program

Expenses are reported for the University's primary program activities. The consolidated financial statements also report certain categories of expenditures that support more than one major program of the University. These expenses include operation and maintenance of plant, depreciation expense, and interest expense.

These costs are allocated to the applicable program activities as indicated in the following chart:

	2014			2013		
	Expenses per Statement of Activities	Allocation	Final Allocated Expenses	Expenses per Statement of Activities	Allocation	Final Allocated Expenses
Instruction and educational administration	\$ 1,412,326	\$ 188,907	\$ 1,601,233	\$ 1,296,089	\$ 198,431	\$ 1,494,520
Research	549,481	106,530	656,011	556,940	93,846	650,786
Patient care expense	769,544	40,247	809,791	747,032	33,540	780,572
Library	64,587	38,880	103,467	62,221	38,780	101,001
Operation and maintenance of plant	208,083	(208,083)		207,508	(207,508)	
Institutional support	212,418	26,100	238,518	230,558	24,687	255,245
Auxiliary enterprise	126,403	46,565	172,968	106,858	47,623	154,481
Depreciation expense	191,984	(191,984)		182,013	(182,013)	
Interest expense	47,162	(47,162)		47,386	(47,386)	
Other	23,791		23,791	23,412		23,412
	<u>\$ 3,605,779</u>		<u>\$ 3,605,779</u>	<u>\$ 3,460,017</u>		<u>\$ 3,460,017</u>

The allocation of operation and maintenance of plant is based on square footage occupancy with the exception of certain rent costs directly attributable to patient care expense. Depreciation expense includes depreciation of buildings and building improvements and equipment. The allocation of depreciation on buildings and building improvements is based on square footage occupancy. Depreciation on equipment is allocated to the programs for which the equipment was purchased. Interest expense is allocated according to the same methodologies used for building depreciation.

Supplemental Schedule

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

	R&D Cluster			
Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
RESEARCH & DEVELOPMENT CLUSTER				
Department of Health & Human Services				
Direct Awards				
Centers for Disease Control and Prevention				
Columbia University CISA Center	93.	CDC 200-2012-53665/0002		466,775
Tuberculosis Trials Consortium	93.	CDC 200-2009-32593		347,434
Columbia University CISA Center	93.	CDC 200-2012-53665/0002		195,554
Columbia University CISA Center	93.	CDC 200-2012-53665/0002		163,231
A Prospective Comprehensive Epidemiologic Study in a Large Cohort in the National ALS Registry: Identifying ALS Risk Factors	93.	CDC 200-2013-56886		120,501
Columbia University CISA Center	93.	CDC 200-2012-53665/0002		59,483
Evaluation of New Interferon γ Release Assays in the Diagnosis of Latent Tuberculosis Infection in Healthcare workers:18	93.	CDC 2002001000760018		-65
Department of Health & Human Services				
Child Poverty and Metrics of Child Well-Being	93.	DHHS CU13-0166		55,182
				\$1,408,095
Training in General, Pediatric, and Public Health Dentistry				
Faculty Development in General, Pediatric & Public Health Dentistry & Dental Hygiene	93.059	5 D86HP24475-03-00		468,547
Faculty Development in General, Pediatric & Public Health Dentistry & Dental Hygiene	93.059	5 D86HP24475-03-00		25,000
				\$493,547
Food and Drug Administration Research				
Phase 2 Study of Vitamin D for Tx of Respiratory Complications in Sickle Cells Ds	93.103	5R01FD003894-04		412,330
Phase 2 Teriparatide for Tx of Idiopathic Osteoporosis in Premenopausal Women	93.103	5R01FD003902-02		394,186
Treatment of Hypoparathyroidism with Parathyroid Hormone	93.103	5R01FD002525-07		254,449
High-T susceptometer to monitor transfusional iron overload (NSR device)	93.103	5R01FD003702-04		175,952
Phase II Trial Tiopronin Aneurysmal Subarachnoid Hemorrhage	93.103	5R01FD003728-03		13,596
				\$1,250,513
Maternal and Child Health Federal Consolidated Programs				
TEXTFLUENZA: Using Technology to Promote Flu Vaccination In Underserved Maternal and Child Populations	93.110	4R40MC17169-03-04		146,262
Leadership Training in Pediatric Dentistry	93.110	5 T17MC06359-07-02		31,440
				\$177,702
Nurse Anesthetist Traineeships				
Nurse Anesthetist Traineeship Program	93.124	1A22HP26001-01-00		28,723
				\$28,723
Grants to Increase Organ Donations				
Clinical Interventions to Increase Organ Procurement	93.134	5 R38OT10588-03-02		-785
				\$-785

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Centers for Research and Demonstration for Health Promotion and Disease Prevention				
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		354,457
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		311,941
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		300,781
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		267,119
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		230,655
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		118,542
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		71,560
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		6,514
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		-589
Category I: Technology and Community-Based Approaches to Improve Health in Harlem	93.135	5U48DP001916-05		-3,829
				\$1,657,151
Injury Prevention and Control Research and State and Community Based Programs				
Columbia Injury Control Research Center	93.136	5R49CE002096-03		193,201
Columbia Injury Control Research Center	93.136	5R49CE002096-03		156,034
Columbia Injury Control Research Center	93.136	5R49CE002096-03		149,272
Columbia Injury Control Research Center	93.136	5R49CE002096-03		142,449
Columbia Injury Control Research Center	93.136	5R49CE002096-03		131,266
Child Pedestrian Injuries and Built Urban Environment: Evaluation of a Safe Route to School Program.	93.136	5R21CE001816-02R1		40,631
Columbia Injury Control Research Center	93.136	5R49CE002096-03		19,371
Columbia Injury Control Research Center	93.136	5R49CE002096-03		8,500
Columbia Injury Control Research Center	93.136	5R49CE002096-03		8,484
Columbia Injury Control Research Center	93.136	5R49CE002096-03		7,974
Columbia Injury Control Research Center	93.136	5R49CE002096-03		6,258
Columbia Injury Control Research Center	93.136	5R49CE002096-03		5,274
Columbia Injury Control Research Center	93.136	5R49CE002096-03		1,696
Columbia Injury Control Research Center	93.136	5R49CE002096-03		1,501
				\$871,911
AIDS Education and Training Centers				
New York/New Jersey AIDS Education and Training Center	93.145	5H4AHA00071-11-00		2,707,951
New York/New Jersey AIDS Education and Training Center	93.145	5H4AHA00071-11-00		789,496
New York/New Jersey AIDS Education and Training Center	93.145	5H4AHA00071-11-00		-3,185
				\$3,494,262
Immunization Research, Demonstration, Public Information and Education Training and Clinical Skills Improvement Projects				
Text 4 Health-Kids: Text Message Reminder-Recalls for Early Childhood Vaccination	93.185	5U01IP000313-02		34,521
				\$34,521

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Research on Healthcare Costs, Quality and Outcomes				
WICER 4U	93.226	1R01HS022961-01		349,719
Addressing Hospital Patient Information Needs Using a PHR Portal	93.226	5R01HS021816-02		314,704
Keep It Clean for Kids: The KICK Project	93.226	5R01HS021470-03		267,189
Keep It Clean for Kids: The KICK Project	93.226	5R01HS021470-03		113,421
DEVISE: Data Exchange of Vaccine Information between an IIS and EHR	93.226	1R18HS022667-01		77,565
Validation of Nurse Practitioner Primary Care Organizational Climate Questionnaire	93.226	5R03HS020999-02		34,721
Flu Alert: Influenza Vaccine Alerts for Providers in the Electronic Health Record	93.226	5 R18 HS018158-03		28,330
Hospital and County-Level Predictors of Immediate Breast Reconstruction Post-Mastectomy	93.226	1R36HS021709-01		17,173
Determining a Learning Curve for Complex Laparoscopic Gastrointestinal Surgery	93.226	5R03HS021549-02		12,273
Keep It Clean for Kids: The KICK Project	93.226	5R01HS021470-03		4,881
THE SPATIOTEMPORAL ANATOMY OF SEASONAL INFLUENZA IN THE UNITED STATES, 1968-2007	93.226	1 R36 HS021085-01		-76
				\$1,219,900
Advanced Nursing Education Grant Program				
TRaining Nurse Scientists in Interdisciplinary & translational Research in the Underserved (TRANSIT)	93.247	5 D09 HP14667-03-01		-1,732
				\$-1,732
Centers for Disease Control and Prevention Investigations and Technical Assistance				
MOSAIC: Mobile Surveillance for ARI and ILI in the Community	93.283	5U01IP000618-01		634,677
MOSAIC: Mobile Surveillance for ARI and ILI in the Community	93.283	5U01IP000618-01		212,834
				\$847,511
Health Resources and Services Administra				
ARRA -4S02MC19289-01-02	93.418	4S02MC19289-01-02		515,156
				\$515,156
Social Services Research and Demonstration				
Child Care and Early Education Research Connections	93.647	90YE0104-05-05		591,362
Examining the Impact of Policy Changes on Child Care Subsidy Receipt and Child Care Stability among Low-Income Families with Young Children in Illinois	93.647	90PD0274-01-00		32,584
				\$623,946
Recovery Act Comparative Effectiveness Research - AHRQ				
ARRA -1R01HS019853-03	93.715	1R01HS019853-03		816,031
ARRA -1R01HS019384-01	93.715	1R01HS019384-01		365,407
ARRA -1R01HS019384-01	93.715	1R01HS019384-01		93,437
ARRA -1R01HS019853-03	93.715	1R01HS019853-03		86,516
ARRA -1R01HS019384-01	93.715	1R01HS019384-01		60,512
ARRA -1R01HS019384-01	93.715	1R01HS019384-01		37,097
				\$1,459,000
ARRA - Health Information Technology Professionals in Health Care				

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
ARRA -1T15OC000060-01	93.721	1T15OC000060-01		130,570
ARRA -90CD0003/01-04	93.721	90CD0003/01-04		-69
				\$130,501

Grants for Primary Care Training and Enhancement

Postdoctoral Training in General, Pediatric and Public Health Dentistry and Dental Hygiene	93.884	5 D88HP20109-05-00		430,378
Predoctoral Training in General, Pediatric, and Public Health Dentistry and Dental Hygiene	93.884	5 D85HP20031-05-00		318,794
Faculty Development in Primary Care	93.884	5D55HP05154-08-00		158,858
Faculty Development in Primary Care	93.884	5D55HP05154-08-00		119,855
Postdoctoral Training in General, Pediatric and Public Health Dentistry and Dental Hygiene	93.884	5 D88HP20109-05-00		5,001
Predoctoral Training in General, Pediatric, and Public Health Dentistry and Dental Hygiene	93.884	5 D85HP20031-05-00		2,999
Faculty Development in Primary Care	93.884	5D55HP05154-08-00		-2,568
				\$1,033,317

HIV Demonstration, Research, Public and Professional Education Projects

PS11-003: Minority AIDS Research Initiative (MARI)	93.941	5U01PS003321-04		171,232
Informing the Development of Mobile Apps for HIV Prevention, Treatment and Care	93.941	1U01PS003715-01		128,546
PS11-003: Minority AIDS Research Initiative (MARI)	93.941	5U01PS003321-04		118,908
				\$418,686

Epidemiologic Research Studies of Acquired Immunodeficiency Syndrome (AIDS) and Human Immunodeficiency Virus (HIV) Infection in Selected Population Groups

PS07-003, Minority HIV/AIDS Research Initiative (MARI)	93.943	5U01PS000700-04		844
				\$844

Total Direct Award Programs

\$15,662,769

Pass-through Awards

Biomedical Advanced Research and Develop

A Phase 1 , Open-label, Multi-center Study to Determine the Pharmacokinetics nd Safety of Solithromycin as ADD-on Therapy in Adolescents with Suspected or Confirmed Bacterial Infection	93.	DUKE 198109	HHS0100201300009C	1,766
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Centers for Disease Control and Prevention

Implementation & Evaluation of a Comprehensive Prevention with Positives Intervention at HIV Clinics	93.	UMIAM 66876H	CDC 200-2011-41981	26,483
Implementation & Evaluation of a Comprehensive Prevention with Positives Intervention at HIV Clinics	93.	UMIAM 66876H	CDC 200-2011-41981	17,181
Implementation & Evaluation of a Comprehensive Prevention with Positives Intervention at HIV Clinics	93.	UMIAM 66876H	CDC 200-2011-41981	9,411

Department of Health & Human Services

High-Throughput Bodosimetry After Radiological and Nuclear Events	93.	NGC 8140000583	HHSO100201000002C	935,121
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Health Resources and Services Administration

Heritable Disorders in Newborns and Children and Newborn Screening and Early Childhood Screening Programs	93.	CDUKE 3839526	HSHS250201200027C	37,665
HRSAs, Dept of Health and Human Services Sec Advisory Cmte on Heritable Disorders in Newborns & Children and Newborn Screening & Early Childhood Screening Pgms, Contract No. HSHS2502012	93.	ARLLC CU13-3598	HSHS250201200027C	25,109
				\$1,052,736

Birth Defects and Developmental Disabilities - Prevention and Surveillance

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Prevalence of Developmental Disabilities among Children with Epilepsy in Rural Populations	93.073	KUCR FY2009-057-M7	AUCD RTOI 2008-01-01	3,194
				\$3,194

Food and Drug Administration Research

Phase 2 Study of Abatacept with Calcineurin Inhibition and Methotrexate for GVHD	93.103	SCH 10970SUB	7R01FD004099-02	11,859
Development of Major Depressive Disorder Standard Data Elements	93.103	Duke 2039561	1R24FD004656-01	8,070
Phase 2 Study of Rasagiline for Treatment of Amyotrophic Lateral Sclerosis	93.103	QBB59730	1R01FD003739-01A3	2,539
Etanercept for Acute Kawasaki Disease	93.103	SCRI 10169SUB	R01 FD003526-03	2,400
				\$24,868

National Research Service Award in Primary Care Medicine

NRSA for Primary Medical Care	93.186	5T32HP10260-06-00	5T32HP10260-05-00	137,452
NRSA for Primary Medical Care	93.186	5T32HP10260-06-00	5T32HP10260-05-00	10,250
NRSA for Primary Medical Care	93.186	5T32HP10260-06-00	5T32HP10260-05-00	-2,994
				\$144,708

Research on Healthcare Costs, Quality and Outcomes

Center for Education and Research on Mental Health Therapeutics	93.226	RUTGER 5113	U19 HS021112-01	123,598
Comparative Effectiveness of Surgical Treatments for Lung Cancer in the Elderly	93.226	MSSM 0254-5684-4609	5R01HS019670-03	41,467
Youth Providers 2.0 (YP2)	93.226	SAHM CU12-1565	1R18HS021943-01	41,243
Comparative Effectiveness of Surgical Treatments for Lung Cancer in the Elderly	93.226	MSSM 0254-5684-4609	5R01HS019670-03	18,773
Collaboration to Advance Pediatric Quality Measures (CAPQuaM)	93.226	ISMMS 0254-5693-4609	5U18HS020518-03	8,003
Center for Education and Research on Mental Health Therapeutics	93.226	RUTGER 5113	U19 HS021112-01	7,829
Multi-Center Validation of an Implicit Review Instrument to Measure Quality of Care Provided to Children in the Emergency Department	93.226	UCD CU10-1003	R01 JS019712-01	2,174
Effects of Missing Data Strategies on Disparities Research Results in HCUP SID	93.226	HSS 1	1R01HS021734-01A1	960
				\$244,047

Substance Abuse and Mental Health Services Projects of Regional and National Significance

Implementing Pharmacotherapies for Opioid Dependence: Collaborative Strategies for Training Health Professionals	93.243	AAAP 5-27003-005	1U79TI024697-01	75,485
				\$75,485

Occupational Safety and Health Program

Epigenetic Links in PTSD and Respiratory Disease in WTC Responders	93.262	SUNYSB 65502/1112346/2	U01OH010416	199,115
World Trade Center Research	93.262	QCCUNY 41799-A	CDC 200-2011-41826	138,163
Epigenetic Links in PTSD and Respiratory Disease in WTC Responders	93.262	SUNYSB 65502/1112346/2	U01OH010416	136,010
World Trade Center Research	93.262	QCCUNY 41799-A	CDC 200-2011-41826	120,256
Biomarkers of Psychological Risk and Resilience in World Trade Center Responders	93.262	MSSM 0254-5742-4609	1U01OH010407-01	57,368
Trace elements in autopsy tissues in WTC decedents	93.262	NYU 12-02605	1U01OH010395-01A1	43,314
Biomarkers of Psychological Risk and Resilience in World Trade Center Responders	93.262	MSSM 0254-5742-4609	1U01OH010407-01	6,529
				\$700,755

Centers for Disease Control and Prevention Investigations and Technical Assistance

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
SOCIOECONOMIC STATUS, HEALTH CARE USE AND OUTCOMES IN EPILEPSY	93.283	UTEXHOUS S3031-23/23	5 U36-CCU300430-25	-5,276
				\$-5,276
Teenage Pregnancy Prevention Program				
Engender Health	93.297	ENGENDER PSA-655-01	5 TP2AH000001-02-00	167,036
Teenage Pregnancy Prevention: (Tier 2) with Native Youth	93.297	UCOL FY11-355.001	1 TP2AH0003-01-00	61,988
Teenage Pregnancy Prevention: (Tier 2) with Native Youth	93.297	UCOL FY11-355.001	1 TP2AH0003-01-00	29,333
				\$258,357
Promoting Safe and Stable Families				
Improving Service Delivery to youth in the child welfare system	93.556	RIFPA CU11-2269	HHS-2011-ACF-ACYF-CW-0186	105,613
Improving Service Delivery to youth in the child welfare system	93.556	RIFPA CU11-2269	HHS-2011-ACF-ACYF-CW-0186	67,415
				\$173,028
Recovery Act Comparative Effectiveness Research - AHRQ				
ARRA -RUTGER 4207	93.715	RUTGER 4207	R18 HS019937-01	30,284
ARRA -RUTGER 4207	93.715	RUTGER 4207	R18 HS019937-01	9,119
				\$39,403
Microbiology and Infectious Diseases Research				
VACCINE SAFETY SURVEILLANCE AND ASSESSMENT	93.856	AAHP 200-2002-00732	CDC 200-2002-00732	-748
				\$-748
PPHF-2012 Geriatric Education Centers				
Alzheimer Disease Supplemental	93.969	MSSM 0253-6156-4609	5UB4HP19194-02-00	46,604
Alzheimer Disease Supplemental	93.969	MSSM 0253-6156-4609	5UB4HP19194-02-00	12,988
				\$59,592
Total Pass-through Programs				\$2,770,149
Total: Department of Health & Human Services (Excluding NIH)				\$18,432,918
National Institute of Health				
Direct Awards				
National Heart, Lung, and Blood Institute				
Multi-Ethnic Study of Atherosclerosis (MESA)- Field Center	93.	N01-HC-95161		633,559
Subpopulations and Intermediate Outcome Measure in COPD Study (SPIROMICS: Clinical Center)	93.	HHSN268200900017C		443,495
Subpopulations and Intermediate Outcome Measure in COPD Study (SPIROMICS: Clinical Center)	93.	HHSN268200900017C		266,743
Subpopulations and Intermediate Outcome Measure in COPD Study (SPIROMICS: Clinical Center)	93.	HHSN268200900017C		31,770
Subpopulations and Intermediate Outcome Measure in COPD Study (SPIROMICS: Clinical Center)	93.	HHSN268200900017C		17,567
Subpopulations and Intermediate Outcome Measure in COPD Study (SPIROMICS: Clinical Center)	93.	HHSN268200900017C		14,052
National Institute of Allergy and Infectious Disease				
Columbia Partnership for Prevention and Control of HIV/AIDS Clinical Trials Unit (Columbia Partnership CTU)	93.	2UM1AI069470-08		579,412

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Columbia Partnership for Prevention and Control of HIV/AIDS Clinical Trials Unit (Columbia Partnership CTU)	93.	2UM1AI069470-08		409,615
Columbia Partnership for Prevention and Control of HIV/AIDS Clinical Trials Unit (Columbia Partnership CTU)	93.	2UM1AI069470-08		207,783
Columbia Partnership for Prevention and Control of HIV/AIDS Clinical Trials Unit (Columbia Partnership CTU)	93.	2UM1AI069470-08		117,600
National Institute of Child Health and Human Development				
ARRA -HHSN275200800013C	93.	HHSN275200800013C		822,766
Central Lab for the Nestorone/Estradiol-releasing Vaginal Ring for Female Contraception	93.	275201100042U-0-0-1		407,741
ARRA -HHSN275200800013C	93.	HHSN275200800013C		397,786
The National Standard for Normal Fetal Growth	93.	HHSN275200800013C		361,944
Core Function Activities	93.	HHSN2752013000101		272,096
Central Lab for the Nestorone/Estradiol-releasing Vaginal Ring for Female Contraception	93.	275201100042U-0-0-1		132,982
Core Function Activities	93.	HHSN2752013000101		57,646
National Institute of General Medical Sciences				
Recombination Rate Variation and Evolution in Primates	93.	2R01GM083098		98,953
National Institute of Mental Health/NIH/				
NIMH/NIH Professional Services Contract: Patterns of Psychotropic Utilization in the United States, 2004-2008	93.	HHSN 271201000725P		21,726
National Institute on Drug Abuse/NIH/DHH				
PILOT PROJECT IN PATIENTS PRE AND POSTOP AORTIC VALVE SURGER	93.	HHSN271201100704P		24,879
National Patterns and Trends in Psychotropic Medication Use	93.	HHSN271201200543P		9,677
Office of AIDS Research				
International MTCT - Plus Mothers and Children Cohort Study (IMACS)	93.	OAR 1B01NIAIDCU52002		95,782
				\$5,425,574
Environmental Health				
Intervening to Improve Birth Weight and Infant Respiratory Health in Rural Ghana	93.113	5R01ES019547-04		1,043,244
Molecular and Behavioral Effects of Low Level Mn Exposure	93.113	5R01ES010975-10		793,698
Black carbon exposure, DNA methylation, airway inflammation in pediatric asthma	93.113	5R01ES013163-08		783,726
Early-life Phthalate Exposure, Thyroid Function and Child Cognitive Development	93.113	5R01ES013543-09		656,848
Mechanism-based abrogation of BCC pathogenesis	93.113	5R01ES020344-03		598,048
Pre-and Postnatal PBDE Exposure, Thyroid Hormones, and Neurodevelopment	93.113	5R01ES021806-03		557,796
Multicenter ALS Cohort Study of Oxidative Stress and Disease Progression	93.113	5R01ES016348-05		470,188
NMDA Receptor Function in Lead Neurotoxicity	93.113	5R01ES006189-20		464,455
Prenatal Pyrethroid Exposure and Child Mental, Motor and Behavioral Development (Whyatt/Factor-Litvak)	93.113	5R01ES021482-02		462,495
Biological Markers of Aflatoxin Exposure and Methylation	93.113	5R01ES005116-23		424,703
Presynaptic Mechanisms of Lead Neurotoxicity	93.113	5R01ES020465-03		419,228
CEHNM - Admin Core	93.113	5P30ES009089-16		379,261
Cytoplasmic Damage and Genotoxicity	93.113	5R01ES012888-08		366,198

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Biomarkers for Arsenic Toxicity: Genetics, Epigenetics and Folate	93.113	5R01ES017875-04		270,280
CEHNM - Admin Core	93.113	5P30ES009089-16		213,594
Nutrients Involved in 1- Carbon Metabolism and the Methylation of Arsenic and DNA	93.113	5R00ES018890-05		208,002
Peripheral BDZ Receptor Biomarker of Neurotoxicity	93.113	5R01ES007062-16		206,221
CEHNM - Admin Core	93.113	5P30ES009089-16		199,651
Eff of a Major Climatic Evnt -Sprstrm Sandy on Preg Outcms and Telomere Length (Factor-Litvak/Monk)	93.113	5R21ES023582-02		193,478
Columbia Center for Children s Environmental Health - Admin Core	93.113	5P01ES009600-15		184,523
Assess the Effects of Pre- and Postnatal Exposure to the Organophosphorus	93.113	5R01ES015579-05		176,064
Columbia Center for Children s Environmental Health - Admin Core	93.113	5P01ES009600-15		167,515
CEHNM - Admin Core	93.113	5P30ES009089-16		164,113
Interdisciplinary Training in Environmental Health	93.113	5T32ES007322-12		157,110
Validating particulate matter monitors for multiple parameters	93.113	5R01ES020424-02		142,383
NMDA Receptor Function in Lead Neurotoxicity	93.113	5R01ES006189-20		129,754
CEHNM - Admin Core	93.113	5P30ES009089-16		128,636
Eff of a Major Climatic Evnt -Sprstrm Sandy on Preg Outcms and Telomere Length (Factor-Litvak/Monk)	93.113	5R21ES023582-02		126,783
Prenatal PAH Exposure and Genome-wide Methylation in a Cohort of Sibling-Pairs	93.113	5R00ES017051-05		121,745
Columbia Center for Children s Environmental Health - Admin Core	93.113	5P01ES009600-15		117,479
Intervening to Improve Birth Weight and Infant Respiratory Health in Rural Ghana	93.113	5R01ES019547-04		114,708
The Impact of Environmental Conditions on the Productivity of Agricultural Workers	93.113	5R21ES019670-02		112,164
High Throughput Technology for Assessing Global DSB Repair Capacity	93.113	5R21ES019494-02		106,164
CEHNM - Admin Core	93.113	5P30ES009089-16		95,172
Black carbon exposure, DNA methylation, airway inflammation in pediatric asthma	93.113	5R01ES013163-08		87,960
Multicenter ALS Cohort Study of Oxidative Stress and Disease Progression	93.113	5R01ES016348-05		87,269
Columbia Center for Children s Environmental Health - Admin Core	93.113	5P01ES009600-15		86,507
Role of ultraviolet radiation in Merkel cell carcinogenesis	93.113	5 R21 ES020060-02		85,171
CEHNM - Admin Core	93.113	5P30ES009089-16		82,123
CEHNM - Admin Core	93.113	5P30ES009089-16		81,056
Prenatal Factors and Risk of Autism in a Finnish National Birth Cohort	93.113	2R01ES019004-03A1		65,042
Columbia Center for Children s Environmental Health - Admin Core	93.113	5P01ES009600-15		63,729
Black carbon exposure, DNA methylation, airway inflammation in pediatric asthma	93.113	5R01ES013163-08		62,131
Biomarkers for Arsenic Toxicity: Genetics, Epigenetics and Folate	93.113	5R01ES017875-04		62,010
Columbia Center for Children s Environmental Health - Admin Core	93.113	5P01ES009600-15		59,765
Columbia Center for Children s Environmental Health - Admin Core	93.113	5P01ES009600-15		59,686
Peripheral BDZ Receptor: Biomarker of Neurotoxicity	93.113	5R01ES007062-14		55,657
CEHNM - Admin Core	93.113	5P30ES009089-16		54,801
Columbia Center for Children s Environmental Health - Admin Core	93.113	5P01ES009600-15		48,235

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Intervening to Improve Birth Weight and Infant Respiratory Health in Rural Ghana	93.113	5R01ES019547-04		46,409
Assessing the Impact of Clean Heat Policy Intervention in New York City	93.113	1R21ES024108-01		39,426
Developmental Effects of Early-life Exposure to Airborne PAHs	93.113	5R01ES015282-04		38,390
CEHNM - Admin Core	93.113	5P30ES009089-16		38,060
Columbia Center for Children's Environmental Health - Admin Core	93.113	5P01ES009600-15		37,572
CEHNM - Admin Core	93.113	5P30ES009089-16		37,222
CEHNM - Admin Core	93.113	5P30ES009089-16		36,947
CEHNM - Admin Core	93.113	5P30ES009089-16		36,659
CEHNM - Admin Core	93.113	5P30ES009089-16		33,531
CEHNM - Admin Core	93.113	5P30ES009089-16		33,452
CEHNM - Admin Core	93.113	5P30ES009089-16		31,662
Columbia Center for Children's Environmental Health - Admin Core	93.113	5P01ES009600-15		30,314
Columbia Center for Children's Environmental Health - Admin Core	93.113	5P01ES009600-15		28,011
CEHNM - Admin Core	93.113	5P30ES009089-16		26,164
Validating particulate matter monitors for multiple parameters	93.113	5R01ES020424-02		23,899
CEHNM - Admin Core	93.113	5P30ES009089-16		23,796
Validating particulate matter monitors for multiple parameters	93.113	5R01ES020424-02		23,047
CEHNM - Admin Core	93.113	5P30ES009089-16		22,142
Columbia Center for Children's Environmental Health - Admin Core	93.113	5P01ES009600-15		19,562
Intervening to Improve Birth Weight and Infant Respiratory Health in Rural Ghana	93.113	5R01ES019547-04		18,798
Columbia Center for Children's Environmental Health - Admin Core	93.113	5P01ES009600-15		16,518
CEHNM - Admin Core	93.113	5P30ES009089-16		16,170
Columbia Center for Children's Environmental Health - Admin Core	93.113	5P01ES009600-15		11,303
Phthalate Exposure and Inner City Pediatric Asthma	93.113	5R01ES014393-05		10,462
CEHNM - Admin Core	93.113	5P30ES009089-16		10,077
CEHNM - Admin Core	93.113	5P30ES009089-16		9,771
CEHNM - Admin Core	93.113	5P30ES009089-16		9,440
Assessing the Impact of Clean Heat Policy Intervention in New York City	93.113	1R21ES024108-01		9,240
CEHNM - Admin Core	93.113	5P30ES009089-16		8,053
Smart Miniaturized Personal Monitors for Black Carbon and Multiple Air Pollutants	93.113	5 U01 ES016110-04		7,845
CEHNM - Admin Core	93.113	5P30ES009089-16		6,934
CEHNM - Admin Core	93.113	5P30ES009089-16		5,796
THE ROLE OF AIRBORNE PAHS AND DEP IN THE PATHOGENESIS OF CHILDHOOD ASTHMA	93.113	5 P50 ES015905-05		5,771
CEHNM - Admin Core	93.113	5P30ES009089-16		5,569
CEHNM - Admin Core	93.113	5P30ES009089-16		5,181
CEHNM - Admin Core	93.113	5P30ES009089-16		4,420

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
CEHNM - Admin Core	93.113	5P30ES009089-16		2,913
CEHNM - Admin Core	93.113	5P30ES009089-16		2,754
CEHNM - Admin Core	93.113	5P30ES009089-16		2,472
CEHNM - Admin Core	93.113	5P30ES009089-16		2,272
Columbia Center for Children's Environmental Health - Admin Core	93.113	5P01ES009600-15		743
CEHNM - Admin Core	93.113	5P30ES009089-16		164
THE ROLE OF AIRBORNE PAHS AND DEP IN THE PATHOGENESIS OF CHILDHOOD ASTHMA	93.113	5 P50 ES015905-05		132
CENTER FOR ENVIRONMENTAL HEALTH IN NORTHERN MANHATTAN	93.113	5 P30 ES009089-13		-17
THE ROLE OF AIRBORNE PAHS AND DEP IN THE PATHOGENESIS OF CHILDHOOD ASTHMA	93.113	5 P50 ES015905-05		-21
Risk Factors Accounting for Neighborhood Differences in Asthma Prevalence	93.113	5 R01 ES014400-04		-30
Smart Miniaturized Personal Monitors for Black Carbon and Multiple Air Pollutants	93.113	5 U01 ES016110-04		-55
Center for Environmental Health in Northern Manhattan	93.113	5P30ES009089-14		-80
THE ROLE OF AIRBORNE PAHS AND DEP IN THE PATHOGENESIS OF CHILDHOOD ASTHMA	93.113	5 P50 ES015905-04		-438
THE ROLE OF AIRBORNE PAHS AND DEP IN THE PATHOGENESIS OF CHILDHOOD ASTHMA	93.113	5 P50 ES015905-05		-549
Center for Environmental Health in Northern Manhattan	93.113	5P30ES009089-14		-555
CENTER FOR ENVIRONMENTAL HEALTH IN NORTHERN MANHATTAN	93.113	5 P30 ES009089-13		-1,063
Center for Environmental Health in Northern Manhattan	93.113	5P30ES009089-14		-1,487
Center for Environmental Health in Northern Manhattan	93.113	5P30ES009089-14		-1,932
Prenatal Exposure to a Mixture of EDCs, Maternal Thyroid Function and Child Neurodevelopment	93.113	5K99ES020364-02		-1,955
Health Effects of Early-Life Exposure to Urban Pollutants in Minority Children	93.113	5 R01 ES008977-14		-3,455
THE ROLE OF AIRBORNE PAHS AND DEP IN THE PATHOGENESIS OF CHILDHOOD ASTHMA	93.113	5 P50 ES015905-05		-3,510
Health Effects of Early-Life Exposure to Urban Pollutants in Minority Children	93.113	5 R01 ES008977-14		-5,429
Intervening to Improve Birth Weight and Infant Respiratory Health in Rural Ghana	93.113	5R01ES019547-04		-6,399
THE ROLE OF AIRBORNE PAHS AND DEP IN THE PATHOGENESIS OF CHILDHOOD ASTHMA	93.113	5 P50 ES015905-05		-8,035
Columbia Center for Children's Environmental Health - Admin Core	93.113	5P01ES009600-15		-21,752
				\$12,518,870

Oral Diseases and Disorders Research

Engineering of Vascularized Bone	93.121	5R01DE018248-04		674,928
Oral Infections and Vascular Disease Epidemiology Study (INVEST)	93.121	5R01DE013094-13		585,968
Pre-clinical Models of Odontic Analogs by Endogenous Stem Cells	93.121	5R01DE023112-02		444,941
Oral Transmission of HIV through Breastfeeding	93.121	5R01DE021238-04		282,358
Estrogen Receptor Beta Regulation of Mandibular Condylar Growth	93.121	5R01DE020097-05		277,551
Oral Infections and Vascular Disease Epidemiology Study (INVEST)	93.121	5R01DE013094-13		218,649
Periodontitis Exposure and Risk of Incident Dementia	93.121	1R56DE022568-01A1		215,728
Periodontitis Exposure and Risk of Incident Dementia	93.121	1R56DE022568-01A1		204,719
HIV Testing in Dental Care Settings	93.121	7R01DE019615-04		204,086

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Subgingival Microbial Community Structure and Insulin Resistance	93.121	5R21DE022422-02		179,005
NIDCR Dentist Scientist K99: Improve TMJ Fibrocartilage Regeneration Strategies	93.121	5K99DE022060-02		146,604
Craniofacial Tissue Engineering	93.121	2R01DE016525-06A1		133,846
Bmi3 Transcription Factor Family in Osteoclastogenesis	93.121	5K08DE018968-06		128,858
MicroRNA expression in gingival tissues in periodontal health and disease	93.121	5R21DE021820-02		126,481
Periodontal Infections and Type 2 Diabetes Mellitus Risk	93.121	5R00DE018739-05		124,894
MicroRNA marker-based prognosis of oral cancer survival	93.121	5R03DE022797-02		123,633
Tight Adherence Genes of a Periodontal Pathogen	93.121	5R01DE014713-10		117,205
Multidisciplinary Training in TMJ Disorders/Pain: Integrating Basic, Translational and Clinical Science	93.121	1K12DE023583-01		70,558
Predictive Value of MicroRNAs in the Progression of Oral Leukoplakias	93.121	1R03DE023820-01		56,605
Developing a Decision Support System to Promote Tobacco Counseling by Dentists	93.121	5R34DE022293-02		51,977
Functional analysis of miRNAs during craniofacial dermal morphogenesis	93.121	5F31DE023472-02		42,706
Oral Infections and Vascular Disease Epidemiology Study (INVEST)	93.121	5R01DE013094-13		1,300
				\$4,412,600

NIEHS Superfund Hazardous Substances Basic Research And Education

Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		538,657
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		256,729
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		227,599
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		202,979
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		179,745
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		175,197
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		135,632
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		108,193
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		104,078
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		96,825
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		90,011
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		87,015
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		68,371
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		67,800
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		64,793
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		62,486
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		62,064
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		59,830
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		59,770
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		56,430
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		49,183

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		43,233
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		37,685
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		36,877
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		29,436
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		27,969
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		23,347
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		17,853
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		15,859
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		14,805
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		14,489
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		12,304
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		1,702
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		799
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		799
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		597
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		3
Health Effects and Geochemistry of Arsenic and Manganese	93.143	5P42ES010349-10		-139
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		-207
Health Effects and Geochemistry of Arsenic and Manganese - Administrative Core	93.143	5P42ES010349-13		-712
				\$3,030,086

Human Genome Research

Center for Research on Ethical, Legal and Social Implications of Psychiatric, Neurologic and Behavioral Genetics	93.172	5P50HG007257-02		793,047
Impact of return of incidental genetic test results to research participants in the genomic era	93.172	5R01HG006600-03		740,811
Inferring gene regulatory circuitry from functional genomics data	93.172	5R01HG003008-10		458,886
An Integrated System for Single Molecule Electronic Sequencing by Synthesis	93.172	1R01HG007415		337,599
Predictive Learning of Post-Transcriptional Networks	93.172	2R01HG03219-10		265,543
Integrated, multiplexed high-frequency electronic analysis of DNA in nanopores	93.172	5R01HG006879-03		189,128
Quantile Analysis on Human Complex Traits in GWAS and Sequencing Studies	93.172	5R03HG007443-02		49,913
Challenges of Informed Consent in Return of Data from Genomic Research	93.172	5R21HG006596-02		46,138
Inferring gene regulatory circuitry from functional genomics data	93.172	5R01HG003008-10		35,197
Center for ELSI research on Psychiatric, Neurologic, and Behavioral Genetics	93.172	5P20HG005535-03		34,801
Center for Research on Ethical, Legal and Social Implications of Psychiatric, Neurologic and Behavioral Genetics	93.172	5P50HG007257-02		8,353
Inferring gene regulatory circuitry from functional genomics data	93.172	5R01HG003008-08		2,124
LOW-COST ACTIVE CMOS BIOCHIPS FOR WHOLE GENOME ANALYSIS	93.172	5 R33 HG003089-05		1,375
STATISTICAL METHODS TO ASSESS THE ROLE OF RARE VARIANTS IN COMPLEX TRAITS	93.172	5 R03 HG005908-02		-478
Predictive learning of transcriptional networks	93.172	7 R01 HG003219-08		-6,507
				\$2,955,930

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Research Related to Deafness and Communication Disorders				
Regeneration in the olfactory system	93.173	5R01DC012567-02		793,484
Neural Coding and Perception of Learned Vocalizations	93.173	5R01DC009810-05		519,192
Observing Auditory Mechanics with Pressure and Motion Measurements	93.173	5R01DC003130-20		313,611
Untethering Electrophysiology in Vivo: An Optical Nanoscale Semiconductor Array for Neural Sensing and Recording	93.173	5R21DC012440-02		181,187
Observing Auditory Mechanics with Pressure and Motion Measurements	93.173	5R01DC003130-20		48,513
Exploring Otoacoustic Emissions with Intracochlear Pressure and Motion Measurements	93.173	5R01DC011506-02		10,892
CRCNS: INPUT/OUTPUT CHARACTERIZATION OF THE ANTENNAL LOBE OF THE DROSOPHILA	93.173	5 R01 DC008701-05		-2,395
				\$1,864,484
Research and Training in Complementary and Alternative Medicine				
Acupuncture of Armatase Inhibitor Related Arthralgias in Breast Cancer Patients	93.213	5R01AT006376-04		334,189
Acupuncture of Armatase Inhibitor Related Arthralgias in Breast Cancer Patients	93.213	5R01AT006376-04		248,472
Acupuncture of Armatase Inhibitor Related Arthralgias in Breast Cancer Patients	93.213	5R01AT006376-04		-17,386
				\$565,275
National Center on Sleep Disorders Research				
Reducing Sleep Disparities in Urban, Minority School-Aged Children	93.233	5R01HL092856-05		598,602
VASCULAR ENDOTHELIAL ACTIVATION IN SLEEP APNEA	93.233	5R01HL106041-04		491,460
Reducing Sleep Disparities in Urban, Minority School-Aged Children	93.233	5R01HL092856-05		79,781
				\$1,169,843
Mental Health Research Grants				
The Conte Center for Schizophrenia Research	93.242	5P50MH086385-04		1,521,693
Biosignatures of Treatment Remission in Major Depression	93.242	5U01MH092250-04		1,289,206
Mapping Genes for Schizophrenia in a Founder Population	93.242	5R01MH061399-12		882,342
2/2 A Comparison of Long-Acting Injectable Medications for Schizophrenia-ACLAIMS	93.242	5R01MH081107-06		853,561
The Conte Center for Schizophrenia Research	93.242	5P50MH086385-04		795,519
Neurobiology of Depression and Antidepressants	93.242	5R01MH040695-22		741,466
Neurophysiology underlying neural representations of value	93.242	5R01MH082017-07		726,857
Multi-Level Determinants of Late ART Initiation in sub-Saharan Africa	93.242	5R01MH089831-05		696,692
The Cross-National Epidemiology of Trauma Exposure and PTSD	93.242	5R01MH093612-03		646,589
Interagency Collaboration to Implement Effective Behavioral Interventions-DEBIs	93.242	5R01MH095676-03		644,894
The Effects of Prenatal Stress & Poor Nutrition on Brain and Cognition	93.242	5R01MH093677-03		635,664
Longitudinal Imaging of Patients at Clinical Risk for Psychosis	93.242	5R01MH093398-04		621,807
The Antidepressant Action of Ketamine: Brain Chemistry and Sustaining Remission	93.242	5R01MH093637-04		575,037
Efficacy Trial of a Brief Health Enhancement Intervention for Newly Diagnosed Men (Wilson/Hansen)	93.242	5R01MH097651-03		554,767
Stigma Associated with a High-Risk State for Psychosis	93.242	5R01MH096027-03		535,441
Ketamine vs Midazolam: Testing Rapid Relief of Suicide Risk in Depression	93.242	5R01MH096784-03		523,058

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Building Schizophrenia Research in Macedonia	93.242	5R01MH098786-02		493,107
Genomic Approaches to Deciphering Memory Circuits	93.242	5R01MH097062-02		492,781
A School-Based Intervention to Reduce Stigma and Promote Mental-Health Service Use (Link/Painter)	93.242	5R01MH095254-04		484,829
Online Partnering of Heterosexuals and HIV Risk (Siegel/Lekas)	93.242	5R01MH095325-03		457,743
Understanding Discontinuation of Outpatient Care among HIV-positive Inpatients (Lekas/Metsch)	93.242	5R01MH095849-03		457,045
Attentional Control by Uncertainty and Reward: Parietal and Frontal Mechanisms	93.242	5R01MH098039-03		452,695
Prenatal stress: the epigenetic basis of maternal and perinatal effects	93.242	5R01MH092580-04		451,904
Functional analysis of the 22q11.2 schizophrenia susceptibility genes	93.242	5R01MH067068-12		432,094
Medium Spiny Neuron Excitability and Motivation	93.242	5R01MH093672-04		422,622
Intra-axonal signaling pathways triggered by attractive guidance cues.	93.242	5R01MH096702-02		418,242
MicroRNA Dysregulation in Pyschiatric Disorders and Cognitive Dysfunction	93.242	5R01MH097879-03		389,166
Regional Network for Mental Health Research in Latin America (Susseri/Galea/Alvarado/Rojas)	93.242	5U19MH095718-03		376,948
Adv PrEP for Black MSM: Community-Based Ethnography and Clinic-Bsd Intrvntn - ICAP (Colson/Hirsch)	93.242	5R01MH098723-03		367,763
Categorical Decision-Making in Fronto-Striatal Circuits	93.242	5R01MH059244-15		364,880
5-HT1A Receptor Anti-apoptotic Transduction Pathways in Suicide	93.242	5R01MH079439-05		360,390
Elucidating the Effect of Disc 1 on Neurodevelopment and Synaptic Transmission	93.242	5R01MH080234-07		344,598
Behavioral Sciences Research in HIV Infection	93.242	5T32MH019139-24		335,510
A Research Training Program in Psychiatric Epidemiology	93.242	5T32MH013043-43		334,538
Novel Statistical Methods for DNA Sequencing Data, and Applications to Autism	93.242	5R01MH095797-03		332,933
Mechanisms Mediating Long-Term Synaptic Plasticity	93.242	5R01MH060387-14		329,922
The neurophysiological basis of serial learning	93.242	5R01MH081153-06		318,949
Network Models for Timing and Sequence Generation	93.242	5R01MH093338-04		306,200
Mental Health and Service Utilization Among Reserve and National Guard Forces	93.242	5R01MH082729-05		297,640
Exploring the pathophysiology of anxiety: the role of the hippocampus, amygdala and medial prefrontal cortex	93.242	5R01MH081968-07		296,990
2/2 A Comparison of Long-Acting Injectable Medications for Schizophrenia-ACLAIMS	93.242	5R01MH081107-06		289,240
Therapeutic Potential of GLS1 Inhibition for the Pharmacotherapy of Schizophrenia	93.242	5R01MH087758-05		267,086
HIV Dissemination Science Training Program for Underrepresented Investigators	93.242	5R25MH080665-06		254,147
Biosignatures of Treatment Remission in Major Depression	93.242	5U01MH092250-04		250,316
Multimodal Neuroimaging for Mapping Decision Making in the Human Brain	93.242	5R01MH085092-05		249,015
Future Suicide Attempt: Psychobiological Features	93.242	5R01MH048514-20		243,769
1/4 Optimizing Treatment for Complicated Grief	93.242	5R01MH060783-10		243,589
1/3 - Genomics of Schizophrenia in the South Africa Xhosa	93.242	5U01MH096756-02		237,326
Implementing Health Care Interventions for Hispanics with Serious Mental Health	93.242	5K01MH091118-05		230,111
Novel caged Dopamine compounds	93.242	5R21MH100646-02		220,151
Prenatal stress: the epigenetic basis of maternal and perinatal effects	93.242	5R01MH092580-04		217,400
Regional Network for Mental Health Research in Latin America (Susseri/Galea/Alvarado/Rojas)	93.242	5U19MH095718-03		217,141

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Mechanisms underlying the functional connectivity deficit in the 22q11 microdeletion syndrome	93.242	5R01MH096274-02		213,326
Vitamin-D- PROD ^H - &DTNBP1-induced Hyperprolinemia:Schizophrenia Risk & Treatment	93.242	1R01MH100219-01A1		203,318
A Stepped Care Model of Adolescent Depression Treatment in Primary Care	93.242	5R34MH091320-03		200,887
The role of GABA-mimetic metabolites in neurodevelopmental and neuropsychiatric disorders	93.242	5R21MH100691-02		193,119
Modeling schizophrenia in Mice by Altered Expression of Neuregulin 1 (Nrg1)	93.242	5K08MH090397-05		180,094
Design of Molecular Probes For Optical Imaging of Dopamine Neurotransmission	93.242	5R01MH086545-04		173,640
Biosignatures of Treatment Remission in Major Depression	93.242	5U01MH092250-04		173,589
Epigenetic modulation of antidepressant efficacy	93.242	5R21MH099251-02		166,510
Child/AdolescentAnxiety Multimodal Extended Long-Term Study	93.242	5R01MH064092-11		166,480
Two-photon optical control of astrocytic function	93.242	5R01MH10218-02		158,206
Mitochondrial dysfunction due to aberrant mTor-regulated mitophagy in autism	93.242	5K01MH096956-02		154,302
Use of Smartphone Applications for Sexual Partnering among MSM (Siegel/Schrimshaw)	93.242	5R21MH096639-02		150,898
Assisted Reproductive Technologies and Increased Autism Risk	93.242	5R21MH096122-02		149,660
Developmental Neuroscience and Behavior	93.242	5T32MH018264-29		138,990
Personalized and Scalable Cognitive Remediation Approaches	93.242	1R34MH100317-01		130,225
Intra-axonal signaling pathways triggered by attractive guidance cues.	93.242	5R01MH096702-02		129,935
Hippocampal inhibitory control of contextual fear learning	93.242	1R01MH100631-01A1		129,024
Parental Remission From Depression and Child Psychopathology	93.242	5R01MH082255-04		123,156
Development of PET Tracers for in vivo Quantification of PDE10A	93.242	5R21MH093936-02		122,545
Regional Network for Mental Health Research in Latin America (Susser/Galea/Alvarado/Rojas)	93.242	5U19MH095718-03		118,006
Complicated Grief Treatment in Elderly Adults	93.242	5R01MH070741-05		117,826
Inferring Phenogenic Mechanisms in Psychiatric and other Complex Traits	93.242	5R01MH084995-04		117,271
Functional analysis of the 22q11.2 schizophrenia susceptibility genes	93.242	5R01MH067068-12		116,667
Adv PrEP for Black MSM: Community-Based Ethnography and Clinic-Bsd Intrvntn - ICAP (Colson/Hirsch)	93.242	5R01MH098723-03		109,690
Mechanisms underlying the functional connectivity deficit in the 22q11 microdeletion syndrome	93.242	5R01MH096274-02		108,810
NOVEL MECHANISMS UNDERLYING DEPRESSION: PET IMAGING OF THE KAPPA OPIOID	93.242	5R21MH091553-02		103,318
1/3 - Genomics of Schizophrenia in the South Africa Xhosa	93.242	5U01MH096756-02		99,483
1/4 Optimizing Treatment for Complicated Grief	93.242	5R01MH060783-10		98,793
5-HT1A Receptor Anti-apoptotic Transduction Pathways in Suicide	93.242	5R01MH079439-05		98,778
Multi-Level Determinants of Late ART Initiation in sub-Saharan Africa	93.242	5R01MH089831-05		97,639
Transcranial Magnetic Stimulation for Treatment of Obsessive Compulsive Disorder	93.242	5 R21 MH091276-02		88,146
The Influence of Aerobic Exercise on Cognitive Functioning in Schizophrenia	93.242	5R21MH096132-02		77,499
Behavioral Change in the Mother-Infant Dyad: Preventing Postpartum Depression	93.242	5R21MH092665-02		76,037
Medium Spiny Neuron Excitability and Motivation	93.242	5R01MH093672-04		72,254
Psychotic Disorders in an African Setting: Incidence, Early Course, and Trtmnt Pthwys (Susser/Burns)	93.242	5R21MH093296-02		68,126
Biosignatures of Treatment Remission in Major Depression	93.242	5U01MH092250-04		67,102

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Understanding Discontinuation of Outpatient Care among HIV-positive Inpatients (Lekas/Metsch)	93.242	5R01MH095849-03		59,075
HIV/STI Risk Among Migrant Market Workers in Kazakhstan	93.242	5R01MH082684-04		54,812
Research Training in Biobehavioral Disturbances of Eating Disorders	93.242	1T32MH096679-01A1		51,470
Ventrositatal Dopamine Release and Reward Motivation in MDD	93.242	1R01MH099322-01A1		50,187
Using genetic and optogenetic models to dissect the role of the serotonin 1B receptor in aggression and impulsivity	93.242	5F32MH100888-02		49,555
tDCS augmentation of cognitive remediation in Schizophrenia	93.242	1R21MH099265-01A1		47,852
The Spread of Autism Diagnosis through Spatially Embedded Social Networks	93.242	1R21MH100514-01A1		47,529
Postmortem Neurochemical Studies in Suicide	93.242	5R01MH040210-26		46,364
Acute Inhibition of Adult-born Granule Cells and Its Effect on Antidepressant Action	93.242	1F31MH100842-01		40,936
Regional Network for Mental Health Research in Latin America (Susseri/Galea/Alvarado/Rojas)	93.242	5U19MH095718-03		40,611
smFRET Investigation of Gating in a Neurotransmitter Transporter Homolog	93.242	5F30MH101985-02		40,032
Functional Analysis of 22q11 Schiz. Susceptibility Genes	93.242	5R01MH067068-10		37,843
Examining the Deficit Syndrome Subtype in an Untreated and Treated Non-Acute, Representative Cohort of Schizophrenia Patients in China	93.242	5R03MH092666-02		27,179
Behavioral Sciences Research in HIV Infection	93.242	5T32MH019139-24		26,294
Neural Mechanisms of Increased Anxiety in Serotonin 1A Receptor-Deficient Mice	93.242	5R01MH081968-05		26,029
HIV/STI Risk Among Migrant Market Workers in Kazakhstan	93.242	5R01MH082684-04		18,489
Evaluating a microfinance intervention for High Risk Women in Mongolia	93.242	5 R34 MH093227-02		18,072
Biosignatures of Treatment Remission in Major Depression	93.242	5U01MH092250-04		17,843
Neuronal oscillation as a tool for selective attention	93.242	5F32MH093061-02		17,380
1/4 Optimizing Treatment for Complicated Grief	93.242	5R01MH060783-10		16,857
HCN1 Channels in Hippocampal Function and Spatial Memory	93.242	5R01MH080745-05		10,232
HIV Dissemination Science Training Program for Underrepresented Investigators	93.242	5R25MH080665-06		8,443
A Research Training Program in Psychiatric Epidemiology	93.242	5T32MH013043-43		8,091
Development of Agonist PET tracers for Quantifying 5HT2AR	93.242	5R21MH091470-02		6,950
Prenatal stress: the epigenetic basis of maternal and perinatal effects	93.242	5R01MH092580-04		6,768
Biosignatures of Treatment Remission in Major Depression	93.242	5U01MH092250-04		5,607
13DEAL for HIV Research	93.242	1R03MH103957-01		5,407
2/2 A Comparison of Long-Acting Injectable Medications for Schizophrenia-ACLAIMS	93.242	5R01MH081107-06		4,179
Functional Analysis of 22q11 Schiz. Susceptibility Genes	93.242	5R01MH067068-10		3,789
HIV/STI Risk Among Migrant Market Workers in Kazakhstan	93.242	5R01MH082684-04		3,335
Cognitive Mechanisms of Serially Organized Behavior	93.242	5 R01 MH081153-04		2,400
MECHANISMS OF AXONAL PATHFINDING CONTROLLED BY NETRIN-1	93.242	5 R00 MH081058-05		1,817
USING MULTIMEDIA AND DIGITAL TECHNOLOGIES IN THE DISSEMINATION OF AN HIV/STI PREVENTION INTERVENTION	93.242	5 R01 MH080659-05		1,051
Biosignatures of Treatment Remission in Major Depression	93.242	5U01MH092250-04		560
A Research Training Program in Psychiatric Epidemiology	93.242	5T32MH013043-43		527
Neuronal oscillation as a tool for selective attention	93.242	5F32MH093061-02		283

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
SCN NETWORKS AND EFFERENT SIGNALS	93.242	5 R01 MH075045-05		272
Biosignatures of Treatment Remission in Major Depression	93.242	5U01MH092250-04		-137
USING MULTIMEDIA AND DIGITAL TECHNOLOGIES IN THE DISSEMINATION OF AN HIV/STI PREVENTION INTERVENTION	93.242	5 R01 MH080659-05		-323
Mindboggling Shape Analysis and Identification	93.242	5 R01 MH084029-03		-1,011
HIV/STI Risk Among Migrant Market Workers in Kazakhtan	93.242	5R01MH082684-04		-8,322
HIV/STI Risk Among Migrant Market Workers in Kazakhtan	93.242	5R01MH082684-04		-18,489
The Conte Center for Schizophrenia Research	93.242	5P50MH086385-04		-25,762
Lithium's Molecular Mechanism of Action and the Pathology of Bipolar Disorder	93.242	5R01MH090276-02		-63,500
Developmental Neuroscience and Behavior	93.242	5T32MH018264-29		-92,357
				\$29,770,941

Alcohol Research Programs

Role of the Gut Microbiota and TLR4 in Alcoholic Hepatocarcinogenesis	93.273	5R01AA020211-05		453,676
Targeting DAMPs in Alcoholic Hepatitis	93.273	5U01AA021912-02		362,847
Alcohol Consumption and Brown Adipose Tissue	93.273	5R21AA021336-02		233,585
2/2 Multisite Study: Varenicline for Alcohol Dependent Smokers	93.273	5R01AA020389-03		198,235
Race, Alcohol Consumption and Vehicle Crashes: An Epidemiologic Paradox	93.273	5K01AA021511-02		186,550
The Role of Maternal Nutrition in the Teratogenesis of Alcohol in Humans	93.273	5K23AA020516-04		182,559
Dorsal Raphe Nucleus Serotonin Neurons in Alcoholism	93.273	5R01AA011293-13		182,000
Alcohol and Dopamine Release: Cellular and Synaptic Mechanisms	93.273	5R01AA019801-05		113,026
Alcohol and Dopamine Release: Cellular and Synaptic Mechanisms	93.273	5R01AA019801-05		105,026
Neighborhood Interventions in Alcohol-related Homicide: A Systems Approach (Cerde/Wild)	93.273	1R21AA021909-01A1		66,045
Alcohol and inhibition in the prefrontal cortex	93.273	5F32AA022028-02		37,330
Alcohol withdrawal and tonic inhibition in the thalamus.	93.273	5F32AA022545-02		37,067
Ethanol Modulation of Glycine Receptor Mediated Currents in the Striatum	93.273	1F32AA022554-01		31,370
Epidemiologic Studies of Alcohol Use Disorders (ongoing)	93.273	5K05AA014223-09		27,638
Alcohol and inhibition in the prefrontal cortex	93.273	5F32AA022028-02		26,306
Targeting DAMPs in Alcoholic Hepatitis	93.273	5U01AA021912-02		10,472
ALCOHOL AND GABA IN THE THALAMUS	93.273	5 R01 AA016393-06		-1,670
				\$2,252,062

Drug Abuse and Addiction Research Programs

Couple HIV prevention for drug-involved male offenders: An Effectiveness Trial	93.279	5R01DA033168-02		978,131
Project RETAIN: Providing Integrated Care for HIV-Infected Crack Cocaine Users (Metsch/Del Rio)	93.279	5R01DA032098-05		960,018
Couples-Based HIV/STI Prevention for Drug-Involved, African American MSM	93.279	5R01DA030396-03		811,543
Molecular mechanisms of bacterial homologs of neurotransmitter sodium symporters	93.279	5R01DA017293-10		707,452
A web-Based Intervention to Prevent Drug Abuse among Adolescent Girls	93.279	5R01DA031781-03		685,990
Post Exposure Prophylaxis among IDU Syringe Customers - Pharmacy Pilot Intervention	93.279	5R01DA030253-05		668,702

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Enhanced Access to HIV Care for Drug Users in San Juan, Puerto Rico (Metsch/Santana-Bagur)	93.279	5R01DA035280-02		661,415
Preventing Drug Abuse among Hispanic Adolescents	93.279	5R01DA031477-02		606,984
Assess the Effects of ETS on Neurodevelopment	93.279	5R01DA027100-05		590,244
STAR - Seek, Test and Retain. Linkages for Black HIV+, Substance Using MSM	93.279	5R01DA032100-04		531,743
Modafinil and DRD4 Genotype in a Human Laboratory Model of Cocaine Relapse	93.279	5R01DA023650-04		515,362
AMPA receptors: Common role in opiate withdrawal and pain sensitivity	93.279	5R01DA027460-05		515,106
Sex Differences in Stress & Impulsivity in Cocaine Abusers	93.279	5R01DA021242-04		397,209
Imaging the Neurochemistry of Negative Reinforcement in Cocaine Abuse	93.279	5R01DA027777-05		341,744
Brain Circuits Mediating Motivated Behaviors	93.279	5R01DA035025-02		336,949
Presynaptic Mechanisms in Dopamine Neurotransmission	93.279	2R01DA007418-19A1		301,147
Translational research to increase service access for NYS juvenile probationers	93.279	1U01DA036226-01		299,072
Research Fellowship in Substance Abuse Disorder	93.279	5T32DA007294-22		275,415
Daily Psychosocial Determinants of ART Adherence in Substance-Using Black Men	93.279	5R34DA034568-03		274,243
Epidemiology of Substance Use Disorders Training Program at Columbia University	93.279	5T32DA031099-03		196,132
Imaging Dopamine Transmission in Cannabis Dependence	93.279	5R01DA022455-04		195,891
Astrocytic Regulation of Neuronal Synchronization	93.279	5R21DA034195-02		191,608
Exploratory Study of Drug User Health-related Internet and Mobile Technology Use	93.279	5R21DA034841-02		176,071
Glutamatergic Modulation of Exposure Therapy in Cigarette Smoking	93.279	5K23DA025735-05		171,447
Drug Abuse Treatment Development and Research Mentoring	93.279	5K24DA022412-08		171,410
Substance Abuse Treatment Development and Clinical Research Mentoring	93.279	5K24DA029647-04		164,860
Brief Substance and HIV Interventions for Homeless Young Adults	93.279	5K23DA032323-02		159,764
Social Stress and Substance Use Disparities in Sexual Minority Youth	93.279	5K01DA032558-03		140,345
Molecular Determinants for the Action of Psychostimulants	93.279	5K05DA022413-07		136,747
Trajectories of Substance Use and Comorbid Mental Illness	93.279	5K01DA030449-04		130,432
Single molecule imaging of beta2 adrenergic receptor activation	93.279	5R21DA035485-02		129,934
Contextualizing & responding to HIV risk behaviors among Black drug offenders	93.279	5K01DA036411-02		129,897
Clinical and Preclinical Models in Drug Abuse: Training and Development	93.279	5K05DA031749-03		126,360
Using PET to Image the Neurochemistry of Addiction	93.279	5K02DA026525-05		126,360
Mechanisms underlying opiate-induced neuroplasticity at the synapse	93.279	5R01DA025036-05		125,652
Cortical and Striatal Dopamine Dysfunction in Addiction and Schizophrenia	93.279	5K02DA026075-10		123,732
Assess the Effects of ETS on Neurodevelopment	93.279	5R01DA027100-05		111,918
A Computerized Service Tool to Address Partner Abuse among Women in Drug Court	93.279	5R34DA031325-02		87,649
Couples-Based HIV/STI Prevention for Injecting Drug Users in Kazakhstan	93.279	5 R01 DA022914-05		86,489
Testing a Comprehensive Model of the Diffusion of Evidence-based Practices	93.279	5R01DA030459-02		72,239
Conflict, Substance Use and HIV and Related Diseases (Fellow: Bradley Kerridge)	93.279	1F32DA036431-01		45,745
EFFECTIVENESS OF MANDATORY PRESCRIPTION DRUG MONITORING	93.279	5R21DA029670-02		29,224

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Health & Psychosocial Need: Children with Developmental Disorder in a Time of HIV	93.279	5R01DA023697-05		28,773
Health & Psychosocial Need: Children with Developmental Disorder in a Time of HIV	93.279	5R01DA023697-05		15,578
Role for delta opioid receptor in morphine tolerance during chronic pain	93.279	1R21DA036826-01A1		9,205
AMPA receptors: Common role in opiate withdrawal and pain sensitivity	93.279	5R01DA027460-05		8,675
RESEARCH FELLOWSHIP IN SUBSTANCE ABUSE DISORDER	93.279	5 T32 DA007294-20		5,992
Multi-Site Controlled Trial of Cocaine Vaccine (6 of 6) Columbia University Site	93.279	5R01DA025250-03		3,059
A Computerized Service Tool to Address Partner Abuse among Women in Drug Court	93.279	5R34DA031325-02		1,357
An Experimental Model of Human Language and Cognition in Drug Dependence	93.279	5K23DA021850-05		716
Health & Psychosocial Need: Children with Developmental Disorder in a Time of HIV	93.279	5R01DA023697-05		112
Epidemiology of Substance Use Disorders Training Program at Columbia University	93.279	5T32DA031099-03		39
A Molecular Analysis of the Gateway Hypothesis in Mice	93.279	5 R01 DA024001-05		-332
Multimedia HIV/STI Prevention for Drug-Involved Female Offenders	93.279	5 R01 DA025878-05		-964
NICOTINE DEPENDENCE IN EARLY ADULTHOOD	93.279	5 R01 DA026305-03		-2,419
Multi-Site Controlled Trial of Cocaine Vaccine (6 of 6) Columbia University Site	93.279	5R01DA025250-03		-8,291
Multimedia HIV/STI Prevention for Drug-Involved Female Offenders	93.279	5 R01 DA025878-05		-11,845
Post Exposure Prophylaxis among IDU Syringe Customers - Pharmacy Pilot Intervention	93.279	5R01DA030253-05		-16,876
Subproject for Institution # 08-5125	93.279	5 R01 DA007418-18		-22,899
				\$13,498,255

Mental Health Research Career/Scientist Development Awards

Novel Interventions for Adults with Obsessive-Compulsive Disorder	93.281	5K23MH092434-04		201,274
Intrinsic Motivation and Learning in Schizophrenia	93.281	5K23MH086755-04		177,237
Enhancing Patient-Oriented Research and Training in OCD	93.281	5K24MH091555-05		144,666
Neurobiology of Motivational Modulation of Sustained Attention by Signaled Reward	93.281	K99MH095835-02		59,011
Neuroimaging of Fatty Acids in Major Depression	93.281	5K08MH079033-05		32,100
Bulimia Nervosa and Dopamine: a Link to Addictions?	93.281	5K23MH082097-05		12,036
Cognitive Neuroscience of Anorexia Nervosa	93.281	5K23MH076195-05		487
				\$626,811

Mental Health National Research Service Awards for Research Training

Research Training in Mood and Anxiety Disorders: From Animal Models to Patients	93.282	5T32MH015144-36		430,272
Training in Schizophrenia and Psychotic Disorders: From Animal Models to Patients	93.282	5T32MH018870-27		324,212
Translational Research Training in Child Psychiatry	93.282	5T32MH016434-34		317,179
Research Training in Late-Life NeuroPsychiatric Disorders	93.282	5T32MH020004-15		284,013
Translational Neuroscience Training Grant	93.282	5T32MH015174-38		191,712
Translational Research Training in Child Psychiatry	93.282	5T32MH016434-34		132,717
Research Training in Mood and Anxiety Disorders: From Animal Models to Patients	93.282	5T32MH015144-36		122,600
Spatial and reward coding in the primate amygdal	93.282	5F30MH099762-03		48,842

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Characterization and genetic ablation of the CA2 subfield of the hippocampus	93.282	5F30MH098633-02		46,357
Developmental role of Neuregulin-1 in subventricular zone stem cell fate	93.282	5F31MH094029-03		45,032
Non-invasive and cost-effective quantification of Positron Emission Tomography data	93.282	5F31MH095338-03		36,532
Translational Neuroscience Training Grant	93.282	5T32MH015174-38		31,179
Social Determinants of HIV Risk and Vulnerability among Black MSM in South Africa	93.282	5F31MH088943-04		22,516
Training in Schizophrenia and Psychotic Disorders: From Animal Models to Patients	93.282	5T32MH018870-27		17,596
Research Training in Late-Life Neuropsychiatric Disorders	93.282	5T32MH020004-15		15,654
Characterization and genetic ablation of the CA2 subfield of the hippocampus	93.282	5F30MH098633-02		5,568
Developmental role of Neuregulin-1 in subventricular zone stem cell fate	93.282	5F31MH094029-03		3,672
Social Determinants of HIV Risk and Vulnerability among Black MSM in South Africa	93.282	5F31MH088943-04		3,603
Non-invasive and cost-effective quantification of Positron Emission Tomography data	93.282	5F31MH095338-03		3,473
Social Determinants of HIV Risk and Vulnerability among Black MSM in South Africa	93.282	5F31MH088943-04		-431
Training in Schizophrenia and Psychotic Disorders: From Animal Models to Patients	93.282	5 T32 MH018870-25		-3,465
Research Training in Late-Life Neuropsychiatric Disorders	93.282	5T32MH020004-15		-7,640
Translational Research Training in Child Psychiatry	93.282	5T32MH016434-34		-101,026
Research Training in Mood and Anxiety Disorders: From Animal Models to Patients	93.282	5T32MH015144-36		-102,699
				\$1,867,468

Centers for Disease Control and Prevention Investigations and Technical Assistance

Genetic Susceptibility to Age-Related Macular Degeneration	93.283	5R01EY013435-13		395,636
Genetic Susceptibility to Age-Related Macular Degeneration	93.283	5R01EY013435-13		10,920
				\$406,556

Discovery and Applied Research for Technological Innovations to Improve Human Health

Radiological Research Accelerator Facility (RARAF)	93.286	5P41EB002033-18		814,969
Tracking stem cells in engineered tissue and organs in vivo and in real time	93.286	5R01EB009663-04		554,978
Integrated heart-liver-vascular systems for drug testing in human health and disease	93.286	5UH2EB017103-02		485,245
Mechanobiological Mechanism for Inflammatory Bone Loss	93.286	5R01EB006834-07		399,976
Optimization of ultrasound-facilitated blood-brain barrier opening	93.286	5R01EB009041-05		361,476
Integrated heart-liver-vascular systems for drug testing in human health and disease	93.286	5UH2EB017103-02		351,091
Ultrasound-based tumor targeting and thermal ablation monitoring system	93.286	5 R01 EB014496-02		328,537
Radiological Research Accelerator Facility (RARAF)	93.286	5P41EB002033-18		217,337
A Microfluidic System for Image-Guided RNA-Seq of Single Cells in Glioblastoma	93.286	5K01EB016071-02		184,632
Microbubble Infused Hydrogels for Cartilage Tissue Engineering	93.286	5R21EB014382-02		171,079
Early Detection and Mapping of Ischemia Using Myocardial Elastography	93.286	5R01EB006042-07		168,029
Isolation of Narrow Subpopulations of Cells using Molecular Computing Cascades	93.286	5R21EB014477-02		143,766
Concurrent ultrasound & molecular evaluation of a lymphatic malformation model	93.286	5R21EB016515-02		121,472
Device to mechanically interrogate tissue and skin across research environments	93.286	5R21EB015906-04		91,470

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Functional Regression Models with Application in Brain Imaging Studies	93.286	5R01EB009744-03		90,207
Microbubble Infused Hydrogels for Cartilage Tissue Engineering	93.286	5R21EB014382-02		82,014
Educational Pathways to Science and Other Careers for Academically Talented Women	93.286	7R01EB010584-03		80,872
Optimization of ultrasound-facilitated blood-brain barrier opening	93.286	2R01EB009041-06A1		71,755
Integrated heart-liver-vascular systems for drug testing in human health and disease	93.286	5UH2EB017103-02		53,946
Radiological Research Accelerator Facility (RARAF)	93.286	5P41EB002033-18		85
Silk Hydrogel for Functional Cartilage Tissue Engineering	93.286	5 R21 EB011869-02		-123
Aptameric modulators of relaxivity of MRI contrast agents	93.286	5R21EB013347-02		-424
				\$4,772,389

Minority Health and Health Disparities Research

Columbia Center for the Health of Urban Minorities	93.307	5 P60 MD000206-10		201,100
Columbia Center for the Health of Urban Minorities	93.307	5 P60 MD000206-10		192,756
Next Generation (NIMHD Minority Health and Health Disparities International Research Training (T37)	93.307	1T37MD008637-01		67,726
Columbia Center for the Health of Urban Minorities	93.307	5 P60 MD000206-10		58,307
Columbia Center for the Health of Urban Minorities	93.307	5 P60 MD000206-10		44,528
Columbia Center for the Health of Urban Minorities	93.307	5 P60 MD000206-10		12,465
Columbia Center for the Health of Urban Minorities	93.307	5 P60 MD000206-10		4,005
				\$580,887

Trans-NIH Research Support

Theranostic Nano-objects: Basic Principles and Initial Applications	93.310	5R01GM104960-03		1,250,707
Generation and integration of new CNS neurons by in vivo directed conversion	93.310	5R01NS081701-03		695,011
Label-Free Chemical Imaging for Biological Applications	93.310	1DP2EB016573		628,264
Investigating the Potential of Endogenous RNAi in Mediating Adaptation to Environment	93.310	1DP2OD006412-01		566,027
Functional Connectomics of the Neocortical microcircuit	93.310	5DP1EY024503-02		557,457
Regulation of Adaptive Immune Response By Large Intergenic Non-Coding RNA	93.310	1DP2OD008651-01		542,862
Functional Metagenomic Reprogramming of the Human Microbiome through Mobilome Engineering	93.310	5DP5OD009172-04		516,875
IR-LAMP: Optigenetic technology to spatially manipulate protein function in vivo	93.310	1DP2OD008773-01		493,985
Epigenomics of Alzheimer s Disease	93.310	5R01AG036040-05		418,875
Novel sub-cellular chemical and mechanical nanoimaging	93.310	1DP2EB018657-01		397,635
Multiplexed, Single Molecule Protein Identification for Single Cell Proteomics	93.310	5R21EB016980-02		274,088
Towards a Cognitive Framework for Understanding Cellular Behavior	93.310	8DP1ES022578-05		266,981
Epigenomics of Alzheimer s Disease	93.310	5R01AG036040-05		225,330
Optogenetic dissection of hippocampal circuitry underlying Alzheimer s disease	93.310	1DP5OD017908-01		212,373
Towards a Cognitive Framework for Understanding Cellular Behavior	93.310	8DP1ES022578-05		78,812
Epigenomics of Alzheimer s Disease	93.310	5R01AG036040-05		65,289
Use of induced pluripotent stem cells to study mechanisms of familial and sporadic ALS	93.310	8DP1NS082099-06		32,822

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
NIH PIONEER'S AWARD	93.310	5 DP1 OD003635-05		882
				\$7,224,275
National Center for Advancing Translational Sciences				
Modeling complex diseases using iPSC-derived skin constructs	93.350	5U18TR000561-02		411,262
Modeling complex diseases using iPSC-derived skin constructs	93.350	5U18TR000561-02		81,412
				\$492,674
Research Infrastructure Programs				
Super-resolution structured illumination microscope	93.351	1S10OD014584-01A1		579,180
High precision robotic weighing system in support of new exposure health studies	93.351	1S10OD016219-01		211,810
Automated protein crystal optimization system for high-throughput structural biology	93.351	1S10OD012012-01A1		120,673
Small Animal CT Image-Guided X-ray Irradiation System	93.351	1S10OD010631-01A1		12,200
				\$923,863
Nursing Research				
Prevention of Nosocomial Infections and Cost Effectiveness in Nursing Homes	93.361	5R01NR013687-03		793,716
Health Information Technology to Reduce Healthcare-Associated Infections: HIT-HAI	93.361	5R01NR010822-07		407,727
New York City Hispanic Dementia Caregiver Research Program (NHiRP)	93.361	5R01NR014430-02		327,366
Reducing Health Disparities Through Informatics	93.361	5T32NR007969-13		214,755
Training in Interdisciplinary Research to Prevent Infections (TIRI)	93.361	5T32NR013454-03		176,987
Prevention of Nosocomial Infectious and Cost-Effectiveness Refined (P-NICER)	93.361	5R01NR010107-06		171,143
New York City Hispanic Dementia Caregiver Research Program (NHiRP)	93.361	5R01NR014430-02		125,105
Comparative and Cost-Effectiveness Research Training for Nurse Scientists	93.361	5T32NR014205-02		99,333
Hydroxyurea Adherence for Personal Best in Sickle Cell Treatment HABIT	93.361	5R21NR013745-02		95,529
Improving Antimicrobial Prescribing Practices in the Neonatal Intensive Care Unit	93.361	5R01NR010821-05		92,476
Training in Interdisciplinary Research to Prevent Infections (TIRI)	93.361	5T32NR013454-03		67,401
Healthcare Associated Infections in Home Health Care	93.361	5R03NR013966-02		61,338
Hydroxyurea Adherence for Personal Best in Sickle Cell Treatment HABIT	93.361	5R21NR013745-02		54,116
The examination of infection prevention and crowding in the emergency room department	93.361	5F31NR014599-02		42,232
Health Information Technology to Reduce Healthcare-Associated Infections: HIT-HAI	93.361	5R01NR010822-07		32,487
Training in Interdisciplinary Research to Prevent Infections (TIRI)	93.361	5T32NR013454-03		29,487
Secondary Bacteremia in Patients with Catheter-Associated Urinary Tract Infection	93.361	1F31NR014063-01		27,096
Comparative and Cost Effectiveness Analyses of HAI Reduction in Nursing Homes	93.361	5F31NR013810-02		18,194
Maternal and Child Outcomes of a Prison Nursery Program	93.361	5R01NR007782-08		11,690
Prevention of Nosocomial Infections and Cost Effectiveness in Nursing Homes	93.361	5R01NR013687-03		7,202
Center for Evidence-based Practice in the Underserved (CEBP)	93.361	5 P30 NR010677-05		4,750
Center for Evidence-based Practice in the Underserved (CEBP)	93.361	5 P30 NR010677-05		2,721
Improving Antimicrobial Prescribing Practices in the Neonatal Intensive Care Unit	93.361	5R01NR010821-05		823

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Center for Evidence-based Practice in the Underserved (CEBP)	93.361	5 P30 NR010677-05		725
Reducing Health Disparities Through Informatics	93.361	5T32NR007969-13		-1,404
REDUCING HEALTH DISPARITIES THROUGH INFORMATICS	93.361	5 T32 NR007969-10		-5,205
FROM CELL TO SOCIETY: A NEW METHOD TO CHARACTERIZE CARDIAC AUTONOMIC CONTROL	93.361	5 R21 NR010858-04		-12,132
Training in Interdisciplinary Research to Reduce Antimicrobial Resistance (TIRAR)	93.361	5 T90 NR010824-05		-26,843
				\$2,818,815

National Center for Research Resources

Clinical and Translational Science Award	93.389	5UL1TR000040-09		1,552,765
Clinical and Translational Science Award	93.389	5UL1TR000040-09		1,141,970
Clinical and Translational Science Award	93.389	5UL1TR000040-09		907,962
Clinical and Translational Science Award	93.389	5UL1TR000040-09		708,329
Clinical and Translational Science Award	93.389	5UL1TR000040-09		513,737
Clinical and Translational Science Award	93.389	5UL1TR000040-09		441,991
Clinical and Translational Science Award	93.389	5UL1TR000040-09		429,705
Clinical and Translational Science Award	93.389	5UL1TR000040-09		290,955
Clinical and Translational Science Award	93.389	5UL1TR000040-09		236,121
Clinical and Translational Science Award	93.389	5TL1TR000082-08		165,912
Clinical and Translational Science Award	93.389	5KL2TR000081-08		165,261
Clinical and Translational Science Award	93.389	5KL2TR000081-08		134,922
Clinical and Translational Science Award	93.389	5KL2TR000081-08		133,991
Clinical and Translational Science Award	93.389	5KL2TR000081-08		93,684
Clinical and Translational Science Award	93.389	5KL2TR000081-08		93,293
Clinical and Translational Science Award	93.389	5KL2TR000081-08		91,530
Clinical and Translational Science Award	93.389	5KL2TR000081-08		83,500
Clinical and Translational Science Award	93.389	5KL2TR000081-08		72,414
Clinical and Translational Science Award	93.389	5KL2TR000081-08		63,154
Plug and Play bioreactor	93.389	8R21EB015888-03		42,763
Clinical and Translational Science Award	93.389	5UL1TR000040-09		18,018
Clinical and Translational Science Award	93.389	5KL2TR000081-08		14,016
Clinical and Translational Science Award (UL1)	93.389	5UL1TR000040-08		12,659
Clinical and Translational Science Award	93.389	5UL1TR000040-09		12,297
Clinical and Translational Science Award	93.389	5KL2TR000081-08		6,681
Clinical and Translational Science Award	93.389	5UL1TR000040-09		4,718
Clinical and Translational Science Award	93.389	5UL1TR000040-09		3,975
Clinical and Translational Science Award	93.389	5TL1TR000082-08		2,750
Clinical and Translational Science Award	93.389	5UL1TR000040-09		2,224

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Clinical and Translational Science Award	93.389	5UL1TR000040-09		1,878
Clinical and Translational Science Award	93.389	5KL2TR000081-08		1,519
Clinical and Translational Science Award	93.389	5KL2TR000081-08		825
Clinical and Translational Science Award	93.389	5UL1TR000040-09		611
Clinical and Translational Science Award	93.389	5UL1TR000040-09		404
Clinical and Translational Science Award	93.389	5KL2TR000081-08		146
Clinical and Translational Science Award	93.389	5UL1TR000040-09		21
Clinical and Translational Science Award (UL1)	93.389	5UL1TR000040-08		-1,703
Clinical and Translational Science Award (KL2)	93.389	5KL2TR000081-08		-1,745
Clinical and Translational Science Award	93.389	5KL2TR000081-08		-3,922
				\$7,439,331

Cancer Cause and Prevention Research

Genes, Environment and Breast Cancer Risk: The 15 Year Follow-up of the Prof-SC (Terry/Hopper)	93.393	5R01CA159868-04		2,284,753
LEGACY: A Cohort of Youth in Families from the Breast Cancer Family Registry	93.393	5R01CA138822-04		679,318
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		541,570
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		425,701
Role of MLL2 Gene inactivation in B cell non-Hodgkin lymphoma	93.393	5R01CA172492-02		407,093
Mechanisms of Radioresistance and Cell Cycle Progression	93.393	5R01CA130536-20		390,178
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		357,653
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		331,655
Regulation of Mdmx Stability and Subcellular Localization by Ubiquitination	93.393	5R01CA166294-03		320,063
The Influence of Hospital Variability on the Management of Cancer-Associated Complications	93.393	5R01CA169121-02		311,677
Regulation for the DNA damage response by the ATM-MRN pathway	93.393	5R01CA092245-12		298,245
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		297,733
Methylation Suicide in Cancer (PQ10)	93.393	5R01CA170546-03		290,363
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		281,659
Training Program in Cancer-Related Population Sciences	93.393	5R25CA094061-12		280,314
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		259,551
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		247,436
Folic Acid and Creatine as Therapeutic Approaches for Lowering Blood Arsenic	93.393	5R01CA133595-05		222,874
Estimating State-Specific Potential Annual Healthcare Cost Savings from Reducing Obesity	93.393	5R01CA172814-02		201,032
Unmetabolized Folic Acid and Retinoblastoma	93.393	5R21CA167833-02		187,313
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		184,204
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		178,345
Molecular Epidemiology and Lung Cancer: A Nested Case-Control Study	93.393	5R01CA127532-05		170,336
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		150,976

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Mouse Models of Gastric Cancer	93.393	2R01CA093405-12A1		143,288
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		114,645
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		100,537
Construction and Analysis of Retrovirus Mutants	93.393	5R37CA030488-33		100,035
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		97,189
CONSTRUCTION AND ANALYSIS OF RETROVIRUS MUTANTS	93.393	2R01CA030488-34		81,305
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		69,712
CORE B	93.393	1P01CA174653-01A1		67,918
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		67,268
Training Program in Cancer-Related Population Sciences	93.393	5R25CA094061-12		57,907
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		49,126
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		47,071
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		41,975
Aberrant DNA Methylation of MicroRNA Genes in Hepatocellular Carcinoma (HCC)	93.393	5R03CA156629-02		39,953
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		37,952
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		32,085
Non-cancer Gene Addition as Anticancer Strategy	93.393	5R01CA153233-03		21,771
Increasing breast cancer chemoprevention in the primary care setting	93.393	1R0CA177995-01A1		21,753
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		18,120
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		18,076
MicroRNA in Blood as an Early Biomarker of Breast Cancer	93.393	5R03CA159427-02		16,374
Regulation of Mdmx Stability and Subcellular Localization by Ubiquitination	93.393	5R01CA166294-03		16,349
Naphthalene Exposure, Chromosomal Aberrations in Poor Urban School Children	93.393	5U01CA159157-02		16,075
CORE B	93.393	1P01CA174653-01A1		13,258
Increasing breast cancer chemoprevention in the primary care setting	93.393	1R0CA177995-01A1		12,480
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		7,035
CORE B	93.393	1P01CA174653-01A1		6,992
CANCER SCREENING AMONG LATINAS	93.393	5 R21 CA134247-02		6,440
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		4,869
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		3,957
DETERMINANTS AND RISKS OF USE OF OVERUSE OF EXPENSIVE ONCOLOGY DRUGS	93.393	5 R01 CA134964-04		3,306
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		2,357
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		1,794
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		1,557
Role of Inflammation in Mouse Models of Gastric Cancer	93.393	5R01CA093405-11		1,542
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		-116

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Radiation Bystander Effects: Mechanisms	93.393	5P01CA49062-23		-154
AIDS ASSOCIATED LYMPHOPROLIFERATIVE DISORDERS	93.393	5 R37 CA037295-28		-287
Regulation of the DNA Damage Response by the MRN-ATM Pathway	93.393	5R01CA092245-10		-2,512
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		-5,141
Oncogenic role of PIK3CA hotspot mutations	93.393	5R01CA129432-05		-13,704
Molecular Pathogenesis of Basal-like Breast Cancer	93.393	5P01CA097403-10		-24,040
MECHANISMS OF RADIORESISTANCE AND CELL CYCLE PROGRESSION	93.393	5 R01 CA130536-17		-25,493
Molecular Mechanisms of Prostate Cancer Initiation	93.393	5P01CA154293-04		-36,886
				\$10,533,780

Cancer Detection and Diagnosis Research

In Vivo 31P MRS Studies of Non-Hodgkins Lymphoma	93.394	5R01CA118559-04		631,304
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		554,561
Optical Imaging of Chemotherapy for Brain Tumors	93.394	5R01CA138643-04		494,250
Studying measurement variability in tumor volume and volume change on MDCT	93.394	5R01CA149490-04		455,882
Quantitative Volume and Density Response Assessment Sarcoma and HCC as a Model	93.394	5U01CA140207-03		364,953
Quantitative Volume and Density Response Assessment Sarcoma and HCC as a Model	93.394	5U01CA140207-03		311,392
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		264,835
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		235,457
Genomic methylation patterns and mammary carcinoma	93.394	5R33 CA143453-02		171,629
Enhanced Intraarterial Delivery of Chemotherapeutic Drugs to the Brain	93.394	5R01CA127500-05		137,841
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		94,178
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		88,822
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		81,035
Dissecting the Melanoma Genome	93.394	5R21CA158557-02		32,427
SMALL ANIMAL TOMOGRAPHY SYSTEM FOR GREEN FLUORESCENT PROTEIN IMAGING	93.394	5 R33 CA118666-05		21,544
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		19,126
Predicting Outcome of Experimental Therapy in Lymphomas by 31P & 1H MRS	93.394	5R21CA152858-02		183
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		-2,124
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		-2,171
Systems Biology of Tumor Progression and Drug Resistance	93.394	5U01CA168426-03		-3,740
Quantitative Volume and Density Response Assessment Sarcoma and HCC as a Model	93.394	5U01CA140207-03		-24,434
				\$3,926,950

Cancer Treatment Research

Columbia University Medical Center Minority-based Community Clinical Oncology Program (MB-CCOP)	93.395	5U10CA167791-02		1,142,403
Chronic Convection Enhanced Delivery (CED) of Tepotecan for Glioblastoma	93.395	5R01CA161404-03		602,040
Preclinical analyses of advanced prostate cancer in genetically-engineered mice	93.395	5R01CA173481-02		491,914

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Columbia-South Africa Training Program for Research on HIV-associated Malignancies	93.395	5D43CA153715-03		380,041
Using SWOG-Medicare database to evaluate long-term toxicities of cancer survivors	93.395	5R01CA166084-02		377,223
Chemical Genetic Profiling of Engineered Tumor Cells	93.395	5R01CA097061-11		366,268
Enhancing the Vaccinal Effect of Antitumor Antibodies	93.395	5R01CA164309-03		271,194
Advanced Anatomic and Functional Response Assessment in Lung Cancer	93.395	5R01CA125143-05		253,863
Functionizing the epigenome in Ewing sarcoma	93.395	7R21CA166805-03		198,028
The role of fibroblasts in the activities of tissue penetrating peptides	93.395	5R01CA167174-04		130,429
Columbia-South Africa Training Program for Research on HIV-associated Malignancies	93.395	5D43CA153715-03		105,348
Feasibility of a Weight Loss Intervention among Female Cancer Survivors in SWOG	93.395	5R21CA155973-02		77,236
Targeting the LKB1-AMPK PATHWAY in Melanoma: Mechanism and Preclinical Evaluation	93.395	5R01CA166717-02		47,006
Multi-Method Study of Cancer Patients Medication Adherence After Allogenic HSCT	93.395	5R03CA162980-03		44,130
Columbia University Medical Center Minority-based Community Clinical Oncology Program (MB-CCOP)	93.395	5U10CA167791-02		29,018
Discovery of allele-selective KRAS inhibitors	93.395	1R21CA177591-01A1		23,785
Feasibility of a Weight Loss Intervention among Female Cancer Survivors in SWOG	93.395	5R21CA155973-02		14,852
Multi-Method Study of Cancer Patients Medication Adherence After Allogenic HSCT	93.395	5R03CA162980-03		5,914
Columbia-South Africa Training Program for Research on HIV-associated Malignancies	93.395	5D43CA153715-03		-12,195
Regulation of LKB1 and AMPK Signaling by BRAF in Melanoma	93.395	5R00CA133245-05		-17,397
				\$4,531,100

Cancer Biology Research

Roles and Regulations of P53	93.396	5P01CA087497-14		705,748
Roles and Regulations of P53	93.396	5P01CA087497-14		643,764
Regulation of the p53 tumor suppressor protein	93.396	5R01CA058316-22		576,559
Profiling Signatures of synergistic Chemical Perturbations in Diverse Cellular Contexts	93.396	5U01CA164184-02		556,993
Profiling Signatures of synergistic Chemical Perturbations in Diverse Cellular Contexts	93.396	5U01CA164184-02		550,134
The role of ETV6 in T-cell acute lymphoblastic leukemia	93.396	5R01CA172398-02		444,650
The BARD1 tumor suppressor and breast cancer	93.396	5R01CA172272-02		440,113
Mechanism of the Stromal Response to Smoothed Inhibition in Pancreatic Cancer	93.396	5R01CA157980-04		409,069
Mechanism of action of Prdm16 in hematopoietic stem cells	93.396	5R01CA167289-02		408,518
The Role of NK-kB in B-Cell Differentiation and Lymphomagenesis	93.396	5R01CA157660-03		365,182
Studies of DNA Interstrand Crosslink Repair to Improve Crosslinking Drug Therapies	93.396	5R01CA167826-03		328,995
Role of Acetyltransferase Gene Inactivation in Follicular Lymphoma Pathogenesis	93.396	5R01CA164152-03		327,613
Role of p53-mediated unconventional functions in tumor suppression	93.396	5R01CA172023-03		280,430
Leadership Component in Chemoprevention: Mouse Models of Human Cancer Consortium	93.396	5U01CA141535-05		267,772
Roles and Regulations of P53	93.396	5P01CA087497-14		266,001
The Role of NOTCH1 in the Pathogenesis of CLL	93.396	5R01CA177319-02		256,846
The Role of ATM in Suppression of Lymphomas	93.396	5R01CA158073-04		256,163

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Targeting non-classical oncogenes as therapy for T-ALL	93.396	5R01CA169162-03		254,689
Mouse Model for Human Pancreatic Ductal Adenocarcinoma	93.396	5R01CA109525-10		253,579
Role of IRF4-NOTCH2 Interplay in B-Cell Development and Malignancy	93.396	5R21CA175461-02		233,030
The role of PHF6 in T-cell acute lymphoblastic leukemia	93.396	5R01CA155743-04		232,422
Integrative Cancer Genomics: Drivers, Pathways and Drugs	93.396	5R01CA164729-03		229,976
Properties and regulation of p53 in tumor cells	93.396	5R01CA077742-14		215,317
The Role of NOTCH1 in the Pathogenesis of CLL	93.396	5R01CA177319-02		198,565
Elucidation of cancer pathways and druggable targets using mouse models	93.396	5U01CA084294-15		186,697
Elucidation of cancer pathways and druggable targets using mouse models	93.396	5U01CA084294-15		176,995
Identification and modeling of driver genetic modules in glioblastoma	93.396	1R01CA179044-01A1		166,759
Role of MMP13 in Multiple Myeloma Bone Disease	93.396	1R01CA175313-01A1		162,398
p53 Acetylation and Deacetylation in Tumorigenesis	93.396	5R01CA085533-10		138,220
Elucidation of cancer pathways and druggable targets using mouse models	93.396	5U01CA084294-15		134,938
ARRA -5R01CA095389-09	93.396	5R01CA095389-09		124,914
Mechanisms of Mdm2/Mdmx in repressing p53	93.396	5R01CA131439-05		120,574
Comparing HTS with Fragment-Based Design for B-Raf and the Ras-Raf Interaction	93.396	5R01CA161061-04		104,098
Notch Signaling in Lymphangiogenesis	93.396	5R01CA136673-05		96,536
Role of p53-mediated unconventional functions in tumor suppression	93.396	5R01CA172023-03		75,091
VEGF blockade and alternative angiogenic pathways in neuroblastoma	93.396	5R01CA124644-05		70,850
Elucidation of cancer pathways and druggable targets using mouse models	93.396	5U01CA084294-15		69,540
The role of Id proteins in tumor development and angiogenesis in the brain	93.396	5R01CA101644-11		65,364
The Ure1 Ubiquitin Ligase in Neural Stem Cells and Cancer	93.396	5R01CA131126-05		64,380
(PQB5) Reconstruction of Evolutionary Networks using Cross-Sectional Genomic Data	93.396	1R01CA185486-01		56,698
Role of MEF2B mutations in lymphomagenesis	93.396	1R01CA178453-01A1		43,237
Notch Signaling in Lymphangiogenesis	93.396	5R01CA136673-05		42,171
The Role of AKT Signaling in NOTCH1 Induced Leukemias	93.396	5R01CA129382-04		29,750
Roles and Regulations of P53	93.396	5P01CA087497-14		24,491
Leadership Component in Chemoprevention: Mouse Models of Human Cancer Consortium	93.396	5U01CA141535-05		23,606
Identification and modeling of driver genetic modules in glioblastoma	93.396	1R01CA179044-01A1		20,190
(PQB5) Reconstruction of Evolutionary Networks using Cross-Sectional Genomic Data	93.396	1R01CA185486-01		13,964
Mechanisms and Regulation of Post-Translational Modifications of ID Proteins	93.396	5R01CA127643-05		7,857
Mechanisms of T-Cell Leukemogenesis Induced by Notch1	93.396	5R01CA120196-05		1,604
VEGF blockade and alternative angiogenic pathways in neuroblastoma	93.396	5R01CA124644-05		145
Profiling Signatures of synergistic Chemical Perturbations in Diverse Cellular Contexts	93.396	5U01CA164184-02		64
ROLE OF TGFBI GENE IN CELL PROLIFERATION AND TUMOR PROGRESSION	93.396	5 R01 CA127120-04		-23
ELUCIDATION OF CANCER PATHWAYS AND DRUGGABLE TARGETS USING M OUSE MODELS	93.396	5 U01 CA084294-13		-110

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Regulation of the p53 Tumor Suppressor Protein	93.396	5 R01 CA058316-20		-2,490
ELUCIDATION OF CANCER PATHWAYS AND DRUGGABLE TARGETS USING M OUSE MODELS	93.396	5 U01 CA084294-13		-3,491
Elucidation of cancer pathways and druggable targets using mouse models	93.396	5U01CA084294-15		-5,182
Dynamic Roles of HAUSP in p53/Mdm2 Regulation	93.396	5 R01 CA129627-05		-6,003
Defining mechanisms of cancer chemoresistance and metastasis	93.396	4R00CA172697-02		-7,722
Elucidation of cancer pathways and druggable targets using mouse models	93.396	5U01CA084294-15		-9,491
				\$10,688,747

Cancer Centers Support Grants

Cancer Center Support Grant	93.397	5P30CA013696-39		514,778
Stem Cells And The Origins of Barrett s Esophagus	93.397	5U54CA163004-03		487,580
Stem Cells And The Origins of Barrett s Esophagus	93.397	5U54CA163004-03		345,795
Cancer Center Support Grant	93.397	5P30CA013696-39		343,623
Cancer Center Support Grant	93.397	5P30CA013696-39		320,524
Cancer Center Support Grant	93.397	5P30CA013696-39		265,787
Stem Cells And The Origins of Barrett s Esophagus	93.397	5U54CA163004-03		224,486
Stem Cells And The Origins of Barrett s Esophagus	93.397	5U54CA163004-03		218,719
Cancer Center Support Grant	93.397	5P30CA013696-39		210,365
Cancer Center Support Grant	93.397	5P30CA013696-39		208,016
Cancer Center Support Grant	93.397	5P30CA013696-39		187,720
Cancer Center Support Grant	93.397	5P30CA013696-39		182,845
Cancer Center Support Grant	93.397	5P30CA013696-39		171,062
Myofibroblasts in Gastrointestinal Cancers	93.397	5U54CA163111-03		166,935
Cancer Center Support Grant	93.397	5P30CA013696-39		137,654
Myofibroblasts in Gastrointestinal Cancers	93.397	5U54CA163111-03		118,516
Cancer Center Support Grant	93.397	5P30CA013696-39		118,004
Cancer Center Support Grant	93.397	5P30CA013696-39		116,414
Myofibroblasts in Gastrointestinal Cancers	93.397	5U54CA163111-03		112,704
Cancer Center Support Grant	93.397	5P30CA013696-39		108,437
Cancer Center Support Grant	93.397	5P30CA013696-39		100,110
Cancer Center Support Grant	93.397	5P30CA013696-39		91,120
Cancer Center Support Grant	93.397	5P30CA013696-39		90,299
Cancer Center Support Grant	93.397	5P30CA013696-39		86,894
Cancer Center Support Grant	93.397	5P30CA013696-39		86,277
Cancer Center Support Grant	93.397	5P30CA013696-39		78,788
Cancer Center Support Grant	93.397	5P30CA013696-39		74,007
Cancer Center Support Grant	93.397	5P30CA013696-39		73,519

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Myofibroblasts in Gastrointestinal Cancers	93.397	5U54CA163111-03		71,909
Cancer Center Support Grant	93.397	5P30CA013696-39		66,010
Myofibroblasts in Gastrointestinal Cancers	93.397	5U54CA163111-03		55,099
Cancer Center Support Grant	93.397	5P30CA013696-39		49,716
Cancer Center Support Grant	93.397	5P30CA013696-39		48,395
Cancer Center Support Grant	93.397	5P30CA013696-39		42,410
Stem Cells And The Origins of Barrett's Esophagus	93.397	5U54CA163004-03		18,608
Myofibroblasts in Gastrointestinal Cancers	93.397	5U54CA163111-03		15,462
Myofibroblasts in Gastrointestinal Cancers	93.397	5U54CA163111-03		14,040
Stem Cells And The Origins of Barrett's Esophagus	93.397	5U54CA163004-03		11,706
Cancer Center Support Grant	93.397	5P30CA013696-39		5,072
Myofibroblasts in Gastrointestinal Cancers	93.397	5U54CA163111-03		4,967
Cancer Center Support Grant	93.397	5P30CA013696-39		2,764
Stem Cells And The Origins of Barrett's Esophagus	93.397	5U54CA163004-03		1,187
Stem Cells And The Origins of Barrett's Esophagus	93.397	5U54CA163004-03		920
Myofibroblasts in Gastrointestinal Cancers	93.397	5U54CA163111-03		374
Cancer Center Support Grant	93.397	5P30CA013696-39		-87,551
				\$5,562,066

Cancer Research Manpower

Cancer Epidemiology, Biostatistics and Environmental Sciences	93.398	5T32CA009529-25		322,558
ASSESSMENT OF INHERITED COLON CANCER PREDICTION MODELS IN DIVERSE POPULATIONS	93.398	5K07CA151769-05		163,922
Methylation and Hepatocellular Carcinoma Outcomes	93.398	5K23CA149084-04		159,644
Effects of Antioxidant Supplementation during Breast Cancer Adjuvant Therapy	93.398	5K23CA141052-05		157,011
Health-Seeking Behaviors among Men with Criminal Justice and Substance Abuse Histories	93.398	5K01CA154861-06		140,378
Multilevel Determinants of Breast Cancer: Translating Research into Interventions	93.398	5K07CA151777-03		133,308
TLR4 in obesity-driven liver cancer Ms. Ross,	93.398	5K22CA178098-02		121,572
Targeting Tumor Cell Iron Addiction to Achieve Tumor-selective Cell Death	93.398	5K99CA166517-02		87,174
The Role of FBXL4 in T-cell Acute Lymphoblastic Leukemia	93.398	5F30CA174099-02		62,539
Cancer Biology Training Grant	93.398	5T32CA009503-28		55,088
Risk factors for Site-Specific Metastasis in Esophageal Cancer	93.398	5K07CA132892-05		45,696
The Role of CLIC 1 And 4 in Tumor Growth And Metastasis	93.398	5F31CA174244-02		41,534
Elucidation of Novel Post-Translational Mechanisms That Regulate Notch Activity	93.398	5F31CA177168-02		41,534
Unnatural Amino Acid Mutagenesis with Fluorescent Amino Acids	93.398	5F30CA174357-02		38,917
Cancer Biology Training Grant	93.398	5T32CA009503-28		38,000
Cancer Biology Training Grant	93.398	5T32CA009503-28		33,127
Cancer Biology Training Grant	93.398	5T32CA009503-28		27,454

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Effects of genetic, pharmacological modulation of system Xc- in pancreatic cancer	93.398	1F31CA180738-01		26,624
Cancer Biology Training Grant	93.398	5T32CA009503-28		24,668
Cancer Biology Training Grant	93.398	5T32CA009503-28		23,944
Cancer Biology Training Grant	93.398	5T32CA009503-28		23,462
The role of DKK1, a Wnt-Inhibitor, in Mesenchymal Differentiation/Sarcomagenesis	93.398	5 K08 CA132986-04		22,738
Cancer Biology Training Grant	93.398	5T32CA009503-28		22,656
Cancer Biology Training Grant	93.398	5T32CA009503-28		22,205
Cancer Biology Training Grant	93.398	5T32CA009503-28		20,806
Cancer Biology Training Grant	93.398	5T32CA009503-28		18,392
Cancer Biology Training Grant	93.398	5T32CA009503-28		17,944
Cancer Biology Training Grant	93.398	5T32CA009503-28		17,874
Epigenetics and Risk Factors for Breast and Ovarian Cancer in High Risk Women (TERRY/FERRIS)	93.398	1F31CA183547-01		14,259
Role of Replication Stress During Mycdependent Lymphomagenesis	93.398	5K99CA151827-03		3,619
Cancer Biology Training Grant	93.398	5T32CA009503-28		3,272
Cancer Biology Training Grant	93.398	5T32CA009503-28		540
				\$1,932,459

Trans-NIH Recovery Act Research Support

Mechanisms of Novel Cancer Targets in ARF-mediated Tumor Suppression	93.701	5R01CA169246-03		264,982
ARRA -5P30AR058886-02	93.701	5P30AR058886-02		111,095
ARRA -1KM1CA156709-01	93.701	1KM1CA156709-01		78,718
ARRA -1KM1CA156709-01	93.701	1KM1CA156709-01		50,581
ARRA -1KM1CA156709-01	93.701	1KM1CA156709-01		47,154
ARRA -3 R01 AR056016-02S2	93.701	3 R01 AR056016-02S2		39,077
ARRA -1KM1CA156709-01	93.701	1KM1CA156709-01		31,759
Mechanisms of Novel Cancer Targets in ARF-mediated Tumor Suppression	93.701	5R01CA169246-03		29,560
ARRA -1 RC4 DK090776-01	93.701	1 RC4 DK090776-01		15,567
ARRA -1KM1CA156709-01	93.701	1KM1CA156709-01		9,459
ARRA -3 P60 MD000206-08S1	93.701	3 P60 MD000206-08S1		3,172
ARRA -1KM1CA156709-01	93.701	1KM1CA156709-01		1,164
ARRA -1KM1CA156709-01	93.701	1KM1CA156709-01		796
ARRA -1 RC2 DE020767-01	93.701	1 RC2 DE020767-01		-91
ARRA -5 R01 NS055809-05	93.701	5 R01 NS055809-05		-131
ARRA -3 P30 DK063608-07S2	93.701	3 P30 DK063608-07S2		-343
ARRA -3 R01 CA127532-02S1	93.701	3 R01 CA127532-02S1		-580
ARRA -5RC2DE020767-02	93.701	5RC2DE020767-02		-2,907
ARRA -5RC1MH088405-02	93.701	5RC1MH088405-02		-8,840

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Mechanisms of p53 activation in tumor suppression	93.701	5R01CA098821-09		-28,298
ARRA -5R01CA138678-04	93.701	5R01CA138678-04		-31,415
				\$610,479

Cardiovascular Diseases Research

Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		976,007
Mechanisms and Consequences of Stress-Induced Macrophage Death in Atherosclerosis	93.837	5R01HL075662-11		844,477
Exercise and Inflammation: Autonomic, Affective & Cellular Mechanisms	93.837	5R01HL094423-05		588,608
Investigation of Calcium Channel Modulation in Cardiomyocytes by Novel Methods	93.837	5R01HL113136-02		587,215
PKD Isoforms in Heart	93.837	5R01HL112388-03		569,077
Translational Research of Negative Emotions and Acute Endothelial Dysfunction	93.837	5R01HL116470-02		548,489
Cardiac Lipotoxicity and Ceramide Metabolism in Heart Failure	93.837	5R01HL114813-02		539,135
Depression, Biobehavioral Mechanisms, & CHD/Mortality Outcomes	93.837	5P01HL088117-05		509,411
PROMISE Trial: Substudy to Assess for Effective Dose of Radiation	93.837	5R01HL109711-04		508,423
Single Molecules Studies of titin elasticity	93.837	5R01HL061228-17		500,679
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		483,007
GP1b Alpha-VWF-A1 bond kinetics in health and disease	93.837	5R01HL103989-04		466,221
Depressing Screening RCT in ACS patients: Quality of Life and Cost Outcomes	93.837	5R01HL114924-02		433,322
New techniques for microfabricated vascularized 3D tissues	93.837	5R01HL095477-05		426,736
Endothelial Oxidative Stress and Inflammation: Mechanisms and Human Studies	93.837	5R01HL092144-05		425,368
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		423,980
Novel Therapeutic Approaches to Atrial Fibrillation Targeting Intracellular Calcium Leak	93.837	5R01HL102040-04		411,935
Postdoctoral Training in Arteriosclerosis Research	93.837	5T32HL007343-37		410,230
Impact of Social-Interpersonal Factors in the ER on PTSD/Cardiac Outcomes	93.837	5R01HL117832-02		402,836
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		401,270
Pathways of Fenofibrate Effects on Cardiovascular Outcomes in ACCORD	93.837	5R01HL110418-03		397,702
Molecular Determinants of K ⁺ Channel Regulation in Heart	93.837	5R01HL044365-21		393,898
Ecological Link of Psychosocial Stress to Exercise: Personalized Pathways	93.837	5R01HL115941-03		393,827
Physical Activity Patterns via New Dimension-Informative Cluster Models (Cheung/Eikind)	93.837	5R01HL111195-03		385,922
Assembly and Secretion of APOB containing Lipoproteins	93.837	5R01HL055638-17		379,952
Depression, Biobehavioral Mechanisms, & CHD/Mortality Outcomes	93.837	5P01HL088117-05		377,627
Mechanisms of Fatty Acid Uptake By Cardiac Muscle	93.837	5R01HL073029-09		376,776
Molecular approaches to gene identification in congenital heart disease	93.837	5U01HL098163-05		372,555
The Role of the Orphan Receptor Tyrosine Kinase Ror1 in Vascular Disease	93.837	5R00HL109256-04		371,385
Protein kinase C-delta actions in cardiomyocytes	93.837	5R01HL077860-09		354,099
Comparative effectiveness analysis of treat-to-target and risk-based blood pressure control guidelines	93.837	5R01HL107475-03		347,735
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		344,679

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Notch in Angiogenesis and Vascular Biology	93.837	5R01HL112626-02		334,948
A systems approach to elucidate mechanisms of drug activity and sensitivity using LINCS data	93.837	5U01HL111566-02		326,603
Molecular Basis of Heart Failure	93.837	5R01HL061503-16		320,703
Engineering vascularized cardiac muscle	93.837	5R01HL076485		320,173
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		315,482
A Novel Atherosclerosis Locus on Mouse Chrom	93.837	5R01HL102206-04		312,234
p66Shc Signaling Functions in Cardiomyocytes	93.837	5R01HL093343-04		305,274
EXTRACELLULAR REGULATION OF LIPOPROTEIN LIPASE ACTIVITY	93.837	5R01HL045095-23		302,464
Postdoctoral Training in Cardiovascular Disease	93.837	5T32HL007854-19		300,302
Depression, Biobehavioral Mechanisms, & CHD/Mortality Outcomes	93.837	5P01HL088117-05		295,755
Assembly of membranes in heart and yeast mitochondria	93.837	5R01HL022174-33		292,335
Gender Race and Ethnic Disparities Research in Cardiovascular Disease Prevention	93.837	5K24HL076346-10		290,001
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		284,312
Autophagy in Advanced Atherosclerosis	93.837	5R01HL106019-04		268,704
Noninvasive Arrhythmia Mapping Using Electromechanical Wave Imaging	93.837	5R01HL114358-03		260,925
ABCG1 AND ENDOTHELIAL FUNCTION	93.837	5R01HL102395-04		260,690
Mechanisms of Defective Efferocytosis in Atherosclerosis	93.837	5R01HL107497-03		258,213
Clinical validation of cardiac strain measures with real-time 4D ultrasound	93.837	5R01HL086578-04		255,817
Visualization and Lineage Tracing of Hematopoietic Stem Cell Heterogeneity	93.837	5R21HL113678-02		254,251
Noninvasive qualitative and quantitative assessment of vascular disease in vivo	93.837	5R01HL098830-04		246,408
Postdoctoral Training in Cardiovascular Disease	93.837	5T32HL007854-19		244,874
Modeling of Timothy Syndrome to Screen Drugs with Induced Pluripotent Stem Cells	93.837	5R00HL111345-04		244,427
Molecular approaches to gene identification in congenital heart disease	93.837	5U01HL098163-05		232,614
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		228,391
ABA1/ABCG1 IN MYELOID POPULATIONS AND ATHEROGENESIS	93.837	5R01HL107653-04		202,181
Network for Cardiothoracic Surgical Investigations in Cardiovascular Medicine	93.837	5U01HL088951-05		191,680
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		189,750
Columbia Summer Institute for Training in Biostatistics (CSIBS)	93.837	5T15HL117444-02		185,035
ENACTING THE BEHAVIORAL AND SOCIAL SCIENCES IN THE CLINICAL SETTING: INSTITUTION	93.837	5R25HL108014-04		178,024
CLIC function in angiogenesis	93.837	1R01HL119043-01A1		160,243
Enhancing survival and function of engineered cardiac tissue	93.837	5R21HL108668-02		158,371
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		154,801
Optical Tomographic Imaging of Peripheral Arterial Disease	93.837	1R01HL115336-01A1		153,375
Use of waveform and frequency analyses to diagnose atrial tachycardias after atrial fibrillation ablation	93.837	5K23HL105893-04		153,288
PKD Isoforms in Heart	93.837	5R01HL112388-03		149,971
Notch3 signaling in the pathogenesis of hemangioma	93.837	5K08HL102068-05		144,511

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Improving QoL in Outpatients with Heart Failure: A Dose-Finding Study and RCT	93.837	5K23HL112850-02		143,314
Ecological Link of Psychosocial Stress to Exercise: Personalized Pathways	93.837	5R01HL115941-03		139,639
Nutritional and Hormonal Pathways for Reduction of ApoB-lipoproteins	93.837	5R21HL112233-02		138,516
Uncontrolled Hypertension: The Role of Medication Adherence and Clinical Inertia	93.837	5K23HL098359-06		138,359
MIDCAREER MENTORING IN BEHAVIORAL CARDIOLOGY: DEPRESSSION & CARDIOVASCULAR	93.837	5K24HL084034-09		130,011
Pathways of Fenofibrate Effects on Cardiovascular Outcomes in ACCORD	93.837	5R01HL110418-03		129,777
Nanomechanics of the extracellular matrix	93.837	5R01HL066030-14		127,196
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		125,678
Depression, Biobehavioral Mechanisms, & CHD/Mortality Outcomes	93.837	5P01HL088117-05		125,150
Adolescent Experiences and Adult Cardiovascular Health: Effects of the Social and Physical Environment	93.837	5K01HL103199-06		124,767
Mechanisms of Reduced Fatty Acid Oxidation and Cardiac Dysfunction in Sepsis	93.837	5K99HL112853-02		122,572
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		122,049
Role of FoxO1 in Lipid Metabolism	93.837	5K99HL111206-02		121,109
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		119,418
MECHANISMS OF VENTRICULAR TACHYCARDIA IN LIPOTOXIC CARDIOMYOPATHY	93.837	5K08HL105801-04		119,350
Depression, Biobehavioral Mechanisms, & CHD/Mortality Outcomes	93.837	5P01HL088117-05		118,299
HDL cholesterol and chronic lower respiratory disease events in five cohorts	93.837	5R21HL121457-02		105,948
BEST-DP: Biostatistics & Epidemiology Summer Training Diversity Program (BEGG/GALEA/VAUGHAN)	93.837	2R25HL096260-06		104,093
Cell-type Specificity of Heritable Channelopathies: Role of the Purkinje Fiber	93.837	5K08HL116790-02		100,661
Dusp4 in the pathogenesis of LMNA cardiomyopathy	93.837	5K99HL118163-02		99,056
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		98,309
Insulin Resistance in Chronic Heart Failure: Pathophysiology and Potential for Reversal	93.837	5K23HL103795-03		97,859
Forecasting the Cardiovascular Disease Epidemic in China	93.837	5K08HL089675-05		85,917
Specialized pro-resolving mediators in atherosclerosis	93.837	5K99HL119587-02		85,464
Cardiac and Skeletal Muscle Metabolism and Proteolysis in Heart Failure	93.837	5K23HL095742-05		85,319
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		81,666
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		76,881
Molecular approaches to gene identification in congenital heart disease	93.837	5U01HL098163-05		64,180
Depression, Biobehavioral Mechanisms, & CHD/Mortality Outcomes	93.837	5P01HL088117-05		57,171
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		54,967
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		52,301
Physical Activity, Depression, and Post-ACS	93.837	5R01HL098037-04		51,744
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		49,349
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		47,661
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		46,781
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		45,258

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Biologically inspired engineering of hierarchical vascular networks	93.837	5F30HL112505-03		45,032
Role of FoxO1 in Lipid Metabolism	93.837	4R00HL111206-03		44,850
A systems approach to elucidate mechanisms of drug activity and sensitivity using LINCS data	93.837	5U01HL111566-02		44,338
Mechanisms of Atherogenesis in Insulin Resistance	93.837	5P01HL087123-07		42,675
Pregnancy as a Window to Future Cardiovascular Health	93.837	5U10HL120034-02		39,654
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		33,382
Ecological Link of Psychosocial Stress to Exercise: Personalized Pathways	93.837	5R01HL115941-03		33,300
A systems approach to elucidate mechanisms of drug activity and sensitivity using LINCS data	93.837	5U01HL111566-02		33,000
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		28,289
Training in Cardiovascular Translational Research	93.837	1T32HL120826-01		26,211
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		24,784
postdoctoral training in arteriosclerosis	93.837	5T32HL007343-35		22,182
Postdoctoral Training in Cardiovascular Disease	93.837	5T32HL007854-19		21,276
MicroRNA de-targeting: new therapy for coronary artery disease	93.837	5K99HL109133-02		18,857
Investigating the role of electrical stimulation in integrin-mediated functionality	93.837	1F31HL122067-01		17,591
Discrimination, Diabetes and Cardiovascular Complications in Black Ethnic Groups (LUCHSINGER/FORDE)	93.837	1F31HL117613-01		16,680
Molecular approaches to gene identification in congenital heart disease	93.837	5U01HL098163-05		16,114
Translational Research of Negative Emotions and Acute Endothelial Dysfunction	93.837	5R01HL116470-02		10,942
Postdoctoral Training in Cardiovascular Disease	93.837	5T32HL007854-19		10,359
Racial Disparities in Obesity: Role of Culture and Environment	93.837	5 K01 HL084700-06		4,135
Postdoctoral Training in Cardiovascular Disease	93.837	5T32HL007854-19		3,780
Pregnancy as a Window to Future Cardiovascular Health	93.837	5U10HL120034-02		3,115
A systems approach to elucidate mechanisms of drug activity and sensitivity using LINCS data	93.837	5U01HL111566-02		2,333
Postdoctoral Training in Cardiovascular Disease	93.837	5T32HL00785417		2,177
RAGE-DIRECTED IMAGING IN DIABETES-INDUCED ACCELERATED ATHERO SCLEROSIS	93.837	5 R01 HL089874-04		1,542
Biologically inspired engineering of hierarchical vascular networks	93.837	5F30HL112505-03		1,521
Single molecule studies of titin elasticity	93.837	5 R01 HL061228-15		1,479
Lipoprotein Oxidation and Utilization During Exercise in CHF	93.837	5 R01 HL086845-04		637
Depression, Biobehavioral Mechanisms, & CHD/Mortality Outcomes	93.837	5P01HL088117-05		357
Role of SP-A Gene Polymorphism in Lung Transplantation	93.837	5R21HL092478-02		289
Network for Cardiothoracic Surgical Investigations in Cardiovascular Medicine	93.837	5U01HL088951-05		-5
REGULATION OF CARDIAC MORPHOGENESIS BY NKX GENES IN THE ZEBR AFISH EMBRYO	93.837	5 K08 HL088002-04		-18
ION CHANNEL FUNCTION IN ARRHYTHMOGENIC CARDIAC CELL	93.837	5 R01 HL066140-08		-30
Depression, Biobehavioral Mechanisms, & CHD/Mortality Outcomes	93.837	5P01HL088117-05		-111
Molecular approaches to gene identification in congenital heart disease	93.837	5U01HL098163-05		-688
Molecular approaches to gene identification in congenital heart disease	93.837	5U01HL098163-05		-756

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Engineering Vascularized Cardiac Muscle	93.837	5R01HL076485-06		-1,024
New Synthetic Reactions For Active Principles	93.837	5 R01 HL025848-32		-1,552
Psychosocial factors and cardiovascular Disease	93.837	5P01HL047540-20		-2,543
Molecular Pharmacology of an Inherited Heart Disease	93.837	5 R01 HL056810-14		-2,891
Biventricular Pacing After Cardiopulmonary Bypass	93.837	5 R01 HL080152-05		-3,635
Allosteric Modulation of Cardiovascular ION Channels	93.837	5 P01 HL081172-05		-4,845
MOLECULAR DETERMINANTS OF L-TYPE CALCIUM CHANNEL GATING	93.837	5 R01 HL069911-10		-5,655
Molecular approaches to gene identification in congenital heart disease	93.837	5U01HL098163-05		-9,739
DEPRESSION, BIOBEHAVIORAL MECHANISMS, & CHD/MORTALITY OUTCOMES	93.837	5 P01 HL088117-03		-10,500
Molecular Basis of Sudden Cardiac Death	93.837	5 P01 HL067849-10		-10,603
MECHANISMS OF ATHEROGENESIS IN INSULIN RESISTANCE	93.837	5 P01 HL087123-05		-71,112
				\$27,690,676

Lung Diseases Research

Cardiopulmonary Structure & Function in the Multi-Ethnic Study of Atherosclerosis	93.838	5R01HL077612-08		712,805
Obesity, Inflammation and Lung Injury after Lung Transplantation	93.838	5R01HL114626-02		663,235
Subclinical Interstitial Lung Disease in MESA	93.838	5R01HL103676-04		608,456
Smoke Induced Airway Injury in the Lung	93.838	5R01HL086936-06		467,199
Imaging RAGE Pro-inflammatory Signaling and Cellular Apoptosis in Emphysema	93.838	5R01HL116346-03		341,871
Calcium Dependent Signaling in Airway Epithelial Cells	93.838	5R01HL073989-09		273,015
Bioengineering a chimeric human lung	93.838	5R01HL120046-02		259,092
COLUMBIA UNIVERSITY TRAINING PROGRAM IN LUNG SCIENCE	93.838	5T32HL105323-04		191,695
Optical Imaging of Mesenchymal Stem Cell Interactions With Lung Microvessels	93.838	5R01HL057556-18		174,369
Mitochondrial Dysfunction in the Development of Bronchopulmonary Dysplasia	93.838	5K08HL096953-05		170,753
Staphylococcus Aureus Activation of TNF Signaling Pathways	93.838	5R01HL079395-08		159,718
Pulmonary Microvascular Blood Flow and Cor Pulmonale Parvus in Emphysema/COPD	93.838	2R01HL093081-05		154,096
Bioengineering a chimeric human lung	93.838	5R01HL120046-02		144,906
Liquid secretion in the alveolar wall	93.838	5R01HL078645-09		138,816
Imaging RAGE Pro-inflammatory Signaling and Cellular Apoptosis in Emphysema	93.838	5R01HL116346-03		120,225
Pulmonary Vascular Changes in Early Chronic Obstructive Pulmonary Disease (COPD)	93.838	5R01HL093081-04		112,992
Retinoic Acid Regulation of Lung Development	93.838	7R01HL067129-11		85,965
Obesity, Inflammation and Lung Injury after Lung Transplantation	93.838	5R01HL114626-02		44,909
Randomized Trial Antenatal Late Preterm Steroids Clinical Coordinating	93.838	5U01HL098554-03		34,672
Subclinical Interstitial Lung Disease in MESA	93.838	5R01HL103676-04		32,159
Cardiopulmonary Structure & Function in the Multi-Ethnic Study of Atherosclerosis	93.838	5R01HL077612-08		30,423
COLUMBIA UNIVERSITY TRAINING PROGRAM IN LUNG SCIENCE	93.838	5T32HL105323-04		12,439
COLUMBIA UNIVERSITY TRAINING PROGRAM IN LUNG SCIENCE	93.838	5T32HL105323-04		5,495

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Micropuncture Studies of Lung Water and Solute Exchange	93.838	5R01HL036024-28		145
Subclinical Interstitial Lung Disease in MESA	93.838	5R01HL103676-04		-21,550
				\$4,917,900

Blood Diseases and Resources Research

Harmful effects of red blood cell transfusions are mediated by iron	93.839	5R01HL115557-02		546,959
Yes 1 and CTNND1 as quiescence regulators in hematopoietic stem cells	93.839	5R01HL115145-02		474,174
Zfx, A Novel Transcriptional Regulator of Hematopoiesis	93.839	5R01HL084353-09		458,812
Genetic regulation of hematopoietic stem cells	93.839	5R01HL073760-08		331,616
Harmful effects of transfusion of older stored red cells: iron and inflammation	93.839	5R01HL098014-04		186,392
Mechanisms underlying the harmful effects of stored red blood cell transfusions	93.839	5K08HL103756-05		171,279
Role of STAT1 and STAT3 in Graft v. Host disease and Graft v. Leukemia Effects	93.839	7R01HL093716-05		169,521
Short-term training: Students in Health Professional Schools	93.839	5T35HL007616-34		168,251
Novel Viruses and Viral Dynamics in Multiple Transfusion Recipients	93.839	1R01HL119485-01A1		38,495
Harmful effects of transfusion of older stored red cells: iron and inflammation	93.839	5R01HL098014-04		24,297
Short-term training: Students in Health Professional Schools	93.839	5T35HL007616-34		3,501
Short-term training: Students in Health Professional Schools	93.839	5T35HL007616-34		684
				\$2,573,981

Arthritis, Musculoskeletal and Skin Diseases Research

Primary cilia as mechanotransducers in bone	93.846	5R01AR062177-03		522,731
Physiologic Loading for Cartilage Tissue Engineering	93.846	5R01AR046568-12		475,620
The Osteoblast as a Determinant of Leukemogenesis	93.846	5R01AR054447-07		471,149
Mechanobiology of 3D Trabecular Bone Explants	93.846	5R01AR052461-04		396,987
Interface Tissue Engineering for Soft Tissue-to-Bone Integration	93.846	5R01AR055280-07		384,628
Clinical Bone Mechanics Using HR-pQCT and MRI	93.846	5R01AR058004-05		382,538
inflammation and cardiovascular disease in race/ethnicity	93.846	5R01AR050026-10		370,895
Clinical Bone Mechanics Using HR-pQCT and MRI	93.846	5R01AR058004-05		324,309
Intracellular calcium leak and muscle function	93.846	5R01AR060037-05		319,758
PATHOGENESIS OF EMERY-DREIFUSS MUSCULAR DYSTROPHY	93.846	5R01AR048997-10		295,186
Mechanisms of mechanosensory transductions in Merkel cells	93.846	5R01AR051219-10		294,501
Micro-Mechanical Modeling of Trabecular Bone	93.846	5R01AR051376-08		268,416
BIOTRIBOLOGY OF DIARTHRODIAL JOINTS	93.846	5R01AR043628-17		249,096
ERK Signaling in Inflammatory Bone Loss	93.846	5R01AR056246-06		247,520
inflammation and cardiovascular disease in race/ethnicity	93.846	5R01AR050026-10		246,969
Multidisciplinary Engineering Training in Musculoskeletal Research	93.846	5T32AR059038-04		232,448
Genome Wide Association Studies in Alopecia Areata	93.846	5R01AR056016-05		221,640
A Novel Genetic Model of Systemic Lupus Erythematosus	93.846	5R21AR064460-02		210,976

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Columbia University Medical Center Skin Disease Research Center (CUMCSDRC)	93.846	5P30AR044535-13		204,694
Columbia University Medical Center Skin Disease Research Center (CUMCSDRC)	93.846	5P30AR044535-13		193,941
Idiopathic Osteoporosis in Premenopausal Women	93.846	5K24AR052665-09		177,932
Optimizing Nutrient Supply in Large Engineered Cartilage Tissue Constructs	93.846	5R01AR060361-04		156,688
A novel mouse model for immune-mediated skin fibrosis in scleroderma	93.846	5R21AR064693-02		128,327
Inflammation and cardiovascular disease in race/ethnicity	93.846	5R01AR050026-10		127,366
Optimizing Nutrient Supply in Large Engineered Cartilage Tissue Constructs	93.846	5R01AR060361-04		116,550
ERK Signaling in Inflammatory Bone Loss	93.846	5R01AR056246-06		102,051
An RA immune system derived from patients stem cells	93.846	5R21AR064473-02		100,809
Inflammation and cardiovascular disease in race/ethnicity	93.846	5R01AR050026-10		97,596
Functional Analysis of the Hairless Protein	93.846	5R01AR047338-10		92,789
IGF-1, bone turnover and response to teriparatide in premenopausal women with IOP	93.846	5R03AR064016-02		87,791
Anti-CCP Antibodies, TNF-Antagonists, and Cardiac Function in Rheumatoid Arthritis	93.846	5R03AR064572-02		80,309
ERK Signaling in Inflammatory Bone Loss	93.846	5R01AR056246-06		78,499
Columbia University Medical Center Skin Disease Research Center (CUMCSDRC)	93.846	5P30AR044535-13		68,558
Columbia University Medical Center Skin Disease Research Center (CUMCSDRC)	93.846	5P30AR044535-13		57,219
Meniscus Regeneration by Endogenous Stem/Progenitor Cells	93.846	1R01AR065023-01A1		51,358
An RA immune system derived from patients stem cells	93.846	5R21AR064473-02		44,504
An Optogenetic Strategy to Determine if Merkel Cells Are Excitatory in the Skin	93.846	5R21AR062307-02		41,902
Columbia University Medical Center Skin Disease Research Center (CUMCSDRC)	93.846	5P30AR044535-13		40,355
Columbia University Medical Center Skin Disease Research Center (CUMCSDRC)	93.846	5P30AR044535-13		39,591
Epigenetic control of target gene activity by hairless in skin homeostasis	93.846	1K01AR064315-01A1		27,525
Identification of Alopecia Areata Biomarkers in Skin and Blood	93.846	5R21AR06188102		16,170
Physiologic Loading for Cartilage Tissue Engineering	93.846	5R01AR046568-12		15,911
Columbia University Medical Center Skin Disease Research Center (CUMCSDRC)	93.846	5P30AR044535-13		4,282
Physiologic Loading for Cartilage Tissue Engineering	93.846	5R01AR046568-12		2,522
Hormonal Control of Periosteal Expansion	93.846	5R01AR054447-05		2,446
Osteocalcin as a Regulator of Energy Metabolism	93.846	5 R01 AR045548-13		2,284
Multidisciplinary Engineering Training in Musculoskeletal Research	93.846	5T32AR059038-04		544
Pseudo-3D Cytoskeleton Dynamics and Signal Activation in Osteocytes under Flow	93.846	5 R21 AR059917-02		167
PATHOGENESIS OF EMERY-DREIFUSS MUSCULAR DYSTROPHY	93.846	5R01AR048997-10		101
Physiologic Loading for Cartilage Tissue Engineering	93.846	5R01AR046568-12		-43
Columbia University Medical Center Skin Disease Research Center (CUMCSDRC)	93.846	5P30AR044535-13		-337
Sirtuin/FOXO Signaling in the Regulation of Bone Mass	93.846	5 R01 AR055931-05		-892
Multidisciplinary Engineering Training in Musculoskeletal Research	93.846	5T32AR059038-04		-35,184
				\$8,039,692

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Diabetes, Digestive, and Kidney Diseases Extramural Research				
HIT for Facilitating Problem Solving in Diabetes Management	93.847	5R01DK090372-04		799,481
Epigenetic events underlying Type 1 diabetes	93.847	1DP3DK094400-01		607,700
BONE PROPERTIES IN HYPOPARATHYROIDISM: EFFECT OF PTH	93.847	5R01DK069350-10		591,366
Clinical Research on Nonalcoholic Fatty Liver Disease	93.847	5U01DK061734-12		583,744
Discovery and Fine Mapping of Susceptibility Loci for IgA Nephropathy	93.847	5R01DK095510-02		536,919
Progenitor Cells of the Mouse Prostate Epithelium	93.847	5R01DK076602-09		520,039
Genetic Analysis of Etv4/Etv5 Transcription Factors and Kidney Development	93.847	5R01DK075578-09		515,358
Clinical Research on Nonalcoholic Fatty Liver Disease	93.847	5U01DK061734-12		514,706
Iron Delivery in the Developing Kidney	93.847	5R01DK092684-03		470,288
Effects of Age on the Cognitive ERP/DC/EC Wave Effect	93.847	5R01AG005213-24		459,349
Vitamin D Deficiency in Primary Hyperparathyroidism	93.847	5R01DK084986-05		442,481
Branching Morphogenesis of Urinary Epithelia: from Genes to Cellular Behaviors	93.847	5R01DK083289-05		412,541
CSF Neuropeptide, Hormonal, and Metabolomic Analysis in Human Energy Balance	93.847	5R01DK093920-04		412,402
Adipose Tissue Macrophage Phenotype and Function	93.847	5R01DK066525-11		406,544
RENAL PROTECTION WITH A1 ADENOSINE RECEPTORS	93.847	5R01DK058547-14		404,632
Retinoic acid signaling controls urothelial development and regeneration	93.847	5R01DK095044-02		400,421
Epigenetic events underlying Type 1 diabetes	93.847	1DP3DK094400-01		383,463
Advancing Clinical Research in Primary Glomerular Diseases (UM1)	93.847	5UM1DK100876-02		381,862
VZV in the enteric nervous system: pathogenesis and consequences	93.847	5R01DK093094-03		378,127
Mechanisms of Beta Cell Failure	93.847	5R01DK064819-12		359,638
Metabolic and Endocrine Effects of Bariatric Surgery	93.847	5R01DK072011-09		350,264
Primary Hyperparathyroidism	93.847	5R01DK032333-28		340,526
THE FUNCTION AND REGULATION OF HISTIDINE DECARBOXYLASE IN GUT INFLAMMATION	93.847	5R01DK048077-19		338,009
New Approaches to the Evaluation and Treatment of Acromegaly	93.847	5R01DK064720-10		330,170
Hormones: Biochemistry and Molecular Biology	93.847	5T32DK007328-35		325,558
Identifying the earliest events in HIV-1 associated nephropathy via genome-wide detection of aberrant transregulation	93.847	5R01DK087626-05		322,103
Quiescent Dclk1+ stem cells in the mouse intestine	93.847	5R01DK097016-02		320,033
Functional imaging and eating behavior among FTO genotypes in pre-obese children	93.847	1R01DK097399-01A1		315,591
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		315,023
Regulation of exocrine pancreas formation	93.847	5R01DK087711-05		312,764
BARIATRIC SURGERY: OUTCOMES & IMPACT ON PATHOPHYSIOLOGY	93.847	5U01DK066667-11		312,163
Lrp5-dependent regulation of bone mass accrual by gut-derived serotonin	93.847	5R01DK067936-09		303,788
Interactions between neuronal networks that regulate food intake and body weight	93.847	5R01DK089038-04		294,825
FUNCTION AND REGULATION OF PROGASTRIN	93.847	5R37DK052778-16		284,598
Mechanisms of Mucosal Th17 Cell Induction By Segmented Filamentous Bacteria	93.847	5R01DK098378-02		280,380

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Genetic Control of Ureter and Kidney Development	93.847	5R01DK082715-05		269,340
Regulation of pancreatic cell fate	93.847	5R01DK082590-06		268,671
Human Islet Antigen Discovery and Imaging	93.847	5 R01 DK063567-09		268,454
Postprandial Vitamin A	93.847	5R01DK068437-09		266,967
Graduate Training in Nutrition	93.847	5T32DK007647-25		263,184
Iron Lipocalin NGAL in Kidney Disease	93.847	5R01DK073462-08		262,437
Role of Forkhead Proteins in Insulin Action	93.847	5R01DK057539-14		261,062
Subproject for Institution # 09-3915	93.847	5U01DK085504-05		255,237
Training Program in Endocrinology and Metabolism	93.847	5T32DK007271-35		251,114
STEM CELL THERAPY FOR ACUTE KIDNEY INJURY	93.847	5R01DK083411-06		248,465
Molecular Genetic Analysis of Human Obesity	93.847	5R01DK052431-20		247,769
Adult to Adult Living Donor Liver Transplantation Cohort Study	93.847	5U01DK062483-12		244,231
Clinical Research on Nonalcoholic Fatty Liver Disease	93.847	5U01DK061734-12		234,550
Molecular Regulation of Adrenal Cortex Homeostasis and Remodeling	93.847	5R01DK081515-05		218,627
Generating Molecular markers that selectively label urothelial sub-populations	93.847	5U01DK094530-04		214,580
Structural Biology of Enzymes in Fatty Acid Metabolism	93.847	5R01DK067238-08		200,994
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		198,946
Training Grant in Pediatric Endocrinology, Diabetes and Metabolism	93.847	5T32DK065522-09		191,511
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		185,130
Epigenetic events underlying Type 1 diabetes	93.847	1DP3DK094400-01		176,153
Mechanisms of monocytois and accelerated atherosclerosis in patients with CKD	93.847	5K23DK097288-02		171,294
Clinical Research on Nonalcoholic Fatty Liver Disease	93.847	5U01DK061734-12		168,249
NOTCH AND REGULATORS OF NOTCH SIGNALING IMPACT BOTH GLUCOSE AND LIPID	93.847	5K08DK093604-04		168,064
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		167,604
Epigenetic events underlying Type 1 diabetes	93.847	1DP3DK094400-01		167,140
New Approaches to the Evaluation and Treatment of Acromegaly	93.847	5K24DK073040-10		167,035
Molecular Events in Urinary Tract Formation	93.847	5R01DK061459-10		160,731
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		159,153
Regulation of Mucosal Th17 Cell Response by Intestinal Bacteria	93.847	5R00DK085329-04		154,392
Mouse Models of Insulin Resistance	93.847	5R37DK058282-15		147,273
Skeletal Regulation of Cortical and Trabecular Bone by Parathyroid Hormone	93.847	5K23DK095944-03		147,049
Chronic Kidney Disease and PTH: Effects on the Postmenopausal Skeleton	93.847	5K23DK084337-05		146,746
Non-Classical Manifestations of Primary Hyperparathyroidism	93.847	5K24DK074457-08		136,306
Enteric Neuronal Development as a Determinant of Intestinal Inflammation	93.847	1K08DK093786-01A1		131,548
MULTIDISCIPLINARY TRAINING IN TRANSLATIONAL GASTROINTESTINAL AND LIVER RESEARCH	93.847	5T32DK083256-05		130,575
Clinical Research on Nonalcoholic Fatty Liver Disease	93.847	5U01DK061734-12		126,271

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Quantitative Genetics of Defective IgA1 Glycosylation in IgA Nephropathy	93.847	5K23DK090207-04		124,340
Primary Hyperparathyroidism	93.847	2R01DK032333-29A1		118,486
Leptin in Human Energy and Neuroendocrine Homeostasis	93.847	5R01DK064773-08		103,026
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		98,827
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		93,275
The Drosophila midgut: A model of human intestinal stem cells and their progeny	93.847	5R01DK082456-05		93,183
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		90,258
BARIATRIC SURGERY: OUTCOMES & IMPACT ON PATHOPHYSIOLOGY	93.847	5U01DK066667-11		89,546
Discovery and Fine Mapping of Susceptibility Loci for IgA Nephropathy	93.847	5R01DK095510-02		85,134
Leptin in Human Energy and Neuroendocrine Homeostasis	93.847	5R01DK064773-08		84,283
The Central Melanocortin System and Regulation of Energy Balance	93.847	5 R01 DK080003-05		82,648
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		82,366
Intercalated Cells of the Distal Nephron Defend the Urinary System	93.847	5K99DK094873-02		80,848
Brown Remodeling of White Adipose Tissue by PPARGgamma Deacetylation	93.847	5K99DK097455-02		78,577
Gender Differences in Growth in Pediatric Patients with Crohn's Disease	93.847	7K23DK077734-06		77,438
Mouse Models of Insulin Resistance	93.847	5R37DK058282-15		74,733
Training Medical Students in NIDDK Research	93.847	5T35DK093430-03		70,827
Branching Morphogenesis of Urinary Epithelia: from Genes to Cellular Behaviors	93.847	5R01DK083289-05		69,712
Interdisciplinary Training in Nutritional and Population Health Sciences	93.847	5T32DK091227-04		69,346
Training Program in Endocrinology and Metabolism	93.847	5T32DK007271-35		68,784
Genetic diagnosis of kidney and urinary tract malformations via copy number varia	93.847	5R21DK098531-02		65,950
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		64,023
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		63,502
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		58,577
Cell intrinsic immunopathology of Type 1 diabetes in humanized mice	93.847	5F32DK095539-03		58,217
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		54,825
Population Based Study of Serum IgA, IgA1 and Galactose-Deficient IgA1 Levels	93.847	5R03DK099564-02		54,644
Clinical Research on Nonalcoholic Fatty Liver Disease	93.847	5U01DK061734-12		54,164
Quiescent Dclk1+ Stem Cells in the Mouse Intestine	93.847	1R56DK097016-01		52,346
Immune regulation of adipose tissue mass	93.847	1R01DK101942-01		52,332
Regulation of pancreatic islet cell fate	93.847	5R01DK082590-04		50,311
The Role of FoxO1 in the Regulation of the Adipocyte Browning Response	93.847	5F30DK100038-02		49,037
Nkx2.2 in Pancreatic Development: The Role of the NK2-SD Domain	93.847	5F30DK092027-03		46,498
The Role of Glial Cells in the Enteric Nervous System	93.847	5F32DK098903-03		43,279
Advancing Clinical Research in Primary Glomerular Diseases (UM1)	93.847	5UM1DK100876-02		40,124
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		36,216

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Training Program in Endocrinology and Metabolism	93.847	5T32DK007271-35		35,847
The Contribution of Activated Hepatic Stellate Cell to hepatocarcinogenesis	93.847	5F32DK091980-04		34,910
Toll-Like Receptor Signaling in Hepatic Fibrogenesis	93.847	5 R01 DK076920-05		32,256
Functional imaging and eating behavior among FTO genotypes in pre-obese children	93.847	1R56DK097399-01		32,144
Genetic Control of Ureter and Kidney Development	93.847	5R01DK082715-05		31,585
GDNF/ Ret Regulation of Ureteric Bud Morphogenesis	93.847	5F32DK096782-02		28,530
GDNF/ Ret Regulation of Ureteric Bud Morphogenesis	93.847	5F32DK096782-02		23,866
ANALYSIS OF NGAL METABOLISM IDENTIFIES A THERAPY FOR IRON OVERLOAD	93.847	5R21DK091729-02		23,474
A Differential Dielectric Affinity Microsensor for Stable and Accurate Glucose Monitoring	93.847	1DP3DK101085-01		18,400
PET Imaging of human beta cell mass	93.847	5R01DK077493-03		18,091
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		16,900
Training Grant in Pediatric Endocrinology, Diabetes and Metabolism	93.847	5T32DK065522-09		16,337
Hormones: Biochemistry and Molecular Biology	93.847	5T32DK007328-35		14,324
Interdisciplinary Training in Nutritional and Population Health Sciences	93.847	5T32DK091227-04		13,476
Hormones: Biochemistry and Molecular Biology	93.847	5T32DK007328-35		13,114
Insulin Action on GLUT4 and FOXO1 in the Brain	93.847	1F32DK095541-01		8,411
Clinical Research on Nonalcoholic Fatty Liver Disease	93.847	5U01DK061734-12		7,860
Human Islet Antigen Discovery and Imaging	93.847	5 R01 DK063567-09		5,548
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-12		5,327
Subproject for Institution # 09-3915	93.847	5U01DK085504-05		4,712
STEM CELL THERAPY FOR ACUTE KIDNEY INJURY	93.847	5R01DK083411-06		3,721
Generating Molecular markers that selectively label urothelial sub-populations	93.847	5U01DK094530-04		3,323
Graduate Training in Nutrition	93.847	5T32DK007647-25		3,171
Training Program in Endocrinology and Metabolism	93.847	5T32DK007271-35		3,122
IDENTIFICATION AND FUNCTIONAL ANALYSIS OF RENAL STEM CELLS	93.847	5 K08 DK078014-05		2,727
Training Program in Endocrinology and Metabolism	93.847	5T32DK007271-35		1,086
MECHANISMS OF BETA CELL FAILURE	93.847	5 R01 DK064819-10		872
Adult to Adult Living Donor Liver Transplantation Cohort Study	93.847	5U01DK062483-12		308
Adult to Adult Living Donor Liver Transplantation Cohort Study	93.847	5U01DK062483-12		275
MULTIDISCIPLINARY TRAINING IN TRANSLATIONAL GASTROINTESTINAL AND LIVER RESEARCH	93.847	5T32DK083256-05		231
Training Program in Endocrinology and Metabolism	93.847	5T32DK007271-35		-95
Graduate Training in Nutrition	93.847	5T32DK007647-25		-97
Cloning of a Type 2 Diabetes Modifier in Obese Mice	93.847	5R01DK066518-08		-117
MULTIDISCIPLINARY TRAINING IN TRANSLATIONAL GASTROINTESTINAL AND LIVER RESEARCH	93.847	5T32DK083256-05		-746
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-10		-2,056
Type 1 Diabetes TrialNet: Clinical Center at Berrie Center, Columbia University	93.847	5 U01 DK085504-04		-2,274

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Bone Quality and Mechanical Competence in Chronic Kidney Diseases	93.847	5 K23DK080139-05		-2,608
MULTIDISCIPLINARY TRAINING IN TRANSLATIONAL GASTROINTESTINAL AND LIVER RESEARCH	93.847	5T32DK083256-05		-2,959
The Endocannabinoid System in Hepatic Injury and Fibrosis	93.847	5R01DK075830-05		-4,730
Generating Molecular markers that selectively label urothelial sub-populations	93.847	5U01DK094530-04		-6,840
Genetics of Renal Hypodysplasia	93.847	5R01DK080099-05		-8,337
Training Grant in Pediatric Endocrinology, Diabetes and Metabolism	93.847	5T32DK065522-09		-12,533
Diabetes and Endocrinology Research Center	93.847	5P30DK063608-10		-15,793
The Function and Regulation of Trefoil Factor Family 2 (TFF2)	93.847	5R01DK060758-10		-51,412
				\$24,376,741

Extramural Research Programs in the Neurosciences and Neurological Disorders

Gene-Environment Interactions in an Autism Birth Cohort	93.853	5U01NS047537-08		1,583,182
Warfarin vs. Aspirin in Reduced Ejection Fraction (WARCEF)	93.853	5U01NS043975-11		1,187,971
RCT: The Effects of a novel intervention to improve stroke symptom recognition	93.853	5R01NS067443-05		632,809
Molecular physiology of voltage-gated Ca2+ channels	93.853	5R01NS053494-08		631,801
Identification of Susceptibility Genes for Essential Tremor	93.853	5R01NS073872-03		617,543
Motor neuron selector genes and mechanism of their action	93.853	5R01NS078097-03		575,665
A Dynamical Systems Approach to Fundamental Questions in Neuroscience	93.853	1DP2NS083037-01		575,458
A Randomized Trial of Unruptured Brain Arteriovenous Malformations (ARUBA)	93.853	5 U01 NS051483-05		534,618
Examination of the earliest symptoms and biomarkers of FTLD MAPT carriers	93.853	5R01NS076837-02		494,828
Psychosocial Impact of Genetics in Epilepsy	93.853	5R01NS078419-03		493,750
The Role of White Matter Progenitors in Glioma Formation and Progression	93.853	5R01NS066955-05		488,073
Function and development of a C. elegans GABAergic interneuron	93.853	5R01NS039996-14		479,755
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		465,996
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		452,393
Validating a Novel Lipid Phosphatase Target in Alzheimer s Disease	93.853	5R01NS074536-04		435,161
Microenvironment in Enteric Neuron Development	93.853	5R01NS015547-32		424,556
Genetic Analysis of Dopaminergic Neuron Specification in C.elegans	93.853	5R01NS050266-10		422,302
Autophagic Clearance of Aberrant Tau: Biochemical and Therapeutic Implications	93.853	5R01NS074593-04		412,055
Neurotrophic Factor Deprivation and Neuronal Cell Death	93.853	5R01NS033689-20		409,088
GFP Reconstitution Across Synaptic Partners (GRASP) Methods to Dissect Mammalian Neural Circuits	93.853	5R01NS076774-04		403,914
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		394,770
Modulating Aggrephagy to Modify Huntingtons Disease	93.853	5R01NS077111-03		392,311
Role of Phosphoinositides in Neuronal Membrane Traffic and Neurodegeneration	93.853	5R01NS056049-08		392,253
Mechanisms of Central Synaptic Dysfunction in SMA	93.853	5R01NS078375-03		385,506
SMN Control of snRNP Biogenesis: Role in RNA Splicing and Motor Neuron Survival	93.853	5R01NS069601-05		371,674
SUMOylation and Amyloid-beta elevation	93.853	5R01NS049442-09		370,531

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Pathogenesis of Essential Tremor: Cerebellar Metabolism	93.853	5R01NS042859-09		368,171
Propagation of tauopathy: role of degeneration and impact of immunotherapy	93.853	5R01NS081555-02		358,581
Elucidating a molecular pathway for synaptic vesicle maintenance and degradation	93.853	5R01NS080967-02		354,098
Peripheral Mechanisms Governing Tactile Encoding During Normal Target Remodeling	93.853	5R01NS073119-05		351,225
Cadherin-Catenin Based Recognition in Sensory-Motor Connectivity	93.853	5R01NS080932-02		349,870
Goals vs. habits in the human brain: Cognitive and computational mechanisms	93.853	5R01NS078784-03		341,570
Seizure localization in humans: the effect of inhibitory surround on the EEG	93.853	5R01NS084142-02		339,909
Environmental Epidemiology of Essential Tremor	93.853	5R01NS039422-13		338,356
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		334,121
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		330,472
In Vivo Quantification of Cerebellar GABA and NAA in Essential Tremor	93.853	1R01NS085136-01		328,422
Neuron death in Parkinson's disease: The role of Trib3	93.853	5R01NS072050-03		320,635
Spatio-temporal relationship of pathology and functional decline with tauopathy	93.853	5R01NS074874-04		317,060
Roles for Granule Cells in Adaptive Processing in a Cerebellum-like Circuit	93.853	5R01NS075023-03		316,139
BK Channel Modulation by Beta Subunits	93.853	5R01NS054946-08		314,638
Dendritic Patterning by interacting	93.853	5R01NS061908-07		308,614
Blood Flow and Cognition in Asymptomatic Carotid Artery Disease	93.853	5R01NS076277-03		307,923
North American Mitochondrial Disease Consortium	93.853	5U54NS078059-03		306,075
The Role of Dendrites in Thalamocortical Transmission	93.853	5R01NS069679-05		302,670
Control of Motor Neuron Differentiation	93.853	4R37NS033245-21		299,593
Prospective Study of Clinically Non-functioning Pituitary Adenomas	93.853	5R01NS070600-05		296,999
Development and function of an adult locomotion circuit in Drosophila	93.853	5R01NS070644-05		295,103
FUS/TLS GAIN AND LOSS OF FUNCTION IN ALS: ANIMAL AND CELLULAR MODELS OF DISEASE	93.853	5R01NS073776-04		293,300
Imaging the neuronal and metabolic basis of resting state connectivity mapping	93.853	5R01NS076628-04		281,569
Mechanisms and Treatment of CNS Edema	93.853	5R01NS081333-02		279,265
Evaluating HMG-CoA reductase as a therapeutic target in ALS	93.853	5R21NS078614-02		274,376
Striatal cholinergic neurons and L-DOPA induced dyskinesia	93.853	7R01NS064865-06		269,430
Columbia University Medical Center-Weill Cornell Medical Center NEXT Site	93.853	5U10NS077267-04		269,104
Role of MMP-9 in selective motor neuron degeneration in ALS	93.853	5R01NS072428-02		268,101
Regulation of HCN Channel Trafficking and Function in the Brain by TRIP8b	93.853	5R01NS036658-15		263,887
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		261,923
Prospective Purification of Adult Stem Cell Astrocytes	93.853	5R01NS074039-04		259,470
Computational analysis of high-grade gliomas	93.853	5R01NS061776-05		257,921
Interaction Between DA, Alpha-Synuclein and Chaperone-Mediated Autophagy	93.853	5R01NS075222-04		256,354
Novel Two-Photon Caged GABA Compounds	93.853	5R21NS081393-02		251,443
Cortical Localization in Temporal Lobe Epilepsy	93.853	5R01NS035140-15		239,904

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Development of Amodiaquine and Its Analogs as Reactivators of Organophosphate-inh	93.853	5R21NS080790-02		237,400
Structure and Finction of AMPA subtype ionotropic glutamate receptors	93.853	5R01NS083660-02		225,908
Neurotrophins, spontaneous release, and synaptic growth cascades	93.853	5R01NS083690-02		218,891
The role of a Synuclein transcript variants in neuronal pathology and function	93.853	5R01NS082068-02		214,862
Novel Genetic Determinants of the Neuromuscular SMA Phenotype	93.853	5R01NS057482-07		212,811
Therapeutic Enhancement of neurogenesis following traumatic brain injury	93.853	5R21NS083077-02		212,014
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		207,712
The role of glucocerebrosidase in Parkinson s disease	93.853	5K02NS080915-03		202,686
Small molecule drugs for treatment of dry age-related macular degeneration	93.853	5U01NS74476-04		200,172
The Neurophysiology of Spontaneous Biological Recovery	93.853	5K23NS078052-03		200,152
Neuroepidemiology Training Program	93.853	5T32NS007153-30		187,924
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		186,533
Autophagy and Neurodegeneration	93.853	5R01NS063973-05		186,257
Advanced Graduate Training Program in Neurobiology and Behavior	93.853	5T32NS064928-05		181,475
Neuro-vascular Disease as a Cause of Impaired Mobility	93.853	5K23NS073104-04		180,787
Balancing Death and Survival Factors in PD: The Role of the Stress-Related Proteins RTP801 and ATF4	93.853	5K08NS070608-05		176,351
In-Vivo Optical Imaging of Neurovascular Coupling and Cerebral Metabolism	93.853	5R01NS063226-05		171,426
Computational analysis of high-grade gliomas	93.853	5R01NS061776-05		166,210
A novel spinal circuit involved in locomotion	93.853	5R21NS079981-02		164,475
The role of glucocerebrosidase and chaperone-mediated autophagy in Parkinson s disease	93.853	5K08NS083738-02		162,220
Warfarin vs Aspirin in Reduced Ejection Fraction - STAT	93.853	5U01NS039143-09		157,513
RCT: The Effects of a novel intervention to improve stroke symptom recognition	93.853	5R01NS067443-05		154,671
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		148,674
The Role of mir-17~92 Cluster in Motor Neuron Degeneration	93.853	5R21NS076936-02		147,552
Functions of membrane deforming-proteins during neuronal development	93.853	7R01NS067557-06		147,179
Advanced Graduate Training Program in Theoretical Neuroscience	93.853	5T32NS064929-05		144,893
North American Mitochondrial Disease Consortium	93.853	5U54NS078059-03		131,020
Efficient Methods for Genotype-Specific Distributions with Unobserved Genotypes	93.853	5R01NS073671-04		128,706
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		126,536
Developing Optimal Dynamic Behavioral Intervention in Community-Based Studies	93.853	5R01NS072127-03		124,728
CRCNS: Modeling Impact Receptor Arrangement on Spike Initiation in Touch	93.853	3R01NS073119-03		123,932
Role of Stasimon Dysfunction in Spinal Muscular Atrophy	93.853	5R21NS077038-02		120,282
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		117,010
Neurexin-Neuroligin Trans-Synaptic Interaction: Learning-Related Synaptic Growth	93.853	5K08NS053415-05		114,791
Neuroepidemiology Training Program	93.853	5T32NS007153-30		107,766
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		105,040

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		104,501
Warfarin vs. Aspirin in Reduced Ejection Fraction (WARCEF)	93.853	5U01NS043975-11		99,761
Development of Amodiaquine and Its Analogs as Reactivators of Organophosphate-inh	93.853	5R21NS080790-02		96,232
MOLECULAR GENETIC ANALYSIS OF LYSOSOMAL STORAGE DISORDER GENES IN PD	93.853	5 R01 NS060113-04		92,669
North American Mitochondrial Disease Consortium	93.853	5U54NS078059-03		92,051
Essential Tremor: Gene expression profiling in cerebellar Purkinje cells	93.853	5R21NS077094-02		88,665
New York Stroke Trials network of Columbia and Cornell (NYCCSTN)	93.853	5U10NS086728-02		87,940
A Dynamical Systems Approach to Fundamental Questions in Neuroscience	93.853	1DP2NS083037-01		86,409
Pre-clinical testing of necrostatin as a potential small molecule for the treatment of ALS	93.853	5R21NS072182-02		82,497
Regulation of HCN Channel Trafficking and Function in the Brain by TRIP8b	93.853	2R56NS036658-14		80,653
Development of Amodiaquine and Its Analogs as Reactivators of Organophosphate-inh	93.853	5R21NS080790-02		66,871
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		63,166
Psychosocial Impact of Genetics in Epilepsy	93.853	5R01NS078419-03		58,830
Gene regulatory mechanisms that assign and maintain motor neuron terminal differentiation	93.853	5K99NS084988-02		57,939
Investigation of the dopamine system in frontotemporal dementia	93.853	5R00NS060766-05		56,683
A genome-wide phenotypic screen for modifiers of SMN expression and function	93.853	1R21NS085612-01A1		55,347
Summer Program for Under-Represented Students	93.853	5R25NS076445-03		54,541
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		52,493
Genetics of Mouse Seizure Susceptibility	93.853	5R01NS061991-05		51,636
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		51,150
Assessment and characterization of naming in older adults with epilepsy	93.853	1R01NS083976-01A1		51,116
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		50,695
Alternate pathways for the spread of excitation: Functional and behavioral studies of cortical circuitry in mouse somatosensory cortex	93.853	5F32NS084768-02		48,827
In-vivo imaging of the evolution of hemodynamic control in the developing brain	93.853	5F31NS084538-02		47,107
Identification and Regulation of Quiescent Stemcells in the Adult Brain	93.853	5F31NS079057-03		47,086
Proinflammatory enzymes in amyotrophic lateral sclerosis	93.853	5 R01 NS042269-08		46,384
Phospholipase D1 in Alzheimer's Precursor Protein trafficking and processing	93.853	5F31NS073387-04		45,233
Phagocytosis is misregulated in a Drosophila model of Fragile X syndrome	93.853	5F31NS080673-02		45,032
Small chemical modulators of SMN biology as candidate therapeutics for SMA	93.853	1R01NS083831-01A1		43,583
Cell fate restriction and reprogramming in Caenorhabditis elegans	93.853	5F31NS080435-03		42,758
Regulation of Adult Neural Stem Cells by the miR-17-92 Cluster	93.853	5F31NS081990-02		42,539
Prevalence and predictors of asymptomatic atrial fibrillation in the community	93.853	1R01NS083784-01A1		42,426
Synaptic Transmission In Mammalian Cutaneous Touch Receptors	93.853	1F32NS080544-01A1		42,169
Molecular and cellular characterization of SMN-mediated U7 snRNP assembly	93.853	5F31NS079002-03		41,868
Neural mechanisms for sensory prediction in a cerebellum-like structure	93.853	5F31NS076334-03		41,735
Effect of ALS-causing Mutations on Binding of TDP43 and FUS to RNA in iMNs	93.853	5F31NS083158-02		40,471

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Genetic evaluation of the p53 cell death pathway in spinal muscular atrophy (SMA)	93.853	1R21NS084185-01A1		38,823
Study of brain Treg localization and function during CNS infection using an engineered encephalomyocarditis virus	93.853	5F31NS084776-02		37,838
Identifying genes that turn skin cells into neurons	93.853	5F31NS074841-03		37,600
Alfy-mediated selective macroautophagy and the pathogenesis of Huntington's Disease	93.853	5F31NS086394-02		36,062
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		33,462
Genetic Epidemiology of Parkinsons Disease	93.853	2R56NS036630-10		33,342
LKB1 function in axon development through regulation of mitochondrial trafficking	93.853	7F32NS080464-03		33,033
Motor neuron diversity: markers, regulatory mechanisms, and functional relevance	93.853	1F32NS086285-01		31,651
Ribosomal translation of beta-amino acids in high-throughput drug discovery	93.853	5F32NS083242-02		29,560
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		29,242
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		29,195
Generating neurons through cellular reprogramming	93.853	5R21NS076191-02		29,085
Warfarin vs. Aspirin in Reduced Ejection Fraction (WARCEF)	93.853	5U01NS043975-11		26,987
Perivascular niche for adult neural stem cell	93.853	5R21NS075610-02		26,143
Warfarin vs. Aspirin in Reduced Ejection Fraction (WARCEF)	93.853	5U01NS043975-11		26,000
Information Flow in the Primary Sensory Cortex	93.853	5F31NS076338-02		25,211
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		23,978
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		23,899
Ribosomal translation of beta-amino acids in high-throughput drug discovery	93.853	5F32NS083242-02		23,598
North American Mitochondrial Disease Consortium	93.853	5U54NS078059-03		22,613
Summer Program for Under-Represented Students	93.853	5R25NS076445-03		21,600
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		16,256
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		13,686
Neuropathology of severe malaria in Thailand: MRI studies	93.853	5R21NS055348-02		13,427
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		9,212
Small molecule drugs for treatment of dry age-related macular degeneration	93.853	5U01NS74476-04		9,144
Gene Expression Regulatory Circuitry and MicroRNAs in Midbrain Dopamine Neurons	93.853	5R01NS064433-05		8,836
Mechanisms of mechanical transduction in the guidance of neuronal axons	93.853	5K99 NS075135-02		8,822
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		7,218
Columbia University Medical Center-Weill Cornell Medical Center NEXT Site	93.853	5U10NS077267-04		7,141
CRCNS: Modeling Impact Receptor Arrangement on Spike Initiation in Touch	93.853	3R01NS073119-03		6,297
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		4,450
Mechanisms of Dopamine Neuron Degeneration	93.853	5P50NS038370-15		2,964
PROFILING PATHOLOGICALLY NORMAL APOE VARIANTS TO IDENTIFY PATHWAYS FOR AD	93.853	5 R21 NS071836-02		2,477
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		2,399
Small molecule drugs for treatment of dry age-related macular degeneration	93.853	5U01NS74476-04		1,908

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Identifying genes that turn skin cells into neurons	93.853	5F31NS074841-03		1,659
New York Columbia Collaborative SPOTRIAS	93.853	5P50NS049060-09		1,631
Molecular profiling of gamma motor neuron development	93.853	5 R21 NS072573-02		1,508
Control of Motor Neuron Differentiation	93.853	4R37NS033245-21		1,148
APOPTOSIS IN SUBSTANTIA NIGRA	93.853	2 R56 NS026836-21		1,144
Advanced Graduate Training Program in Neurobiology and Behavior	93.853	5T32NS064928-05		1,080
Advanced Graduate Training Program in Theoretical Neuroscience	93.853	5T32NS064929-05		519
Neural substrates for matching hearing to utterance	93.853	5R01NS023684-29		410
Phospholipase D1 in Alzheimer's Precursor Protein trafficking and processing	93.853	5F31NS073387-04		227
Phospholipase D1 in Alzheimer's Precursor Protein trafficking and processing	93.853	5F31NS073387-04		220
Genetics of Mouse Seizure Susceptibility	93.853	5R01NS061991-05		33
GENE-ENVIRONMENT INTERACTIONS IN AN AUTISM BIRTH COHORT	93.853	2 U01 NS047537-06A1		-1
MECHANISMS OF SYNAPTIC DYSFUNCTION BY AMYLOID PEPTIDES	93.853	5 R01 NS049442-05		-2
Study of Carotid Occlusion and Neurocognition (RECON)	93.853	5 R01 NS048212-05 R1		-83
VALIDATION OF A STANDARDIZED DIAGNOSTIC INTERVIEW FOR EPILEPSY	93.853	5 R03 NS065346-02		-87
Small molecule drugs for treatment of dry age-related macular degeneration	93.853	5U01NS74476-04		-98
Molecular and cellular characterization of SMN-mediated U7 snRNP assembly	93.853	5F31NS079002-03		-178
Deciphering the Genetics of Synapse Development by Whole Genome Sequencing	93.853	5 R21 NS075572-02		-197
Dendritic Patterning by interacting extrinsic cues	93.853	5 R01 NS061908-05		-298
NEUROEPIDEMIOLOGY TRAINING PROGRAM	93.853	5 T32 NS007153-28		-389
Small molecule drugs for treatment of dry age-related macular degeneration	93.853	5U01NS74476-04		-1,058
A FUNCTIONAL CELL-BASED SCREEN FOR POTENTIAL SMA THERAPEUTIC COMPOUNDS	93.853	5 R21 NS071092-02		-1,245
Mechanisms of Genetic Seizure Susceptibility in Juvenile Myoclonic Epilepsy	93.853	5R01NS061829-03		-2,730
Transsynaptic Neurodegeneration after Nerve	93.853	7 R01 NS050408-06		-2,986
ROLE OF FAS DEATH RECEPTOR SIGNALING IN MOTOR NEURON DEGENERATION	93.853	5 R01 NS056422-05		-3,723
Protocadherin Gene Expression and Function	93.853	2R56NS043915-33A1		-4,286
RCT: The Effects of a novel intervention to improve stroke symptom recognition	93.853	5R01NS067443-05		-4,988
COMPLEMENT-MEDIATED NEURONAL INJURY IN STROKE	93.853	5 R01 NS040409-09		-5,602
Columbia University Medical Center-Weill Cornell Medical Center NEXT Site	93.853	5U10NS077267-04		-13,009
Neurotrophic Factor Deprivation And Neuronal Cell Death	93.853	5 R01 NS033689-18		-16,528
PATHOGENESIS OF NEURODEGENERATIVE DISEASES CAUSED BY MUTATIONS IN SENATAXIN	93.853	5 R01 NS064253-05		-35,343
A Randomized Trial of Unruptured Brain Arteriovenous Malformations (ARUBA)	93.853	5 U01 NS051483-05		-100,792
NEURAL CONTROL OF GASTROINTESTINAL ACTIVITY	93.853	5 R01 NS012969-37		-159,438
				\$33,519,553

Allergy, Immunology and Transplantation Research

Northeast Biodefense Center - Admin Core & Subs	93.855	5U54AI057158-10		6,203,860
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The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Centers for Innovative Research to Control AIDS	93.855	5UM1AI069466-07		1,011,807
LINK4HEALTH: A Combination Intervention Strategy for Linkage and Retention, Swaziland	93.855	5R01AI100059-03		828,031
Northeast Biodefense Center - Admin Core & Subs	93.855	5U54AI057158-10		774,656
Columbia Collaborative HIV/AIDS Clinical Trials Unit	93.855	5UM1AI069470-07		702,594
Osteoporosis in HIV Infected Postmenopausal Women	93.855	5R01AI065200-10		643,727
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		629,869
Enhance Prevention in Couples (EPIC)	93.855	5R01AI083038-04		622,160
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		612,313
Centers for Innovative Research to Control AIDS	93.855	5UM1AI069466-07		590,188
HIV and the Menopausal Transition: Effects on Musculoskeletal Health	93.855	5R01AI095089-04		546,358
Understanding the Role of NF-kB T-regulatory Cell Function	93.855	5R01AI068977-08		486,834
Improving Maternal and Newborn Health Using the HIV/AIDS Program Platform in Tanzania	93.855	5R01AI093182-04		470,679
Development of Lung T Cell Responses in Infant Respiratory Immunity	93.855	5R01AI100119-03		469,545
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		465,682
Center for Research in Diagnostics and Discovery - Administrative Core	93.855	1U19AI109761-01		463,477
Modeling of S. aureus Transmission in Northern Manhattan	93.855	5R01AI077690-05		428,646
Northeast Biodefense Center - Admin Core & Subs	93.855	5U54AI057158-10		427,174
Control of CD8= Effector T Cell Differentiation	93.855	5R01AI061699-10		425,784
Exploiting Fatty Acid Metabolism to Cure Malaria	93.855	5R01AI085584-05		406,827
Understanding the Role of Meningeal Dendritic Cells in CNS Antiviral Immunity	93.855	5R01AI101251-02		401,608
Risk Factors for Spread of Staphylococcus aureus in Prisons	93.855	5R01AI082536-05		389,919
Pig to human thymic xenotransplantation	93.855	5R01AI084903-05		385,995
Molecular Control of Plasmacytoid Dendritic Cell Development and Function	93.855	5R01AI072571-07		384,848
Role of pfprt in Chloroquine Resistance P. falciparum	93.855	5R01AI050234-14		375,182
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		373,842
Role of CD47 in Xenograft Rejection by Macrophages	93.855	5R01AI064569-08		365,530
Role of ncRNA Surveillance Complex	93.855	5R01AI099195-03		363,449
Columbia Collaborative HIV/AIDS Clinical Trials Unit	93.855	5UM1AI069470-07		359,183
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		357,343
Antagonism of Innate Immunity by Picornaviruses	93.855	5R01AI102597-03		344,861
Gardnerella vaginalis: toxin production and pathogenesis	93.855	5R01AI092743-04		317,328
Understanding the Role of kB Ras Proteins in Signaling and Development	93.855	5R01AI093985-04		307,517
MRSA Activation of Human Keratinocyte Signaling	93.855	5R01AI103854-02		307,376
Comprehensive genetic characterization of antibiotic resistance	93.855	5R01AI077562-05		301,868
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		297,921
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		273,225

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
A Combination Intervention Package for Isoniazid Preventive Therapy in Ethiopia (NY)	93.855	5R01AI100044-03		248,876
A Combination Intervention Package for Isoniazid Preventive Therapy in Ethiopia (NY)	93.855	5R01AI100044-03		241,844
Risk Factors for Spread of Staphylococcus aureus in Prisons	93.855	5R01AI082536-05		241,552
Mouse Allergen Intervention and DNA Methylation of Asthma Regulatory Genes	93.855	5R21AI101296-02		223,609
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		215,707
The use of whole genome sequencing to identify spread of USA300 in the community	93.855	5R21AI103562-02		205,924
Columbia Collaborative HIV/AIDS Clinical Trials Unit	93.855	5UM1AI069470-07		202,833
Staphylococcus Aureus Exploitation of Autophagy Promotes Latent Infection	93.855	5R21AI105978-02		202,368
Regulations of HIV-1 Gene Expression in Latency by YY1, RuvB2, and ZAP	93.855	1R01AI106629-01		198,329
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		195,132
Integration of redox-balancing mechanisms in Pseudomonas aeruginosa biofilms	93.855	5R01AI103369-02		189,878
Northeast Biodefense Center - Admin Core & Subs	93.855	5U54AI057158-10		188,905
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		186,985
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		185,022
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		149,542
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		144,188
Spatial coordination of CD28 and TCR signaling	93.855	5R01AI088377-04		138,762
Role of Staphylococcus aureus SpA in Microbial Competition and Host Colonization	93.855	5K08AI101005-03		137,052
Training in Pediatric Infections Diseases	93.855	5T32AI007531-15		135,639
Enhance Prevention in Couples (EPIC)	93.855	5R01AI083038-04		126,387
DNase for Prevention of Reproductive Tract Infections in Pregnancy	93.855	5R21AI098654-02		125,255
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		117,878
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		110,576
MECHANISMS OF S. AUREUS TRANSMISSION AND PERSISTENCE	93.855	5K08AI090013-05		109,305
Northeast Biodefense Center - Admin Core & Subs	93.855	5U54AI057158-10		105,230
Bacterial Attachment under Mechanical Perturbations	93.855	1K99AI106072-01		102,353
Study of Rodent HCV-GBV like Viruses	93.855	1R21AI107631-01A1		97,690
Genetic characterization of the murine type I	93.855	1R21AI109458-01		96,906
Center for Research in Diagnostics and Discovery - Administrative Core	93.855	1U19AI109761-01		95,482
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		93,270
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		91,349
Pharmacologic Approaches to Combating Resistance to Antimalarial Combinations	93.855	5 R01 AI079709-04		91,079
Columbia Integrated Training Program in Infectious Disease Research	93.855	5T32AI100852-02		90,675
THE ROLE OF XLF IN HEMATOPOIETIC STEM CELL MAINTENANCE AND FUNCTION	93.855	5R21AI103826-02		90,011
THE ROLE OF XLF IN HEMATOPOIETIC STEM CELL MAINTENANCE AND FUNCTION	93.855	5R21AI103826-02		88,992
IMMUNOLOGIC MECHANISMS IN POST-LYME DISEASE	93.855	1R56AI093763-01A1		86,051

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		83,961
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		82,680
Northeast Biodefense Center - Admin Core & Subs	93.855	5U54AI057158-10		75,216
Helper T Cell Regulation in Murine Leishmaniasis	93.855	7R01AI042370-15		59,995
Center for Research in Diagnostics and Discovery - Administrative Core	93.855	1U19AI109761-01		58,829
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		58,767
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		56,153
Training in Pediatric Infections Diseases	93.855	5T32AI007531-15		55,662
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		54,023
The Human Innate B Cell Niche and Role in Effercytosis	93.855	7R21AI110854-02		51,648
Targeting of AID Mutagenic Activity	93.855	5F31AI098411-03		47,459
Center for Research in Diagnostics and Discovery - Administrative Core	93.855	1U19AI109761-01		40,785
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		39,701
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		35,508
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		35,140
Microfluidic devices for investigation of rare T cell populations	93.855	5F32AI100496-02		31,472
Study of a Novel Picornavirus Genus Associated with Acute Flaccid Paralysis	93.855	5R21AI081132-02		30,369
Planning for a Phase 2/2b Microbicide Study: VivaGel for HSV Prevention in Women	93.855	1R34AI090051-01		28,258
Asymmetric CD8+ T Cell Division in the Initiation of Immunity	93.855	7R01AI076458-05		27,636
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		26,665
Probing the Innate Response to 3', 5' - Cyclic Diguanylate(c-diGMP)	93.855	5R21AI096088-02		23,098
Microfluidic devices for investigation of rare T cell populations	93.855	5F32AI100496-02		22,170
Characterization of Antibody-Dependent Cellular Cytotoxicity in HIV Infection	93.855	5F31AI098409-03		21,016
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		16,939
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		16,366
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		15,138
Diversifying and Regenerating T Cell Function	93.855	1R01AI113365-01		13,285
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		12,384
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		11,811
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		11,427
Characterization of Antibody-Dependent Cellular Cytotoxicity in HIV Infection	93.855	5F31AI098409-03		11,201
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		11,055
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		8,276
Tissue compartmentalization of human lymphocytes	93.855	5P01AI106697-02		6,931
Centers for Innovative Research to Control AIDS	93.855	5UM1AI069466-07		5,219
Biomarker for XDR-TB Treatment Response and Drug Resistance in HIV Endemic Area	93.855	7K23AI098479-03		5,020

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Rhinovirus Pathogenesis and Host Range	93.855	5 R01 AI050754-10		3,810
Columbia Collaborative HIV/AIDS Clinical Trials Unit	93.855	5UM1AI069470-07		3,245
LINK4HEALTH: A Combination Intervention Strategy for Linkage and Retention, Swaziland	93.855	5R01AI100059-03		2,506
Center for Research in Diagnostics and Discovery - Administrative Core	93.855	1U19AI109761-01		2,309
DNase For Prevention Of Reproductive Tract Infections In Pregnancy	93.855	4R33AI098654-03		1,613
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-09		805
Training in Pediatric Infections Diseases	93.855	5T32AI007531-15		593
Centers for Innovative Research to Control AIDS	93.855	5UM1AI069466-07		167
REGULATORY MODULES IN NORMAL AND TRANSFORMED B-CELLS	93.855	5 R01 AI066116-05		-1
ROLE OF ANTHRAX TOXIN RECEPTORS IN ANGIOGENESIS AND ENDOTHELIUM	93.855	5 R01 AI064654-05		-64
CENTERS FOR INNOVATIVE RESEARCH TO CONTROL AIDS	93.855	5 U01 AI069466-03		-67
Rhinovirus Pathogenesis and Host Range	93.855	5 R01 AI050754-10		-271
Columbia Collaborative HIV/AIDS Clinical Trials Unit	93.855	5UM1AI069470-07		-1,325
IFN-IS AT THE INTER FACE OF INNATE AND ADAPTIVE IMMUNITY	93.855	3 R01 AI058211-05R1		-3,679
Center for High-Throughput Minimally-Invasive Radiation Biodosimetry	93.855	5U19AI067773-08		-10,433
Molecular Control of Plasmacytoid Dendritic Cell Development and Function	93.855	5R01AI072571-05		-33,498
				\$29,624,815

Biomedical Research and Research Training

Medical Scientist Training Program	93.859	5T32GM007367-39		1,025,987
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		760,850
Genetic analysis of nematode cell differentiation	93.859	3R01GM030997-31S1		649,459
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		618,548
Mechanism of Action of Dynactin	93.859	5R01GM102347-03		577,057
Mechanisms of alternative splicing of pre-mRN	93.859	5 R01 GM048259-26		508,827
Mechanism of Spontaneous and DSB-induced Repair	93.859	5R37GM050237-22		505,127
Training in Cellular, Molecular and Biomedical Studies	93.859	5T32GM008224-27		467,742
Initiative for Maximizing Student Diversity (IMSD) (Abraido-Lanza/Fuller)	93.859	5R25GM062454-11		465,648
Computer Studies of Protein Structure and Function	93.859	5R01GM030518-33		456,772
Experimentally Guided Ribosomal RNA Modeling	93.859	5R01GM055440-17		455,095
Cellular and Molecular Foundation of Biomedical Science	93.859	5T32 GM008798-13		440,599
Role of Nucleo-cytoskeleton Interactions in Cell Migration	93.859	5R01GM099481-04		425,395
Mechanisms of cell competition that regulate growth during development	93.859	5R01GM078464-08		419,328
Control of Transcription Termination in E. coli	93.859	5R01GM037219-25		417,141
Structural Analysis of Macromolecular Assemblies	93.859	5R01GM029169-32		415,437
Mechanisms of Anesthetic Effects on Tachykinin Induced Airway Tone	93.859	5R01GM065281-12		399,980
Mechanisms of Renal Protection with Volatile Anesthetics	93.859	5R01GM067081-11		398,677

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Mechanisms of Homologous Recombination in Yeast	93.859	5R01GM041784-25		385,516
mRNA synthesis in animal cells - 3' end formation	93.859	3R01GM028983-33S1		385,214
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		379,418
DNA ASSEMBLY VIA REITERATIVE RECOMBINATION	93.859	3R01GM096064-03S1		373,173
Assembly and Placement of the Cell Division Ring	93.859	5R01GM056836-17		371,535
Enantioselective Catalysis with Cyclopropanimines	93.859	5R01GM102611-02		359,421
Influenza Outbreak Prediction: Applying Data Assimilation Methodology to Make Skillful Forecast of an Inherently Chaotic Nonlinear System	93.859	5R01GM100467-04		358,931
Predoctoral Training Grant in Genetics and Development	93.859	5T32GM007088-39		357,231
The Chemistry and Biology of Resveratrol-based Oligomers	93.859	5R01GM084994-05		353,729
Genetics of the formation of repair & recombination foci	93.859	5R01GM067055-12		352,909
Exon recognition during constitutive pre-mRNA splicing	93.859	5R01GM072740-08		352,715
CysZ Proteins - A Family of Sulfate Transporters with Remarkable Architecture	93.859	5R01GM098617-03		349,321
Modeling Hydrophobic and Hydrophilic Interactions	93.859	5R01GM043340-22		346,510
Characterization of the antiviral and nuclear regulatory functions of FEZ1 & NEK1	93.859	5R01GM101975-02		344,699
Visualizing the Dynamics of Chromatin and Chromatin Remodeling Proteins	93.859	5R01GM082848-06		340,136
Molecular Genetics of Segment Identity	93.859	5R01GM054510-22		329,199
The Role of Notch in Behavioral Plasticity	93.859	5R01GM095797-04		312,000
Training Program in Molecular Biophysics	93.859	5T32GM008281-27		308,616
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		304,241
Strategies for Heavy Metal Detoxification	93.859	5R01GM046502-17		296,075
The structural basis of cis and trans protocadherin interactions	93.859	5R01GM107571-02		288,274
Break-induced Replication and Genome Rearrangements	93.859	5R01GM094386-04		288,085
Regulation of SNF1/AMPK Pathway in Yeast	93.859	5R01GM034095-28		286,449
Molecular mechanisms of cargo capture into ER-derived transport vesicles	93.859	5R01GM085089-06		285,883
The MRAD9 Radioresistance Gene	93.859	5R01GM079107-12		277,671
Formin mDia Functions in Mitosis	93.859	5R01GM089768-04		275,869
Hedgehog signaling in Drosophila	93.859	5R01GM041815-25		273,713
Molecular Basis of Cadherin Mediated Cell Adhesion	93.859	5R01GM062270-12		272,227
The structural dynamics of translation initiation	93.859	5R01GM084288-05		260,532
The Impact Of Prolonged Anesthetic Exposure On Tau Pathology And Function	93.859	5R01GM101698-04		260,414
ER export and the quality control checkpoint during membrane protein biogenesis	93.859	5R01GM078186-08		259,250
Protein Motions in Recognition, Regulation and Catalysis	93.859	5R01GM059273-14		258,488
Circadian regulation of phagocytosis	93.859	5R01GM105775-02		255,759
Function of the Bromodomain Protein Brdt in Spermatogenesis	93.859	5R01GM081767-06		254,348
Structural Studies of Metabotropic GABA Receptors	93.859	5R01GM088454-05		251,997
Structural biology of pre-mRNA 3'-end processing	93.859	5R01GM077175-07		251,298

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Mitochondrial-cytoskeletal interactions and aging	93.859	5R01GM096445-04		251,253
Quantitative Studies of Influenza Evolution	93.859	1R01GM109018-01		250,468
Anesthesiology Research Training	93.859	5T32GM008464-22		248,783
Continued development and maintenance of the 3DNA suite of programs	93.859	5R01GM096889-04		238,853
Mitochondrial Motility and Inheritance	93.859	5R01GM045735-17		237,012
The structural basis of cis and trans protocadherin interactions	93.859	5R01GM107571-02		233,993
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		231,268
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		230,050
Modeling Contractile Ring Constriction in Fission Yeast	93.859	5R01GM086731-05		206,056
Mechanistic Basis for Amino Acid Discrimination by the Translational Machinery GO2	93.859	5R01GM090126-04		194,251
Analyses of 120 nm Local Contractions Linked to Rigidity Sensing	93.859	5R01GM100282-02		190,680
Somatic stem cells in the Drosophila ovary	93.859	2R01GM079351-05A1		186,950
Elucidating the Mechanisms of DNA Recombination	93.859	5R01GM074739-08		186,639
Mechanism of Heterochromatin Assembly	93.859	2R01GM085145-06A1		183,998
Medical Genetics Training Program	93.859	5T32GM082771-05		179,727
Somatic stem cells in the Drosophila	93.859	5R01GM079351-04		179,163
An integrative genomic strategy to infer global RNA regulatory networks	93.859	5R00GM095713-04		177,817
Point Impact and Sparsity in Functional Data Analysis	93.859	5R01GM095722-04		167,693
Proximo-Distal Patterning in the Drosophila Appendages	93.859	5R01GM058575-16		164,180
Computational Annotation of Orphan Metabolic Activities	93.859	2R01GM078759-04		153,393
Structure and function of 5' to 3' exonucleases	93.859	5R01GM090059-04		148,721
Mechanisms of alternative splicing of pre-mRNA	93.859	2R01GM048259-28		146,082
Structure and function of 5' to 3' exonucleases	93.859	5R01GM090059-04		139,248
NMR Studies of Structures and Dynamics of Proteins	93.859	5R01GM050291-19		138,108
Training Program in Computational Biology	93.859	5T32GM082797-06		133,542
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		126,626
Fluorescence methods for HT validation and production of protein complexes	93.859	5R01GM097089-04		126,392
Transcription Factor and Epigenetic Regulation of Hypoxic Gene Expression	93.859	7R01GM083054-06		124,417
THERAPEUTIC TARGETING OF THE GABAA CHANNEL ON AIRWAY SMOOTH MUSCLE	93.859	5K08GM093137-05		119,632
Fluorescence methods for HT validation and production of protein complexes	93.859	5R01GM097089-04		102,444
Microtubule Organization and Nuclear Positioning	93.859	5R01GM069670-08		90,527
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		85,263
Analyses of 120 nm Local Contractions Linked to Rigidity Sensing	93.859	5R01GM100282-02		83,207
Genome-wide measurement of bacterial transcriptional regulatory states	93.859	K99GM097033-02		82,107
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		76,745
Transcriptional regulation by protein sumoylation	93.859	5R01GM097174-04		75,721

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Formin mDia Functions in Mitosis	93.859	5R01GM089768-04		72,368
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		71,109
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		70,501
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		63,374
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		62,519
Structural Biology of G-Protein Coupled Receptors	93.859	5 R01 GM068671-08		56,968
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		56,615
Small G-protein Regulation of Calcium Channels	93.859	1R01GM107585-01A1		55,065
REGULATION OF MICROTUBULES BY RHO GTPASES	93.859	5R01GM062939-12		53,931
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		52,963
Medical Scientist Training Program	93.859	5T32GM007367-39		52,486
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		48,836
Microfluidic Selection of Aptamers for Biological Purification Applications Institution: The Trustees of Columbia University in the City of New York	93.859	8R21GM104204-03		47,304
Heme A and cytochrome oxidase biosynthesis	93.859	5 R01 GM050187-16		46,941
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		46,639
Characterization of Hox transcription factor complexes using proteomics	93.859	5F32GM099160-03		44,627
DNA ASSEMBLY VIA REITERATIVE RECOMBINATION	93.859	3R01GM096064-03S1		42,479
Evolutionary paths toward intrinsic antibiotic resistance	93.859	5F31GM108419-02		40,828
Mechanistic Basis for Amino Acid Discrimination by the Translational Machinery GO2	93.859	5R01GM090126-04		39,519
Exon recognition during constitutive pre-mRNA splicing	93.859	5R01GM072740-08		38,168
Using Nnofabricated DNA Curtains to Reveal Protein during Replication	93.859	5F32GM101819-02		35,892
Microtubule networks and Virus Trafficking	93.859	1P01GM105536-01A1		35,217
Domaing Structure of tRNase ZL, the Long Form of tRNase Z	93.859	1F33GM103190-01		30,798
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		29,091
Cellular and Molecular Foundation of Biomedical Science	93.859	5T32 GM008798-13		28,357
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		27,419
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		25,653
Microtubule networks and Virus Trafficking	93.859	1P01GM105536-01A1		22,840
Asymmetric synthesis of macrolide antibiotics	93.859	5R01GM058133-12		22,771
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		17,505
Anomalous Diffraction Analysis of Biomolecular Structure	93.859	1R01GM107462-01A1		16,034
Characterization of Hox transcription factor complexes using proteomics	93.859	5F32GM099160-03		15,240
Microtubule networks and Virus Trafficking	93.859	1P01GM105536-01A1		14,917
Medical Genetics Training Program	93.859	5T32GM082771-05		14,340
DNA ASSEMBLY VIA REITERATIVE RECOMBINATION	93.859	3R01GM096064-03S1		14,322
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		11,799

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Mechanistic Basis for Amino Acid Discrimination by the Translational Machinery GO2	93.859	5R01GM090126-04		11,342
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		11,248
Exploring the role of the central amygdala in vocalization	93.859	1F32GM103266-01A1		11,082
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		10,433
Using Nnofabricated DNA Curtains to Reveal Protein during Replication	93.859	5F32GM101819-02		10,254
Mechanisms of cell competition that regulate growth during development	93.859	5R01GM078464-08		8,692
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		6,708
Medical Genetics Training Program	93.859	5T32GM082771-05		4,892
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		4,291
Anesthesiology Research Training	93.859	5T32GM008464-22		3,780
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		3,561
CysZ Proteins - A Family of Sulfate Transporters with Remarkable Architecture	93.859	5R01GM098617-03		2,306
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		2,165
Training Program in Computational Biology	93.859	5 T32 GM082797-05		2,061
Peptidoglycan Synthesis during Sporulation	93.859	5R01GM081368-05		2,015
Exon recognition during constitutive pre-mRNA splicing	93.859	5R01GM072740-08		870
Structural Biology of G-Protein Coupled Receptors	93.859	5 R01 GM068671-08		837
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		773
Investigation of the Establishment of the Prion State	93.859	7 R01 GM070934-06		747
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		486
Training Program in Pharmaceutical Sciences	93.859	5T32GM007182-35		339
The effects of anesthetics on brain development	93.859	1K08GM104329-01		126
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		83
ANESTHESIOLOGY RESEARCH TRAINING	93.859	5 T32 GM008464-18		-29
CELLULAR AND MOLECULAR FOUNDATIONS OF BIOMEDI	93.859	5 T32 GM008798-11		-55
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		-120
Efficient synthesis of the spongistatin EF ring segment and analogue sar study	93.859	5F32GM090487-03		-125
TRAINING IN CELLULAR, MOLECULAR AND BIOPHYSICAL STUDIES	93.859	5 T32 GM008224-25		-131
ANESTHESIOLOGY RESEARCH TRAINING	93.859	2 T32 GM008464-16		-199
STRUCTURAL BIOLOGY OF PRE-MRNA 3'-END PROCESSING	93.859	3 R01 GM077175-04S1		-376
Medical Scientist Training Program	93.859	5 T32 GM007367-36		-758
Molecular mechanisms of cargo capture into ER-derived transport vesicles	93.859	5 R01 GM085089-04		-848
Anesthesiology Research Training	93.859	5T32GM008464-20		-3,836
Theoretical Studies of Metalloprotein Chromophores	93.859	5 R01 GM040526-23		-8,331
Function of the Bromodomain Protein Brdt in Spermatogenesis	93.859	5 R01 GM081767-04		-13,318
National Center: Multiscale Analysis of Genomic and Cellular Networks (MAGNet)	93.859	5U54CA121852-09		-26,620

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
The structural dynamics of translation initiation	93.859	5R01GM084288-05		-63,044
Structural and Functional Studies of Channels and Pumps by Solid State NMR	93.859	2R01GM088724-05		-65,248
Signaling Specificity of Drosophila Serpentine Receptors	93.859	5R01GM057043-13		-73,586
				\$27,827,426

National Institute of Child Health and Human Development

SOCIAL SCIENCE TRAINING AND RESEARCH SMS-HMU PARTNERSHIP	93.864	5 R24 HD056691-05		71,128
EFFECT OF NURSE IMMIGRATION ON EMPLOYMENT AND EARNINGS OF U. S. NURSES	93.864	5 R01 HD056512-02		-289
				\$70,839

Child Health and Human Development Extramural Research

PRENATAL CYTOGENETIC DIAGNOSIS BY ARRAY-BASED COPY NUMBER ANALYSES: Follow-up	93.865	5U01HD055651-08		1,025,990
Evaluating a Youth focused Economic Empowerment Approach to HIV Treatment	93.865	5R01HD074949-02		948,509
Host epigenetic and mitochondrial function in HIV-infected children	93.865	5R01HD073952-02		687,328
Unemployment, the Great Recession, Fragile Families and Child Development	93.865	5R01HD066054-03		671,343
Bone Health in Perinatally HIV-infected South African Children on Antiretrovirals	93.865	5R01HD073977-03		599,219
Prenatal Alcohol in Sudden Infant Death Syndrome (SIDS) and Stillbirth (PASS) Network	93.865	5U01HD055155-08		597,665
The Development of Emotion Regulation Mechanisms Impacting Health	93.865	5R01HD069178-04		546,127
Prevention and Planning Linkages	93.865	5R01HD072695-03		508,268
Rapid Initiation of Antiretroviral Therapy in Pregnant Women in South Africa (Abrams/Myer)	93.865	5R01HD074558-03		507,583
Adolescent and Parental Attitudes About STI Prevention Trial Participation	93.865	5R01HD067287-03		495,473
Treatment Options for Protease Inhibitor Exposed Children	93.865	5R01HD061255-05		430,608
Determinants of Leukocyte Telomere Length at Birth (Susser/Factor-Litvak/Aviv)	93.865	5R01HD071180-03		420,941
Bridges to the Future: Economic Empowerment for AIDS-Orphaned Children in Uganda	93.865	5R01HD070727-03		415,057
Neurobiology and Behavior Research Training Grant	93.865	5T32HD007430-17		409,697
Motor Proteins in Brain Development	93.865	5R01HD040182-14		403,304
Molecular Pathogenesis and Treatment of MNGIE	93.865	5R01HD056103-05		391,925
Rakai Adolescent Project (RAP)	93.865	5R01HD061092-05		362,676
AKU Global Network Research Unit	93.865	7U01HD040607-12		351,918
Role of Cyclin As in mammalian gametogenesis	93.865	2R01HD034915-15		349,404
Mother and Infant Retention for Health (MIR4Health) - NY	93.865	5R01HD075163-02		342,058
Identification of Novel Genes for Congenital Diaphragmatic Hernia	93.865	5R01HD057036-05		313,526
Role of T-box Genes in Mouse Development	93.865	5R37HD033082-18		308,667
Osteocalcin: the hormonal link between bone and reproduction	93.865	5R01HD065439-20		306,876
Columbia University/Aga Khan University Global Network Research Unit	93.865	5U10HD078438-02		261,889
Columbia-Vietnam Social Science Training and Research Partnership: STAR II (Hirsch/Parker/Van)	93.865	2R24HD056691-06		258,475
The Nucleocytoskeleton in Progeria and Aging	93.865	5R01HD070713-04		254,493
Prevention of Preterm Birth in high Risk Nulliparous Patients	93.865	5U10HD063047-04		237,638

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Determinants of Leukocyte Telomere Length at Birth (Susser/Factor-Litvak/Aviv)	93.865	5R01HD071180-03		231,985
Maternal Fetal Medicine Unit Network at CUMC	93.865	5U10HD040485-15		227,318
The Nucleocyctoskeleton in Progeria and Aging	93.865	5R01HD070713-04		221,562
PRENATAL CYTOGENETIC DIAGNOSIS BY ARRAY-BASED COPY NUMBER ANALYSES: Follow-up	93.865	5U01HD055651-08		221,317
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		201,284
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		195,445
Columbia Population Research Center	93.865	5R24HD058486-05		195,177
The Fetal Adrenal Gland as a Predictor of Spontaneous Preterm Birth	93.865	5R21HD068809-02		166,328
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		161,498
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		158,563
Bacterial Vaginosis: Vitamin D Links Mucosal Immunity and Patient Risk	93.865	5K23HD065844-04		156,814
GSH Training Grant	93.865	5T32HD049339-08		155,473
Development of an Interactive Feedback System to Improve Neonatal Resuscitation	93.865	5R21HD072878-03		150,389
Mechanisms underlying loss of neural stem cell competence	93.865	4R00HD072035-03		142,232
Retinoid receptor antagonists as novel male contraceptives	93.865	5U01HD060479-05		140,658
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		134,010
Desire for Pregnancy, Contraception, and HIV Risk among Serodiscordant Couples (Siegel/Lekas)	93.865	5R01HD058338-04		133,282
Motor impairments in Huntington's disease: mechanisms and outcome measures	93.865	5K01HD060912-04		130,072
A Lifecourse Approach to Emerging Health Disparities in a US Birth Cohort (Link/Cohn)	93.865	5R01HD058515-05		126,942
Early Markers of Neurodevelopmental Risk in Children with Congenital Heart Disease	93.865	5K23HD061601-04		124,031
Sexual Behaviors, Sexual Networks and Reproductive Health in Malawi	93.865	5R03HD071122-02		120,182
Investigating the Pathogenesis of CoQ10 Deficiencies	93.865	5K23HD065871-05		118,018
A US-UK Comparison of Discrimination & Disparities in Health & Health Service Use	93.865	5R01HD061320-05		117,370
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		109,412
Malaria and the Safety of Iron Interventions: Absorption and NTBI	93.865	5 U01 HD061233-04		108,435
Prevention of Preterm Birth in high Risk Nulliparous Patients	93.865	5U10HD063047-04		105,776
Fragile Families Summer Data Workshops Series 2013 to 2017	93.865	5R25HD074544-02		103,296
Migration and Child Health and Development: Effects and Mechanisms	93.865	5K01HD073318-02		92,670
Prenatal Alcohol in Sudden Infant Death Syndrome (SIDS) and Stillbirth (PASS) Network	93.865	5U01HD055155-08		90,032
Linking Dynamic Environments with Childhood Obesity	93.865	5K01HD067390-04		89,959
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		83,535
Predictors of Pathological Gambling among African-American Young Adults	93.865	7R01HD60072-05		80,849
Maternal Fetal Medicine Unit Network at CUMC	93.865	5U10HD040485-15		78,420
Mechanisms of Effect of Iron Status & Interventions on Malaria & Other Infections	93.865	5 U01 HD064827-04		74,408
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		71,721
Retinoid Receptor Antagonists as Novel Male Contraceptives	93.865	2U01HD060479-06		64,826

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Host epigenetic and mitochondrial function in HIV-infected children	93.865	5R01HD073952-02		63,680
Molecular Pathogenesis of Coenzyme Q10 Deficiency	93.865	5R01HD057543-05		58,831
Mother and Infant Retention for Health (MIR4Health) - NY	93.865	5R01HD075163-02		58,814
A Lifecourse Approach to Emerging Health Disparities in a US Birth Cohort (Link/Cohn)	93.865	5R01HD058515-05		56,516
Improving Adolescent and Adult Mortality Data in Developing Countries	93.865	5R03HD071117-02		55,713
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		53,967
Bone Health in Perinatally HIV-infected South African Children on Antiretrovirals	93.865	5R01HD073977-03		52,409
Neurobiology and Behavior Research Training Grant	93.865	5T32HD007430-17		35,692
Prevention of Preterm Birth in high Risk Nulliparous Patients	93.865	5U10HD063047-04		29,505
Columbia Population Research Center	93.865	5R24HD058486-05		28,370
Boys Transitions Through Puberty	93.865	5R03HD069193-02		27,515
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		26,259
AKU Global Network Research Unit	93.865	7U01HD040607-12		25,081
Using Google Streetview to Measure Neighborhood Characteristics	93.865	5 R21 HD062965-02		22,421
Molecular Pathogenesis of Coenzyme Q10 Deficiency	93.865	5R01HD057543-05		21,090
Prenatal Alcohol in Sudden Infant Death Syndrome (SIDS) and Stillbirth (PASS) Network	93.865	5U01HD055155-08		16,337
Columbia University/Aga Khan University Global Network Research Unit	93.865	5U10HD078438-02		15,944
Predictors of High-Risk Behavior among Youth (MARTINS/BLANCO/CANINO/DUARTE)	93.865	2R01HD060072-06A1		15,886
Fragile Families Summer Data Workshops Series 2013 to 2017	93.865	5R25HD074544-02		15,326
Sex Differences in Statural Growth Impairment in Pediatric Crohn's Disease	93.865	1R01HD075929-01A1		15,079
Columbia Population Research Center	93.865	5R24HD058486-05		14,727
Bridges to the Future: Economic Empowerment for AIDS-Orphaned Children in Uganda	93.865	5R01HD070727-03		14,272
Investigating the Pathogenesis of CoQ10 Deficiencies	93.865	5K23HD065871-05		9,335
Multilevel latent class and social network models for observational and adolescent obesity data	93.865	5R01HD061940-03		9,174
Prevention of Preterm Birth in high Risk Nulliparous Patients	93.865	5U10HD063047-04		8,858
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		8,798
GSH Training Grant	93.865	5T32HD049339-08		7,832
PRENATAL CYTOGENETIC DIAGNOSIS BY ARRAY-BASED COPY NUMBER ANALYSES: Follow-up	93.865	5U01HD055651-08		4,672
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		4,456
ROLE OF PIP2 METABOLISM IMBALANCE IN DOWN SYNDROME	93.865	5 R01 HD055457-05		3,705
PROFESSIONAL DILEMMAS: HEALTH WORKER'S PERCEPTIONS OF POST ABORTION CARE IN SENEGAL	93.865	5 F31 HD059397-04		2,980
Using Google Streetview to Measure Neighborhood Characteristics	93.865	5 R21 HD062965-02		1,584
SAFER WEANING PRACTICES FOR HIV-INFECTED WOMEN	93.865	5 R01 HD057617-05		1,378
Mitochondrial Encephalomyopathies and Mental Retardation	93.865	5P01HD032062-20		1,231
Retinoid receptor antagonists as novel male contraceptives	93.865	5U01HD060479-05		789
DOCTORAL RESEARCH TRAINING IN SOCIOMEDICAL SCIENCES	93.865	5 T32 HD049339-05		-50

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
DOCTORAL RESEARCH TRAINING IN SOCIOMEDICAL SCIENCES	93.865	5 T32 HD049339-04		-227
Prenatal Alcohol in Sudden Infant Death Syndrome (SIDS) and Stillbirth (PASS) Network	93.865	5U01HD055155-08		-377
Reducing Health Systems Costs through a Patient-activation RCT	93.865	5R21HD071561-02		-1,366
The Consequences of Migration for Child Development in Sending Areas	93.865	5R03HD062691-02		-5,731
Prenatal Cytogenetic Diagnosis by Array-Based Copy Number Analysis	93.865	5R01HD055651-05		-5,925
FUNCTIONAL ANALYSIS OF CRIPTO IN MOUSE EMBRYOGENESIS	93.865	5 R01 HD042837-15		-9,040
AKU Global Network Research Unit	93.865	7U01HD040607-12		-11,921
Mechanisms of Effect of Iron Status & Interventions on Malaria & Other Infections	93.865	5 U01 HD064827-04		-32,082
Role of Cyclin A s Mammalian Meiosis	93.865	5 R01 HD034915-13		-38,561
				\$17,972,892

Aging Research

Epidemiology of Biomarkers of Risk and Progression in LOAD	93.866	5R01AG037212-05		2,497,620
Exploring Cognitive Aging Using Reference Ability Neural Networks	93.866	5R01AG038465-04		1,403,076
Imaging of Cognition, Learning and Memory in Aging	93.866	5R01AG026158-09		918,247
Alzheimer s Disease Research Center At Columbia University	93.866	5P50AG008702-25		781,309
Predictors of Severity in Alzheimer s Disease	93.866	5R01AG007370-24		767,024
Genetic Epidemiology of Alzheimer s Disease in Hispanics	93.866	5R37AG015473-15		687,840
Epidemiology of Familial Late-Onset Alzheimer s Disease	93.866	5R01AG041797-03		595,890
Olfactory deficits and donepezil treatment in cognitively impaired elderly	93.866	5R01AG041795-02		547,117
NIA Long Life Family Study	93.866	5U01AG023749-08		541,922
Human Induced Neuronal Stem Cell Models of Familial Alzheimer s Disease	93.866	5R01AG042317-03		509,718
White matter hyperintensities in aging and dementia	93.866	5R01AG034189-05		471,837
Prenatally Induced DNA Methylation Profiles and Disease Risk at Age 60	93.866	5R01AG042190-03		467,848
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		441,562
Exercise, Age-Related Memory Decline, and Hippocampal Function	93.866	5R01AG035015-05		434,346
Hematopoietic Stem Cells and Longevity	93.866	5R01AG029626-08		428,888
Histone acetylation and cognitive aging	93.866	5R01AG034618-05		419,413
fMRI and Mouse Models of Alzheimer s Disease	93.866	5R01AG025161-08		406,294
Exercise, aging, and cognition: Effect and mechanisms	93.866	5R01AG033546-04		400,048
Understanding cognitive mechanisms of emotion regulation in aging	93.866	1R01AG043463-01		369,828
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		357,523
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		357,401
Gene-Environment Interaction in Cognition in Venezuelan Families	93.866	5R01AG036469-04		350,336
Exercise, aging, and cognition: Effect and mechanisms	93.866	5R01AG033546-04		345,348
Assessment of ultrasound-facilitated neurotherapeutics	93.866	5R01AG038961-04		309,557
Endogenous amyloid-beta in synaptic function and memory	93.866	5R01AG034248-05		299,607

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Exercise, Age-Related Memory Decline, and Hippocampal Function	93.866	5R01AG035015-05		289,923
Novel PDE5 inhibitors as a therapeutic tool against Alzheimer's Disease	93.866	5U01AG032973-03		288,166
Hippocampal Neurogenesis, Pattern separation & age-Related cognitive impairments.	93.866	5R01AG043688-02		266,129
Genetic Epidemiology of Alzheimers Disease in African Americans	93.866	5R01AG028786-05		259,838
Aging of tissue-specific clocks in the immune system of Drosophila	93.866	5R01AG045842-02		248,397
Control of liver autophagy by phosphatidic acid signaling	93.866	5R21AG045020-02		239,618
Extrinsic regulation of adult neural stem cells	93.866	5R21AG042671-02		235,230
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		231,119
Cognitive and Emotional Sources of Wise Decision Making Across the Lifespan	93.866	1R01AG044941-01		214,549
Psychosocial Factors & Aging: Effects on Resting/Reflexive Cardiovascular Control	93.866	5R21AG044260-02		201,792
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		190,752
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		171,295
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		165,709
Prenatal Under Nutrition and Mortality Through Age 63 Project	93.866	5R01AG028593-05		154,971
Integrating neuroimaging with studies of cognitive aging in the Dominican Republic	93.866	5R21AG043337-02		151,646
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		149,905
MIDCAREER MENTORING AWARD FOR PATIENT ORIENTED RESEARCH IN GERIATRIC CARDIOLOGY	93.866	5K24AG036778-05		137,331
A cellular basis for age-related impaired tactile acuity	93.866	1R21AG044633-01A1		128,621
AGE-RELATED STRUCTURAL AND FUNCTIONAL NEURAL CHANGES ON COGNITIVE MEASURES	93.866	5K01AG035061-05		126,324
Use of intensive care services for elderly patients undergoing high-risk surgical procedures	93.866	5K08AG038477-05		123,957
Neuropsychology and Cognition in Aging	93.866	5T32AG000261-15		119,580
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		117,438
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		115,244
Mapping Causative factors in the sortilin-related pathway in Alzheimer's Disease	93.866	5K23AG034550-05		111,654
Dietary Factors and Neuroimaging Markers	93.866	5K99AG042483-02		110,167
Analyzing age-related changes of brain activation in subjects native space	93.866	5K01AG044467-02		109,092
Low Magnitude Mechanical Stimulation to Increase Muscle Strength Among Frail Adults	93.866	5K23AG040168-03		108,576
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		102,980
Mechanism of Cognitive Dysfunction: CEA and Stenting	93.866	5R01AG017604-09		101,919
Allele-specific Mapping in Alzheimer's Disease	93.866	5R01AG035020-04		100,253
The Brief Research in Aging and Interdisciplinary Neurosciences	93.866	5T35AG044303-02		89,230
NIA Long Life Family Study	93.866	5U01AG023749-08		80,785
Questionable Dementia: Course and Predictors of Outcome	93.866	5R01AG017761-15		76,023
Mediterranean Diet and Other Dietary Patterns in Alzheimer's Disease	93.866	5R01AG028506-05		73,740
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		67,256
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		63,197

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		62,565
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		62,335
Early AD Detection with ASL MRI & Covariance Analysis	93.866	5R01AG026114-05		62,267
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		56,266
Mechanisms underlying selective motor pool vulnerability in mouse and human SMA	93.866	5F30AG044989-02		45,106
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		43,788
Longevity and turnover of human naive T cells in lymphoid tissue	93.866	5F31AG047003-02		41,314
Long Life Family Study: Columbia University	93.866	2U01AG023749-09		38,756
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		34,386
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		24,355
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		24,346
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		21,068
NIA Long Life Family Study	93.866	5U01AG023749-08		20,820
Neuropsychology and Cognition in Aging	93.866	5T32AG000261-15		19,712
Awareness of Deficit in Alzheimer's Disease	93.866	5K2AG032899-05		18,379
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		17,196
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		16,899
Integrating neuroimaging with studies of cognitive aging in the Dominican Republic	93.866	5R21AG043337-02		14,045
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		12,841
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		12,164
NIA Long Life Family Study	93.866	5U01AG023749-08		11,934
Genetic Epidemiology of Alzheimer's Disease in Hispanics	93.866	5R37AG015473-15		10,063
Questionable Dementia: Course and Predictors of Outcome	93.866	5R01AG017761-15		9,022
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		6,894
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		6,348
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		6,109
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		5,885
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		5,407
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		5,294
Imaging of Cognition, Learning and Memory in Aging	93.866	5R01AG026158-09		4,326
Alzheimer's Disease Research Center At Columbia University	93.866	5P50AG008702-25		4,287
TEMPORAL CHANGES IN MICRORNA FUNCTION DURING TAU TANGLE ACCUMULATION	93.866	5 R21 AG033790-02		3,813
Combined exercise and cognitive training intervention in normal aging	93.866	5R01AG034178-03		3,444
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		3,166
SEROTONIN AS A REGULATOR OF BONE MASS ACCRUAL: BASIC AND CLINICAL	93.866	5 P01 AG032959-02		2,520
NOVEL PDE5 INHIBITORS AS A THERAPEUTIC TOOL AGAINST ALZHEIMER'S DISEASE	93.866	1 U01 AG032973-01		2,188

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Alzheimer s Disease Research Center At Columbia University	93.866	5P50AG008702-25		2,060
SEROTONIN AS A REGULATOR OF BONE MASS ACCRUAL: BASIC AND CLINICAL	93.866	5 P01 AG032959-02		1,980
Decision-Making Over the Lifespan: How Memory Affects preferences	93.866	5 R01 AG027934-05		1,695
SEROTONIN AS A REGULATOR OF BONE MASS ACCRUAL: BASIC AND CLINICAL	93.866	5 P01 AG032959-02		1,635
Alzheimer s Disease Research Center At Columbia University	93.866	5P50AG008702-25		1,372
Alzheimer s Disease Research Center At Columbia University	93.866	5P50AG008702-25		1,016
SEROTONIN AS A REGULATOR OF BONE MASS ACCRUAL: BASIC AND CLINICAL	93.866	5 P01 AG032959-02		441
SEROTONIN AS A REGULATOR OF BONE MASS ACCRUAL: BASIC AND CLINICAL	93.866	5 P01 AG032959-02		379
CELLULAR COFACTORS, NEURONAL STRESS & RESCUE, AGING & ALZHEIMER DISEASE	93.866	5 P01 AG174490-09		-2
Genetic Consortium for Late Onset Alzheimer s Disease	93.866	5 U24 AG026395-05		-49
MULTICENTER STUDY ON EXCEPTIONAL SURVIVAL IN FAMILIES	93.866	2 U01 AG023749-06		-67
SCREENING FOR AD THERAPEUTICS BASED ON A NOVEL LIPID PHOSPHATASE TARGET	93.866	5 R21 AG033199-02		-321
CALPAIN INHIBITORS AGAINST ALZHEIMER'S DISEASE	93.866	5 U01 AG028713-04		-3,039
Novel PDE5 inhibitors as a therapeutic tool against Alzheimer s Disease	93.866	5U01AG032973-03		-13,927
Alzheimer s Disease Research Center At Columbia University	93.866	5P50AG008702-25		-27,418
Serotonin as a Regulator of bone Mass Accrual: basic and Clinical	93.866	5P01AG032959-05		-35,918
				\$21,301,150

Vision Research

Therapeutic Approaches for ABCA4-associated Disorders	93.867	5R24EY019861-04		1,178,527
Completing genetic analysis of the ABCA4 locus	93.867	5R01EY021163-04		659,099
Impact of Lipofuscin in Retinal Pigment Epithelial Cells	93.867	2R01EY012951-13		505,135
Measures of Human Receptor and Post Receptor Activity	93.867	5R01EY009076-22		498,630
Photoreceptor specification in the Drosophila eye	93.867	5R01EY023635-02		488,648
Core Grant for Vision Research	93.867	5P30EY019007-05		401,222
Studying Models and Mechanisms of Optic Nerve Diseases	93.867	5R01EY002115-37		390,537
The Role of Zic Genes in Patterning the Binocular Projection	93.867	5R01EY015290-11		390,488
Therapeutic Corneal Cross-linking Using Aliphatic Beta-Nitroalcohols	93.867	5R01EY020495-04		376,164
The Role and Mechanisms of Lipofuscin Formation in Macular Degeneration	93.867	5R01EY021207-04		375,074
The Neurophysiology of Spatial Vision	93.867	5R01EY014978-10		367,824
Core Grant for Vision Research	93.867	5P30EY019007-05		363,850
Regulation of FGF signaling in lacrimal gland development	93.867	7R01EY018868-06		343,084
Signaling Mechanisms of Lens Development	93.867	7R01EY017061-09		342,956
Early Detection of Keratoconus	93.867	5R01EY019055-05		335,501
Mechanisms of Visual Perception	93.867	5R01EY011378-17		334,798
Growth and Guidance of Retinal Axons	93.867	5R01EY012736-24		326,783
Imaging functional connectivity in visual cortex	93.867	5R01EY011787-14		270,991

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Role of oculomotor proprioception in spatial processing by the parietal cortex	93.867	5K08EY023265-02		256,308
Vision Sciences Training Grant	93.867	5T32EY013933-14		248,755
Elastographic Imaging of the Retina/Choroid in Age-Related Macular Degeneration	93.867	5R01EY021529-03		235,022
Anticipatory Hemodynamic Signals in Primary Visual Cortex	93.867	5R01EY019500-04		87,385
The Neurophysiology of Spatial Vision	93.867	5R01EY014978-10		68,431
Toward mechanism- and gene-based therapies for retinal degeneration	93.867	5R01EY018213-05		47,908
Defining Barriers to Gene Therapy	93.867	2R01EY018213-06A1		42,667
The Neurophysiology of Visual Search: Oculomotor and Visual Mechanisms	93.867	5R01EY017039-05		33,585
Therapeutic Corneal Cross-linking Using Aliphatic Beta-Nitroalcohols	93.867	5R01EY020495-04		31,118
Impact of Lipofuscin in Retinal Pigment Epithelial Cells	93.867	5R01EY012951-12		30,884
Spontaneous Intrinsic Activity as a Window into Visual Cortical Circuits	93.867	5F32EY022579-02		27,697
Spontaneous Intrinsic Activity as a Window into Visual Cortical Circuits	93.867	5F32EY022579-02		26,491
Vision Sciences Training Grant	93.867	5T32EY013933-14		23,158
RPE-Neural Retina Interactions in the Developing Albino Mouse Eye	93.867	1R21EY023714-01A1		883
Vision Sciences Training Grant	93.867	5T32EY013933-14		-587
THE ROLE OF ZIC GENES IN PATTERNING THE BINOCULAR PROJECTION	93.867	5 R01 EY015290-08		-5,164
Early Detection of Keratoconus	93.867	5R01EY019055-05		-52,614
				\$9,051,238

Medical Library Assistance

Training in Biomedical Informatics at Columbia University	93.879	5T15LM007079-23		949,420
Pharmacovigilance Methods: Leveraging Heterogeneous Adverse Drug Reaction Data	93.879	5R01LM010016-06		365,872
Developing flexible EHR plug-ins to re-engineer clinical care and research workflow	93.879	5R01LM010815-04		354,346
Bridging the Semantic Gap Between Research Eligibility Criteria and Clinical Data	93.879	5R01LM009886-06		328,355
Discovering and Applying Knowledge in Clinical Databases	93.879	5R01LM006910-15		271,654
Developing flexible EHR plug-ins to re-engineer clinical care and research workflow	93.879	5R01LM010815-04		156,167
Discovering and Applying Knowledge in Clinical Databases	93.879	5R01LM006910-13		102,955
Disaster and the the Reinvention of Public Health in France	93.879	5G13LM010931-03		39,868
Training in Biomedical Informatics at Columbia University	93.879	5T15LM007079-23		35,931
EHEALTH LITERACY BARRIERS AND SOLUTIONS FOR CONSUMER USE OF A HEALTH PORTAL	93.879	5 R21 LM010688-02		-86
				\$2,604,482

International Research and Research Training

Columbia University - Southern African AIDS International Training/Research Program	93.989	5D43TW000231-20		737,302
Columbia University - Southern African AIDS International Training/Research Program	93.989	5D43TW000231-20		278,080
Climate Variability and Change: Implications for Malaria Control in East Africa	93.989	1R21TW009537-01		164,732
Columbia University - Southern African AIDS International Training/Research Program	93.989	5D43TW000231-20		17,429
Building Capacity to Reduce Arsenicosis in Bangladesh	93.989	5D43TW005724-10		-278

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Columbia University - Southern African AIDS International Training/Research Program	93.989	5D43TW000231-20		-1,611
				\$1,195,654
Total Direct Award Programs				\$353,169,609
Pass-through Awards				
National Cancer Institute				
ARRA -SAICFI 13XS231	93.	SAICFI 13XS231	HHSN261200800001E	1,056
National Cancer Institute/NIH/DHHS				
Preclinical investigations of Finasteride in mouse models of prostate cancer	93.	SAIC 12XS459	HHSN261200800001E	69,356
A Randomized Phase II Study of Epigenetic Priming Using Decitabine with Induction Chemotherapy in Patients with Acute Myelogenous Leukemia (AML)	93.	CCCG CU13-1871	HHSN261200622012C	2,925
A Multicenter Phase II Study of Docosahexaenoic Acid (DHA) in Triple Negative Breast Cancer Survivor	93.	UTXMDAN 00000345/54443	N01 CN 035159	1,900
CHEMOPREVENTION IN A NOVEL MOUSE MODEL OF BARRETT'S ESOPHAGUS AND ESOPHAGEAL ADENOCARCINOMA	93.	UTHSC N-2011-40	HHSN261200433000C	-1,669
National Heart, Lung, and Blood Institute				
(ACCORD) Follow-On Study-Action to Control Cardiovascular Risk in Diabetes	93.	WUHS 33000	HHSN268201100027C	478,396
A Nanotherapeutic Approach to Defective Inflammation Resolution in Atherosclerosis.	93.	MSSM 0258-3921 -460	HHSN268201000045C	211,050
Systolic Blood Pressure Intervention Trial (SPRINT)	93.	UAB 000336417-027	HHSN268200900047C	76,351
Systolic Blood Pressure Intervention Trial (SPRINT)	93.	UAB 000336417-027	HHSN268200900047C	43,078
Action to Control Cardiovascular Risks in Diabetes (ACCORD) Follow-On	93.	WUBGSM WUHS 33000	HHSN268201100027C	40,545
Hispanic Community Health Study - Study of Latinos (HCHS-SOL) - Coordinating Center	93.	UNC 5-56029	HHSN268201300001I	19,979
(ACCORD) Follow-On Study-Action to Control Cardiovascular Risk in Diabetes	93.	WUHS 33000	HHSN268201100027C	13,648
Systolic Blood Pressure Intervention Trial (SPRINT)	93.	UAB 000336417-027	HHSN268200900047C	7,674
Action to Control Cardiovascular Risks in Diabetes (ACCORD) Follow-On	93.	WUBGSM WUHS 33000	HHSN268201100027C	6,601
(ACCORD) Follow-On Study-Action to Control Cardiovascular Risk in Diabetes	93.	WUHS 33000	HHSN268201100027C	5,168
Systolic Blood Pressure Intervention Trial (SPRINT)	93.	UAB 000336417-027	HHSN268200900047C	1,495
ACCORDION - Mind Substudy	93.	WUHS 30012	HHSN271201000023C	1,322
(ACCORD) Follow-On Study-Action to Control Cardiovascular Risk in Diabetes	93.	WUHS 33000	HHSN268201100027C	429
National Institute of Allergy and Infectious Disease				
Inner City asthma Consortium (ICAC): Immunologic Approaches to Reduce Asthma	93.	UWIS X561190	HHSN272200900052C	1,279,441
The Collaborative Network for Clinical Research in Immune Tolerance	93.	CUCSF 107521	N01-AI-15416	139,237
URBAN ENVIRONMENT AND CHILDHOOD ASTHMA	93.	UWIS 267K131	HHSN272200900052C	115,535
Inner City asthma Consortium (ICAC): Immunologic Approaches to Reduce Asthma	93.	UWIS X561190	HHSN272200900052C	114,570
Inner City asthma Consortium (ICAC): Immunologic Approaches to Reduce Asthma	93.	UWIS X561190	HHSN272200900052C	104,320
Inner City asthma Consortium (ICAC): Immunologic Approaches to Reduce Asthma	93.	UWIS X561190	HHSN272200900052C	78,645
Protocol ITN034AI: A Randomized, Double-Blind, Controlled, Phase II multicenter trial of CYLA4IG (Abatacept) plus Cyclophosphamide vs. Cyclophosphamide alone in the treatment of Lupus	93.	CUCSD ITN10220-00sc	N01-AI-15416	64,267
Inner City asthma Consortium (ICAC): Immunologic Approaches to Reduce Asthma	93.	UWIS X561190	HHSN272200900052C	6,127
ITN Steering Committee Member	93.	UCSF 105891	N01 AI15416	5,170

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
National Institute of Child Health and Human Development				
PK & relative bioavailability of a liquid formulation of hydroxyurea in pediatric patients with sickle cell anemia	93.	CDUKE CU11-3549	HHSN 2752010000031	18,068
Lithium in the Treatment of Pediatric Mania	93.	CCWRU CU09-1721	HHSN275200503406C	64
National Institute of Environmental Health				
Gulf Long-Term Follow-Up Study (:GoLF STUDY)	93.	SSSI HSR-S-13-003546	N01-ES-55553	434
National Institute of Mental Health/NIH/				
RAISE-IES: Duration of Untreated Psychosis Study	93.	SRFMH 114780	HHSN-271-2009-00020-C	15,587
National Institute on Alcohol Abuse and Alcoholism				
NESARC PRISM	93.	RFMH #24891	HHSN27520090007C	148,244
Mechanisms of Behavior Change Initiation (MOBCI) for Drinking	93.	SRFMH 109104	HHSN-275-2009-00019C	24,792
National Institute on Drug Abuse/NIH/DHH				
ARRA -RFMH 1007967-1-24812	93.	RFMH 1007967-1-24812	HHSN 271-2009-00020C	147,995
Nepicastat for Treatment of Cocaine Dependence: A Phase II Study	93.	RFMH 25534	NIDA-VA1031	11,055
ARRA -RFMH 1007967-1-24812	93.	RFMH 1007967-1-24812	HHSN-271--2009-00020C	-2,096
National Institutes of Health/DHHS				
ARRA -SAICFI 12ST1103	93.	SAICFI 12ST1103	HHSN261200800001E	195,707
TrialNet Type 1 Diabetes Natural History Study	93.	UFLRDA CU09-4618	NIDDK	155,950
Revive-It Corelab/Gatekeeper	93.	UMICHG 3001889775	HHSN268201100026C	30,054
National Library of Medicine/NIH/DHHS				
Application of Systems Approaches to Health Disparities & Population Health	93.	UMICHG 3002748977	HSN276200800013C	16,000
Developing an Evaluation Plan for NLM AIDS Community Information Outreach Program	93.	ICF 11ED00025	HHSN276-2009-0356U	-7,479
				\$3,640,991
Environmental Health				
Prenatal Environmental Determinants of InterGenerational Risk (PEDIGREE)	93.113	PHI 1017056	5 U01 ES019471-03	223,024
Gulf Coast Oil Spill Research Consortium	93.113	LSUMC	U01ES021497	181,068
Phenotyping/Epigenetic studies of PAH-associated Treg impairment in asthma	93.113	SU 60289635-52089-B	5R01ES02092602-02	86,466
Validation of a Genomic Biomarker of Response to Environmental Tobacco Smoke	93.113	BUMC 9500300401	1R01ES020425-01	46,865
A Pooled Investigation of Prenatal Phthalate Exposure and Childhood Obesity	93.113	UNC-CH 5-33243	1R21ES021700-01A1	38,266
Prenatal Environmental Determinants of InterGenerational Risk (PEDIGREE)	93.113	PHI 1017056	5 U01 ES019471-03	11,724
Polycyclic Aromatic Hydrocarbons and Birth Control Outcomes in Mexico City	93.113	UMICHG 3001266731	5 R01 ES017022-03	-16
A NESTED CASE-CONTROL STUDY OF BIOMARKERS OF PROSTATE CANCER	93.113	HFHS CU08-7296	5 R01 ES11126-09	-445
Validation of a Genomic Biomarker of Response to Environmental Tobacco Smoke	93.113	BUMC 9500300401	1R01ES020425-01	-10,650
				\$576,302
Oral Diseases and Disorders Research				

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Integrating Social & Systems Science Approaches to Promote Oral Health Equity	93.121	NYU CU12-0650	1R01DE023072-01	281,854
				\$281,854

NIEHS Superfund Hazardous Substances Basic Research and Education

Superfund Metal Mixtures: Biomarkers in Neurodevelopment: Project No. 3 Genetic Mechanisms of Metal Toxicity	93.143	HARVARD 112096.5036578	5 P42 ES016454-03	120,059
Superfund Metal Mixtures: Biomarkers in Neurodevelopment: Project No. 3 Genetic Mechanisms of Metal Toxicity	93.143	HARVARD 112096.5036578	5 P42 ES016454-03	-1,025
				\$119,034

Human Genome Research

Biorepository for Genomic Medicine in Diverse Communities	93.172	MSSM 0255-4322-4609	5U01HG006380-03	246,211
High-throughput, real time electronic DNA sequencing using integrated single-molecule fingerprinting	93.172	INTEL CU12-0349	1R01HG006882-01	123,285
New Physical Methodologies for Genomic Analysis	93.172	UWIS 429K122	2R01HG00225-16	30,495
New Physical Methodologies for Genomic Analysis	93.172	UWIS 429K122	2R01HG00225-16	22,612
Biorepository for Genomic Medicine in Diverse Communities	93.172	MSSM 0255-4322-4609	5U01HG006380-03	21,255
				\$443,858

Research and Training in Complementary and Alternative Medicine

Creatine Safety, Tolerability & Efficacy in Huntington s Disease (CREST-E)	93.213	MGH CU09-3943	5 U01 AT000613	33,346
Pragmatic Trial of Population-Based Programs to Prevent Suicide Attempt	93.213	GHC 2012119722	1UH2AT007755-01	5,798
				\$39,144

National Center on Sleep Disorders Research

Sleep Disturbance and risk for adverse pregnancy outcomes	93.233	NWU 60029273 CUNY	R01 HL105549	81,974
Tailored Sleep Health Education: A Community-Engaged Approach	93.233	NYUMC 13-A0-00-0018103-01	1R25HL116378-01	12,616
				\$94,590

Mental Health Research Grants

Common and Rare Genetic Factors in an Ethnically Homogenous Schizophrenia Cohort	93.242	FIMR 500615-COL-01	1R01MH095458-01A1	290,875
A Novel 3D microscope for imaging and photostimula	93.242	BNL CU12-1556	1R41MH100895-01	206,178
Power and Risk among Gay Couples	93.242	SFSU S10-0008	5 R01 MH089276-02	200,913
Weight suppression, dieting and bulimia nervosa: A biobehavioral study	93.242	DREXEL 232547-3684	1R01MH095982-01A1	131,215
Risk for Depression, Neighborhood Characteristics, and Physical Activity	93.242	NYAMED CU11-0015	5R01MH085132-04	129,627
Outcomes in Callers to the VA s 24/7 Veterans Crisis Line	93.242	CNYCF	1R34MH096854-01A1	93,005
Conte Center for Computational Systems Genomics of Neuropsychiatric Phenotypes	93.242	UCHICA FP046983-A	P50MH94267	91,569
Characterizing Placebo Response	93.242	NYUMC 12-01978	1R01MH099003-01	91,207
Characterizing Placebo Response	93.242	NYUMC 12-01978	1R01MH099003-01	76,478
Bluntant and Discordant Affect: A Transdiagnositc Construct in Psychopathology	93.242	UPMC 0025282(123087-2)	1R01MH096334-01	70,421
Electrocardiography markers of social function	93.242	UPENN 559189	1P50MH096891-01	68,092
Neurodevelopmental Profiling of the Epigenome in Human and Rhesus	93.242	MSSM 0255-6211-4609	7R01MH094774-03	59,633
Mobile Text Message Intervention to Promote HIV/STI Service Use by at Risk Youth	93.242	DARTC 1099	R34MH093162-02	57,013
Risk for Depression, Neighborhood Characteristics, and Physical Activity	93.242	NYAMED CU10-1401	R01 MH085131	56,771

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
National Center for Disaster Mental Health Research Data Center	93.242	DARTC 666	5 P60 MH082598-04	52,773
HealthMpowerment.org: a Novel Internet and Mobile Phone HIV Intervention for Young Black MSM	93.242	UNC-CH 5-31798	R01 MH093275	48,593
A D1 Agonist for Working Memory Enhancement in the Schizophrenia Spectrum	93.242	MSSM 0255-5881-4609	1R01MH097799-01A1	38,164
Electrocardiography markers of social function	93.242	UPENN 559189	1P50MH096891-01	36,239
An fMRI Study of the Enhancement of Emotion regulation in Borderline Patients	93.242	MSSM 0255-1622-4609	2 R01 MH077813-05A1	31,162
Novel medication strategies targeting brain mechanisms in pediatric OCD	93.242	CUMC 120100300	1R34MH095377-01A1	31,149
Role of cGKII in AMPA Receptor Transport	93.242	NYU 08-1248	5 R01 MH067229-09	30,636
International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT) Group	93.242	JH CU13-0710	7UM1AI068632-07	25,152
Genetic and Trauma-Related Risk Factors for PTSD	93.242	EMORYU S602055	5 R01 MH071537-07	24,108
Fetal Exposure to Maternal Stress and Inflammation: Effects on Neurodevelopment	93.242	TEMPLE 360762-CU	1R01MH096478-01A1	22,828
EFFECTIVENESS TRIAL OF YOUTH SUICIDE PREVENTION DELIVERED BY TEEN PEER LEADERS	93.242	URMC 415292-G	1 R01 MH091452-01	21,981
Africa Focus on Intervention Research for Mental Health (AFFIRM)	93.242	UCT 3	U19 MH095699	20,607
Depression Prevention Initiative: A Study of IPT - AST in School Settings	93.242	RUTGER 4099	5 R01 MH087481-02	19,224
Weight suppression, dieting and bulimia nervosa: A biobehavioral study	93.242	DREXEL 232547-3684	1R01MH095982-01A1	16,142
Conte Center for Computational Systems Genomics of Neuropsychiatric Phenotypes	93.242	UCHICA FP046983-A	P50MH94267	10,643
A Smartphone Intervention to Improve Adherence to Antipsychotic Medications	93.242	UMD SR00002273	1R34MH094555-01	9,342
A D1 Agonist for Working Memory Enhancement in the Schizophrenia Spectrum	93.242	MSSM 0255-5881-4609	1R01MH097799-01A1	8,052
Critical Consciousness-Based HIV Prevention for Black Gay/Bi/MSM Male Adolescents	93.242	UMICHG 3002575001	R34 MH095571	7,997
Africa Focus on Intervention Research for Mental Health (AFFIRM)	93.242	UCT 3	U19 MH095699	5,696
CBT for Social Anxiety Disorder Delivered by School Counselors	93.242	NYUMC 08-1159	1 R01 MH081881-01A2	3,579
International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT) Group	93.242	JH CU13-0710	7UM1AI068632-07	2,831
Estimating Mental Health Expenditures Using National Household Data	93.242	UMARY PO#S00002276	R21MH096285-02	1,868
Conte Center for Computational Systems Genomics of Neuropsychiatric Phenotypes	93.242	UCHICA FP046983-A	P50MH94267	732
Learning adaptive treatment Strategies in Mental Health	93.242	UMICHG 3001392918	5 R01 MH080015-03	-199
Fetal Antecedents to Depression and Risk for CVD	93.242	BWH CU07-1567	5 R01 MH074679-05	-411
FETAL ANTECEDENTS TO SEX DIFFERENCES IN DEPRESSION: A TRANSLATIONAL APPROACH: PROJECT 1	93.242	BWH CU08-8034	P50 MH082679	-568
International Maternal Pediatric Adolescent AIDS Clinical Trials Group (IMPACT)	93.242	BRS-IMPCT-Q-06-00107-T004	UM1 AI068632-08	-4,044
The Mount Sinai Institute for NeuroAIDS Disparities	93.242	MSSM 0253-6142-4609	5R25MH080663-05	-9,270
				\$2,078,003

Alcohol Research Programs

Alcohol-induced Human Striatal Dopamine Release Related to Alcoholism Vulnerability and Habitual Use	93.273	YU MI2A11309	2P50AA012870-11	124,985
Translational Research in Alcoholic Hepatitis	93.273	UNC-CH 5-33483	1U01AA021908-01	70,467
Gene network perturbations in alcohol dependence - A systems biology approach	93.273	TSRI PO No. 5-50486	1R01AA021667-01A1	49,139
Translational Research in in Alcoholic Hepatitis	93.273	UNC-CH 5-33482	1U01AA021908-01	22,500
Teen Alcohol Screening in the Pediatric Emergency Care Applied Research Network	93.273	RIH 701-5475-2-NY	1R01AA021900-01	16,492
Alcohol-induced Human Striatal Dopamine Release Related to Alcoholism Vulnerability and Habitual Use	93.273	YU MI2A11309	2P50AA012870-11	3,299
				\$286,882

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Drug Abuse and Addiction Research Programs				
Florida Node Alliance of Drug Abuse Clinic Trials Network - CTN 0049	93.279	UMIAMI CU12-3439	2U10DA013720-11	338,932
Presynaptic Plasticity of Vesicular Dopamine Release	93.279	UCSF 555843-29279	2P01DA010154-16A1	202,656
Florida Node Alliance of Drug Abuse Clinic Trials Network - CTN 0049	93.279	UMIAMI CU12-3439	2U10DA013720-11	180,715
Structure and Function of Neurotransmitter Transporters	93.279	CUMC 12070954-01	5P01DA012408-13	143,697
Florida Node Alliance of the Drug Abuse Clinic Trials Network - Infrastructure	93.279	UMIAMI CU12-3426	2U10DA013720-11	104,767
Florida Node Alliance of the Drug Abuse Clinic Trials Network - Infrastructure	93.279	UMIAMI CU12-3426	2U10DA013720-11	102,954
Functional Properties of Protein Segments in Receptors and Transporters	93.279	CUMC 09020215	5 R01 DA015170-08	93,647
Learning to Avoid Pain: Computational Mechanisms and Application to Methamphetamine Abuse	93.279	UCOL 1547563	7 R01-DA027794-03	86,845
A Computerized family-based youth HIV and drug abuse prevention in Kazakhstan	93.279	FP052892	R34DA033201	82,021
Impact of Health Reform on Outpatient Substance Abuse Treatment Programs	93.279	RIH 701-5530	1R01DA034634-01	79,823
Structure and Function of Neurotransmitter Transporters	93.279	CUMC 12070954-01	5P01DA012408-13	70,839
A Computerized family-based youth HIV and drug abuse prevention in Kazakhstan	93.279	FP052892	R34DA033201	51,994
Community Vulnerability and Responses to Drug-User-Related HIV/AIDS	93.279	NDRI 081	R01 DA01336	46,239
Evaluating ART for all HIV Seropositives: Can it work with the Hardest Cases?	93.279	SLRIHS CU12-3799	1R01DA035707-01	41,573
Higher-activity mutants of Cocaine esterase	93.279	UKRK 3048105116-09-227	1 R01 DA025100-01	40,543
Structure and Function of Neurotransmitter Transporters	93.279	CUMC 12070954-01	5P01DA012408-13	38,540
Florida Node Alliance of the Drug Abuse Clinic Trials Network - CTN 0047	93.279	UMIAMI CU12-3438	2U10DA013720-11	22,972
Translational Research Training on Addiction for Racial/ Ethnic Minorities	93.279	RFCUNY 41848-A	1R25DA035161-01	21,901
Classification of Substance Use Severity and Treatment Outcomes: NIDA CTN Studies	93.279	DUKEU 203-0608	4 R33 DA027503-02	21,432
Structure and Function of Neurotransmitter Transporters	93.279	CUMC 12070954-01	5P01DA012408-13	19,598
Monitoring the Future: Drug Use and Lifestyles of American Youth	93.279	UMICHG 3002376099	2R01DA001411	18,877
Heart to HAART: Smartphone Intervention to Improve HAART Adherence For Drug Users	93.279	UMARY SR00002274	1R34DA032411-01	9,342
Florida Node Alliance of the Drug Abuse Clinic Trials Network - Infrastructure	93.279	UMIAMI CU12-3426	2U10DA013720-11	4,153
Structure and Function of Neurotransmitter Transporters	93.279	CUMC 12070954-01	5P01DA012408-13	2,421
Community Vulnerability and Responses to Drug-User-Related HIV/AIDS	93.279	NDRI 081	R01 DA01336	167
STRUCTURE AND FUNCTION OF NEUROTRANSMITTER TRANSPORTERS	93.279	CUMC 10111786-01	P01 DA012408-12	-31
Presynaptic Plasticity of Vesicular Dopamine Release	93.279	UCSF 555843-29279	2P01DA010154-16A1	-5,784
				\$1,820,833
Mental Health National Research Service Awards for Research Training				
Timing and Associative Learning	93.282	BARNARD CU09-2857	R01 MH068073-01A1	80,929
Timing and Associative Learning	93.282	BARNARD CU09-2857	R01 MH068073-01A1	80,109
Timing and Associative Learning	93.282	BARNARD CU09-2857	R01 MH068073-01A1	-81,146
				\$79,892
Discovery and Applied Research for Technological Innovations to Improve Human Health				
Tissue Engineering Resource Center	93.286	TUSM CU08-0194	5P41EB002520-04	460,210

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

				R&D Cluster, continued
Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Longitudinal Causal Inferencer for fMRI	93.286	JH 2001960596	R01EB016061	61,473
Image Guided In Vivo Tooling Platform for Minimal Access Surgery	93.286	VANDER 22094-S1	7 R21 EB007779-04	-43
				\$521,640
Minority Health and Health Disparities Research				
Northern Manhattan Initiative for Minority Involvement in Clinical Trials	93.307	MSSM 0255-4721-4609	7U24MD006961-02	26,365
The John Jay Institutional Development Program for Correctional Health and Health Care Research	93.307	JJCCJ 41773-A	P20 MD006118-01	-5,639
				\$20,726
Trans-NIH Research Support				
Dynamics Underlying Tissue Integrity	93.310	MSSM 0255-3751-4609	5R01DK087650-03	231,726
				\$231,726
National Center for Advancing Translational Sciences				
Preclinical Development of Novel MED1/2 Inhibitors to Treat Inherited Cardiomyopa	93.350	CPL CU14-0805	1R41TR001008-01A1	39,816
				\$39,816
Nursing Research				
Home ECG Monitoring to Detect Allograft Rejection Following Heart Transplantation	93.361	UCSF 6572sc	1 R01 NR012003-01	170,561
Understanding Delayed Access to HIV Prevention Services among Black MSM	93.361	UPITT 0029591 (123132-3)	1R01NR013865-01A1	34,352
Structural-Based CD4/GP120 Antagonism	93.361	DREXEL 232522	5P01GM056550-16S1	5,843
Structural-Based CD4/GP120 Antagonism	93.361	DREXEL 232522	5P01GM056550-16S1	4,829
Strategies to Help Adolescents with a Parent in Hospice	93.361	KENT 443168-CU	5 R21 NR012700-02	570
				\$216,155
National Center for Research Resources				
Optical Fluorescence and X-Ray Computed Tomography Scanner for Small Animal In-Vivo Imaging	93.389	BIOSCAN CU11-0090	1 R44 RR030701-01	15,555
Creating an Investigator Toolkit to Build a Dental CTSA Nexus	93.389	UNC-CH#5-31606	3 UL 1RR025747-04S3	-290
				\$15,265
Cancer Cause and Prevention Research				
Breast Cancer Family Registry Cohort - NY Cohort	93.393	CPIC	UM1CA164920	264,217
Breast Cancer Family Registry Cohort - NY Cohort	93.393	CPIC	UM1CA164920	172,209
Breast Cancer Family Registry Cohort - NY Cohort	93.393	CPIC	UM1CA164920	155,426
Mechanisms of DNA Motor Proteins in Genome Maintenance	93.393	NYUMC 09-0093	5 R01 CA146940-03	141,357
Breast Cancer Family Registry Cohort - NY Cohort	93.393	CPIC	UM1CA164920	74,872
Chemoprevention of Arsenic-Induced Skin Cancer	93.393	UCHICA 44706-E	R01 CA107431	35,649
Insulin Resistance and Breast Cancer Prognosis in Black & White Women	93.393	MSSM 0255-4841-4609	R01CA171558	32,249
Epidemiologic study of Hepatocellular Carcinoma in the US	93.393	HAWAII KA0090	5R01CA138698-04	29,628
CRN4: Cancer Research Resources & Collaboration in Integrated Health Care Systems	93.393	KFDNI 115-9341-CU-01	1U24CA171524-01	24,272
MicroRNA and Breast Cancer: Functional Characterization in a Population-Based Study	93.393	MSSM 0255-6601-4609	1R01CA172460-01A1	23,283
CRN4: Cancer Research Resources & Collaboration in Integrated Health Care Systems	93.393	KFDNI 115-9341-CU-01	1U24CA171524-01	8,881

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Validation and extension of the PREMM model for mismatch repair genes	93.393	DFCI 1150005	5R01CA132829-05	3,816
				\$965,859
Cancer Detection and Diagnosis Research				
Lung Adenocarcinoma Invasion Genomics	93.394	MSSM 0255-5901-4609	5R01CA163772-02	108,656
Role of Immunity in Efficacy of Chemotherapy Plus Trastuzumab	93.394	MAOJF 62990868	5R01CA152045-04	98,460
Nanotrap Technology for One Step Preservation and Amplification of Cancer Biomarkers	93.394	GMU E2028561	1R33CA173359-01	76,494
Role of Immunity in Efficacy of Chemotherapy Plus Trastuzumab	93.394	MAOJF 62990868	5R01CA152045-04	31,024
Lung Adenocarcinoma Invasion Genomics	93.394	MSSM 0255-5901-4609	5R01CA163772-02	19,669
Genome-wide Identification of DNA Methylation Biomarkers in AML	93.394	CUMC 12010029-1	1R01CA159175-01A1	16,464
Genome-wide Identification of DNA Methylation Biomarkers in AML	93.394	CUMC 12010029-1	1R01CA159175-01A1	12,664
MicroRNAs and Early Prostate Cancer Detection	93.394	FIMR 500626COL	1R21CA178864-01	12,347
Quantitative Oncologic PET-MR	93.394	MGH 220509	1R01CA165221-01A1	6,650
Validation of screening Biomarkers for Early Detection of Colorectal Neoplasia	93.394	UMIG CU11-2632	2 U01 CA86400-11	1,009
Role of Immunity in Efficacy of Chemotherapy Plus Trastuzumab	93.394	MAOJF 62990868	5R01CA152045-04	32
				\$383,469
Cancer Treatment Research				
SWOG Treatment Grant	93.395	ORHSUN 1004031	7U10CA032102-35	24,915
Facilitating Parent Adaptation to Pediatrics Transplant: the P-SCIP Trial	93.395	UMDNJ 1454	7R01CA127488-04	21,530
SWOG Treatment Grant	93.395	ORHSUN 1004031	7U10CA032102-35	20,926
AMERICAN COLLEGE OF SURGEONS ONCOLOGY GROUP (ACOSOG) U10 CA7 6001	93.395	CDUKE ACOSOG 458-01	U10 CA76001	18,789
Understanding Optimism in Clinical Research	93.395	ORHSUN 1002304 columbiaU	1R01CA166556-01A1	18,675
Radiation Therapy Oncology Group (RTOG)	93.395	RTOG CU09-4498	U10 CA021661	18,001
Children's Oncology Group-Cruz-Arrieta-Chair's Grant	93.395	CHILDREN 960244 - RSUB	5U10CA098543-10	14,185
A Pilot Study of Decitabine and Vorinostat with Chemotherapy for Relapsed ALL	93.395	TACL T2009-003	1R21CA161688-01	12,001
Radiation Therapy Oncology Group (RTOG)	93.395	RTOG CU09-4498	U10 CA021661	10,400
Lifestyle and Molecular Factor of Bone Health in Breast Cancer Survivors	93.395	KFDNI 115-9991-01	1R01CA166701-01A1	6,404
Children's Oncology Group CCOP	93.395	NCCF 97452-1030	U01 CA097452-06	4,000
COG Master for Non-Industry Studies	93.395	CHOP 13-0834	U10CA098543	1,600
COG Master for Non-Industry Studies	93.395	CHOP 13-0834	U10CA098543	1,500
Radiation Therapy Oncology Group (RTOG)	93.395	RTOG CU09-4498	U10 CA021661	1,169
Therapeutic Index of Acute Lymphoblastic Leukemia	93.395	DCFI 1123313	5 P01 CA068484-13	401
Radiation Therapy Oncology Group (RTOG)	93.395	RTOG CU09-4498	U10 CA021661	204
southwest oncology group operations office grant	93.395	SWOG CU09-3420	U10CA32102	-122
				\$174,578
Cancer Biology Research				
p53 Regulators and Effectors Project 2 Anti-repression mechanisms in p53-mediated stress responses	93.396	MSSM 0254-3111-4609	2 P01 CA080058-11	277,058

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Cadherin-11 in cancer and rheumatoid Arthritis: Common target, common therapies	93.396	GU RX 4424-007-CU	1R01CA170653-01	114,426
GI Tract Dysbiosis and Breast Cancer	93.396	MIT 5710003510	1U01CA164337-01	109,066
Inflammation and the Esophageal Tumor Microenvironment	93.396	UPENN 562190	5U01CA143056-04	89,020
GI Tract Dysbiosis and Breast Cancer	93.396	MIT 5710003510	1U01CA164337-01	59,423
Inflammation and the Esophageal Tumor Microenvironment	93.396	UPENN 562190	5U01CA143056-04	45,283
p53 Regulators and Effectors Project 2 Anti-repression mechanisms in p53-mediated stress responses	93.396	MSSM 0254-3111-4609	2 P01 CA080058-11	192
p53 Regulators and Effectors Project 2 Anti-repression mechanisms in p53-mediated stress responses	93.396	MSSM 0254-3111-4609	2 P01 CA080058-11	-5,018
PHASE 1B DOSE ESCALATION STUDY OF POLYPHENON E IN WOMEN WITH A HISTORY OF HORMONE RECEPTOR-NEGATIVE BREAST CANCER	93.396	UTMDA #30616/9802567	N01 CN 035159-07	-9,057
Inflammation and the Esophageal Tumor Microenvironment	93.396	UPENN 562190	5U01CA143056-04	-29,458
				\$650,935

Cancer Centers Support Grants

SARC Sarcoma SPORE	93.397	SARC CU11-3160	1U54CA168512-01	16,549
SARC Sarcoma SPORE	93.397	SARC CU11-3160	1U54CA168512-01	16,056
Dana-Farber/Harvard Cancer Center SPORE in Lung Cancer	93.397	DFCI 1082107	5 P50 CA090578-09	-3,669
				\$28,936

Cancer Control

Childrens Oncology Group-Ladas-Chair	93.399	CHOP 960494-RSUB	U10CA095861	5,400
SELENIUM AND VITAMIN E CANCER PREVENTION TRIAL (SELECT) IRB 13553, S000	93.399	CUTHSCSA CU01-2766	5 U01 CA37429	296
				\$5,696

Trans-NIH Recovery Act Research Support

ARRA - CJHPKN #2000878472	93.701	CJHPKN #2000878472	1 RC2 CA148346-01	80,219
ARRA - BRPI CU11-1189	93.701	BRPI CU11-1189	1 RC3 MH090833	34,226
Children s Oncology Group-Kelly- Chair s Grant	93.701	CHILDREN 960738 RSUB	U10CA098543	28,673
ARRA - UMIAMI 66713N	93.701	UMIAMI 66713N	RC7DA028973	25,766
ARRA - UMICHG 3001747410	93.701	UMICHG 3001747410	RC4AG039029	17,268
ARRA - HARVARD 23600-114881	93.701	HARVARD 23600-114881	1 RC4 MH092707-01	7,060
ARRA - WU-11-121	93.701	WU-11-121	3 U01 AI077810-02S1	247
ARRA - BU GC208195NGC	93.701	BU GC208195NGC	5 RC2 GM092602-02	-101
ARRA - MCLEANH CU09-4155	93.701	MCLEANH CU09-4155	1 RC2 NS070276-01	-274
ARRA - DUMC 165034	93.701	DUMC 165034	5 RC2 NS070344-01	-492
ARRA - MMC CU09-2394	93.701	MMC CU09-2394	5 R01 NS043209-07S1	-659
ARRA - TULANE TUL-HSC-281-1	93.701	TULANE TUL-HSC-281-1	5 U01 AI082053-02	-699
ARRA - UMIAMI 66713N	93.701	UMIAMI 66713N	RC7DA028973	-6,284
				\$184,950

Cardiovascular Diseases Research

Antibody tolerance by mixed chimerism induction	93.837	MGH 213753	5 P01 HL018646	557,409
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The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
EHD Proteins in Cardiac Membrane Protein Targeting and Remodeling	93.837	OSU 60038336	1R01HL114383-01A1	216,381
Purkinje cells and arrhythmia mechanisms	93.837	NYU 10-02465	5 R01 HL105983-02	156,797
Novel Ion Channel Approaches to Reentrant Arrhythmias	93.837	SUNYRF 61199	7 R01 HL094410-04	150,575
Pediatric Heart Network	93.837	NERI CU11-2689	U10 HL068270	133,039
Stress, gene-environment interaction, and cardiovascular disease MESA Stress II Center	93.837	UMICHG 3001616969	R01HL101161-01	129,133
EFFECTS OF EXERCISING ON CELL AGING	93.837	UCSF 6745sc	01 R01 HL108821-01	89,737
Steering Committee Chair for the Pediatric Cardiac Genomics Consortium (PCGC)	93.837	NERI CU11-1621	U01 HL098188	78,113
Sorafenib for Hepatopulmonary Syndrome	93.837	UPENN 562019	1UM1HL116886-01A1	73,879
Confirmation Core the Congenital Heart Disease Genetic Network Study (CHD GENES) for the Pediatric Cardiac Genomics Consortium (PCGC)	93.837	NERI CU12-2238	U01-HL098188	71,450
THE METABOLIC IMPACT OF CONGENITAL HETEROZYGOUS APOC-III DEFICIENCY IN HUMANS	93.837	UMARY SR00001540	1 R01 HL104193-01A1	58,156
Incorporation of a Hypertension Working Group into the Jackson Heart Study	93.837	UAB 000436171-001	1R01HL117323-01	47,384
Cognitive Benefits of Cardiac Rehabilitation	93.837	KENT 443159-CU	5 R01 HL089311-04	43,114
RAGE and Mechanisms of Vascular Dysfunction	93.837	NYUMC 11-00103	5P01HL060901-12	40,240
ASSOCIATION OF SLEEP DISORDER WITH CARDIOVASCULAR HEALTH ACROSS ETHNIC GROUPS	93.837	BWH 105963	1 R01 HL098433-01	37,966
STRESS, GENE-ENVIRONMENT INTERACTION, AND CARDIOVASCULAR DISEASE	93.837	UMICHG 3001509884	R01 HL101161-01	31,103
Disease Mechanisms in ARVC	93.837	BIDMC CU09-2370	5 R01 HL102361-02	25,233
A Highly Sensitive and Targeted Non-Invasive test for the Surveillance of Rejection in Cardiac Transplant Recipients	93.837	MCW 1	1R01HL119747-01	22,422
Pediatric Heart Network	93.837	NERI CU11-2689	U10 HL068270	17,174
RAGE: Macrophages & HDL Metabolism	93.837	G#12A0-00-000046/Proj. 102518	1R01HL118565-01	16,979
Ventricular Volume Variability Study of the Pediatric Heart Network (PHN)	93.837	NERI CU01-2830	U01 HL68270	13,543
Non-Contrast Enhanced Peripheral MR Angiography	93.837	NYUMC 11-02576	7R01HL092439-05	11,936
MESA Epigenetics Ancillary Study- Subcontract	93.837	WFUHS 14060	1 R01 HL101250	11,052
Project EAT-III: Eating Among Teens and Young Adults	93.837	UMINN P663658701	5 R01 HL084064-05	8,771
Ventricular Volume Variability Study of the Pediatric Heart Network (PHN)	93.837	NERI CU01-2830	U01 HL68270	8,014
Arterial Elasticity, Subclinical, and clinical CVD in MESA	93.837	UMINN P001435601	5 R01 HL098382-02	7,209
LVAD THERAPY: EXPLORING THE EFFECT OF INTRAMYOCARDIAL INJECTION OF MESENCHYMAL PRECURSOR CELLS ON MY	93.837	MSSM CU12-0997	5 U01 HL088942-05	6,990
Surgical Ablation vs. No Surgical Ablation for Patients with Persistent or Longstanding Persistent Atrial Fibrillation Undergoing Mitral Valve Surgery	93.837	MSSM 0255-3106-4605	5U01HL088942-05	5,618
Cardiovascular Inflammation Reduction Trial	93.837	BWH CU13-3251	5U01HL101422	5,590
Cardiac Biomarkers in Pediatric Cardiomyopathy	93.837	UMIAMI 661551	5R01HL109090-02	5,573
Cardiac Biomarkers in Pediatric Cardiomyopathy	93.837	UMIAMI 661551	5R01HL109090-02	5,211
Post-STOP, Prevention of Stroke after STOP	93.837	MUSC CU13-0316	5R01HL096789-04	4,019
Genotype-Phenotype Associations in Pediatric Cardiomyopathy FED	93.837	UMIAMI 660811/660204	1R01HL111469-01	3,473
OHS CORE COLUMBIA 2002 01	93.837	PHS CU12-3621	1R01AG034151	3,428
Disease Mechanisms in ARVC	93.837	BIDMC CU09-2370	5 R01 HL102361-02	2,866
Phosphodiesterase Type 5 Inhibition with Tadalafil changes outcomes in Heart Failure	93.837	NERI CU13-3303	U01HL105463	1,800
Cardiovascular Inflammation Reduction Trial (CIRT)	93.837	BWH CU13-3564	5U01HL101422	1,652

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Ventricular Volume Variability Study of the Pediatric Heart Network (PHN)	93.837	NERI CU01-2830	U01 HL68270	1,587
Heartsbreath Test for Heart Transplant Rejection	93.837	UMENSS CU12-1975	2R44HL059715-04A1	1,460
Surgical Ablation vs. No Surgical Ablation for Patients with Persistent or Longstanding Persistent Atrial Fibrillation Undergoing Mitral Valve Surgery	93.837	MSSM 0255-3106-4605	5U01HL088942-05	1,266
Steering Committee Chair for the Pediatric Cardiac Genomics Consortium (PCGC)	93.837	NERI CU11-1621	U01 HL098188	1,100
Confirmation Core the Congenital Heart Disease Genetic Network Study (CHD GENES) for the Pediatric Cardiac Genomics Consortium (PCGC)	93.837	NERI CU12-2238	U01-HL098188	940
Disease Mechanisms in ARVC	93.837	BIDMC CU09-2370	5 R01 HL102361-02	689
FREEDOM TRIAL: Future Revascularization Evaluation in Patients with Diabetes Mellitus: Optional Management of Multivessel Disease	93.837	MSSM CU01-2880	1 R01 HL071988-01A1	354
TRIAL OF BETA BLOCKER THERAPY(ATENOL) VS ANGIOTENIN II RECEPTOR BLOCKER THERAPY(LOSARTAN) IN INDIVIDUAL WITH MARFAN	93.837	NERI CU01-2786	5 U01 HL68270	128
Purkinje cells and arrhythmia mechanisms	93.837	NYU 10-02465	5 R01 HL105983-02	-2,428
SC Chair - Congenital Heart Disease Genetic Network Study (CHD GENES)	93.837	PRGF CU12-2228	U01HL098188	-2,678
RCT of Controlled Breathing Effects on Ambulatory BP Resperate	93.837	RWJMS CU01-2796	1 R01 HL083056-01A2	-3,920
NON-CONTRAST-ENHANCED PERIPHERAL MR ANGIOGRAPHY	93.837	NYUMC SPA#07-0929	1 R01 HL092439-01	-13,276
Hispanic Community Health Study- Coordinating Center	93.837	UNC-CH N01-HC-65233	HHSN268200625233C	-57,342
				\$2,030,909

Lung Diseases Research

Kit Inhibition in Asthma (KIA)	93.838	BWH CU11-4149	5U01HL102225-02	402,479
Phase II Study of Inhaled Carbon Monoxide for the Treatment of IPF	93.838	BWH 106476	1U01HL105371-01	188,259
Genetic Epidemiology of Chronic Obstructive Pulmonary Disease	93.838	NJMRCSS 24021506	2R01HL089897-06A1	118,755
Hormonal, Metabolic and Signaling Interactions in PAH	93.838	VUMC 40614	1P01HL108880-01A1	99,476
Foxp3+ Treg Cells and Primary Graft Dysfunction in Clinical Lung Transplant Recipients	93.838	CHILDREN 320960	1 R01 HL114468-01	79,988
Design and Testing of Practical Tools to ID Individuals at High Risk for COPD	93.838	UMICHG 3002346938	1R01HL114055-01	70,523
HALF-PINT Heart and Lung Failure - Pediatric INsulin Titration Trial	93.838	CHB 74159	1 U01 HL107681-01	57,443
Secondhand smoke and asthma: Mechanistic outcomes of DNA methylation in T cells	93.838	SU 60519233-107979	1R01HL118612-01	36,114
Non-invasive measurement of pulmonary ventilation and perfusion using Electrical Impedance Tomography (EIT)	93.838	GENELE 400096285	R01 HL109854-01	30,607
Phase II Study of Inhaled Carbon Monoxide for the Treatment of IPF	93.838	BWH 106476	1U01HL105371-01	6,996
Hormonal, Metabolic and Signaling Interactions in PAH	93.838	VUMC 40614	1P01HL108880-01A1	-648
Kit Inhibition in Asthma (KIA)	93.838	BWH CU11-4149	5U01HL102225-02	-102,378
				\$987,614

Blood Diseases and Resources Research

Multiscale Model of Platelet Adhesion and Thrombus Formation	93.839	CU 58266-9225	R01 HL097971	289,890
FGF23 and the Risk of Stroke and Cognitive Decline	93.839	UMIAMI 66917H	1 R01HL108623-01A1	107,919
FGF-23 and Phosphorus in stroke, subclinical vascular damage, and cognition	93.839	UMIAMI CU11-1180	R01HL108623	66,875
TCD With Transfusions Changing to Hydroxyurea (TWITCH)	93.839	CCHMC 132981	7R01HL095647-05	42,735
Red Cell Storage Duration Study (RECESS)	93.839	NERI 5580	U01HL072268	15,590
				\$523,009

Arthritis, Musculoskeletal and Skin Diseases Research

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Electrotherapeutic Strategies for Connective	93.846	TUFTS HS1988	1R01AR061988	196,896
Electrotherapeutic Strategies for Connective	93.846	TUFTS HS1988	1R01AR061988	134,737
Treat To Target to Reduce Atherosclerosis in Rheumatoid Arthritis	93.846	BWH 109100	5U34AR063911-02	97,623
Syk Blockade in Bullous Skin Diseases	93.846	Portola Syk (318)	1R43AR063129-01	75,219
Electrotherapeutic Strategies for Connective	93.846	TUFTS HS1988	1R01AR061988	21,852
				\$526,327

Diabetes, Digestive, and Kidney Diseases Extramural Research

Glycemic Reduction Approaches in Diabetes (GRADE) Study	93.847	GWU SGRD1213-EA7	5U01DK098246-02	506,759
Treatment Options for Type 2 Diabetes in Adolescents and Youth (Today) Trial	93.847	GWU 23438-9-CCLS20573F	U01DK061230	417,129
Genetic control of pancreatic endocrine cell development	93.847	VUMC 37460	1 U01 DK089523-01	238,477
NYORC Molecular Genetics/Molecular Biology Core	93.847	SLRHC CU10-2119	5 P30DK26687-32	187,757
Diabetes-mediated Effects on Myeloid Precursors and Vascular Complications	93.847	NYUSOM 11-02463	1 R01 DK095684-01	177,287
Subcontract to InfoSciTex Corp: Wearable Artificial Kidney STTR Phase 2	93.847	Vivonics 1483-S001	2R42DK072646-02A1	137,586
NYORC Adipose Tissue Core	93.847	SLRHC CU10-2118	5P30DK26687-32	134,802
Ion Chelators Predicated on Desferriethiocin	93.847	UF 10086	4 R37 DK049108-16	115,847
The New York CKD Biomarker Discovery Program	93.847	MSSM 0255-3795-4609	5U01DK085688-05	89,496
Glycemic Reduction Approaches in Diabetes (GRADE) Study	93.847	GWU SGRD1213-EA7	5U01DK098246-02	85,939
Pathogenesis of HIV Associated Nephropathy	93.847	BCMH 5600650039	5P01DK056492-14	79,498
Treatment Options for Type 2 Diabetes in Adolescents and Youth (Today) Trial	93.847	GWU 23438-9-CCLS20573F	U01DK061230	63,080
Glycemic Reduction Approaches for Diabetes: A Comparative Effective Study	93.847	GWU S-GRD1314-EA41	1U01DK098246-01	54,327
A2ALL-Patient Safety System Improvements in Living Donor Liver Transplant	93.847	NWU 60029589CUNY	5R01DK090129-03	47,878
Glycemic Reduction Approaches for Diabetes: A Comparative Effective Study	93.847	GWU S-GRD1314-EA41	1U01DK098246-01	42,197
Hepto/Renal Fibrocystic Diseases Core Center (UAB HRFDCC)	93.847	UAB 000439208-004	5P30DK074038-09	39,971
New York Nutrition Obesity Research Center	93.847	SLRIHS CU12-1576	5 P30 DK026687-32	38,695
Look AHEAD Action for Health Diabetes	93.847	SLRIHS CU13-2587	3U01DK057178-15S1	32,959
Diabetes Prevention Program Outcomes Study - Phase 2	93.847	SLRIHC CU09-1697	5 U01 DK048404-21	32,939
REGENERATION, REPAIR AND REMODELING OF THE LOWER URINARY TRACT	93.847	WFUHS 112114	P20DK097806-02S1	25,161
A Novel Human Peptide that Reduces Adipocyte Uptake of Long Chain Fatty Acids	93.847	SLRIHS CU12-1406	5 P30 DK026687-32	24,360
The Pathogenesis of HIV-Associated Nephropathy -Project 3	93.847	BCMH CU11-1063	7 P01 DK056492-12	22,259
Lifestyle Intervention in Overweight and Obese Pregnant Women	93.847	SLRIHS CU12-1575	1 U01 DK094463-01	19,644
NYORC Molecular Genetics/Molecular Biology Core	93.847	SLRHC CU10-2119	5 P30DK26687-32	16,505
Treatment Options for Type 2 Diabetes in Adolescents and Youth (Today) Trial	93.847	GWU 23438-9-CCLS20573F	U01DK061230	11,069
Lifestyle Intervention in Overweight and Obese Pregnant Women	93.847	SLRIHS CU12-1575	1 U01 DK094463-01	8,360
Molecular Mechanisms of Kidney Disease in Diabetes and Obesity	93.847	UCOL FY14.266.002	3U24DK076169-08S4	5,230
Glucose Regulation of Hypertriglycedemia	93.847	GRU 25034-37	5U24DK076169-08	5,044
Genetic control of pancreatic endocrine cell development	93.847	VUMC 37460	1 U01 DK089523-01	3,456

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Novel Therapies for Resistant FSGS	93.847	NYU 12-00881	5 R33 DK070341-05	3,185
DiaCompSummer Student Funding Program	93.847	GRU 25732-33	3U24DK076169-08S4	2,000
THE NEPHROTIC SYNDROME STUDY NETWORK	93.847	MICHG 3001819806	U54 DK083912	1,853
The Protect Study	93.847	CCMC 12-179296-30	1U01DK095745	1,494
Body Composition and the Metabolic Syndrome in Cushing's Disease	93.847	MSSM 0254-1051-4609	5 K23 DK082617-03	1,087
Functional Analysis of TM4SF4 During Embryogenesis	93.847	VUMC 36021	U01 DK074273	-1
Immune Deregulation and Chronic Humoral Rejection of Kidney Allografts in Humans	93.847	MGH 216032	5 R01 DK083352-02	-61
NYORC Adipose Tissue Core	93.847	SLRHC CU10-2118	5P30DK26687-32	-168
Cognition in the Diabetes Prevention Program	93.847	SLRIHC CU09-1697	5U01 DK048404-10	-302
Diabetes Prevention Program Outcomes Study - Phase 2	93.847	SLRIHC CU09-1697	5 U01 DK048404-21	-421
Genetic control of pancreatic endocrine cell development	93.847	VUMC 37460	1 U01 DK089523-01	-2,565
Diabetes-mediated Effects on Myeloid Precursors and Vascular Complications	93.847	NYUSOM 11-02463	1 R01 DK095684-01	-8,331
				\$2,661,481

Extramural Research Programs in the Neurosciences and Neurological Disorders

Stroke Incidence and Risk Factors in a Tri-Ethnic Region	93.853	UMIAM 660813	R37NS029993-20	871,795
Stroke Incidence and Risk Factors in a Tri-Ethnic Region	93.853	UMIAM 660813	R37NS029993-20	244,891
Center for Stroke Disaparties Solution, Project III	93.853	NYU 12-02247 101974 Project II	1U54NS081765-01	229,871
Center for Stroke Disaparties Solution, Core A&B	93.853	NYU 12-02247 101975 Core A&B	1U54NS081765-01	167,956
Generation and Characterization of Amyotrophic Lateral Sclerosis iPS Cells	93.853	JH 2001591778	5U24NS078736-02	164,742
CONSEQUENCES OF PROLONGED FEBRILE SEIZURES IN CHILDHOOD	93.853	AECM 310597	2R37NS043209-11	160,320
Molecular Motors and Glioma Dispersion	93.853	CCLC 311-SUB	R01NS073610-01A1	120,143
Impact of Initial Therapy and Response in Long-Term Outcome in Children with CAE	93.853	CHMCO 107759	5U01NS045911-08	112,635
Vascular Effects of Infection in Pediatric Stroke	93.853	UCSF 5776sc	R01NS062820	102,887
Minorities with ICH	93.853	UCINCM CU09-2753	5U01NS069763-03	99,805
Transitioning Early Career Neurosurgeons to Scientific Independence-Cognitive Control in the human Prefrontal Cortex	93.853	MGH 220901	5K12NS080223-02	95,975
Anti-hypertensive Treatment of Acute Cerebral Hemorrhage ATACH II	93.853	UMINN N000936904	U01 NS062091-01A2	94,515
Neurological Emergencies Treatment Trials (NETT)-SHINE	93.853	UMICHG 3002925824-SHN	5U01NS069498-03	93,117
Long-term Outcomes of Childhood Onset Epilepsy	93.853	CMH 901460	4R37NS031146-19	84,762
Project 2 EPI4K: Gene discovery in 4000 epilepsy genomes	93.853	UNIVMEL CU11-1212	1 U01 NS077367-01	67,688
Impact of Initial Therapy and Response in Long-Term Outcome in Children with CAE	93.853	CHMCO 107759	5U01NS045911-08	63,576
Center for Stroke Disaparties Solution, Core A&B	93.853	NYU 12-02247 101975 Core A&B	1U54NS081765-01	53,115
Molecular mechanisms of IDH1-mediated gliomagenesis	93.853	MSKCC CU12-0771	1R01NS080944-01	49,408
Transitioning Early Career Neurosurgeons to Scientific Independence-Cognitive Control in the human Prefrontal Cortex	93.853	MGH 220901	5K12NS080223-02	45,634
Center for Stroke Disaparties Solution, Project III	93.853	NYU 12-02247 101974 Project II	1U54NS081765-01	45,289
Minorities with ICH	93.853	UCINCM CU09-2753	5U01NS069763-03	42,424
Defects of Mitochondrial Dynamics in ALS	93.853	CUMC 13050614	5 R01 NS062055-03	42,409

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Consolidation of Motor Skills and Sleep Homeostasis in Parkinson s Disease	93.853	RFCUNY 41589-00-02 B	1 R01 NS054864-01A	41,857
NETT: ALIAS-2	93.853	PH CU01-2870	U10 NS05906201	41,554
Neurological Emergencies Treatment Trials (NETT)-Point	93.853	UMICHG 3002925634-PNT	5U01NS062835-04	40,734
Maternal Outcomes and Neurodevelopmental Effects of Antiepileptic Drugs	93.853	EMORYU S917796	2U01NS038455-11A1	40,064
The Epilepsy Phenome/Genome Project (EPGP)	93.853	UCSF 4799sc	5U01NS053998-05	38,880
The Intravascular Cooling in the Treatment of Stroke 2/3 (ICTus 2/3) Trial	93.853	UCSD SP000144	P50 NS044148	36,658
EPI4K - Phenotyping and Clinical Informatics Core	93.853	UCSF 6867SC	5U01NS077276-03	36,462
Predictive Genes, Mechanisms and Clinical Biomarkers of Sudep	93.853	BCM 101822272	5P20NS076916-02	35,292
Project 2 EPI4K: Gene discovery in 4000 epilepsy genomes	93.853	UNIVMEL CU11-1212	1 U01 NS077367-01	34,454
CREST-2 Clinical Coordinating Center	93.853	MAOJF 63522921	1U01NS080168-01A1	28,955
An Information Fusion Approach to Longitudinal Health Records	93.853	OSU 60035751	1R01LM011116-01A1	23,914
Mechanisms of Genetic Seizure Susceptibility in Juvenile Myoclonic Epilepsy	93.853	RINCH 928612	7R01NS061829-04	22,579
Coenzyme Q10 in Huntington s Disease	93.853	MGH CU13-1030	2U01NS052592-06	22,497
EPI4K - Phenotyping and Clinical Informatics Core	93.853	UCSF 6867SC	5U01NS077276-03	21,951
Maternal Outcomes and Neurodevelopmental Effects of Antiepileptic Drugs	93.853	EMORYU S917796	2U01NS038455-11A1	21,119
A versatile system for cell-specific gene expression control in the fly brain	93.853	SU 60545612-111633	1R24NS086564	19,330
The trajectory of functional status and quality of life before and after stroke	93.853	MSSM 0253-9491-4609	1K23NS079422-01A1	18,356
Spinal Muscular Atrophy (SMA) Biomarkers in the Immediate Postnatal Period of Development NN101	93.853	NEURONEXT NN101	1U10NS077423-01	16,175
Vascular Effects of Infection in Pediatric Stroke	93.853	UCSF 5776sc	R01NS062820	14,783
Modifiable risk factors in stroke incidence and mortality among women	93.853	BRICHCC CU11-0393	5R21NS075608-02	14,692
NIH Stroke Net National Coordinating Center - Administrative Collaborating Agreement	93.853	UCIN 008822	1U01NS086872-01	14,163
The Vertebrobasilar Flow Evaluation and Risk of Transient Ischemic Attack & Stroke (VERITAS) Study	93.853	UIL 2007-06602	R01 NS059745	13,909
Predictive Genes, Mechanisms and Clinical Biomarkers of Sudep	93.853	BCM 101822272	5P20NS076916-02	11,944
Minorities with ICH	93.853	UCINCM CU09-2753	5U01NS069763-03	11,175
Molecular mechanisms of IDH1-mediated gliomagenesis	93.853	MSKCC CU12-0771	1R01NS080944-01	9,520
Neurological Emergencies Treatment Trial	93.853	NYPH CU08-8065	5 U10 NS059062-05	9,446
The trajectory of functional status and quality of life before and after stroke	93.853	MSSM 0253-9491-4609	1K23NS079422-01A1	7,978
Vascular Effects of Infection in Pediatric Stroke	93.853	UCSF 5776sc	R01NS062820	6,619
Minorities with ICH	93.853	UCINCM CU09-2753	5U01NS069763-03	5,645
Spinal Muscular Atrophy (SMA) Biomarkers in the Immediate Postnatal Period of Development NN101	93.853	NEURONEXT NN101	1U10NS077423-01	5,626
Vascular Effects of Infection in Pediatric Stroke	93.853	UCSF 5776sc	R01NS062820	4,508
Clot Lysis: Evaluating Accelerated Resolution of Intraventricular Hemorrhage, Phase III	93.853	JHU 2000743955	U01 NS062851-01A1	4,315
Neurological Emergencies Treatment Trials (NETT)-RAMPART	93.853	UMICHG 3002932631-RPT	5U01NS056975-08	3,300
Maternal Outcomes and Neurodevelopmental Effects of Antiepileptic Drugs	93.853	EMORYU S917796	2U01NS038455-11A1	2,786
Neurobiological Predictors of Huntington s Disease	93.853	UIO CU08-4421	2 R01 NS40068-08	2,114
Thrombolysis in Pediatric Stroke Study (TIPS)	93.853	SCRI 10780SUB	R01NS065818	2,000

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
NETT: ALIAS-2	93.853	PH CU01-2870	U10 NS05906201	919
Using Cell-Penetrant Peptides to Target ATF5 in Mouse Glioma Models	93.853	UCD 201303503-01	1R01NS083795-01A1	653
Generation and Characterization of Amyotrophic Lateral Sclerosis iPS Cells	93.853	JH 2001591778	5U24NS078736-02	541
Carotid Revascularization Endarterectomy vs. Stent Trial	93.853	UMDNJ CU11-3191	1 R01 NS038384 01	417
Impact of Initial Therapy and Response in Long-Term Outcome in Children with CAE	93.853	CHMCO 107759	5U01NS045911-08	376
Secondary Prevention of Small Subcortical Stokes	93.853	UBC F09-04884	U01 NS038529	-50
Phenotypic Spectrum of LRRK2 Mutations	93.853	BIMC CU12-1837	5K02NS073836-02	-53
Clinical Trial of Ceftriaxone in Subjects with Amyotrophic Lateral Sclerosis	93.853	MGH CU09-3945	5U01NS049640-05	-357
The Epilepsy Phenome/Genome Project (EPGP)	93.853	UCSF 4799sc	5U01NS053998-05	-869
The Epilepsy Phenome/Genome Project (EPGP)	93.853	UCSF 4799sc	5U01NS053998-05	-908
Transcriptional determinants of motor neuron identity	93.853	MIT 5710002928 MOD 002	5P01NS055923-05	-1,769
Vascular Effects of Infection in Pediatric Stroke	93.853	UCSF 5776sc	R01NS062820	-2,114
Stroke Incidence and Risk Factors in a Tri-Ethnic Region	93.853	UMIAMI 660813	R37NS029993-20	-10,943
Alexander Disease: Cellular and Molecular Mechanisms	93.853	UWIS 362K040	5 P01 NS042803	-15,872
Consequences of Prolonged Febrile Seizures in Childhood	93.853	MMC CU08-4400	5 R01 NS043209-10	-25,914
Project 2 EPI4K: Gene discovery in 4000 epilepsy genomes	93.853	UNIVMEL CU11-1212	1 U01 NS077367-01	-34,545
				\$3,647,823

Allergy, Immunology and Transplantation Research

A Tolerance Approach to Xenotransplantation	93.855	MGH 218549	2 P01 AI045897-11A1	401,274
HIV Vaccine Trials Unit - HVTN 505	93.855	FHCRC 205648	5UM1AI068614	304,452
Core C: Small Animal Core, A Tolerance Approach to Xenotransplantation	93.855	MGH 218553	5 P01 AI045897-13	278,665
Miami Womens Interagency HIV Study (WIHS)	93.855	UMIAMI 662346	1U01AI103397-01	235,587
Shaping Antiviral Immunity by the inflammatory,Regulatory and Tissue Environment	93.855	UPENN 561096	5 U19 AI083022-05	190,183
Stem Cell-Based Therapies for Mitigation of Acute Radiation Syndromes	93.855	AECMYU 31525T	5U19AI091175-04	190,177
Defining the targets of broad intervention antimalarial agents	93.855	UCAL 42374631	1R01AI103058-01A1	187,721
Units for HIV/AIDS Clinical Trials Network	93.855	UKZN CU08-4879	5 U01 AI69469-06	180,642
Units for HIV/AIDS Clinical Trials Network	93.855	CAPRISA1 2002 024027 08	2UM1AI069469-08	165,748
Mouse Allergen and Asthma Intervention Trial	93.855	JH 2001003650	5 U01 AI083238-03	150,953
HVTN Scientific Leadership (Hammer)	93.855	FHCRC 0000791118	2UM1AI068614-08	122,431
New York (Columbia University) USA HIV Vaccine Trials Unit - P1F Funding	93.855	FHCRC 0000719043	UM1 AI068614	116,650
Attenuated Malaria Sporozoite Vaccine Using a P. falciparum Blood-stage Auxotroph	93.855	SANINC CU12-1489	1R43AI104129-01A1	112,644
Shaping Antiviral Immunity by the inflammatory,Regulatory and Tissue Environment	93.855	UPENN 561096	5 U19 AI083022-05	101,887
HVTN 505Core Leadership Role	93.855	FHCRC 0000751713	UM1 AI068614	96,610
Probing Mechanisms for Lung Homing of Memory CD4 T Cells by an shRNA Screening Approach	93.855	GHSU 23069-34	5U01AI083005-04	94,972
Structural and functional elucidation of the necrosome in innate immune signaling	93.855	CHMCB 0000491299	2R01AI045937-11	66,360
High resolution analyses of Env-directed B cells to accelerate vaccine design-P2	93.855	SCRIPPS 5-50674	1P01AI104722-01A1	64,371

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Alloantibodies in Cardiac Transplantation-Intervention, Outcomes, and Mechanisms	93.855	VUMC 40171	7U01AI077867-06	63,767
Health Promotion for Township MSM in South Africa	93.855	UCSF 557416-29863	5R01AI089292-03	61,137
Miami Womens Interagency HIV Study (WIHS)	93.855	UMIAMI 662346	1U01AI103397-01	60,958
Chronic Graft Destruction Interplay of Allo and Autoantibodies and Nonadherence	93.855	VUMC 40877	1U01A1104336-01	59,933
East Africa leDEA Regional Consortium	93.855	INDU IN-4685290-CU	U01AI069911	52,537
Immunosuppression Withdrawl for Stable Pediatric Liver T	93.855	UCSF 7230sc	U01AI00807	48,738
HVTN Scientific Leadership	93.855	FHCRC 0000745190	5 UM1 AI068614-07	48,143
Microbicides Trials Network	93.855	MWRI 9242	U01A1068633	44,200
Chronic Graft Destruction Interplay of Allo and Autoantibodies and Nonadherence	93.855	VUMC 40877	1U01A1104336-01	41,483
East Africa leDEA Regional Consortium	93.855	INDU IN-4685290-CU	U01AI069911	41,269
Microbicide Trials Network	93.855	MWRI 9252	5 U01 AI068633-06	41,135
Aging and Fracture Risk among HIV-Infected and HIV-Uninfected Men	93.855	JHU 2001578619	5R01AI093520-02	36,191
HIV/AIDS Prevention Trials Network (HPTN) Leadership Group	93.855	FHI 860/0080.0015	UM1AI068619	27,017
Zoster Vaccine and Risk Factors of Zoster and Post-Herpetic Neuralgia	93.855	KFDNI 5981-CU-01	5R01AI089930-02	25,253
International Maternal Pediatric Adolescent AIDS Clinical Trials Group (IMPAACT)	93.855	JH 2001656188	UM1A1068632-07	22,265
HVTN Protocol Funding	93.855	FHCRC CU14-1568	2UMAI068614-08	21,408
CCM NIH Non-BD Bat Project	93.855	WILDLIFE LIPKIN 004	R01 AI079231	15,966
Immunosuppression Withdrawl for Stable Pediatric Liver T	93.855	UCSF 7230sc	U01AI00807	15,003
The Impact of Mobility on HIV Care in New York and Dominican Republic	93.855	UTHSCSA 131739/13047	K23AI081538	10,270
Solid Organ Transplantation in HIV-Multi-Site Study	93.855	UCSF 3855SC	U01AI052748	6,173
The Impact of Mobility on HIV Care in New York and Dominican Republic	93.855	UTHSCSA 131739/13047	K23AI081538	4,885
HIV Prevention Trials Network Leadership Group	93.855	FHI 860	UM1 AI068619	2,894
Co-Chair ACTG Protocol A5280	93.855	BWH CU12-2870	7UM1AI068636-07	2,891
Environmental Control of the Immunological Synapse - Subcontract	93.855	NYUMC 09-0726	5 R01 AI055037-07	2,177
Mechanism of B Cell Responses in Autoimmune : C13-ALE05-COU	93.855	DUKE 2033000	5U19AI056363-10	1,800
AIDS Clinical Trials Group Protocol Funds	93.855	BWH CU14-1723	2UM1AI068636-08	1,632
IMMUNOSUPPRESSION WITHDRAWAL FOR PEDIATRIC LIVING-DONOR LIV ER TRANSPLANT RECIPIENTS	93.855	UCSF ITN10196-00SC	*NIAID N01-A1-15416	1,245
Lab on a chip point of care assay for the rapid serodiagnosis of lyme disease	93.855	BIOCORP CU11-0025	1 R43 AI09655-01	1,218
HVTN 505Core Leadership Role	93.855	FHCRC 0000751713	UM1 AI068614	208
East Africa leDEA Regional Consortium	93.855	INDU IN-4685290-CU	U01AI069911	192
Shaping Antiviral Immunity by the inflammatory,Regulatory and Tissue Environment	93.855	UPENN 561096	5 U19 AI083022-05	-1
MICROBICIDES TRIALS NETWORK	93.855	MWRI 26-3301-4271	5 U01 AI068633-03	-1
MICROBICIDES TRIALS NETWORK	93.855	MWRI 4323	5 U01 AI068633-04	-1
MICROBICIDES TRIALS NETWORK	93.855	MWRI 4355	5 U01 AI068633-04	-1
Solid Organ Transplantation in HIV-Multi-Site Study	93.855	UCSF 3855SC	U01AI052748	-68
Alantibodies in Cardiac Transplantation - Intervention, Outcomes and Mechanisms	93.855	UPITT 0013076	5 U01 AI077867-04	-168

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
New York (Columbia University) USA HIV Vaccine Trials Unit - PIF Funding	93.855	FHCRC 0000719043	UM1 AI068614	-1,290
Shaping Antiviral Immunity by the inflammatory,Regulatory and Tissue Environment	93.855	UPENN 561096	5 U19 AI083022-05	-3,428
HIV Vaccine Trials Unit - HVTN 505	93.855	FHCRC 205648	5UM1AI068614	-9,820
				\$3,808,537

Microbiology and Infectious Diseases Research

Genetically Attenuated Malaria Attenuated Whole Parasite Sporozoite Vaccine	93.856	SANINC CU10-3109	5 R44 AI069631-04	48,025
Gender, Power and Latino Mens HIV Risk	93.856	TEMPLE 360857-04-CU	7R01HD056948-04	35,342
LYOPHILIZATION OF P. FALCIPARUM TRANSGENIC FOR TREHALOSE SYN THESIS/TRANSPORT	93.856	SANINC CU10-3328	1 R43 AI091208-01	263
				\$83,630

Biomedical Research and Research Training

Structural Genomics of Eukaryotic Domain Families	93.859	RUTGER 5096	5U54GM074597-04	1,080,367
Structural Genomics of Eukaryotic Domain Families	93.859	RUTGER 5096	5U54GM074597-04	205,410
MIDAS Center for Communicable Disease Dynamics	93.859	HARVARD 114041.5046386	U54GM088558	180,978
NYSBC Structural Genomics of Membrane Proteins	93.859	NYSBC CU10-0056	U54GM095315	170,000
NYSBC Structural Genomics of Membrane Proteins	93.859	NYSBC CU10-0056	U54GM095315	170,000
Structural Genomics of Eukaryotic Domain Families	93.859	RUTGER 5096	5U54GM074597-04	169,238
NYSBC Structural Genomics of Membrane Proteins	93.859	NYSBC CU10-0056	U54GM095315	165,219
NYSBC Structural Genomics of Membrane Proteins	93.859	NYSBC CU10-0056	U54GM095315	149,289
Synaptic plasticity and gene regulation in identified neurons during behavioral learning	93.859	UFLRDA UF11169	1 R01 GM097502-01	140,459
NYSBC Structural Genomics of Membrane Proteins	93.859	NYSBC CU10-0056	U54GM095315	137,934
Structural Genomics of Eukaryotic Domain Families	93.859	RUTGER 5096	5U54GM074597-04	133,592
Annotation, Development and Evaluation for Clinical Information Extraction	93.859	UCSD 10316795-005	5R01GM090187-05	132,283
FEBio- Finite Elements for Biomechanics and Biophy	93.859	UTAH 10026950-COLUMBIA	2R01GM083925-05	132,258
Structure-Based Antagonism of HIV-1 Envelope Function in Cell Entry	93.859	232595-CUMC	2P01GM056550-17A1	126,605
The Membrane Protein Structural Dynamics Consortium	93.859	UCHICA 43359-5-31486-8608	U54 GM087519	109,265
Annotation, Development and Evaluation for Clinical Information Extraction	93.859	UCSD 10316795-005	5R01GM090187-05	104,980
Single-molecule characterization of Cytoplasmic Dynein	93.859	UCI 2011-2634	2 R01 GM070676-05	48,447
Manipulation of cellular translation machinery by viral RNAs	93.859	UCOL FY.13.612.001	1R01GM097333-01A1	45,000
MIDAS Center for Communicable Disease Dynamics	93.859	HARVARD 114041.5046386	U54GM088558	38,506
Semiparametric regression analysis of censored data	93.859	UNC-CH-5-30759	4R37GM047845-20	38,409
MIDAS Center for Communicable Disease Dynamics	93.859	HARVARD 114041.5046386	U54GM088558	28,798
Regulation of Adenylyl Cyclase Signaling Pathways	93.859	0009812A	2R01GM060419-14	14,312
NYSBC Structural Genomics of Membrane Proteins	93.859	NYSBC CU10-0056	U54GM095315	10,286
NYSBC Structural Genomics of Membrane Proteins	93.859	NYSBC CU10-0056	U54GM095315	6,741
NYSBC Structural Genomics of Membrane Proteins	93.859	NYSBC CU10-0056	U54GM095315	4,525
Manipulation of cellular translation machinery by viral RNAs	93.859	UCOL FY.13.612.001	1R01GM097333-01A1	4,325

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Structural Genomics of Eukaryotic Domain Families	93.859	RUTGER 5096	5U54GM074597-04	686
The Membrane Protein Structural Dynamics Consortium	93.859	UCHICA 43359-5-31486-8608	U54 GM087519	88
COLLABORATIVE STUDY ON THE SYSTEMS BIOLOGY OF VULNERABILITY TO STRESS	93.859	SCRIPPS CU08-9480	5 R01 GM085659-03	-1
The Membrane Protein Structural Dynamics Consortium	93.859	UCHICA 43359-5-31486-8608	U54 GM087519	-72
NYSBC Structural Genomics of Membrane Proteins	93.859	NYSBC CU10-0056	U54 GM095315-02	-961
Structural Genomics of Eukaryotic Domain Families	93.859	RUTGER 5096	5U54GM074597-04	-3,837
				\$3,543,129

National Cancer Institute/NIH/DHHS

HVTN Clinician	93.864	NYBC 33210707	RO1HD059729	32,876
				\$32,876

Child Health and Human Development Extramural Research

THE MATERNAL FETAL MEDICINE UNIT NETWORK	93.865	GWU PJ#21050	U10 HD040485-09	1,470,311
The Maternal Fetal Medicine Unit Network	93.865	GWU CU14-1338	2U10HD036801-16	628,972
Nutritional Primary Prevention of Type 1 Diabetes	93.865	UPITT #0019592	U01HD042444-13	289,755
Genetic and Epigenetic Modifiers in Down Syndrome	93.865	KKINS CU10-2531	5P01HD035897-24	270,446
Fragile Families and Child Well-being in Adolescence	93.865	PU 00002107	2R01HD036916-11A1	259,551
Multigenerational Familial and Environmental Risk for Autism (MINERvA)	93.865	MSSM 0255-5362-4609	U01HD073978-01	255,826
Aging and Dementia in Adults with Down syndrome	93.865	KKINS CU09-3216	5 P01 HD035897-24	232,470
ATN Coordinating Center	93.865	UAB 000388010-023	5 U01 HD040533-12	224,933
The Vuka Family Program: Supporting the health and behavior of South African HIV+ youth	93.865	NYU F7107-01	1R01HD074052-01	171,275
nuMoM2b Capitation Funding - MOU	93.865	RTI CU10-3538	5U01HD063047-02	113,744
Robotic Exoskeletons, FES, and Biomechanics: Treating Movement Disorders	93.865	UDEL 32396	R01HD038582-01	93,203
Pediatric Scientist Development Program (PSDP)	93.865	CHMCO 130474	5K12HD000850-29	71,132
Intestinal Serotonin in Whole Body Energy Metabolism	93.865	CHMC 130474	5K12HD000850-29	67,783
Microbicide Safety and Acceptability in Young Men	93.865	MWRI 7279	5R01HD059533	50,869
Pediatric Adverse Drug Reactions in NASH	93.865	ABOR 95796	5R01HD062489-03	49,093
Community Factors, HIV and Related Health Outcomes in Men Who Have Sex with Men	93.865	NYBC NYB000024	R01HD059729	34,777
The Pediatric HIV/AIDS Cohort Study (PHACS)	93.865	TUL-HSC-3222-10/11	5 U01 HD052104-07	34,645
Pediatric Scientist Development Program (PSDP)	93.865	CHMCO 130474	5K12HD000850-29	28,362
Microbicide Safety and Acceptability in Young Men	93.865	MWRI 7279	5R01HD059533	26,371
Comparative Effectiveness of Development-Bhavioral Screening Instruments	93.865	TUSM 5007836-SERV	5R01HD072778-01A1	22,132
REPRODUCTIVE SCIENTIST DEVELOPMENT PROGRAM (K12) - SCHOLAR	93.865	WASHU WU-14-91	2K12HD000849-26	20,571
ATN Coordinating Center	93.865	UAB 000388010-023	5 U01 HD040533-12	16,848
Nutritional Primary Prevention of Type 1 Diabetes	93.865	UPITT #0019592	U01HD042444-13	15,628
Minority Stress and Mental Health among Same-Sex Couples	93.865	SFSU S12-0003	R01HD070357	15,488
Aging and Dementia in Adults with Down syndrome	93.865	KKINS CU09-3216	5 P01 HD035897-24	13,158

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Triggers of Abruptio Placentae: A Case-Crossover Design of an Ischemic Placental Disorder	93.865	SWEDMC 803033 C	5R01HD059827-02	11,656
Integration of a Youth-Led Microfinance Program with Adult Microfinance to Improve Resilience Outcomes in the Democratic Republic of Congo (DRC)	93.865	JH 2001683742	1R01HD071958-01	9,500
Genetic and Epigenetic Modifiers in Down Syndrome	93.865	KKINS CU10-2531	5P01HD035897-24	9,456
Cesarean Section Optimal Antibiotic Prophylaxis (C/SOAP) Trial	93.865	UAB 000378020-009	5R01HD064729-04	5,460
Therapy for Spinal Muscular Atrophy	93.865	OSU 60020655	5R01HD060586-05	4,825
Fluid Therapy and Cerebral Injury in Pediatric Diabetic Ketoacidosis	93.865	UCD 09-000148-06	R01 HD062417-01	3,723
Aging and Dementia in Adults with Down syndrome	93.865	KKINS CU09-3216	5 P01 HD035897-24	3,588
Genetic and Epigenetic Modifiers in Down Syndrome	93.865	KKINS CU10-2531	5P01HD035897-24	3,527
Pravastatin for the Prevention of Pre-eclampsia in High Risk Woman	93.865	UTMB 13-072	U01HD047891-09	2,854
Pediatric HIV/AIDS Cohort Study (PHACS) Data and Operations Center (DOC)	93.865	HARVARD 114074 0878 5068905	3U01HD052102-08S1	2,652
Genetic and Epigenetic Modifiers in Down Syndrome	93.865	KKINS CU10-2531	5P01HD035897-24	2,384
Aging and Dementia in Adults with Down Syndrome	93.865	KKINS 231.234E	3 P01 HD035897-22A2	2,002
A Longitudinal Study of Loss of Imprinting in First Trimester CVS Samples Compared to Placental at Birth	93.865	IN468452SCU	1R21HD068873-01A1	1,587
RSDP Phase II: The roles of Tbx2 and Tbx3 in gonad development and sexual differentiation	93.865	UCSF CU10-0464	K12 HD000849	-13
Genetic and Epigenetic Modifiers in Down Syndrome	93.865	KKINS CU10-2531	5P01HD035897-24	-62
FLUCONAZOLE PROPHYLAXIS FOR THE PREVENTION OF CANDIDIASIS IN INFANTS < T50 GRAMS BIRTH WEIGHT	93.865	DUKEU CU 09-4467	R01 HD057956-01	-178
MECHANISM OF RECOVERY FOLLOWING SEVERE BRAIN INJURY	93.865	CUMC 12010021-02	5 R01 HD051912-04	-213
Mechanism of Recovery Following Severe Brain Injury	93.865	CUMC 12010021-02	5 R01 HD051912-05	-216
RSDP Phase II: The roles of Tbx2 and Tbx3 in gonad development and sexual differentiation	93.865	UCSF CU10-0464	K12 HD000849	-10,039
Women's Empowerment and Intimate Partner Violence in Bangladesh: A Multilevel Study	93.865	FHID 4350-03-S-01	6 R01 HD061630-02	-12,187
Genetic and Epigenetic Modifiers in Down Syndrome	93.865	KKINS CU10-2531	5P01HD035897-24	-19,245
ATN Coordinating Center	93.865	UAB 000388010-023	5 U01 HD040533-12	-27,208
The Fragile families and Child Well Being Study	93.865	PU 00001273	5R01HD036916-10	-103,821
				\$4,367,375

Aging Research

Preclinical Alzheimer's Disease Drug Development of Novel MAPK Inhibitors	93.866	60032608 CUMC	1U01AG043415-01	176,154
Non-Invasive Treatment of Abdominal Aortic Aneurysm Clinical Trial (N-TA3CT)	93.866	UNEMED 36-5360-2141-001	5R01AG037120-02	102,335
Integrative Pathways to Health & Illness: Testing Older Cohort Hypotheses	93.866	UWIS 416K441	5P01AG020166-08	94,857
fMRI, Genetic and Cognitive Precursors of AD and Dementia	93.866	BUSM 4500001205	2R01AG016495-11	57,387
Alzheimer's Disease Cooperative Study	93.866	UCSD CU08-3926	U01 AG010483-21	46,456
Dominantly Inherited Alzheimer Network (DIAN)	93.866	WASHU WU-13-166	5U19AG032438-05	33,939
Alzheimer's Disease Genetics Consortium	93.866	UPENN 561036	5U01AG032984-04	32,848
National Alzheimer's Coordinating Center (NACC) - YR 15	93.866	UWASH 752695	5U01AG016976-14	27,700
Research Supplements to Promote Diversity in Health-Related Research	93.866	JSWMCU 12121845-4	3 P30 AG022845-08S1	27,156
Research Supplements to Promote Diversity in Health-Related Research	93.866	JSWMCU 12121845-4	3 P30 AG022845-08S1	22,154
Novel Therapies for Resistant FSGS	93.866	FIMR 500532CU	1R01AG038734-02	19,603

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Dominantly Inherited Alzheimer Network (DIAN)	93.866	WASHU WU-13-166	5U19AG032438-05	14,715
Alzheimer s Disease Neuroimaging Initiative, (ADNI)	93.866	UCSD ADNI-02401	2U01AG024904-06	14,172
Preclinical Alzheimer s Disease Drug Development of Novel MAPK Inhibitors	93.866	60032608 CUMC	1U01AG043415-01	5,988
Effect of Menopause on Musculoskeletal Pain	93.866	WCMC 12121845-5	5P30AG022845-09	4,257
PHASE II STUDY TO EVALUATE THE IMPACT ON BIOMARKERS OF RESVERATROL TREATMENT IN PATIENTS WITH MILD TO MODERATE ALZHEIMER S DISEASE	93.866	CUCSD ADC-008 10-00-	5 U01 AG10483	2,813
Improving the Management of Pain in Later Life	93.866	CUMC 13121756-01	P30 AG022845	1,234
Improving the Management of Pain in Later Life	93.866	CUMC 13121756-01	P30 AG022845	575
Research Supplements to Promote Diversity In Health-Related Research	93.866	JSWMCU 12121845-4	3 P30 AG022845-08S1	216
Alzheimer s Disease Cooperative Study	93.866	UCSD CU08-3926	U01 AG010483-21	101
Experience Corps Trial: Improving Health of Older Populations through Generativity	93.866	JH 2000499372	5 P01 AG027735-05	4
NATIONAL ALZHEIMER'S COORDINATING CENTER (NACC) YEAR 11	93.866	UWASH 696998	5 U01 AG016976-12	-19
PHASE II STUDY TO EVALUATE THE IMPACT ON BIOMARKERS OF RESVERATROL TREATMENT IN PATIENTS WITH MILD TO MODERATE ALZHEIMER S DISEASE	93.866	CUCSD ADC-008 10-00-	5 U01 AG10483	-47
Alzheimer s Disease Genetics Consortium	93.866	UPENN 561036	5U01AG032984-04	-383
Improving the Management of Pain in Later Life	93.866	CUMC 11122185-01	5 P30 AG022845-08	-11,757
				\$672,458

Vision Research

Clinical and genetic analysis of retinopathy of prematurity	93.867	GCAEI0288A CU	7 R01 EY019474-02	125,696
Retinal Mechanisms	93.867	ROCHSTR CU11-1173	2R01EY00436727	113,499
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	110,492
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	101,568
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	86,991
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	84,321
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	56,276
Hyperspectral imaging of the normal and Age-related Macular Degeneration	93.867	NYUMC 100944	7R01EY021470-02	55,847
Phase 1 Safety and Pharmacokinetics of ALK001 in people over 60	93.867	AIKEUS CU13-1874	1R41EY021988-01	31,752
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	27,407
Holography-based Photoacoustic Imaging of the Retina	93.867	RRI NYO.G01037P.012373.13	1R21EY023012-014A1	24,465
Amniotic Membrane versus Pericardium in Reducing Glaucoma Drainage Tube Exposure	93.867	TTI CU13-1823	2R44EY019785-02	16,261
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	14,910
Eyegene Study	93.867	EMMES CU08-7911	HHS-N-260-2007-00001 C	10,541
Absolute Fundus Autofluorescence in Retinal Degenerations	93.867	NYU CU12-1408	7R01EY015520-08	3,799
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	3,468
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	2,413
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	-1,533
CRCHS: COMPLETE FUNCTIONAL CHARACTERIZATION OF A POPULATION OF RETINAL GANGLION CELLS	93.867	SALK PO #611377	1 R01 EY018003	-3,494
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	-8,409

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	-36,270
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	-38,533
Nanomedicine Center for Mechanical Biology	93.867	NYUMC 10-01737	5 PN2 EY016588-08	-48,112
				\$733,355

Medical Library Assistance

Implementing MedlinePlus Connect in Spanish to Address Health Disparities	93.879	IFFAMH CU12-0518	1G08LM011056-01	35,508
Applying NLP to Free Text as an HER Data Capture Mehtod to Improve HER Usability	93.879	ZYDOC CU12-3297	1R43LM011165-01A1	24,310
Casual Inference in Large - Scale Time - Series with Rare Events and Latent Variables	93.879	SIT 2102255-01	1R01LM011826-01	20,261
				\$80,079

National Institutes of Health Acquired Immunodeficiency Syndrome Research Loan Repayment Program

HIV Prevention Trials Network (HPTN) Leadership Group	93.936	FHI 0080-0025	U01 AI068619	243,825
TLC-Plus: A Study to Evaluate the Feasibility of an Enhanced Test, Link to Care Plus Treat Approach for HIV Prevention in the United States	93.936	FHI 822/0080.0067	U01 AI068619	97,511
				\$341,336

International Research and Research Training

Fogarty International Clinical Research Scholars and Fellows Program	93.989	VANDER VUMC 38305	5 R24 TW007988-05	8,771
ENHANCING, TRAINING, RESEARCH CAPACITY AND EXPERTISE IN HIV CARE-ENTREE MEDICAL EDUCATION PARTNERSHIP INITIATIVE	93.989	UKZNIC MEPI CU 01	1 R24 TW0088663-02	2,452
				\$11,223

Total Pass-through Programs				\$36,952,295
Total: National Institute of Health				\$390,121,904

State / City Government

Direct Awards

Mental Health Research Grants

Imaging Stimulant Effects on Emotional Liability in Children with ADHD	93.242	SRFMH 25753		54,232
				\$54,232
Total Direct Award Programs				\$54,232

Pass-through Awards

Mental Health Research Grants

Seratonergic modulation of brain development: Genetic and pharmacologic influences on structure, function, and behavior	93.242	RFMH CU09-3988	P50MH090966	781,859
Children at high and at low risk for depression	93.242	RFMH CU09-4672	5 R01 MH036197-25	274,378
A Longitudinal Multimodal MRI Study of Adolescents with Bulimia Nervosa	93.242	RFMH 25207	5R01MH090062-03	215,178
Postmortem Neurochemical Studies in Suicide	93.242	SRFMH 114647	1R01MH040210-27A1	196,724
Informing the DSM: Using multiple datasets to examine youth psychiatric diagnosis	93.242	SRFMH 89613	R01 MH085150-01A1	196,358
Mechanisms and significance of neural stem cell fate plasticity in the adult hippocampus	93.242	SRFMH 25032	5 R01 MH091844-02	184,432
Distinct & Common Neural Correlates of Fear Disorders, OCD, & Eating Disorders	93.242	RFMH 25220	1R01MH091694-01A1	177,831
Translational Research on Eating Disorders: Reward Systems	93.242	SRFMH 24558	5R01MH079397-05	162,871
Physical Activity in Anorexia Nervosa - Characteristics and Clinical Significance	93.242	SRFMH 903-1711E	5 R01 MH083795-03	140,251

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Olanzapine versus Placebo for Outpatients with Anorexia Nervosa	93.242	RFMH CU09-4659	5 R01 MH085921-02	130,369
A Late Sensitive Period for the Development of Anxiety Disorders	93.242	5R01MH091427-05	5R01MH091427-05	123,461
Antecedents of Suicidal Behavior Related Neurobiology	93.242	SRFMH 25735	1P50MH090964-01A1	120,282
HIV Center for Clinical and Behavioral Studies	93.242	SRFMH 903-1318Z	2P30MH043520-25	91,492
Serotonergic modulation of brain development: Genetic and pharmacologic influences on structure, function, and behavior	93.242	RFMH CU09-3988	P50MH090966	91,187
Antecedents of Suicidal Behavior Related Neurobiology	93.242	SRFMH 25735	1P50MH090964-01A1	90,260
The role of motivation in learning in combined computer-based cognitive remediation and Lurasidone in patients with schizophrenia and schizoaffective disorder	93.242	SRFMH 107612	1R21MH092569-01A1	89,069
Suicidal Behavior in Mood Disorders: Genes and Intermediate Phenotypes	93.242	RFMH #24619	R01MH082041-05	85,578
Brain Circuitry and Psychological Predictors of PTSD	93.242	RFMH 25038	2 R01 MH072833-04A2	77,379
Trophic Factors and Regulations of Hippocampal Neuroplasticity in Human Brain	93.242	RFMH #25200	1 R21 MH094888-01	68,667
Prenatal Factors and Risk of Schizophrenia in a Finnish National Birth Cohort	93.242	SRFMH 116862	5R01MH082052-05	67,175
HIV Center for Clinical and Behavioral Studies	93.242	SRFMH 903-1318Z	2P30MH043520-25	66,666
HIV Center for Clinical and Behavioral Studies	93.242	RFMH 112561	2P30MH043520-25	56,401
Masivukeni: A Multimedia ART Adherence Intervention in Resource-Limited Settings	93.242	RFMH 101442	1R01MH095576-01	52,680
HIV Center for Clinical and Behavioral Studies	93.242	SRFMH 903-1318Z	2P30MH043520-25	50,445
Familial Pathways to Early-Onset Suicide Attempts	93.242	RFMH CU11-2347	5R01MH056390	42,567
1/2-Noval Medication Strategies Targeting Brain Mechanisms in Pediatric OCD	93.242	RFMH 25451	1R34MH095502-01A1	41,616
Attaining and Maintaining Wellness in OCD	93.242	RFMH 25479	2R01MH045436-18	39,881
Structure and function of dopamine receptors	93.242	SRFMH 25781	2R01MH054137-18	38,933
Connecting Brain and Behavior in the Very Brief Exposure Effect	93.242	RFMH 25754	1R21MH101564-01	38,321
Behavioral Activation/Armodafinil to treat fatigue in HIV/AIDS	93.242	SRFMH 25021	5R34MH090843-03	31,618
HIV Center for Clinical and Behavioral Studies	93.242	RFMH #25310	5 P30 MH043520-24	25,510
110 NYPI Experimental Therapeutics	93.242	RFMH 25462	1R21MH096104	23,126
HIV Center for Clinical and Behavioral Studies	93.242	SRFMH 903-1318Z	2P30MH043520-25	14,944
Mechanisms and significance of stem cell fate plasticity in the adult hippocampus	93.242	RFMH CU11-1114	5R01MH091844-04	14,470
Return to Work RCT: Counseling After Fatigue Treatment in HIV/AIDS	93.242	RFMH 25887	1R01MH102161-01A1	2,139
HIV and Sexual Risk in African MSM in South African Townships	93.242	SRFMH 903-1709D	5 R01 MH083557-04	1,371
Olanzapine versus Placebo for Outpatients with Anorexia Nervosa	93.242	RFMH CU09-4659	5 R01 MH085921-02	1,349
Mood Stabilizer Effects on BH4 Deficit in GCH1- Associated Bipolar Disorder	93.242	SRFMH CU24797	5 R21 MH082331-02	-51
Cross Species Imaging of Schizophrenia	93.242	SRFMH 25129	1 K23 MH090563-01	-101
Prenatal Factors and Risk of Schizophrenia in a Finnish National Birth Cohort	93.242	SFRMH 903-1698E	5R01MH082052-05	-328
Serotonergic modulation of brain development: Genetic and pharmacologic influences on structure, function, and behavior	93.242	RFMH CU09-3988	1 P50 MH090966-01	-4,840
Brazilian HIV/STI Prevention for Adolescents with Mental Health Disorder	93.242	SRFMH 25477	5R34MH94163-02	-10,569
Masivukeni: A Multimedia ART Adherence Intervention in Resource-Limited Settings	93.242	RFMH 101442	1R01MH095576-01	-18,838
				\$3,872,111

Alcohol Research Programs

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Adverse Childhood Experiences, Personality Psychopathology and Alcohol Disorders	93.273	SRFMH 903-1713E	5 U01 AA018111-04	64,944
				\$64,944
Drug Abuse and Addiction Research Programs				
Improved Strategies for Outpatient Opioid Detoxification	93.279	SRFMH CU10-3765	1 R01 DA030484-01	109,282
Pioglitazone for the Treatment of Opioid and of Nicotine Dependence	93.279	SRFMH 25063	R01 DA031022-01	101,306
Substance Use/Abuse & HIV/STI Risk Behaviors in Puerto Rican Youth Growing Up	93.279	RFMH 25391	1R01DA033172-01	90,177
Medical Marijuana Laws and MTF Teen Marijuana Use and Attitudes Since 1991	93.279	SRFMH CU11-0649	R01DA034244	76,256
Novel Medication Approaches to Substance Abuse	93.279	SRFMH 903-1431T	5 P50 DA009236-19	75,463
Clinical Trials Network: Greater New York Node	93.279	RFMH #1008868-25056	U10 DA013035-09	72,261
State Medical Marijuana Laws and MTF Teen Marijuana use and Attitudes Since 1991	93.279	SRFMH CU13-1567	3R01DA034244-02S1	34,369
Quetiapine Treatment for Cannabis Dependence	93.279	RFMH 25475	1R01DA031826-01A1	32,367
Imaging the Effects of rTMS on Brain Activity in Cocaine Abusers	93.279	SRFMH 25484	1R21DA034433-01	22,680
Translational Approach to Models in Relapse	93.279	SRFMH-24388	5R01DA021319-04	21,618
Imaging the Neurobiology of a Behavioral Treatment for Cocaine Dependence	93.279	SRFMH 25760	2R01DA020855-05A1	20,141
Clinical Trials Network: Greater New York Node	93.279	RFMH #1008868-25056	U10 DA013035-09	18,241
1/2 Multicenter Trial of Combined Pharmacotherapy to Treat Cocaine Dependence	93.279	RFMH 25639	1U01DA033310-01A1	18,070
Hypocretin (Orexin) Antagonists as a Novel Approach to Medication Development (Subcontract)	93.279	RFMH CU10-2743	1 R01 DA02961801A1	12,291
Clinical Trials Network: Greater New York Node	93.279	SRFMH 903-1545L	2 U10 DA013035-09	7,531
SUD & Decision-Making: A Pilot Imaging Study of Parents & Children	93.279	RFMH CU10-3218	1 R21 DA031975-01	3,109
Neural Mechanisms Underlying Reinforcement Learning	93.279	SRFMH 1006604-5-24392	1 R01 DA020656-01A2	-344
				\$714,818
Centers for Disease Control and Prevention Investigations and Technical Assistance				
HEALTH RESEARCH INC	93.283	SHRI 3476-05	1U58DP003879-01	-345
				\$-345
Cancer Cause and Prevention Research				
GENOME WIDE PREDICTORS OF TREATMENT RELATED TOXICITIES	93.393	SHRI 19-02	5 R01 CA139426-03	6,984
				\$6,984
Cancer Treatment Research				
Interpersonal Psychotherapy for Depressed Minority Breast Cancer Survivors	93.395	SRFMH 1008207-1-24877	5 R01 CA133050-02	13,921
				\$13,921
Microbiology and Infectious Diseases Research				
PASSIVE IMMUNOTHERAPEUTICS FOR SELECT GRANTS	93.856	SHRI 2880-03	2 U54 AI05715804	-1
				\$-1
Child Health and Human Development Extramural Research				
Perinatal Assessment of At-Risk Populations	93.865	RFMH 903-1428I/MPPS6	5R37HD032774-11	95,639
				\$95,639

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Aging Research				
Pilot Combination Trial of Mild Cognitive Impairment with Depression	93.866	RFMH 25237	R01 AG040093-01	6,875
				\$6,875
HIV Emergency Relief Project Grants				
Ryan White Part A Contract 93-EVL-4645 for Planning and Evaluation (BASE)	93.914	PUBHS 93-EVL-4645	NYCDOHMH CU13-1205	533,683
Ryan White Part A Contract 93-EVL-4645 for Planning and Evaluation (BASE)	93.914	PUBHS 93-EVL-4645	NYCDOHMH CU14-0667	228,666
RYAN WHITE PART A CONTRACT 93-EVL-4645 FOR PLANNING AND EVALUATION (BASE)	93.914	PUBHS 93-EVL-4645-22	DHHS CU12-0329	-7,854
				\$754,495
HIV Prevention Activities Health Department Based				
Positive Pathways	93.940	SHRI 4477-03	5U62PS003692-03	1,083
				\$1,083
Block Grants for Community Mental Health Services				
Suicide Prevention Hotline Evaluation	93.958	RFMH 103969	MACRO #33430-9S-1385	52,674
Suicide Prevention Hotline Evaluation	93.958	RFMH 103969	MACRO #33430-9S-1385	8,052
				\$60,726
Total Pass-through Programs				\$5,591,250
Total:				\$5,645,482

National Science Foundation

Direct Awards

National Science Foundation

NSF Intergovernmental Personnel Act agreement	47.	CNS-1353304		219,556
				\$219,556

Engineering Grants

Collaborative Research in Biophotonics: Implantable Sensor for Brain Blood Flow Mapping	47.041	CBET-1264927		296,394
On-Chip Magnetics for Power Management and Delivery	47.041	ECCS-0903466		296,329
Integrated CMOS Terahertz Spectroscopy of Biomolecules	47.041	ECCS-1202488		197,249
Topology optimization of structures accounting for damage uncertainties	47.041	CMMI-1334857		186,790
RCN-SEES: Multidisciplinary Approaches to Carbon Capture, Utilization and Storage	47.041	CBET-1231393		186,562
NIRT: MOLECULAR ELECTRONIC DEVICES WITH CARBON-BASED ELECTRODES ON ACTIVE SUBSTRATES	47.041	ECCS-07-07748		155,342
Multi-Server Queues with Time-Varying Arrival Rates	47.041	CMMI 1066372		153,256
SusChEM: Rational design of aqueous interfaces of Earth abundant and nontoxic	47.041	CBET-1336845		149,714
CDI-TYPE I: COLLABORATIVE RESEARCH: SUPERVISED LEARNING IN MOLECULAR CLASSIFIERS	47.041	CBET-1026592		147,744
Enhanced Modeling of the Rocking and Overturning of Objects on a Moving Base	47.041	CMMI-1200859		139,152
Collaborative Research: Experimental and computational foundations for nonlinear pattern formation in the deposition of elastic rods	47.041	CMMI-1129917		136,084
Sustainable co-generation of COx-free hydrogen and biochar from biomass via novel alkaline thermal treatment	47.041	CBET-1336567		135,817

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
CDI-TYPE II: COMPUTING WITH BIOMOLECULES: FROM NETWORK MOTIF S TO COMPLEX AND ADAPTIVE SYSTEMS	47.041	ECCS-1026591		125,972
Collaborative Research: Iterative Downconversion for Broadband Signal Digitization	47.041	ECCS-1002064		119,237
Reconfigurable flat optics	47.041	ECCS-1307948		114,806
Collaborative Research: Towards Rare-Earth-Free Advanced Permanent Magnets- High- Anisotropy L10 Materials Towards-Rare-Earth-Free Advanced Permanent Magnets	47.041	CMMI-1259736		112,770
Understanding the load transfer mechanisms	47.041	CMMI-1233885		109,410
Visualizing spin torque in nanoscale magnetic devices using ultrafast x-ray microscopy	47.041	ECCS-0925829		107,940
Lithographically Patterned Heteromolecular Arrays with Single-Molecule Resolution	47.041	CMMI-1300590		103,058
Measurement of thermal transport through a single nanostructure: A pit stop on the path towards single molecule thermal transport measurement	47.041	CBET-1236165		99,913
Biomechanical Characterization of Substrate-Free Constructs	47.041	CMMI-1130376		98,536
Hazards SEES Type1 Predicting landslide runoff and granular flow hazard: Enhanced-g centrifuge experiments contact dynamics model development and theoretical study	47.041	CMMI-1331499		92,116
Collaborative Research: Tunable Nanoscale Ferroelectric Photonic Crystals: Materials and Fabrication Photonic Crystal Structures, and Devices	47.041	ECCS-1302488		90,512
CAREER: Electronic and Mechanical Properties of Single Metal-Molecule-Metal Junctions	47.041	CHE-0744185		89,288
Biological conversion of digester gas to methanol via monooxygenic pathways in ammonia oxidizing bacteria	47.041	CBET-1236297		88,261
Accelerated Degradation of Active Nanosystems by Biomolecular Motors	47.041	CMMI-0926790		83,553
GOALI: Strategies for Design, Startup and Control of Field-Scale Anammox Reactors	47.041	CBET-1066860		81,989
Bayesian Based Strategies for Inspection and Maintenance to Optimize Structural Life-Cycle Performance	47.041	CMMI-1354194		81,518
Chain-Structured Strain and Fracture Sensor for Bridge Structural Health Monitoring	47.041	CMMI-1301288		81,153
FORMING, ADVANCING, AND SUSTAINING TEACHER-ENGINEER RELATION SHIPS (FASTER)	47.041	EEC-1201060		81,000
Career:Computational Nanoengineering of few-layer system via strain	47.041	CMMI-1150795		80,926
Optimization Based Methods for Systemic Risk Management	47.041	CMMI-1235023		79,583
Laser Modification of Surface Crystallinity of Biodegradable Polymers	47.041	CMMI-1030536		79,307
Collaborative Research: CDI-Type II: Cyber-Enabled Design of Functional Nanomaterials	47.041	CBET-1028299		77,075
SENSING IN LIVING CELLS: EXPRESSABLE RNA-BASE	47.041	CBET-033288		76,065
Dynamic Scheduling and Resource Control in Stochastic Processing Networks: Beyond Priority Rules	47.041	CMMI-0969328		73,326
Ranking Large Information Sets	47.041	CMMI-1131053		65,824
Career: Interventional Microscopy for In-vivo Investigations of Brain Function	47.041	CBET-0954796		64,849
Data Fusion of Heterogeneous Sensor Measurements for Enhanced Structural Modeling	47.041	CMMI-1100321		64,829
New Methodologies for Dynamic Optimization	47.041	CMMI-1201116		60,461
Characterization of the human myocardium by optical coherence tomography	47.041	EEC-1342273		59,963
Collaborative Research: Automatic Behavior Monitoring for In-Depth Analysis of Construction Fatalities and Injuries	47.041	CMMI-1200120		58,864
Efficient Monte Carlo Methods for Gaussian Random Fields	47.041	CMMI-1069064		57,427
Efficient Monte Carlo Methods for Gaussian Random Fields	47.041	CMMI-1069064		55,298
SusChEM/Collaborative Research: Fundamental Understanding of Foaming Process towards a New Warm Mix Asphalt Technology	47.041	CMMI-1301160		54,937
Matching and Allocation Problems: An Axiomatic Approach with Applications	47.041	CMMI-1201045		52,095
Coastal SEES (Track 2) Collaborative: Developing High Performance Green Infrastructure Systems to Sustain Coastal Cities	47.041	CMMI-1325676		51,080
GOALI: Dissimilar Metal Joining for Micro-Scale Medical Devices	47.041	CMMI-1130564		47,142

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
I-Corps: High-performance phase modulators and tunable birefringent filters based on negative index superlattices	47.041	IIP-1358632		45,000
Ranking Large Information Sets	47.041	CMMI-1131053		44,027
Coastal SEES (Track 2) Collaborative: Developing High Performance Green Infrastructure Systems to Sustain Coastal Cities	47.041	CMMI-1325676		43,956
EAGER: Elucidating Protein - Colloid Interactions for Enhanced Bio-Energy Applications	47.041	CBET-1242524		41,763
Collaborative Research: Joint UFL/CU I/UCR Center for Particulate and Surfactant Systems	47.041	IIP-0749461		41,602
Hazards SEES Type1 Predicting landslide runoff and granular flow hazard: Enhanced-g centrifuge experiments contact dynamics model development and theoretical study	47.041	CMMI-1331499		41,384
BRIGÉ: Characterizing the rheological and microstructural evolution of oil well cement slurries under elevated temperature and pressure conditions	47.041	EEC-1342377		39,635
Career: Energy in Sustainable Infrastructure-Multi-scale/physical Approach to a Novel Hybrid Solar Roofing Panel	47.041	CMMI 0954717		37,883
Hazards SEES Type1 Predicting landslide runoff and granular flow hazard: Enhanced-g centrifuge experiments contact dynamics model development and theoretical study	47.041	CMMI-1331499		37,759
Nanotechnology Infrastructure Workshop	47.041	ECCS-1233158		36,813
CAREER: Efficient Monte Carlo Methods in Engineering and Science: From Coarse Analysis to Refined	47.041	CMMI-0846816		36,672
GOALI: Chip-scale single-molecule optofluidic sensing and manipulation	47.041	ECCS-1102163		36,388
International Workshop on Multiscale Mechanobiology	47.041	CMMI-1427519		35,076
FORMING, ADVANCING, AND SUSTAINING TEACHER-ENGINEER RELATION SHIPS (FASTER)	47.041	EEC-1201060		34,748
NUE: Transforming Nanoscale Science and Engineering Undergraduate Education	47.041	EEC-1138237		33,478
AF: Small: Effective Resource Allocation Mechanisms: Fairness and Incentives	47.041	CMMI-0916453		32,781
CAREER: High-Performance Optimization Methods for Power Systems	47.041	ECCS-1351279		31,401
FORMING, ADVANCING, AND SUSTAINING TEACHER-ENGINEER RELATION SHIPS (FASTER)	47.041	EEC-1201060		29,955
CAREER: Three Dimensional Cell Characterization	47.041	CBET-1254484		29,245
BRIGÉ: Mechanics of DNA Motors for Moving Polarity	47.041	CMMI-1125760		27,485
Coastal SEES (Track 2) Collaborative: Developing High Performance Green Infrastructure Systems to Sustain Coastal Cities	47.041	CMMI-1325676		23,744
Hazards SEES Type1 Predicting landslide runoff and granular flow hazard: Enhanced-g centrifuge experiments contact dynamics model development and theoretical study	47.041	CMMI-1331499		23,489
Collaborative Research: Joint UFL/CU/UCR Center for Particulate and Surfactant Systems	47.041	IIP-1362078		20,810
Integrated Selection of Thermally Responsive Aptamers for Specific Purification and Enrichment of Biomolecules	47.041	CBET-0854030		20,121
Collaborative Research: CDI: A New Method for the Modeling and Simulation of Arterial Clot Formation and Lysis	47.041	CMMI-1028112		17,924
High-Bandwidth, Single-Molecule Bioelectronics Using A Multiplexed, Field-Effect Sensing Platform	47.041	ECCS-1202320		15,869
EAGER: Evolution of Beta Roll peptides to create allosterically-regulated binding domains using bacterial cell surface display	47.041	CBET-1161160		15,606
Collaborative Research: Management of Transitional Care Units to Improve Hospital Outcomes	47.041	CMMI 1233547		12,288
Biomechanical Characterization of Substrate-Free Constructs	47.041	CMMI-1130376		10,577
BRIGÉ: Characterizing the Time-Dependent and Anisotropic Mechanical Properties of the Uterine Cervix with Micro and Nano Indentation	47.041	CMMI-1125670		10,457
Collaborative Research: Towards Rare-Earth-Free Advanced Permanent Magnets- High- Anisotropy L10 Materials Towards-Rare-Earth-Free Advanced Permanent Magnets	47.041	CMMI-1259736		10,000
CAREER: Efficient Monte Carlo Methods in Engineering and Science: From Coarse Analysis to Refined	47.041	CMMI-0846816		9,950
Ultrafast nonlinearities in chip-scale photonic crystals	47.041	ECCS-1102257		9,106
GOALI: Laser Scribing of Multilayer Thin Films in Solar CellsL Defect Formation and Mitigation	47.041	CMMI-1333241		8,851
Reconfigurable flat optics	47.041	ECCS-1307948		8,000
SOFT 3d MEMS: advanced biomaterials devices	47.041	ECCS-07-47747		6,919

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
SOFT 3d MEMS: advanced biomaterials devices	47.041	ECCS-07-47747		6,740
New Methodologies for Dynamic Optimization	47.041	CMMI-1201116		6,582
GOALI: Chip-scale single-molecule optofluidic sensing and manipulation	47.041	ECCS-1102163		6,459
Collaborative Research: Iterative Downconversion for Broadband Signal Digitization	47.041	ECCS-1002064		5,500
I-Corps: High-performance phase modulators and tunable birefringent filters based on negative index superlattices	47.041	IIP-1358632		4,944
Ultrafast nonlinearities in chip-scale photonic crystals	47.041	ECCS-1102257		4,932
CAREER: Molecular Mechanisms and Metabolic Modeling of N2O and NO Emission Fluxes From Biological Nitrogen Removal Reactors	47.041	CBET-0846650		3,635
Collaborative Research: Joint UFL/CU /UCR Center for Particulate and Surfactant Systems	47.041	IIP-0749461		2,747
Switched-Mode Signal Processing: An Innovative Paradigm for High Performance Analog in Nanoscale CMOS	47.041	ECCS-1309721		2,618
NIRT: MOLECULAR ELECTRONIC DEVICES WITH CARBON-BASED ELECTRODES ON ACTIVE SUBSTRATES	47.041	ECCS-07-07748		2,244
COLLABORATIVE RESEARCH: SELF-ASSEMBLY OF POLYMER GRAFTED NANOPARTICLES	47.041	CBET-1033168		1,971
Career: Energy in Sustainable Infrastructure-Multi-scale/physical Approach to a Novel Hybrid Solar Roofing Panel	47.041	CMMI 0954717		1,895
General Purpose Design System for Composite Materials and Structures	47.041	CMMI-1127810		718
CAREER: A Data-driven Robust Approach for Large Scale Dynamic Optimization	47.041	CMMI-1351838		457
Laser Modification of Surface Crystallinity of Biodegradable Polymers	47.041	CMMI-1030536		430
GOALI: Dissimilar Metal Joining for Micro-Scale Medical Devices	47.041	CMMI-1130564		88
On-Chip Magnetics for Power Management and Delivery	47.041	ECCS-0903466		18
SOFT 3d MEMS: advanced biomaterials devices	47.041	ECCS-07-47747		10
Laser Modification of Surface Crystallinity of Biodegradable Polymers	47.041	CMMI-1030536		-350
Career: Nonlinear and nonclassical optics in ultrahigh-Q/V mesoscopic cavities: Science, Education	47.041	ECCS-0747787		-522
I-Corps:Development of the next generation wastewater treatment technologies and infrastructure	47.041	IIP-1261062		-609
On-Chip Magnetics for Power Management and Delivery	47.041	ECCS-0903466		-900
INTERACTIVE UBIQUITOUS VISUALIZATION OF CONSTRUCTION PROGRESS MONITORING WITH D4AR (4DIMENSIONAL AUGMENTED REALITY) MODE	47.041	CMMI-1063559		-900
Understanding Chemical Complexity and Diversity Through Collaboration	47.041	CHE-0717518		-2,711
CAREER: Molecular Mechanisms and Metabolic Modeling of N2O and NO Emission Fluxes From Biological Nitrogen Removal Reactors	47.041	CBET-0846650		-4,484
COLLABORATIVE RESEARCH: ULTRASONIC WIRELESS DATA FOR EXTREMELY LOW- POWER WAKE-UP RECEIVERS	47.041	ECCS-0925813		-6,130
Nanotechnology Infrastructure Workshop	47.041	ECCS-1233158		-23,008
CO2 MINERAL SEQUESTRATION INTEGRATED WITH TAILORED SYNTHESIS OF CARBON-NEUTRAL FILLER MATERIALS	47.041	CBET-0933627		-35,171
Ultrafast nonlinearities in chip-scale photonic crystals	47.041	ECCS-1102257		-40,480
Visualizing spin torque in nanoscale magnetic devices using ultrafast x-ray microscopy	47.041	ECCS-0925829		-117,412
				\$5,880,589

Mathematical and Physical Sciences

US ATLAS Operations Programs: Empowering University Physicists to make Discoveries at the Energy Frontier	47.049	PHY-1119200		5,244,194
Collaborative Research: Continuation of the XENON100 Dark Matter Search at the Gran Sasso Underground Laboratory	47.049	PHY-1104740		936,546
US ATLAS Operations Programs: Empowering University Physicists to make Discoveries at the Energy Frontier	47.049	PHY-1119200		652,201
MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		388,352

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
PESO: Breast Cancer Invasion in Crowded and Locally Stiff Environments	47.049	DMR-1227297		315,871
GOALI: Tailoring the Electronic Structure of Few-Layer Graphene for Electronic and Optoelectronic Applications	47.049	DMR-1106225		283,765
Mechanism of GRB Emission	47.049	AST-1008334		272,312
The XENON1T Dark Matter Project: A Project Proposal from the US Institutions of the XENON Collaboration	47.049	PHY-1209979		263,869
The XENON1T Dark Matter Project: A Project Proposal from the US Institutions of the XENON Collaboration	47.049	PHY-1209979		249,416
Applications of Photochemistry and Spin Chemistry to Challenges in Magnetic Resonance, Chemical Biology and Material Sciences	47.049	CHE-1111392		240,383
Improving Models of Molecular Clouds and Planetary Atmospheres: Dissociative Recombination Measurements for Molecular Ions of Astronomical Interest	47.049	AST-1107036		234,613
Dynamics of Linear and Nonlinear and Nonlinear Waves in Complex Media	47.049	DMS-1008855		223,602
Collaborative Research: Continuation of the XENON100 Dark Matter Search at the Gran Sasso Underground Laboratory	47.049	PHY-1104740		217,439
Structure and Dynamics of strongly interacting systems in the condensed phase:From glasses to quantum transport	47.049	CHE-1213247		215,764
Molybdenum Disulfide Monolayer Synthesis and Characterization	47.049	DMR-1106172		213,814
CAREER: Multimessenger astronomy through gravitational-waves: a student centered approach	47.049	PHY-0847182		210,908
The XENON1T Dark Matter Project: A Project Proposal from the US Institutions of the XENON Collaboration	47.049	PHY-1209979		210,746
Fast First-Order Methods for Large-Scale Structured and Sparse Optimization	47.049	DMS-1016571		209,952
CAREER: Fixing Stellar Chronometers with Open Clusters	47.049	AST-1255419		189,257
Collaborative Research: Continuation of the XENON100 Dark Matter Search at the Gran Sasso Underground Laboratory	47.049	PHY-1104740		182,400
Silane Reagents and Catalysts for Asymmetric Synthesis of Carbinamines	47.049	CHE-1152949		163,589
Tailoring Polymer Nanocomposite Properties by Nanoparticle Assembly	47.049	DMR-1106180		162,700
From Clusters to Voids: Gas and Galaxy Evolution	47.049	AST-1009476		161,341
Tractability of High dimensional Problems for Quantum and Classical Computers	47.049	DMS-1215987		160,098
Exceeding the Limit in Solar Energy Conversion with Exciton Fission	47.049	DMR-1321405		159,451
US ATLAS Operations Programs: Empowering University Physicists to make Discoveries at the Energy Frontier	47.049	PHY-1119200		156,163
Probability Density Function of Dislocation Free Path Length: Experimental Determination through GND Measurements	47.049	DMR-1310503		149,932
Equations with random coefficients and inverse problems	47.049	DMS-1108608		142,467
CAREER: Semiconductor Macromolecules and Nanocrystals: Chemistry at the Interface of Small Molecules and Quantum Dots	47.049	CHE-1151172		140,821
Stress-Induced nanopatterning of Surface Reactions on Metal Oxide Surfaces	47.049	DMR-1206768		135,791
NEB: Novel Quantum Switches Using Heterogeneous Atomically Layered Nanostructures	47.049	DMR-1124894		135,144
Experimental Physics Research Program at Columbia University/Nevis Laboratories	47.049	PHY-0758118		133,914
Collaborative Research: Stellar Clouds as New Probes of the Milky Way's Accretion History and Mass Distribution	47.049	AST-1312196		133,650
Nanoscale sensing of the chemical and physical properties of two-dimensional materials and interfaces using scanning probe microscopy	47.049	CHE-1012058		131,227
Dynamics of Organic Reactions	47.049	CHE-1213976		125,136
MRI Instrument Development for Liquid Xenon Dark Matter Searches: An Atom Trap Trace Analysis System to Measure Ultra-Low Krypton Contamination in Xenon	47.049	PHY-0923274		122,468
Periodic Phenomena in Cataclysmic Binaries	47.049	AST-1211129		119,616
Crystal Size Effects on the Lattice Parameter of Nano-scaled Oxides	47.049	DMR-1206764		114,226
Sum frequency studies of liquid interfaces	47.049	CHE-1057483		112,722
Improving Models of Molecular Clouds and Planetary Atmospheres: Dissociative Recombination Measurements for Molecular Ions of Astronomical Interest	47.049	AST-1107036		112,005

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Stochastic Controls, Games and Portfolios	47.049	DMS-0905754		111,409
CAREER: Visualizing the Formation of the Charge Density Wave Phase at the Atomic Scale	47.049	DMR-1056527		110,958
Algebraic Cycles and L-functions	47.049	DMS-1301848		110,073
COLLABORATIVE RESEARCH: EMSW21-RTG: JOINT COLUMBIA-CUNY-NYU RESEARCH TRAINING GROUP IN NUMBER THEORY	47.049	DMS-0739400		108,428
Collaborative Research: Applied Probability and Time Series Modeling	47.049	DMS-1107031		107,885
MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		107,741
Link homology and categorification of quantum groups	47.049	DMS-1005750		107,094
Elucidating Time and Length Scales of Spatiotemporal Heterogeneity in Supercooled Liquids	47.049	CHE-1213242		105,974
Main Group Element Complexes Supported by Multidentate Ligands: Alkyl Hydride and Subvalent Compounds and their Applications to Catalysis	47.049	CHE-1058987		105,400
Cosmology from Non-Linear Weak Lensing	47.049	AST-1210877		103,906
FRG: COLLABORATIVE RESEARCH: GROMOV-WITTEN THEORY	47.049	DMS-1159416		102,972
Dynamic Self-Assembly of Glycolipids for Unve	47.049	CHE-1312646		100,116
Resolving AGN accretion and feedback in cool core clusters with parsec-scale simulations	47.049	AST-1210890		98,000
MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		97,881
Beyond Spherical Cows: Using Radio Observations to Write the Next Chapter on Novae	47.049	AST-1211778		97,277
Problem in Complex Analysis, Complex Geometry, and Mathematical Physics	47.049	DMS-0757372		95,295
Cellulase Discovery Via Chemical Complementation	47.049	CHE-09-57569		93,989
CAREER: Nonparametric methods in multiple dimensions: shape restrictions, bootstrap and beyond	47.049	DMS-1150435		90,863
MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		89,031
CAREER: Fiber-theoretic approaches to low-dimensional topology	47.049	DMS-1149800		85,832
P-adic Automorphic forms, P-adic L-functions and Galois Representations	47.049	DMS-1101229		84,993
Nonlinear parabolic equations and related geometric problems	47.049	DMS-1266172		82,522
Computational Methods in Risk Management and Financial Engineering	47.049	DMS-0914539		82,167
MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		78,624
Gas Accretion and the Disk-Halo Interface	47.049	AST-1008134		77,177
Understanding the Design and conduction of Materials for Organic Electronics at the Molecular Level	47.049	DMR-1206202		77,118
Collaborative Research: Optimal Monte Carlo Estimation via Randomized Multilevel Methods	47.049	DMS-1320550		76,747
SOLAR Collaborative: Designing & Modeling advanced nanostructure based hybrid solar cells	47.049	DMR-1311770		75,952
Spectroscopy of Electron Liquids in Quantum Structures	47.049	DMR-0803691		75,495
Kinetics of Polymer Interfacial Reactions	47.049	DMR-1206191		73,404
A Unified Statistical Framework for the Identification of Rare Variants Implicated in Complex Diseases	47.049	DMS-1100279		71,801
MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		71,633
MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		69,863
REU Site: Nevis Labs, Columbia University for Summers 2014 - 2016	47.049	PHY-1359059		69,494
Statistical Methods for Screening Individual Childhood Growth Paths	47.049	DMS-1209023		69,043
Stochastic Control Under Model Uncertainty	47.049	DMS-1208985		68,748

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
MuSR Studies of Exotic Spin and Charge Behaviors in Novel Superconducting, Metals, and Semiconductors	47.049	DMR-1105961		68,079
Nonparametric classification, tuning parameter selection, and asymptotic stability for high-dimensional data	47.049	DMS-1308566		65,354
Collaborative Research: cliques, stable sets and approximate structure	47.049	DMS-1265803		62,735
DEGENERATE ELLIPTIC PROBLEMS IN ANALYSIS AND GEOMETRY	47.049	DMS-1200701		60,490
MuSR Studies of Exotic Spin and Charge Behaviors in Novel Superconducting, Metals, and Semiconductors	47.049	DMR-1105961		59,153
Problems in Complex Analysis and Complex Geometry	47.049	DMS-1266033		58,862
Problems in general relativity and geometric flows	47.049	DMS-1105483		58,566
SusChem: IUPAC: Sustainable Transition-Metal Catalysts for Radical Reactions	47.049	CHE-1401049		57,703
Algebraic structures in Floer theory	47.049	DMS-1308179		54,205
Understanding the Design and conduction of Materials for Organic Electronics at the Molecular Level	47.049	DMR-1206202		52,736
MOD P LOCAL LANGLANDS PROGRAM FOR P-ADIC REDUCTIVE GROUPS AND REPRESENTATIONS OF HECKE ALGEBRAS	47.049	DMS-1201376		52,378
Foundations of Algebraic Stacks	47.049	DMS-1303247		52,000
CAREER: Particle-by-Particle studies of Heterogeneous Dynamics in Molecular and Colloidal Glasses	47.049	CHE-07-44322		50,842
US ATLAS Operations Programs: Empowering University Physicists to make Discoveries at the Energy Frontier	47.049	PHY-1119200		50,108
NEB: Novel Quantum Switches Using Heterogeneous Atomically Layered Nanostructures	47.049	DMR-1124894		47,976
Collaborative Research: Massive Surveys for Pulsars and Radio Transients Using the Arecibo L-band	47.049	AST-0806942		47,514
CONFORMALLY INVARIANT STATISTICAL MECHANICS MODELS	47.049	DMS-1106588		47,130
Exact solvability of the Kardar-Paroso-Zhang stochastic partial differential equation	47.049	DMS-1438867		46,389
Geometry of random Loewner chains	47.049	DMS-1308476		46,340
Questions in Stochastic Process Theory Arising from Mathematical Finance	47.049	DMS-1308483		45,800
US ATLAS Operations Programs: Empowering University Physicists to make Discoveries at the Energy Frontier	47.049	PHY-1119200		45,766
MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		44,341
The Law and Politics of Antitrust in Open Economies	47.049	SES-1228453		44,229
Optimal Treatment Policies and Adaptive Screening for Functional Predictors	47.049	DMS-1307838		43,694
CAREER: Searching for Dark Matter and Studying Galactic Particle Accelerators with VERITAS	47.049	PHY-1352567		43,284
Collaborative Research: Role of Polyoxotungstates in enhanced solubility and Transport of Tungsten in the Environment	47.049	CHE-1310368		42,345
NEB: Novel Quantum Switches Using Heterogeneous Atomically Layered Nanostructures	47.049	DMR-1124894		42,219
Open Mirror Symmetry for Toric Varieties	47.049	DMS-1206667		41,292
Problems in Mathematical General Relativity	47.049	DMS-1308164		37,408
Heegaard Floer homology, concordance, and categorification	47.049	DMS-1307879		35,922
Joint US - Africa material science institute	47.049	DMR-1069120		35,569
NEB: Novel Quantum Switches Using Heterogeneous Atomically Layered Nanostructures	47.049	DMR-1124894		34,630
MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		30,862
STOCHASTIC PROCESS RESEARCH INSPIRED BY PROBLEMS FROM MATHEMATICAL FINANCE	47.049	DMS-1138756		27,435
Preparing the Hardware Foundations of Environmental Veloes for the Advanced LIGO Era	47.049	PHY-1208007		26,184
Support for The Large Hadron Collider Physics (LHCP) 2014 Conference held at Columbia University, New York, NY, June 2-7, 2014	47.049	PHY-1434598		25,000

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
EMSW21-RTG: New Techniques in Low-Dimensional Topology and Geometry	47.049	DMS-0739392		24,944
'Mapping the Past in the Future: Science Enabled by High-Resolution Spectroscopic Stellar Surveys	47.049	AST-1107373		24,173
'Collaborative: Viscoelasticity of Nanoparticle Dispersed Polymer Melts: Experiment and Simulation	47.049	DMR-1006514		24,012
'Excitations in Landau Levels of Two-dimensional Quantum Fluids	47.049	DMR-1306976		23,219
'Directly Testing the Presence of Large-Scale Multiphase Flows in the Galactic Halo	47.049	AST-1312888		23,010
'Fully nonlinear geometric partial differential equations	47.049	DMS-1308136		21,328
'Collaborative Research: The Origin of Resistance in Nanotubes: Semi-classical to Quantum Transport in One-Dimension	47.049	DMR-1006533		21,170
'CAREER: CREATING MATERIALS VIA ACTIVE SELF-ASSEMBLY DRIVEN B Y BIOMOLECULAR MOTORS	47.049	DMR-1015486		20,825
'WAVE PROPAGATION AND RESONANCE IN COMPLEX MEDIA	47.049	DMS-07-07850		18,419
'Joint US - Africa material science institute	47.049	DMR-1069120		18,279
'Molecular Dynamics and Monte Carlo Simulations of Classical and Quantum Systems	47.049	CHE-0910943		17,826
'Collaborative Research: Automorphic Forms, Representations and L-functions	47.049	DMS-1001036		13,817
'Nanoscience and Engineering Center: Columbia Center for Electronic Transport in Molecular Nanostructure	47.049	CHE-06-41523		12,805
'FRG: Collaborative Research: Periods of Automorphic Forms and Applications to L-Functions	47.049	DMS-1065839		12,048
'Materials World Network: III-nitride Nanomaterials Growth and Control for Solid-State Cavity Quantum Electrodynamics	47.049	DMR-1108176		11,359
'NEB: Novel Quantum Switches Using Heterogeneous Atomically Layered Nanostructures	47.049	DMR-1124894		10,968
'Analytic Number Theory and its Applications, July 14-18, 2014	47.049	DMS-1403383		9,977
'Experimental Physics Research Program at Columbia University/Nevis Laboratories	47.049	PHY-0758118		9,787
'MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		8,840
'Nanoscience and Engineering Center: Columbia Center for Electronic Transport in Molecular Nanostructure	47.049	CHE-06-41523		7,846
'Algebraic Stacks	47.049	DMS-0970108		7,704
'MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		7,627
'A Research-Intensive Preparation for the Transition to Graduate School: Columbia University's Bridge to the Ph.D. in the Natural Sciences Program	47.049	AST-1015491		6,837
'Tracing Gaseous Galaxy Evolution and Galaxies as a Teaching Tool for Middle School and College Students	47.049	AST-0904059		6,319
'Improving Models of Molecular Clouds and Planetary Atmospheres: Dissociative Recombination Measurements for Molecular Ions of Astronomical Interest	47.049	AST-1107036		6,000
'Nanoscience and Engineering Center: Columbia Center for Electronic Transport in Molecular Nanostructure	47.049	CHE-06-41523		5,138
'MIRT: Building Functional Nanoarchitectures in van der Waals Materials	47.049	DMR-1122594		4,918
'Controlling Nanocomposite Properties by Nanoparticle Assembly	47.049	DMR-1408323		4,326
'CAREER: Molecular Engineering of Charge Transfer in Polymeric Materials	47.049	DMR-1351293		4,325
'Nonlinear elliptic parabolic problems in analysis and geometry	47.049	DMS-1001116		3,708
'NSF Astronomy & Astrophysics Postdoctoral Fellowship for Britt Reichborn-Kjennerud: Probing the Early Universe with Cosmic	47.049	AST-1102774		3,050
'Preparing the Hardware Foundations of Environmental Veloes for the Advanced LIGO Era	47.049	PHY-1208007		2,960
'CAREER: Visualizing the Formation of the Charge Density Wave Phase at the Atomic Scale	47.049	DMR-1056527		2,495
'Nanoscience and Engineering Center: Columbia Center for Electronic Transport in Molecular Nanostructure	47.049	CHE-06-41523		1,307
'Experimental Physics Research Program at Columbia University/Nevis Laboratories	47.049	PHY-0758118		1,137
'Nanoscience and Engineering Center: Columbia Center for Electronic Transport in Molecular Nanostructure	47.049	CHE-06-41523		654

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Quantum Critical Phenomena and Non Fermi Liquid Physics	47.049	DMR-1308236		197
MRI Instrument Development for Liquid Xenon Dark Matter Searches: An Atom Trap Trace Analysis System to Measure Ultra-Low Krypton Contamination in Xenon	47.049	PHY-0923274		180
DYNAMICS OF GAS PHASE ORGANIC REACTIONS	47.049	CHE-0910876		102
Experimental Physics Research Program at Columbia University/Nevis Laboratories	47.049	PHY-0758118		38
Nanoscience and Engineering Center: Columbia Center for Electronic Transport in Molecular Nanostructure	47.049	CHE-06-41523		3
PERIODIC PHENOMENA IN CATAclysmic BINARIES	47.049	AST-0908363		-197
Coloring and Structure	47.049	DMS-1001091		-220
Nanoscience and Engineering Center: Columbia Center for Electronic Transport in Molecular Nanostructure	47.049	CHE-06-41523		-228
SYNTHETIC, STRUCTURAL AND MECHANISTIC STUDIES OF MAIN GROUP ELEMENT COMPLEXES: ATOM TRANSFER REACTION	47.049	CHE-07-49674		-965
R&D of LXe Detector Technology for Dark Matter Experiments	47.049	PHY-1047794		-3,309
TOPICS IN ARITHMETIC ALGEBRAIC GEOMETRY	47.049	DMS-0970100		-5,233
PARTIAL DIFFERENTIAL EQUATIONS WITH RANDOM COEFFICIENTS AND INVERSE PROBLEMS	47.049	DMS-0804696		-7,233
REACTIONS OF FUNCTIONAL POLYMERS AT ORGANIC INTERFACES	47.049	DMR-0704054		-8,545
Nanoscience and Engineering Center: Columbia Center for Electronic Transport in Molecular Nanostructure	47.049	CHE-06-41523		-14,796
Nanoscience and Engineering Center: Columbia Center for Electronic Transport in Molecular Nanostructure	47.049	CHE-06-41523		-25,554
				\$18,984,707

Geosciences

Ship Operations 2012-2017	47.050	OCE-1211494		3,645,781
Oceanographic Technical Services, R/V Marcus G. Langseth, 2012-2016	47.050	OCE-1214328		2,115,267
Collaborative Research: Global Ocean Repeat Hydrography, Carbon and Tracer Measurements 2009-2014	47.050	OCE-0752980		1,467,747
Ship Operations 2012-2017	47.050	OCE-1211494		1,417,565
Geoinformatics Facilities Support: Integrated Data Collections for the Earth & Ocean Sciences: The Marien Geoscience Data System and the Geoinformatics for Geochemistry Program	47.050	OCE-0950477		1,196,007
Experimental Physics Research Program at Columbia University/Nevis Laboratories	47.050	PHY-1067934		1,152,213
LTER: Palmer Antarctica LTER: Climate Change, Ecosystem Migration and Telecommunication in an Ice- Dominated Environment	47.050	PLR-1344502		1,121,670
Ship Operations 2012-2017	47.050	OCE-1211494		1,033,477
Geoinformatics Facilities Support: Integrated Data Collections for the Earth & Ocean Sciences: The Marien Geoscience Data System and the Geoinformatics for Geochemistry Program	47.050	OCE-0950477		780,998
FESD Type 1: Pliocene Maximum Sea Level (PLIOMAX): Dynamic Ice Sheet-Earth Response in a Warmer World	47.050	OCE-1202632		626,494
Experimental Physics Research Program at Columbia University/Nevis Laboratories	47.050	PHY-1067934		447,373
Shipboard Scientific Support Equipment 2011	47.050	OCE-1115537		388,744
Collaborative Research: EaSM2: Linking near-term future changes in weather and hydroclimate in western North America to adaption for ecosystem and water management	47.050	AGS-1243204		383,146
Geoinformatics Facilities Support: Integrated Data Collections for the Earth & Ocean Sciences: The Marien Geoscience Data System and the Geoinformatics for Geochemistry Program	47.050	OCE-0950477		368,129
Collaborative Research: Tectonic and Magmatic Processes During Early-Stage Rifting: An Integrated Study of Northern Lake Malawi, Africa	47.050	EAR-1110921		351,393
Experimental Physics Research Program at Columbia University/Nevis Laboratories	47.050	PHY-1067934		300,733
LTER: Palmer Antarctica LTER: Climate Change, Ecosystem Migration and Telecommunication in an Ice- Dominated Environment	47.050	PLR-1344502		267,472
Multi-Scale Climate Information for Agricultural Planning in Southeastern South America for Coming Decades	47.050	AGS-1049066		267,467
Collaborative Research: Rolling Deck to Repository (R2R): Transforming the Academic Fleet Into an Integrated Global Observing System	47.050	OCE-0947877		251,137

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Lamont, Doherty Core Repository: Curation, Service, Professional Development, Outreach	47.050	OCE-1259124		244,493
Collab Resch:How is Rifting Exhuming the Youngest High-Pressure & Ultrahigh-Pressure Rocks on Earth	47.050	EAR-0814236		239,977
Development of Freeze Shoe Sampler to Recover Aquifer Sands with in situ Groundwater from up to 1000-ft Depth	47.050	EAR-1160753		239,651
Landslide dynamics from seismic wave inversion, satellite remote sensing, and numerical modeling	47.050	EAR-1227083		216,589
Collaborative Research: Acquisition of New Instrumentation for Geochemical Studies in the Earth and Environmental Sciences	47.050	EAR-0746273		211,287
Paleoclimate shocks: environmental variability, human vulnerability, and societal adaptation during the last millennium in the Greater Mekong Basin	47.050	GEO-0908971		187,050
Geoinformatics Facilities Support: Integrated Data Collections for the Earth & Ocean Sciences: The Marien Geoscience Data System and the Geoinformatics for Geochemistry Program	47.050	OCE-0950477		175,125
Renewal Request to ANT 09-58658: MRI-R2: Development of an ice Imaging System for Monitoring Changing Ice Sheets Mounted on the NYANG LC-130	47.050	PLR-1444690		173,429
Collaborative Research: Evolution and Hydration of the Juan de Fuca Crust and Uppermost Mantle: A Plate-scale Seismic	47.050	OCE-1029411		163,263
SHINE: Observationally Constraining the Physical Processes that Generate the Solar Wind	47.050	AGS-1060194		158,319
Collaborative Research: Global Ocean Repeat Hydrography, Carbon and Tracer Measurements 2009-2014	47.050	OCE-0752980		158,208
Collaborative Research Flow, Turbulence and mixing in Mid-Ocean ridge Fracture Zone Canyons	47.050	OCE-1235094		147,388
Drying Versus Wettening of the East African Climate	47.050	AGS-1252301		141,225
Idealized models for tropical climate dynamics	47.050	AGS-1008847		136,778
Experimental Physics Research Program at Columbia University/Nevis Laboratories	47.050	PHY-1067934		133,364
Collaborative Research: Deep Structure of Three Continental Sutures in Eastern North America	47.050	EAR-1147742		128,512
Collaborative Research: Quantifying the ocean s response to solar forcing: Multidecadal to century-scale variability of North Atlantic SST s over recent millennia	47.050	OCE-1103519		127,959
Collaborative Research: Developing New Instrumentation of Accurately Measure Heat and Mass Flux of Hydrothermal Fluids	47.050	OCE-1131455		127,839
Collaborative Research: Reconstructing Hydroclimatic Asian Monsoon Variability for the past Millennium from Tree Rings: Myanmar and Vicinity	47.050	AGS-1303976		126,708
CAREER: Characterizing the uncertainty in projection of climate change in the semi-arid tropics based on the moist static energy framework	47.050	AGS-0955372		126,554
Surface-wave Propagation across North America: New methods, Observations and Models	47.050	EAR-0952285		126,429
Testing Predictions from the Cascade and Pre-seismic Slip Models for Foreshock Occurrence with the High Precision Catalog for Northern California	47.050	EAR-0943771		125,509
Career: Very Broadband Rheology and the Internal Dynamics of Plate boundaried on Earth	47.050	EAR-1056332		121,391
The Impact of Downward Wave Coupling on the Tropospheric Circulation	47.050	AGS-1129519		120,640
Dynamical coupling of deformation and melt transport in the Earth: A combined theoretical and experimental study	47.050	EAR-1141976		120,325
Collaborative Research: Developing a Continous Replicated Reconstruction of Tropical Pacific Climate Over the Last 500-700 Years: Analysis of Massive Porites Corals from American Samoa	47.050	OCE-1203783		118,071
Accomplishment Based Renewal: Temporal Evolution of Hydrothermal and Volcanic Processes at the East Pacific Rise from Microearthquake Data	47.050	OCE -0961594		116,670
Ocean Acidification- Category 1 Calibration and application of the boron isotope seawater - pH indicator in deep-water corals	47.050	OCE-1041133		112,555
New constraints on and models of global and plate-scale anisotropic mantle structure	47.050	EAR-1315984		110,008
Petrologic study of Peridotite Carbonation in Oman:Temperture Timing and Fluid Composition	47.050	EAR-1049905		109,869
GEOTRACES Pacific section: Dissolved and particulate concentrations of selected anthropogenic radionuclides along the U.S. GEOTRACES Peru-Tahiti zonal section	47.050	OCE-1235233		107,906
Collaborative Research: P2C2 Cool and Warm Season Moisture Reconstruction and Modeling over North America	47.050	AGS-1301587		104,007
Collaborative Research: GEOTRACES Pacific Section-Nd isotopes and REEs in the South Pacific	47.050	OCE-1234687		99,944
AccuracyImprovement and Uncertainty Reduction of Spectroscopic Parameter of H2O Lines in the HITRAN	47.050	AGS-1228861		99,428
Collaborative Research: U.S. GEOTRACES North Atlantic Section: Analysis of 230Th, 232Th and 231Pa	47.050	OCE-0927064		96,660
Collaborative Research: Integrated Studies of Early Stages of Continental Extension: From Incipient (Okavango) to Young (Malawi) Rifts	47.050	EAR-1009839		95,716

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Tropical Cyclones and Climate - A Model Intercomparison Project	47.050	AGS-1143959		95,660
Collaborative Research: P2C2-Tree-Ring Reconstructions of Western North Pacific Climate Dynamics	47.050	AGS-1159430		94,589
Facility Support: The Global CMT Project	47.050	EAR-1249167		93,580
Megathrust Seismic Hazard by Reflection	47.050	OCE-0926614		92,354
Shipboard Scientific Support Equipment 2013	47.050	OCE-1317524		88,804
Collaborative Research: Dynamics of Crust-Mantle Coupling through Combined Analysis and Modeling of Earthscope Seismic, Geodetic, and Geological Data	47.050	EAR-1053292		86,702
Collaborative Research: The Behavior of sulfur during magma mixing and implications for magma degassing and ore formation	47.050	EAR-1250414		83,223
Collaborative Research: Rifting, Magmatism, and Lithospheric Sutures Crustal Imaging of the South Georgia Basin and Suwanee Suture	47.050	EAR-1144534		80,101
Collaborative Research: Seismic Reflection Data System for Marine Geosciences II	47.050	OCE-0824630		75,867
Collaborative Research: Automated Continuous Measurement of CFC and SF6 Saturations in Surface Waters	47.050	OCE-1035311		75,565
Testing geochemical proxy relationships under variable paleo-seawater chemical compositions	47.050	OCE-1232987		75,499
Collaborative Research: Quantifying Feedbacks Affecting High Altitude Climate Change	47.050	AGS-1064281		73,996
Collaborative Research: Catching the quake: Investing samples from the JFAST expedition for evidence of the 2011 Tohoku Earthquake	47.050	OCE-1260555		73,553
Towards mass balancing arc magmatic fluxes-insights from the central Mexican Volcanic Belt	47.050	EAR-1220481		72,872
Collaborative Research: The El Nino-Southern Oscillation (ENSO) Mediterranean Teleconnection: Observations and Dynamics	47.050	AGS-1205043		70,978
Collaborative Research: Structure and Composition of Oceanic Lithosphere and the Lithosphere/Asthenosphere Boundary	47.050	OCE-0928270		69,933
REU Site-Research Experience for Undergraduates: Analyzing Global Database	47.050	OCE-1263192		68,782
Collaborative Research: Hydrological variability during the last millennium from high resolution proxies	47.050	AGS-1003417		63,589
A Critical Test of the Nd Paleocirculation Proxy	47.050	OCE-1260514		63,300
Ocean Acidification: Collaborative Research: Quantifying the potential for the biogeochemical feedbacks to create refugia from ocean acidification on tropical coral reefs	47.050	OCE-1316006		62,144
Comprehensive High-Precision Relocation of Global Seismicity	47.050	EAR-1141986		62,031
Future changes in the seasonal cycle: Mechanisms and implications	47.050	AGS-0946849		60,949
Future changes in the seasonal cycle: Mechanisms and implications	47.050	AGS-0946849		59,198
Collaborative Research: Seismic Study of the Galicia S Detachment	47.050	OCE-1030650		59,182
Collaborative Research: Permanent seafloor benchmarks for geodetic measurements of horizontal and vertical plate motion	47.050	OCE-1155006		59,080
Development and Testing of Pressure Gradient Sensors to Improve Shallow Seafloor Seismic Observation	47.050	OCE-1334746		58,231
Collaborative Research: Evaluating hydrologic and ecologic responses to late-Glacial (9-33ka) abrupt climatic transitions in the coastal southwest United States	47.050	EAR-1203545		54,960
COLLABORATIVE RESEARCH: CONSTRAINING ARC PROCESS THROUGH COMPREHENSIVE GEOCHEMICAL STUDY OF THE CHILEAN SOUTHERN VOLCANIC ZONE	47.050	EAR-0948466		54,956
Collaborative Research: Strain Accumulation and release at the Kuril Subduction Zone from Postseismic Observations on the Kuril GPS Array in 2007-2014	47.050	EAR-1141792		53,123
Collaborative Research: US GEOTRACES Pacific Section: Analysis of 230Th, 232Th and 231Pa	47.050	OCE-1233688		52,514
Strategic Ozone Depletion and Recovery and Antarctic Climate Change	47.050	PLR-1341657		52,439
Collaborative Research: Imaging the Cascadia Subduction Zone: A Ship-to-shore Opportunity	47.050	EAR-1147622		52,259
Late Quaternary Variability of the Agulhas Thermohaline Valve from Nd Isotopes in Planktonic Foraminifera	47.050	OCE-1031198		49,772
Dynamics and Predictability of Tropical weather and climate from convective to intraseasonal scales through cloud-resolving ensemble analysis of sounding and radar observation	47.050	AGS-1305788		49,741
Idealized Modeling of Stratospheric Impacts on Weather and Climate	47.050	ATM-0839843		49,426
COLLABORATIVE RESEARCH: UNLOCKING THE SEISMIC SIGNATURE OF RIVERS	47.050	EAR-1148176		49,298

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
CSEDI Collaborative Research: Integrating Seismological, Rheological and Petrological Studies of Melt Production and Transport in Subduction Zones	47.050	EAR-1067974		48,414
Multi-Scale Climate Information for Agricultural Planning in Southeastern South America for Coming Decades	47.050	AGS-1049066		48,298
Geoinformatics Facilities Support: Integrated Data Collections for the Earth & Ocean Sciences: The Marien Geoscience Data System and the Geoinformatics for Geochemistry Program	47.050	OCE-0950477		46,580
A global survey of long term organic carbon decomposition in marine sediments: constraints to methanogenesis, gas hydrate formation and C cycle budget	47.050	OCE -1259274		45,442
Collaborative Research: Timing and structure of the last glacial maximum and termination in southern Peru: Implications for the role of the tropics in climate change	47.050	EAR-1003427		44,656
Boundary Sources and Sinks of 230Th, 232Th and 231Pa in the NW Pacific	47.050	OCE-1029211		44,117
Collaborative Research: Climate and Glacier change in Bhutan: the last millennia, present and future	47.050	EAR-1304351		43,771
Collaborative Research: Filling the triassic geochronologic gap: A continuous cored record of continental environmental change in western north america	47.050	EAR-0958976		42,351
Collaborative Research: Plate Tectonic and Geochemical Evolution of Young Walvis Ridge and Implications for African Plate Motion Modeling	47.050	OCE-0961450		41,301
Collaborative Research: Crustal Accretion and Mantle Processes Along the Subduction-Influenced Eastern Lau Spreading Center	47.050	OCE-0426369		40,107
Collaborative Research: The impact of time-dependent mantle rheology and 3-D structure on models and observations of glacial isostatic	47.050	EAR-1315254		40,080
Collaborative Research: The Aleutian megathrust from trench to base of the seismogenic zone integration and synthesis of laboratory, geophysical and geological data	47.050	EAR-1347312		39,758
TYPE 1 COLLABORATIVE RESEARCH: INTEGRATION OF DECADEAL CLIMATE PREDICTIONS, ECOLOGICAL MODELS AND HUMAN DECISION-MAKING T	47.050	AGS-1049120		38,289
Collaborative Research: Chemical and biological characterizations of phosphonate and polyphosphonate dynamics in marine phytoplankton	47.050	OCE-1316036		36,417
A Study of Continental Margins Amphibious Seismometry	47.050	OCE-1154795		36,184
REU Site-Research Experience for Undergraduates: Analyzing Global Database	47.050	OCE-1263192		36,059
Collaborative Research: Immersive audio-visualization of seismic wave fields in the Earth (Earthscope Education & Outreaches)	47.050	EAR-1147763		35,895
Collaborative Research: Evaluating Controls on Holocene Glacier Fluctuations and Climate Variability in the Southern Peruvian Andes	47.050	EAR-1103486		35,755
Collaborative Research: Volatile Loss during Magma Ascent and Cooling	47.050	EAR-0948533		35,566
Stratospheric and Tropical Influences on the Mid-Latitude Circulation Response to Rising Greenhouse	47.050	AGS-1317469		34,644
Deep-Sea Repository and the Curating and Maintenance of the Sediment Library and Dredge Collection	47.050	OCE-0962010		34,438
Collaborative Research: Investigating Temperature, Melting, and Mantle Flow in the North American Upper Mantle with 3-D Models of Shear Velocity, Radial Anisotropy, and Attenuation	47.050	EAR-1252039		34,202
Thermal Structure, hydration and dehydration of the entire Juan de Fuca Plate	47.050	OCE-1334831		34,141
Constraining the Past and Future Ocean Sink of Anthropogenic Carbon with Observations	47.050	OCE-1060804		34,038
Probing the roots of active volcanic systems with spectral ambient noise tomography and receiver functions	47.050	EAR-1015016		33,922
Collaborative Research: Climate and Glacier change in Bhutan: the last millennia, present and future	47.050	EAR-1304351		33,546
Collaborative Research The North Anatolian Fault system in the Marmara Sea, Turkey Insights from the Quaternary evolution of a multi-stranded transform	47.050	OCE-1234428		32,621
Support for the U.S. GEOTRACES Project Office	47.050	OCE-1129603		31,362
Collaborative Research: Evolution of Lava Channel Networks: Implications for Lava Flow Hazards and Migration	47.050	EAR-1250431		31,319
Support for the U.S. GEOTRACES Project Office	47.050	OCE-1129603		31,098
THE RESPONSE OF THE SUBARCTIC NORTH PACIFIC TO ABRUPT CLIMATE CHANGE: RECONSTRUCTING DUST FLUX AND BIOLOGICAL PRODUCTIVITY	47.050	OCE-1060907		30,813
Ocean Acidification: Collaborative Research: Establishing the Magnitude of Sea-Surface Acidification During The Paleocene-Eocene Thermal Maximum	47.050	OCE-1220554		30,725
Collaborative Research: Plutons as Ingredients for Continental crust: Pilot study of the differences between intermediate plutons and lavas in the Intra-oceanic Aleutian arc	47.050	OCE-1144759		29,529
EarthCube RCN: C4P: Collaboration and cyberinfrastructure for Paleogeosciences	47.050	ICER-1340301		29,241
CONNECTING LAVA RHEOLOGY AND FLOW DYNAMICS USING NOVEL FIELD AND MODELING TECHNIQUES	47.050	EAR-1118943		29,178
Collaborative research:Recent northeastern united States temperature records in the context of the late holocene	47.050	AGS-1303961		28,706

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Oceanographic Instrumentation 2014	47.050	OCE-1418857		28,482
COLLAB RES: UPLIFT & FAULTING AT THE TRANSITION FROM SUBDUCTION TO COLLISION A FIELD & MODELING	47.050	EAR-0607687		28,324
SCHOOL-BASED ECOLOGY AND ENVIRONMENTAL DISCOVERIES (SEEDS)	47.050	GEO-1035037		27,846
Active lava lakes as a window into magma and volcano dynamics	47.050	EAR-1348022		27,514
Collaborative Research: An Abyssal Circulation Type Section for the North Atlantic	47.050	ATM-0936496		27,350
SCHOOL-BASED ECOLOGY AND ENVIRONMENTAL DISCOVERIES (SEEDS)	47.050	GEO-1035037		25,884
Collaborative Research: Advanced modeling for understanding fluid and magma migration in subduction zones	47.050	OCE-1358091		25,415
COLLABORATIVE RESEARCH: LOCALLY-CONSTRAINED CLIMATE FIELD RE CONSTRUCTIONS OF THE LAST MILLENNIUM: METHODS AND APPLICATIONS	47.050	AGS-0902436		25,301
Collaborative Research: Assessing Climate Model Simulations of Last Glacial Maximum Ocean Circulation with Carbon Isotopes	47.050	OCE-1234971		25,292
Collaborative Research: Hawaiian and subplini	47.050	EAR-1145177		23,192
Collaborative Research: Tectonic and Magmatic Processes During Early-Stage Rifting: An Integrated Study of Northern Lake Malawi, Africa	47.050	EAR-1110921		22,703
Collaborative Research: The Pulse of Holocene Glaciations in New Zealand s Southern Alps	47.050	EAR-0823521		22,015
Coral-based Reconstruction of salinity and temperature variability in the Southern Makassar Strait and its influence on the Indonesian Throughflow	47.050	OCE-1211110		21,882
EAGER: Collaborative Research:SAVI Leveraging the Ocean Data Interoperability Platform (ODIP) for International Marine Science	47.050	OCE-1341929		21,812
Collaborative Research: Tropical Cyclones in a Warming Climate: Lessons from Model Simulations of the last Glacial Maximum and Holocene	47.050	AGS-1064081		21,553
Collaborative research on quantifying the impacts of atmospheric and land surface heterogeneity and scale on soil moisture-precipitation feedbacks	47.050	AGS-1035843		20,763
U-Series Disequilibrium in Weddell Sea Sediments: Rates of Iceberg Discharge and Impact on Global Oceans	47.050	EAR-0958276		20,753
Collaborative Research: Development and support of the MB-System software package for processing and display of swath mapping	47.050	OCE-1260599		20,742
ELT Collaborative Research: Evolutionary and ecological responses of small mammal communities to habitat and climate change over the last 5 million years	47.050	EAR-1338243		20,528
Ocean Acidification- Category 1 Climatological Mean Distribution of pH in Surface Waters in the United pH Scale and MEan Rate of changes in Selected Areas	47.050	OCE-1038891		20,359
Collaborative Research: ETBC: Amazon Influence on the Atlantic Carbon Exports From Nitrogen Fixation by Diatom Symbioses	47.050	OCE-1133277		19,377
RAPID - COLLABORATIVE RESEARCH - OFFSHORE IMPACTS OF THE TOH OKU-OKI EARTHQUAKE ON SEAFLOOR DEFORMATION, SEDIMENTATION, E	47.050	OCE-1139036		18,749
Do Creeping Faults Ever Host Large Earthquakes? An investigation of Thermal Alteration in the SAFOD Drillcore	47.050	EAR-1358585		18,022
Collaborative Research: A community seismic experiment targeting the pre-, syn- and post-rift evolution of the Mid-Atlantic US margin	47.050	OCE-1347498		16,790
The Sr-Nd-Pb-Hf isotope evolution of the Mariana Island Arc	47.050	EAR-0840848		15,458
Collaborative Research: Rifting, Magmatism, and Lithospheric Sutures Crustal Imaging of the South Georgia Basin and Suwanee Suture	47.050	EAR-1144534		14,991
Collaborative Proposal: Combined Influence of Snow cover and ENSO on North African/Mediterranean Temperature and Precipitation	47.050	AGS-1303542		14,870
Constraints on the Composition of the Subducting Oceanic Crust in the Northwest Pacific Ocean Basin	47.050	OCE-0961359		14,406
SCHOOL-BASED ECOLOGY AND ENVIRONMENTAL DISCOVERIES (SEEDS)	47.050	GEO-1035037		13,600
Collaborative Research: EaSM2: Linking near-term future changes in weather and hydroclimate in western North America to adaption for ecosystem and water management	47.050	AGS-1243204		13,293
Shipboard Scientific Support Equipment 2012	47.050	OCE-1217210		13,188
Paleoclimate shocks: environmental variability, human vulnerability, and societal adaptation during the last millennium in the Greater Mekong Basin	47.050	GEO-0908971		13,000
EarthCube RCN: C4P: Collaboration and cyberinfrastructure for Paleogeosciences	47.050	ICER-1340301		12,425
A MODEL-BASED INVESTIGATION OF CLIMATE VARIABILITY AND CLIMATE CHANGE: FOCUS ON THE WEST AFRICAN MONSOON	47.050	AGS-1000874		12,344
Surface signatures of stratospheric variability and trends	47.050	AGS-1322439		10,799
Collaborative Research: Understanding Madden-Julian Oscillation (MJO) Initiation with dynamics of the madden Julian Oscillation (DYNAMO) Observations and a Hierarchy of Models	47.050	AGS-1062206		10,056

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Investigating the Thermal Maturity of Organic Matter in Fault Zones with Laboratory Experiments	47.050	EAR-1219488		9,818
Collaborative Research: A field, laboratory and theoretical study of mixed bedrock-alluvial meandering rivers	47.050	EAR-1124114		9,271
MITIGATION OF IMPACTS OF OCEAN SCIENCES RESEARCH OF MARINE MAMMALS 2009-2011	47.050	OCE-0924111		8,774
Experimental Physics Research Program at Columbia University/Nevis Laboratories	47.050	PHY-1067934		8,682
Collaborative Research: An inverse and forward modeling synthesis of noble gases to better quantify biogeochemical cycles	47.050	OCE-1129973		8,625
COLLABORATIVE RESEARCH: COMBINED SEISMOLOGICAL AND GEODETIC CONSTRAINTS ON A 3-D MANTLE STRUCTURE	47.050	EAR-1112216		8,396
Collaborative Research: Fluid Transport and Fluid-Rock Interactions Preserved in Two Serpentinite Melanges in the Guatemala Suture Zone	47.050	EAR-1119456		8,388
Collaborative Research: Dust interaction with climate in the African Humid Period	47.050	AGS-1003505		8,263
Collaborative Research: Tectonic and Magmatic Processes During Early-Stage Rifting: An Integrated Study of Northern Lake Malawi, Africa	47.050	EAR-1110921		8,254
Geochemical Calibration of Modern Isopora and Acropora Corals from the Great Barrier Reef and Application to IODP Leg 325 Fossil Corals	47.050	OCE-1356948		7,650
Collaborative Research: Faulting Processes During Early-Stage Rifting: Analysis of an Unusual Earthquake Sequence in Northern Malawi	47.050	OCE-1049620		7,267
Collaborative Research: the role of fluids in intermediate-depth seismicity and wedge anisotropy: Case studies for Cascadia and Alaska, with a comparison to Japan	47.050	OCE-1249703		7,197
MARGINS: Collaborative Research: Illuminating the Architecture of the Greater Mount St. Helens Magmatic System from Slab to Surface	47.050	EAR-1144351		7,197
GEOMAPAPP MINI-LESSONS AND THE K-12 CLASSROOM: TRANSFORMATIV E RESSOURCES FOR THE 21ST CENTURY EDUCATOR	47.050	GEO-1035036		7,131
Petrologic study of Peridotite Carbonation in Oman:Temperture Timing and Fluid Composition	47.050	EAR-1049905		6,476
Collaborative Research: Quantifying Feedbacks Affecting High Altitude Climate Change	47.050	AGS-1064281		5,773
LTER: Palmer Antarctica LTER: Climate Change, Ecosystem Migration and Telecommunication in an Ice- Dominated Environment	47.050	PLR-1344502		5,303
Collaborative Research: Quantifying Feedbacks Affecting High Altitude Climate Change	47.050	AGS-1064281		5,153
Collaborative Research: Coring the Line Islands Ridge for Paleoceanographic Research	47.050	OCE-1158886		4,910
CAREER: Understanding moisture transport and its coupling to the large-scale energy and momentum of the Northern Hemisphere summer circulation	47.050	AGS-1255208		4,881
Development and Deployment of a Prototype Full Ocean Depth OBS	47.050	OCE-1305096		4,862
Collaborative Research: Evaluating the Roles of Melt Migration and Mantle Flow in Lithospheric Evolution: The Colorado Plateau as a Geodynamic Laboratory	47.050	EAR-0952202		4,528
Collaborative Research: Completing a 10-Year Record of Deep Western Boundary Current Observations at Line W A contribution to the Atlantic Meridional Overturning Circulation Study	47.050	OCE-1332834		4,487
Collaborative Research: Rolling Deck to Repository (R2R): Transforming the Academic Fleet Into an Integrated Global Observing System	47.050	OCE-0947877		4,167
A DEPTH TRANSECT OF SEDIMENTARY 231PA/230TH IN THE WESTERN ATLANTIC SINCE THE LAST ICE AGE	47.050	OCE-0902985		3,687
Collaborative Research: The Upper Branch of the Southern Ocean Overturning in the Southern Ocean State Estimate: Water Mass Transformation and Pathways of the 3-D Residual Circulation	47.050	OCE-1357133		3,629
Investigating the Thermal Maturity of Organic Matter in Fault Zones with Laboratory Experiments	47.050	EAR-1219488		3,519
Collaborative Research: Optimizing Multibeam Data Acquisition Operations and Quality for the U.S. Academic Research Fleet	47.050	OCE-1150520		3,169
Collaborative Research: EarthCube End-User Workshop: Deep seafloor Processes and Dynamics	47.050	OCE-1338760		3,021
Eager: Collaborative Research: EarthCube Building Blocks, Leveraging Semantics and Linked Data for Geoscience Data Sharing and Discovery	47.050	ICER-1354990		2,668
Megathrust Seismic Hazard by Reflection	47.050	OCE-0926614		2,533
2013 Oceanographic Instrumentation	47.050	OCE-1317119		2,053
RAPID: Anthropogenic radionuclides in the Atlantic Ocean 4 Decades after GEOSECS	47.050	OCE-1012154		1,894
Collaborative Research: ETBC: Amazon Influence on the Atlantic Carbon Exports From Nitrogen Fixation by Diatom Symbioses	47.050	OCE-1133277		1,821
EarthCube Domain End-User Workshop: Community-Based Cyberinfrastructure for Petrology and Geochemistry	47.050	EAR-1321723		1,702
Collaborative Research: Dissolved Phosphorus Processing by Trichodesmium Consortia: quantittative partitioning, role of microbial	47.050	OCE-1332912		1,634

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Idealized models for tropical climate dynamics	47.050	AGS-1008847		1,492
Patagonia glaciation, geochemical tracers of Atlantic Meridional Overturning Circulation, and iron	47.050	OCE-0823507		1,468
EAGER: Proof of concept: U-Th Dating of Lake-level History at Mono Basin, CA	47.050	EAR-1353272		1,409
Validation of the B/Ca proxy for surface seawater pH and application to measure anthropogenic ocean	47.050	OCE-07-51764		1,166
Multi-Scale Climate Information for Agricultural Planning in Southeastern South America for Coming Decades	47.050	AGS-1049066		1,147
REU SITE: Research Experience for Undergraduates: Analyzing Global Databases	47.050	OCE-1003931		803
Collaborative Research: Ocean Acidification: Impacts of evolution on the response of phytoplankton populations to rising CO2	47.050	OCE-1314336		647
Insolation Control of Ice Sheet Mass Balance in the 41-kyr World: a test of Multiple Hypotheses	47.050	AGS-1203320		468
GEOMAPPP MINI-LESSONS AND THE K-12 CLASSROOM: TRANSFORMATIV E RESSOURCES FOR THE 21ST CENTURY EDUCATOR	47.050	GEO-1035036		143
Paleoclimate shocks: environmental variability, human vulnerability, and societal adaptation during the last millennium in the Greater Mekong Basin	47.050	GEO-0908971		137
ESTABLISHING A LONG-TERM GEODETIC NETWORK AT THE EAST PACIFIC RISE RIDGE 2000 INTEGRATED STUDIES SITE	47.050	OCE-0647840		77
Testing the Reliability of Paleo Ventilation Estimates	47.050	OCE-1029936		34
RAPID: Continuation of U.S. GEOTRACES North Atlantic Section: CFC and SF6 Measurements	47.050	OCE-1132545		25
COLLABORATIVE RESEARCH: GRAZING AND IRON CONTROLS OF DIATOM BLOOMS IN THE ARABIAN SEA	47.050	OCE-1121039		-1
WORKSHOP PROPOSAL: RECOVERING UNCOMPROMISED SAMPLES OF AQUIFER SANDS WITH IN-SITU GROUNDWATER FROM UP TO 300-M DEPTH IN	47.050	EAR-1105148		-13
MANTLE DYNAMICS AND MAGMATISM ACROSS THE NASIN AND RANGE	47.050	EAR-07-45797		-30
COLLABORATIVE RESEARCH: ADVANCED MODELS OF MAGMA MIGRATION AT CONVERGENT MARGINS	47.050	OCE-0841079		-60
STUDIES OF UNUSUAL EARTHQUAKES: VOLCANOS AND LANDSLIDES	47.050	EAR-0944055		-81
COLLABORATIVE RESEARCH: DEVELOPMENT AND SUPPORT OF THE MB-SYSTEM SOFTWARE PACKAGE FOR PROCESSING AND DISPLAY OF ...	47.050	OCE-06-23584		-106
COLLISION OF THE BURMA ARC ACCRETIONARY PRISM AND FOLDBELT WITH THE GANGES-BRAHMAPUTRA DELTA IN BANGLADESH	47.050	EAR-06-36037		-129
Workshop on Paleo-ocean Acidification and Carbon Cycle Perturbation Events August 26-28 2010	47.050	OCE-1032374		-547
Support for the U.S. GEOTRACES Project Office	47.050	OCE-0850963		-922
EarthCube Domain End-User Workshop: Community-Based Cyberinfrastructure for Petrology and Geochemistry	47.050	EAR-1321723		-1,464
SOUTH CHINA SEA- INDONESIA SEAS TRANSPORTATION /EXCHANGE (SITE)	47.050	OCE-07-51927		-1,523
Collaborative Research: Climate and Glacier change in Bhutan: the last millennia, present and future	47.050	EAR-1256540		-6,358
REU SITE: Research Experience for Undergraduates: Analyzing Global Databases	47.050	OCE-1003931		-12,116
Career: The Atmospheric Chemistry of Ice and Snow	47.050	AGS-0845043		-12,881
Quantifying subglacial erosion rates and exploring pro-glacial bedrock as climate archive by in-situ cosmogenic C14 and Be-10 techniques	47.050	EAR-0922165		-12,914
				\$27,358,204

Computer and Information Science and Engineering

TC: Small: Improving System Security through Virtual Layered File Systems	47.070	CNS-1018355		288,761
CAREER: Bridging Game Theory, Economics and Computer Science: Equilibra, Fixed Points, and Beyond	47.070	CCF-1149257		236,500
CI-ADDO-NEW: Stan, Scalable Software for Bayesian Modeling	47.070	CNS-1205516		223,412
NetSE: Medium: ENergy Harvesting Active Networked Tags	47.070	CCF-0964497		210,466
SHF: MEDIUM: Achieving Software Reliability without True Test Oracles	47.070	CCF-1161079		208,849
A Novel Light-weight Cable-driven Active Leg Exoskeleton (C-ALEX) for training of Human Gait	47.070	IIS-1339666		204,884

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Collaborative Research: FIND: NetSerV-Architecture of a Service-Virtualized Internet	47.070	CNS-0831912		178,358
SHF: Medium: Power-Adaptive, Event-Driven Data Conversion and Signal Processing Using Asynchronous Digital Techniques	47.070	CCF-0964606		174,542
CPS: Small: The Roles of Communication in Lane Merging Systems	47.070	CNS-1035178		171,411
CGV: Small: Discrete Variational Contact, Impact, and Dissipative Dynamics	47.070	IIS-1117257		170,229
III Small: Database Processing on GPUs	47.070	IIS-1218222		161,123
SHF: Small: Designing Low-Latency and Robust Interconnection Networks with Fine-Grain Dynamic Adaptivity Using Asynchronous Techniques	47.070	CCF-1219013		151,321
RI: Small: Statistical machine translation through a tree adjoining grammar with flexible parsing operations	47.070	IIS-1161814		146,676
SHF: Medium: Compiling Parallel Algorithms to Memory Systems	47.070	CCF-1162124		145,855
CSR: Small: LOOM: A Language and System for Bypassing and Diagnosing Concurrency Errors	47.070	CNS-1117805		128,960
Algorithmic Foundations: learning and Testing Classes of Distributions	47.070	CCF-1319788		121,022
Career: Networking Rechargeable Devices: Analysis and Performance Evaluation	47.070	CNS-1054856		118,143
SHF: Medium: Type-Specific Instruction Processing	47.070	CCF-1065338		114,893
NetSE: Medium: ENergy Harvesting Active Networked Tags	47.070	CCF-0964497		112,056
NRI-Small: Collaborative Research: Assistive Robotics for Grasping and Manipulation using Novel Brain Computer Interfaces	47.070	IIS-1208153		108,507
RI: Small: Learning and Inference with Perfect Graphs	47.070	IIS-1117631		101,559
AF: Small: Research on Equilibria, Fixed Points, and Approximation	47.070	CCF 1017955		99,890
RI: Small: Dexterous Manipulation Using Predictive Thin-Shell Modeling	47.070	IIS-1217904		94,202
GOALI: Collaborative Research: CPS: Medium: Methods for Network-Enabled Embedded Monitoring and Control for High-Performance Buildings	47.070	CNS-0931870		93,835
SHF: Medium: Type-Specific Instruction Processing	47.070	CCF-1065338		91,883
RI-Medium: Collaborative: Corpus-Based Studies of Lexical, Acoustic-Prosodic, and Discourse Entrainment in Spoken Dialogue	47.070	IIS-0803148		90,031
SHF: Medium: Compiling Parallel Algorithms to Memory Systems	47.070	CCF-1162124		89,225
RI: large: Collaborative Research: Richer Representations for Machine Translation	47.070	IIS-0910778		86,952
CIF: Small: Removing Inherent Instabilities in Communication Networks	47.070	CCF-0915784		86,875
SHF: Medium: Power-Adaptive, Event-Driven Data Conversion and Signal Processing Using Asynchronous Digital Techniques	47.070	CCF-0964606		83,475
CSR: Medium: A Virtual Smartphone and Tablet System Architecture	47.070	CNS-1162447		82,567
Carer: Banalytics: Behavioral Network Analytics with Data Transparency	47.070	CNS-1254035		77,840
PA-DA-T: Design and Tools for Easy-to-Program massively Parallel On-Chip Systems Deriving Scalability through Asynchrony	47.070	CCF-0811504		74,132
CSR: Medium: Guanyin: A thousand hands with a Thousand eyes for Distributed Software Checking	47.070	CNS-0905246		71,577
Promoting Secondary spectrum markets via profitability-driven methods and algorithms	47.070	CCF-0964170		71,311
III: Small: Collaborative Research: Detection and Presentation of Community and Global Event Content from Social Media Sources	47.070	IIS-1017389		68,521
Small automatic lyric transcription for music audio	47.070	IIS-1117015		67,438
HCC: Medium: Collaborative Research: Generating Effective Dynamic Explanations in Augmented Reality	47.070	IIS-0905569		66,987
SI2-SSE: yt: Reusable Components for Simulating, Analyzing and Visualizing Astrophysical Systems	47.070	ACI-1339624		66,789
CPS: Synergy: Collaborative Research: Hybrid Continuous-Discrete Computer for Cyber-Physical Systems	47.070	CNS-1239134		65,433
CCF: SHF: Medium: Automatic Graphical Analysis of Programs to Discover and Program	47.070	CCF-1302269		64,681
NSF Career: Trustworthy hardware from untrustworthy components	47.070	CCF-1054844		63,042

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
AF: Small: Computational Aspects of Markets: Equilibria, and Fixed Points	47.070	CCF-1320654		60,091
RI: Small: Dexterous Manipulation Using Predictive Thin-Shell Modeling	47.070	IIS-1217904		58,173
NRI-Small: Collaborative Research: Assistive Robotics for Grasping and Manipulation using Novel Brain Computer Interfaces	47.070	IIS-1208153		56,953
SHF: Small: Integrated Infrastructures for On-Chip Communication and Power Management in Message-Passing Multicore Processors	47.070	CCF-1018236		55,647
AF: Small: How to Let an Adversary Compute for You	47.070	CCF-1116702		54,849
NetSE: Small Collaborative Research: Integrating Real Time Traffic Signal control with Networking Control Strategies to Optimize Urban Traffic Networks	47.070	CNS-0915026		50,633
Algorithmic Foundations: The Boundary of Learnability for Monotone Moolean Functions.	47.070	CCF-1115703		50,392
Synthesis-Driven Methods Reuse, Integration, and Programming of Specialized Accelerators in Systems-on-Chip	47.070	CCF-1219001		50,063
ADIABATIC QUANTUM OPTIMIZATION, NP-COMPLETENESS AND ANDERSON' LOCALIZATION	47.070	CCF-1017244		47,387
EAGER: Collaborative Research: Heterogeneous Cores, Memory- Hierarchy and Communication Architectures for Future CMPs	47.070	CCF-1147406		46,131
RUI: CRI: CI-ADDO-EN: Collaborative Research: MASC: A Community Resource For and By the People	47.070	CNS-1059246		44,552
RI: Small: Collaborative Research: Visual Attributes for Identification and Search in Images	47.070	IIS-1117170		40,043
III: Small: Avoiding Contention on Multicore Machines	47.070	IIS-0915956		38,103
RI: Small: Learning and Inference with Perfect Graphs	47.070	IIS-1117631		36,762
HCC: CGV Small: Mesh-Based Simulation of Thin Liquid Structures	47.070	IIS-1319483		36,326
CCF: SHF: Medium: Automatic Graphical Analysis of Programs to Discover and Program	47.070	CCF-1302269		36,120
CPS: Synergy: Collaborative Research: Hybrid Continous-Discrete Computer for Cyber-Physical Systems	47.070	CNS-1239134		35,958
SCH:INT: Large -Scale Probabilistic Phenotyping Applied to Patient Record Summarization	47.070	IIS-1344668		34,740
CAREER: New Abstractions for Sensitive Data Management in Modern Operating Systems	47.070	CNS-1351089		32,920
NetSE: Medium: ENergy Harvesting Active Networked Tags	47.070	CCF-0964497		30,231
III-COR-Small: Beyond Keyword Search: Enabling Diverse Structured Query Paradigms over Text Datab	47.070	IIS-0811038		29,647
CAREER: Abstractions for Energy Management: Vision, Architecture and Tools	47.070	CCF-1253772		29,195
NeTS: Small: Do You See What I See: Finding and Fixing Faults in the Internet	47.070	CNS-1218977		28,748
CPS: Synergy: Collaborative Research: Hybrid Continous-Discrete Computer for Cyber-Physical Systems	47.070	CNS-1239134		27,976
Student Travel Support for the SIGCOMM 2013	47.070	CNS-1341344		24,285
CSR: Small: Fluid Communication for Parallel Programs	47.070	CNS-1117135		21,250
AF-EAGER Scheduling with Resource Constraints	47.070	CCF-1349602		19,594
NetSE: Medium: ENergy Harvesting Active Networked Tags	47.070	CCF-0964497		18,822
RI-Medium: Collaborative: Corpus-Based Studies of Lexical, Acoustic-Prosodic, and Discourse Entrainment in Spoken Dialogue	47.070	IIS-0803148		17,973
SHF: Medium: RacePro: Automatically Detecting API Races in Deployed Systems	47.070	CCF-1162021		16,587
SODA 2014 Travel Grant	47.070	CCF-1348439		13,351
Student Travel to STOC 2013	47.070	CCF-1319775		13,214
CSR: Medium: Guanyin: A thousand hands with a Thousand eyes for Distributed Software Checking	47.070	CNS-0905246		11,216
Nets: Small: Toward All Videos on Demand	47.070	CNS-1017934		11,202
CAREER: Making Threats More Deterministic by Memoizing Schedules	47.070	CNS-1054906		11,055
TC: Small: Exploiting Software Elasticity for Automatic Software Self-Healing	47.070	CNS-0914845		10,384

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
DC:Small:EEGMine: A Distributed Framework for Learning on EEG Data obtained from Epilepsy Patients	47.070	IIS-0916186		10,160
ACM Multimedia 2013 Student Travel Grant	47.070	IIS-1352869		10,000
Collaborative Research: A Multirepresentational & Multilayered Treebank for Hindi/Urdu	47.070	CNS-0751089		9,147
Small: An Information Accountability Architecture for Distributed Enterprise Systems	47.070	CNS-09-14312		9,100
Collaborative Research: CI-P: Reciprosody - A Repository for Prosodically Annotated Material	47.070	CNS-1205450		7,558
RI: Small: Learning and Inference with Perfect Graphs	47.070	IIS-1117631		7,000
Enhancing Interdisciplinary Research in Security and Computer Architecture Via Tutorial at FCRC	47.070	CNS-1137656		6,604
Career: Banalytics: Behavioral Network Analytics with Data Transparency	47.070	CNS-1254035		6,251
CSR: Medium: Guanyin: A thousand hands with a Thousand eyes for Distributed Software Checking	47.070	CNS-0905246		6,000
CI-P: Collaborative Research: Summarizing Opinion and Speaker Attitude in Speech	47.070	CNS-1059260		5,429
CPS: Breakthrough: Safe Protocols in Cyber-Physical Systems (CPS)	47.070	CNS-1329593		5,249
Small automatic lyric transcription for music audio	47.070	IIS-1117015		5,000
SHF: Small: Integrated Infrastructures for On-Chip Communication and Power Management in Message-Passing Multicore Processors	47.070	CCF-1018236		4,838
CSR: Medium: Guanyin: A thousand hands with a Thousand eyes for Distributed Software Checking	47.070	CNS-0905246		4,563
TWC: Small: Virtual Private Social Networks	47.070	CNS-1318415		4,136
SHF: Medium: Compiling Parallel Algorithms to Memory Systems	47.070	CCF-1162124		3,000
TWC: Small: Auditing PII in the Cloud with CloudFence	47.070	CCF-1222748		2,826
SHF: Medium: Type-Specific Instruction Processing	47.070	CCF-1065338		2,762
TWC: Small: Auditing PII in the Cloud with CloudFence	47.070	CCF-1222748		2,600
TC: Small: Collaborative Research: Protecting Networks from Large-Scale Physical Attacks and Disaster	47.070	CNS-1018379		1,787
Collaborative Research: CI-P: Reciprosody - A Repository for Prosodically Annotated Material	47.070	CNS-1205450		1,778
CI-P: Collaborative Research: Summarizing Opinion and Speaker Attitude in Speech	47.070	CNS-1059260		1,760
Career: Networking Rechargeable Devices: Analysis and Performance Evaluation	47.070	CNS-1054856		1,588
NRI-Small: Collaborative Research: Assistive Robotics for Grasping and Manipulation using Novel Brain Computer Interfaces	47.070	IIS-1208153		1,177
Nets: Small: Toward All Videos on Demand	47.070	CNS-1017934		1,042
CCF: SHF: Medium: Automatic Graphical Analysis of Programs to Discover and Program	47.070	CCF-1302269		340
EAGER: USING SOCIAL MEDIA AND CROWDSOURCING TO CREATE A NEW AFFECT DICTIONARY	47.070	IIS-1145505		50
TEXT-TO-TEXT GENERATION FOR SUMMARIZING INFORMAL GENRES	47.070	IIS-05-34871		-1
INCREMENTAL WIZARD ABLATION: A NOVEL WOZ PARADIGM FOR LEARNING, TESTING AND EVALUATING HUMAN-MACHINE	47.070	IIS-0745369		-1,517
Small: An Information Accountability Architecture for Distributed Enterprise Systems	47.070	CNS-09-14312		-1,518
TC: Small: Collaborative Research: Protecting Networks from Large-Scale Physical Attacks and Disaster	47.070	CNS-1018379		-1,791
TRUSTWORTHY MEDIA-BLIND PASSIVE MEDIA FORENSICS FOR CONTENT INTEGRITY VERIFICATION	47.070	CNS-07-16203		-1,863
Rapid Updates and Snapshot-Based Queries Using Multiple Processors	47.070	IIS-1049898		-2,048
RI-Medium: Collaborative: Corpus-Based Studies of Lexical, Acoustic-Prosodic, and Discourse Entrainment in Spoken Dialogue	47.070	IIS-0803148		-2,123
TC: Small: Exploiting Software Elasticity for Automatic Software Self-Healing	47.070	CNS-0914845		-2,441
HCC: SMALL: COLLABORATIVE RESEARCH: ASYNCHRONY AND PERSISTENCE FOR COMPLEX CONTACT SIMULATIONS	47.070	IIS-0916129		-2,599

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
ALGORITHMIC FOUNDATION: SMALL: COLLABORATIVE RESEARCH: THE POLYNOMIAL METHOD FOR LEARNING	47.070	CCF-0915929		-3,173
A Novel Light-weight Cable-driven Active Leg Exoskeleton (C-ALEX) for training of Human Gait	47.070	IIS-1339666		-3,704
MEASURING THE SECURITY POSTURE OF LARGE FINANCIAL ENTERPRISE S: AN EAGER PROPOSAL TO NSF CCF	47.070	CCF-0950373		-7,272
EAGER: Social Information Dissemination: A Market Based Approach	47.070	CCF-1139915		-14,215
Optical reconstruction of cortical connectivity	47.070	IIS-0904353		-17,211
RI: Medium: Collaborative Research: Recognition of Materials	47.070	IIS-0964429		-25,457
				\$6,369,598

Biological Sciences

IDBR:High throughput single molecule AFM force-spectrometer	47.074	DBI-1252857		403,968
BREAD: Assessing, Understanding and Targeting Non-responsive Soils for Improved Crop Production in Smallholder Farms in Sub-Saharan Africa	47.074	IOS-1212623		240,623
CAREER: Using Advanced Statistical Techniques to Decipher the Neural Code	47.074	IOS-0641912		212,245
The Molecular Basis of cadherin-Mediated Cell Adhesion	47.074	MCB-0918535		189,028
Using DNA Curtains to Reveal the Mechanisms of Target Site Location by DNA Binding Proteins	47.074	MCB-1154511		163,205
Environmental, Endocrine and Epigenetic Drivers of Sociality in Birds	47.074	IOS-1257530		160,220
Collaborative Research: BIOMAPS Control of Spindle Positioning and Cytokinesis	47.074	MCB-1244441		154,937
Collaborative Research-Biochemically-constrained Genomic Signal Processing (BioGSP): A Multi Scale Approach to Regulatory Network Inference	47.074	DBI-0850030		121,765
Collaborative Research: Kin Structure, conflict and caste formation: the evolution of sociality in Synalpheus	47.074	IOS-1121435		118,414
Collaborative Research and NEON: MSB Category 2: PalEON - a Paleo Ecological Observatory Network to assess terrestrial ecosystem models	47.074	EF-1241930		102,424
Characterizing a Landscape of Signal Processing in the Immune System	47.074	MCB-1149728		69,317
Collaborative Research: Climate Change Impacts on Forest Biodiversity: Individual Risk to Subcontinental Impacts	47.074	EF-1137239		54,744
Coupling of sodium and substrate fluxes in the Na+/multivitamin transporter	47.074	MCB-1330730		42,316
Mechanisms for sensory prediction in a cerebellum-like circuit	47.074	IOS-1025849		33,694
Assignment and Structural Characterization of Uniformly Labeled proteins by Solid State NMR	47.074	MCB-1412253		30,261
Meeting: New frontiers for the integrative study of animal behavior, New York Genome Center, New York, NY, August 6-9, 2014	47.074	IOS-1439985		29,114
CNH: Fires in Western Amazonia: Understanding and Modeling the Roles of Climatic, Social, Demographic, and Land Use Change	47.074	DEB-0909475		28,650
Synthesis of Three Decades of Research on Tree Growth in Northern Forests in Relation to Global Climatic Change	47.074	DEB-0948827		13,467
ULTRA-Ex: Exploring Linkages Between Ecosystem Services, Public Health and the Green Area Factor in New York City	47.074	DEB-0949387		12,405
DISSERTATION RESEARCH: Do plants think globally and act locally? Combining environmental niche models with intraspecific functional trait variation in a phylogenetic context	47.074	DEB-1311367		12,313
IDBR: CMOS camera for high-frame-rate time-correlated single-photon counting	47.074	DBI-1063315		9,034
Collaborative Research: Kin Structure, conflict and caste formation: the evolution of sociality in Synalpheus	47.074	IOS-1121435		3,819
Collaborative Research: Fire, Climate, and Forest History in Mongolia	47.074	DEB-1049714		2,565
Assignment and Structural Characterization of Uniformly Labeled Proteins by Solid State NMR	47.074	MCB-07-49381		-1,380
CAREER: THE ROLE OF RIBOSOME CONFORMATIONAL DYNAMICS ON THE MECHANISM OF PROTEIN SYNTHESIS	47.074	MCB-06-44262		-7,996
IPY: Autotrophic Respiration in a Changing Arctic Climate: Mechanistic Responses and Ecosystem	47.074	EF-0732664		-10,262
Modeling Successional Vegetation Dynamics in Wet Tropical Forest at Multiple Spatial and Temporal Scales: Integrating Neighborhood Effects, Functional Traits, and Phylogeny	47.074	DEB-1050957		-114,462
				\$2,074,428

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Social, Behavioral, and Economic Sciences				
Understanding and improving environmental decisions	47.075	SES-0951516		1,206,177
Attention Networks and Cognitive Challenges: Positional Advantages in Complex and Distant Search	47.075	SES-1236931		183,098
CAREER: Integrating Neuroimaging and Patient Studies of Learning Decision Making	47.075	BCS-0955494		151,091
Decisions From Experience and the Role of Feedback in Environmental Decisions	47.075	SES-1227462		118,887
A Study Into the Effect of Employment Conditions Upon Judicial Behavior and Performance	47.075	SES-1260875		111,347
Collaborative Research: Network Dynamics and Corporate Strategies	47.075	SES-1226489		105,890
Experimentally testing the roots of poverty and violence: Changing preferences, behaviors, and outcomes	47.075	SES-1317506		105,366
Latent Space Models for Aggregated Relational Data in Social Sciences	47.075	SES-1023176		100,712
Tpe 1-L02170337: Collaborative Research: Use of Climate Information in International Negotiation for Adaptation Resources	47.075	SES-1048946		92,252
UNDERSTANDING THE DETERMINANTS OF HOUSEHOLD DEFAULT DECISION S IN THE MORTGAGE CRISIS	47.075	SES-1124188		88,560
Collaborative Research: Understanding the Connections Between Economics Behaviors	47.075	SES-1414342		85,349
Using Computational Tools to Facilitate Corpus Collection and Language Use in Arrernte	47.075	BCS-1160700		81,908
INFORMATION TRANSMISSION AND AGGREGATION	47.075	SES-1155931		76,564
Scholars Award: The Coming of Age: The Formation of the Global Science and Policy of Aging	47.075	SES-1230524		66,337
Collaborative Research: Identification, Estimation and Inference of DSGE Models	47.075	SES-0962431		65,305
Gaining Knowledge from Other Patients: Structuring and Searching the Content of Health-Related Web Posts	47.075	BCS-1027886		64,008
Heterogeneity individual decision making and matching equilibria under uncertainty	47.075	SES-1124277		58,496
The Dynamics of Controversial Practices: SEC Sunshine, Aspirational Pay, and the Evolution of Executive Compensation Networks	47.075	SES-1359666		57,910
Prices in Space and Time	47.075	SES-1127493		55,308
New Approaches for Dynamic Panel Data Analysis	47.075	SES-1357598		52,000
Matching Theory and College Admissions	47.075	SES-1260937		52,000
Topics in Dynamic Panel Data Analysis, Time-Varying Individual Heterogeneities, and Cross-Sectional Dependence	47.075	SES-0962410		47,584
Integrating Micro and Macro Evidence on Price Dynamics	47.075	SES-1056107		45,392
Two Projects on Market Design	47.075	SES-1023818		45,242
Political Communication and Accountability	47.075	SES-1260631		43,849
Collaborative Research: Testing the Orbital Theory of Ice Ages using glacial deposits in southern South America and numerical modeling	47.075	BCS-1263474		42,375
Understanding and improving environmental decisions	47.075	SES-0951516		41,749
An Investigation Into the Achilles' Heel of Currency Pegs	47.075	SES-1061711		40,643
Education and Earnings Trajectories Across Generations	47.075	SES-1226546		37,237
Understanding and improving environmental decisions	47.075	SES-0951516		36,885
Tpe 1-L02170337: Collaborative Research: Use of Climate Information in International Negotiation for Adaptation Resources	47.075	SES-1048946		36,144
Collaborative Research: Models and Analyses of Industrial Laboratories: Returns, Risks, and Structural Efficiency, with Implications for Sustainability and Science Policy	47.075	SMA-01360189		35,360
Nature-Based Tourism in Urbanizing Economies: The Case of India's Protected Areas	47.075	BCS-1029219		33,629
Collaborative Research: Transformations in Political Party Organizations and the Rise Candidate-Centered Elections in American Politics, 1878-2008	47.075	SES-0959200		32,092
Doctoral Dissertation Research in Political Science: Participation in Loyalist Protest Activities in Northern Ireland	47.075	SES-1263772		22,400

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Government Responses to Network Failures: The Case of the Manufacturing Extension Partnerships	47.075	SBE-0965187		22,389
Understanding and improving environmental decisions	47.075	SES-0951516		21,365
Nature-Based Tourism in Urbanizing Economies: The Case of India's Protected Areas	47.075	BCS-1029219		20,255
Doctoral Dissertation Research in Political Science: Do Voters Count? Voter Mediation Strategies and Access to BPL Cards in India	47.075	SES-1226998		17,639
Group size and reproductive success of female and male blue monkeys	47.075	BCS-1028471		16,491
Collaborative Research: Climatological vegetational and anthropogenic controls on channelization and shallow landsliding quantified through objective analysis of lidar data	47.075	BCS-1063231		16,275
Statistical Analysis for Cognitive Diagnosis - Theory and Applications	47.075	SES-1323977		14,786
Understanding and improving environmental decisions	47.075	SES-0951516		14,431
POSTDOCTORAL FELLOWSHIP: DESENSITIZING TRAUMA SUFFERS	47.075	SES-1027431		12,739
Doctoral Dissertation Research: Bone Marrow Transplant Practices for Children with Sickle Cell Disease in the United States and France	47.075	BCS-1225926		10,275
Understanding Public Opinion and Policymaking Using Multilevel Regression and Poststratification	47.075	SES-1023189		9,152
Doctoral Dissertation Research in Law and Social Sciences: Accountability in Multiple Fora After Extreme Mass Behavior	47.075	SES-1324123		8,407
Doctoral Dissertation Research: Black Spots: Roads and Accidents in Kenya	47.075	BCS-1225907		6,300
COLLABORATIVE RESEARCH: MULTICENTURY DROUGHT RECONSTRUCTIONS FROM GUATEMALA AND THE CONTEXT FOR PAST AND FUTURE	47.075	BCS-0852652		3,439
The Well-being of Migrant Children and Children Left Behind	47.075	SES-1027048		2,655
Group size and reproductive success of female and male blue monkeys	47.075	BCS-1028471		1,635
Doctoral Dissertation Research in Economics: Essays on the determinants of healthcare differences in US hospitals	47.075	SES-1227608		1,117
Doctoral Dissertation Research in Economics: Individual, Family and Community Impacts of Criminal Sentencing	47.075	SES-1260892		1,087
STATISTICAL ANALYSIS FOR COGNITIVE ASSESSMENT	47.075	SES-1123698		785
Dissertation Research: Chemical, Microbiological and Biological Evaluation of Nutritional Deficiencies	47.075	SES-1331190		729
Doctoral Dissertation Research: The construction & circulation of do-it-yourself (DIY) music technology	47.075	SES-1230860		573
DOCTORAL DISSERTATION RESEARCH IN POLITICAL SCIENCE: WHAT DRIVES CIVIC INTERGRATION? ANALYZING IMMIGRANT-MINORITY IDENTITY	47.075	SES-1065792		-127
How Network Structures Explain Creativity	47.075	SES-1123807		-176
HSD: COLLABORATIVE RESEARCH: HUMAN-RELATED FACTORS AFFECTING EMERGING INFECTIOUS DISEASES	47.075	BCS-0826840		-263
Rational Inattention, Random Choice, and Dynamics of Price Adjustment	47.075	SES-0820438		-1,183
Doctoral Dissertation Research in Political Science: Do Voters Count? Voter Mediation Strategies and Access to BPL Cards in India	47.075	SES-1226998		-2,216
CENTER FOR THE STUDY OF INDIVIDUAL AND GROUP DECISION MAKING UNDER CLIMATE UNCERTAINTY	47.075	SES-03-45840		-19,773
				\$3,697,932

Education and Human Resources

Graduate Research Fellowship Program (GRFP)	47.076	DGE-1144155		4,319,665
CCEP-II: Polar learning and responding polar climate education partnership	47.076	DUE-1239783		1,247,063
IGERT: Solving Urbanization Challenges by Design - A New PhD Program Between Architecture and Engine	47.076	DGE-0903597		514,391
IGERT: Optical techniques for actuation, sensing and Imaging of biological systems	47.076	DGE-0801530		443,486
IGERT: Engineering Photons for a Sustainable Future	47.076	DGE-1069240		434,907
Reducing the Racial Achievement Gap in STEM: A Social-Neurological Investigation and Values-Affirmation Intervention	47.076	DRL-1109548		428,371
IGERT: Solving Urbanization Challenges by Design - A New PhD Program Between Architecture and Engine	47.076	DGE-0903597		241,209

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
IGERT: Engineering Photons for a Sustainable Future	47.076	DGE-1069240		211,058
IGERT: Optical techniques for actuation, sensing and Imaging of biological systems	47.076	DGE-0801530		205,148
SEGUE Scholars Program	47.076	DUE-1154372		185,000
IGERT: Solving Urbanization Challenges by Design - A New PhD Program Between Architecture and Engine	47.076	DGE-0903597		165,656
CCEP-II: Polar learning and responding polar climate educationpartnership	47.076	DUE-1239783		93,966
CCEP-II: Polar learning and responding polar climate educationpartnership	47.076	DUE-1239783		41,448
CCEP-II: Polar learning and responding polar climate educationpartnership	47.076	DUE-1239783		31,256
Technology, Research and Ecology Exchange Studies	47.076	DRL-0929796		24,762
Course, Curriculum, and Laboratory Improvement(CCLI)	47.076	DUE-1319670		19,110
COLLABORATIVE RESEARCH: DEVELOPMENT OF ADAPTABLE WEB MODULES TO STIMULATE ACTIVE LEARNING IN HYDROLOGY USING DATA AND MO	47.076	DUE-1123039		17,248
IGERT: Solving Urbanization Challenges by Design - A New PhD Program Between Architecture and Engine	47.076	DGE-0903597		12,145
Graduate Research Fellowship Program (GRFP)	47.076	DGE-1144155		1,562
Technology, Research and Ecology Exchange Studies	47.076	DRL-0929796		-12,277
SEGUE Scholars Program	47.076	DUE-1154372		-71,462
				\$8,553,712

Polar Programs

Long-term Observations in the Switchyard Region of the Arctic Ocean as Part of the Arctic Observing Network (AON)	47.078	ARC-1023529		472,961
Collaborative Research: Sinking rates and nutritional quality of organic mater exported from sea ice the importance of exopolymeric substance	47.078	PLR-1023348		151,758
Long-term carbon storage shifts in high-latitude peatlands with paleoclimate change: Linking peatland modeling with paleoecology and paleohydrology	47.078	ARC-1022979		133,506
The seasonal cycle of export production in an Antarctic costal marine ecosystem	47.078	ANT-1340886		111,081
Collaborative Research: Effects of warming induced increases in shrub abundance and changing seasonality on migratory songbirds in Alaskan arctic tundra	47.078	ARC-0908444		108,088
Subglacial drainage and slip modeling in Antarctica: relating lakes to ice discharge	47.078	ANT-1043481		99,696
Geophysical constraints on the crust and upper-mantle structure of Greenland	47.078	ARC-1304346		92,494
Collaborative Research: Sampling the Ocean - Sea Ice Interaction in the Pacific Center of the Antarctic	47.078	PLR-0739509		92,062
Cape Adare Long Term Moorings (CALM): Analysis Phase	47.078	ANT-1141890		75,894
Dynamic and geochemical evolution of the lithospheric mantle beneath the Western Ross Sea Area, Antarctica	47.078	PLR-1043540		74,875
COLLABORATIVE RESEARCH: IPY GAMBIT: GAMBURSTEV GAMBURSTEV AEROGEOPHYSICAL MAPPING	47.078	ANT-0632292		68,512
COLLABORATIVE RESEARCH: EAGER: Evaluating the Larsen basin s suitability for testing the Cretaceous glaciation Hypotheses	47.078	ANT-1241574		64,444
Collaborative Research: Totten Glacier System and the Marine Record of Cryosphere - Ocean Dynamics	47.078	ANT-1143834		64,322
Collaborative Research: Terrestrial Geological Context for Glacier change in the Northeast Antarctica Peninsula	47.078	ANT-1142002		63,163
US/Chinese Collaborative Study: Investigation of Bottom Water Formation in Prydz Bay, Antarctica	47.078	ANT-1043669		61,516
Collaborative Research: Pleistocene East Antarctic Ice Sheet History as Recorded in Sediment Provenance and Chronology of High-Elevation TAM Moraines	47.078	ANT-0944475		60,519
Laboratory study of ice deformation under tidal loading conditions with application to Antarctic glaciers	47.078	PLR-1245871		58,325
Collaborative Research in IPY: Abrupt Environmental Change in the Larsen Ice Shelf System, a Multidisciplinary Approach -- Cryosphere and Oceans	47.078	ANT-07-32651		48,797
Collaborative Research: The impact of stratospheric ozone depletion/recovery on Antarctic climate	47.078	ANT-0944063		47,145
Collaborative Research: Multi-nuclide approach to systematically evaluate the scatter in surface	47.078	ANT-1043589		42,853

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
A Study of Atmospheric Dust in the WAIS Divide Ice Core Based on Sr-Nd-Pb-He Isotopes	47.078	ANT-1043471		37,565
COLLABORATIVE RESEARCH: RESOLVING CENTENNIAL-TO-MILLENNIAL-S CALE TRENDS IN GLACIER EXTENT AND LAKE SEDIMENTATION IN THE	47.078	ARC-1107885		26,836
History of the East Antarctic Ice Sheet Since the Mid-Miocene: New Evidence from Provenance of Ice Rafted Debris	47.078	ANT-0944489		22,813
CCEP-I: Polar learning and responding (polar) Climate Partnership (Supplemental)	47.078	ANT-1043271		20,474
Vulnerability of East Antarctic ice streams to warm Ocean Water Incursions	47.078	ANT-1245879		20,406
Collab Res: Gas Transfer Through Polar Sea Ice (GAPS)-Mechanisms of Turbulence Production in the Seasonal Ice Zone and Its Control of Mixed Layer Ventilation	47.078	ANT-0944643		15,516
CCEP-I: Polar learning and responding (polar) Climate Partnership (Supplemental)	47.078	ANT-1043271		9,272
Collaborative Research: Sinking rates and nutritional quality of organic mater exported from sea ice the importance of exopolymeric substance	47.078	PLR-1023348		7,330
CCEP-I: Polar learning and responding (polar) Climate Partnership (Supplemental)	47.078	ANT-1043271		7,234
Collaborative Research: East Antarctic outlet glacier contributions to the Ross Sea from chronology of detrital grains	47.078	ANT-1043619		6,208
Collaborative Research: Using Opportunistic Radon Measurements to Estimate the Gas Transfer Velocity in Partial Sea Ice Cover	47.078	ARC-1203854		5,763
CCEP-I: Polar learning and responding (polar) Climate Partnership (Supplemental)	47.078	ANT-1043271		5,748
Collaborative Research: Effects of warming induced increases in shrub abundance and changing seasonality on migratory songbirds in Alaskan arctic tundra	47.078	ARC-0908444		5,611
COLLABORATIVE RESEARCH: SAM'S CONTRIBUTION TO INCREASED OCEAN HEAT CONTENT ON THE CONTINENTAL SHELF OF THE WESTERN ANTAR	47.078	ANT-0944211		5,321
Continued Development of the AMBS as an Integrated Online Resource for Marine and Geophysical Data from the Antarctic Region	47.078	ANT-0739330		3,999
Arctic Ocean Visualization and Outreach	47.078	ARC-1022544		3,801
Long-term Observations in the Switchyard Region of the Arctic Ocean as Part of the Arctic Observing Network (AON)	47.078	ARC-1023529		3,727
Long-term carbon storage shifts in high-latitude peatlands with paleoclimate change: Linking peatland modeling with paleoecology and paleohydrology	47.078	ARC-1022979		1,654
Collab Res: Gas Transfer Through Polar Sea Ice (GAPS)-Mechanisms of Turbulence Production in the Seasonal Ice Zone and Its Control of Mixed Layer Ventilation	47.078	ANT-0944643		1,649
CCEP-I: Polar learning and responding (polar) Climate Partnership (Supplemental)	47.078	ANT-1043271		899
Continued Development of the AMBS as an Integrated Online Resource for Marine and Geophysical Data from the Antarctic Region	47.078	ANT-0739330		645
Collaborative Research: Effects of warming induced increases in shrub abundance and changing seasonality on migratory songbirds in Alaskan arctic tundra	47.078	ARC-0908444		-2,768
				\$2,201,714

Office of International and Integrative Activities

Life on a Tectonically Active Delta0Convergence of Earth Science and Geohazard Research in Bangladesh with Education and Capacity Building	47.079	IIA-0968354		608,943
Life on a Tectonically Active Delta0Convergence of Earth Science and Geohazard Research in Bangladesh with Education and Capacity Building	47.079	IIA-0968354		75,503
PIRE: International consortium for probing novel superconductors with neutrons, muons, photons and STM	47.079	OISE-0968226		60,756
PIRE: International consortium for probing novel superconductors with neutrons, muons, photons and STM	47.079	OISE-0968226		51,918
PIRE: International consortium for probing novel superconductors with neutrons, muons, photons and STM	47.079	OISE-0968226		42,930
PIRE: International consortium for probing novel superconductors with neutrons, muons, photons and STM	47.079	OISE-0968226		36,988
Non Fermi Liquid Physics and Quantum Critical Phenomena	47.079	DMR-1006282		36,830
PIRE: International consortium for probing novel superconductors with neutrons, muons, photons and STM	47.079	OISE-0968226		24,768
PIRE: International consortium for probing novel superconductors with neutrons, muons, photons and STM	47.079	OISE-0968226		18,794
PIRE: International consortium for probing novel superconductors with neutrons, muons, photons and STM	47.079	OISE-0968226		18,248
PIRE: International consortium for probing novel superconductors with neutrons, muons, photons and STM	47.079	OISE-0968226		8,791
EVOLUTIONARY GENETICS OF LAMPROLOGUS LETHOPS:	47.079	OISE-1136895		7,646

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
ARITHMETRIC GROSS-PRASAD CONJECTURE FOR UNITARY SHIMURA VARI TIES	47.079	DMS-1204365		198
				\$992,313

Office of Cyberinfrastructure

RCN-SEES: Network for Utilization of Social Science Research on Sustainability and Energy	47.080	OCI-1140174		81,787
Collaborative Research:Scientific software Innovation Institute for Advanced Analysis of X-ray and Neutron Scattering date (SIXNS)	47.080	OCI 1216719		54,610
EAGER: Policy Design for Reproducibility and Data Sharing in Computational Science	47.080	OCI-1153384		46,977
Collaborative Research:Scientific software Innovation Institute for Advanced Analysis of X-ray and Neutron Scattering date (SIXNS)	47.080	OCI 1216719		31,371
				\$214,745

Trans-NSF Recovery Act Reasearch Support

ARRA -ANT-0958658	47.082	ANT-0958658		830,892
OPERATION AND MANAGEMENT OF THE LDEO INSTRUMENT CENTER OF THE NATIONAL OCEAN BOTTOM SEISMETER POOL	47.082	OCE-0551596		401,528
ARRA -CBET-0846846	47.082	CBET-0846846		134,409
ARRA -OCE-0551596	47.082	OCE-0551596		106,531
ARRA -IIS-0904361	47.082	IIS-0904361		96,812
ARRA -ANT-0958658	47.082	ANT-0958658		84,317
ARRA -EAR-0911557	47.082	EAR-0911557		83,687
ARRA -SES-0847329	47.082	SES-0847329		74,736
ARRA -DMR-0846426	47.082	DMR-0846426		42,287
ARRA -IIS-0904361	47.082	IIS-0904361		37,175
ARRA -EAR-0902363	47.082	EAR-0902363		35,217
ARRA -OCE-0551596	47.082	OCE-0551596		34,395
ARRA -AST-0905832	47.082	AST-0905832		33,952
ARRA -ATM-0854711	47.082	ATM-0854711		28,594
ARRA -ARC-0939905	47.082	ARC-0939905		28,508
ARRA -AST-0905832	47.082	AST-0905832		23,676
ARRA -CNS-0905403	47.082	CNS-0905403		21,008
ARRA -DMS-0854964	47.082	DMS-0854964		15,249
ARRA -OCE-1030309	47.082	OCE-1030309		14,400
ARRA -CMMI-0928604	47.082	CMMI-0928604		6,661
ARRA -CMMI-0928129	47.082	CMMI-0928129		4,249
ARRA -IIS-0904514	47.082	IIS-0904514		4,061
ARRA -CBET-0853946	47.082	CBET-0853946		3,449
ARRA -DMS-0906568	47.082	DMS-0906568		1,418
ARRA -ATM-0902716	47.082	ATM-0902716		772
ARRA -CNS-0905406	47.082	CNS-0905406		750
ARRA -IOS-0920081	47.082	IOS-0920081		518

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
ARRA -IIS-0904361	47.082	IIS-0904361		374
ARRA -ECCS-0903406	47.082	ECCS-0903406		-434
ARRA -OCI-0904746	47.082	OCI-0904746		-1,214
ARRA -ARC-0902051	47.082	ARC-0902051		-1,782
ARRA -IIS-0845677	47.082	IIS-0845677		-2,026
ARRA -ATM-0934516	47.082	ATM-0934516		-6,731
ARRA -SES-0922011	47.082	SES-0922011		-8,890
ARRA -CHE-0844593	47.082	CHE-0844593		-13,608
				\$2,114,940
Total Direct Award Programs				\$78,662,438

Pass-through Awards

National Science Foundation

Bioanalytical Technology for Art: Immunological Techniques for the Identification of Proteins and Polysaccharides in Art, Archaeological and Ethnographic Objects	47.040	MMA CU10-3060	CHE-1041839	3,374
				\$3,374

Engineering Grants

NSF Engineering Research Center for Integrated Access Networks (CIAN)	47.041	UA Y503160	EEC-0812072	270,977
NSF Engineering Research Center for Integrated Access Networks (CIAN)	47.041	UA Y503160	EEC-0812072	118,315
Systems-Level Mass Fatality Preparedness	47.041	UCSF 7218SC	CMMI-1233673	51,744
NSF Engineering Research Center for Integrated Access Networks (CIAN)	47.041	UA Y503160	EEC-0812072	-2,150
NSF Science and Technology Center: Emergent Behaviors of Integrated Cellular Systems (EBICS)	47.041	MIT 5710002873	DBET-039511	-18,027
				\$420,859

Mathematical and Physical Sciences

Subcontract Cornell Center for Materials Research-CEMRI	47.049	63016-9679	DMR-110296	110,487
Particle Astrophysics at TeV Energies with VERITAS	47.049	BARNARD CU13-2783	PHY-1207211	63,305
Proposal for Support of Advanced LIGO Upgrade by Columbia University	47.049	CALTECH 75ADV-109081	NSF	59,108
Collaborative Research: MRI Consortium: Development of a Novel Telescope for Very High-Energy Gamma-Ray Astrophysics	47.049	BARNARD CU12-0519	PHY-1229205	58,157
NRAO Student Observing Support (SOS)	47.049	NRAO 343777	AST-0836064	32,000
ARRA -JH 2000897852	47.049	JH 2000897852	AST-0959349	4,332
NRAO Student Observing Support for Jennifer Weston	47.049	NRAO 341475	AST-0956545	1,064
CONTROLLING ANTISOTROPIC NANOPARTICLE ASSEMBLIES FOR APPLICATIONS	47.049	RPI A12024	DMR-0642573	-54
DISTRIBUTED DATA ANALYSIS OF NEUTRON SCATTERING EXPERIMENTS (DANSE)	47.049	CALTECH 7E-1085447	DMR0520457	-117
PROPOSAL FOR SUPPORT OF ADVANCED LIGO UPGRADE BY COLUMBIA UNIVERSITY	47.049	CALTECH 75ADV-109048	PHY-0823459	-1,075
				\$327,207

Geosciences

Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	3,823,054
Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	900,965

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	877,374
Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	765,348
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	468,842
Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	412,029
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	411,937
Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	392,860
Studies of Turbulence and Mixing in the Antarctic Circumpolar Current, A Continuation of DIMES	47.050	WHOI A100976	OCE-1232962	219,005
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	197,602
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	172,568
Integrated Data Management System for Critical Zone Observatories	47.050	SWRC 340039-55900	EAR-1332257	172,393
Super-Tech Support fro Niskin Bottle Rosette sampling on the US GEOTRACES Pacific Zonal Transect	47.050	WHOI A101096	OCE-1130870	154,864
FESD Type I: Earthquake Fault System Dynamics	47.050	UCR S-000512	EAR-1135455	152,360
Line W A Sustained Measurement Program Sampling in the North Atlantic Deep Western Boundary Current and Gulf Stream at 39N	47.050	WHOI A100634	OCE-0726720	138,187
Center for Microbial Oceanography: Research and Education (CMORE)	47.050	HWAIRC #14183	DBI-0424599	138,055
Collaborative Research: Reconstructing changes in Asian monsoon circulation during the last millennium from stable isotopes in tropical tree rings	47.050	WHOI A101032	AGS-1338734	135,727
How Cloud Processes Alter the Effects of Midlatitude Cyclones on the Atmospheric General Circulation	47.050	RFCUNY 40C96-A	AGS-1240643	112,344
Sub-award for Geo-informatics Project WF-2175	47.050	UTSU 12053601	EAR-1224638	88,035
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	84,090
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	81,935
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	60,155
FESD Type: VOICE: Volcano, Ocean, Ice, and Carbon Experiments	47.050	Harvard 130783-5069512	AGS-1338832	52,863
Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	52,625
The impact of the ozone hole on the climate of the Southern Hemisphere	47.050	MIT 5710003465	OCE-1338814	45,082
Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	42,700
Shipyard and trials support for Sikuliaq	47.050	UAF 13-0136	OCE-1012153	40,367
EarthCube Building Blocks: Deploying Web Services Across Multiple Geoscience Domains	47.050	IRIS 91-Columbia-ECBB	ICER-1343709	36,935
IODP Expedition 350 Izu Bonin Mariana: Reararc aboard the JOIDES Resolution	47.050	T350A34	OCE-0652315	34,398
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	30,564
Determining the Frictional Temperature Rise During the 2011 Tohoku Earthquake	47.050	COCEANIL SAF-13-01	OCE-0652315	30,000
Fault Zone Widths as a Parameter in Seismic Hazard Estimates	47.050	USC Y86189	EAR-1033462	28,063
Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	22,969
Evolution of the Galapagos Mantle Plume	47.050	VPTISU 478672-19020	EAR-1201903	21,582
Earthquake Surface-Wave Phase Velocity Automated Measuring System	47.050	IRIS 62-DMS	EAR-0733069	19,473
Collaborative research on quantifying the impacts of atmospheric and land surface heterogeneity and scal on soil moisture-precipitation feedbacks	47.050	RUTGERS S1775626	AGS-103596B	18,518
Shear wave anisotropy in oceanic crust	47.050	COCEANIL T335B34	OCE-062315	14,828
Fault Zone Widths as a Parameter in Seismic Hazard Estimates	47.050	USC Y86189	EAR-1033462	14,755

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Operation Densification and Upgrade of Continuous GPS Stations in Russia	47.050	IRIS 01-Columbia-SAGE	EAR-1261681	14,741
Present horizontal stress orientation in the Costa Rica subduction margin from borehole breakout analysis	47.050	COCEANIL T344B34	OCE-0652615	14,030
Permeability and temperature in ODP/IODP Hole 1256	47.050	COCEANL T335A34	OCE-0652315	13,167
Support for the Cascade Initiative Expedition Team	47.050	208991F	OCE-1139701	13,128
Fault Zone Widths as a Parameter in Seismic Hazard Estimates	47.050	USC Y86189	EAR-1033462	11,680
EarthCube Test Enterprise Governance: An Agile Approach	47.050	LDEO 1340233	ICER-1340233	11,239
EarthCube Building Blocks: Community Inventory of EarthCube Resources for Geoscience Interoperability (CINERGI)	47.050	UCSD 44142633	ICER-1343813	8,688
Operation, Densification and Upgrade of Continuous GPS Station in Russia	47.050	IRIS 39-GSN	EAR-1063471	8,275
Collaborative Research: Past and Future Drought Variability in the Mediterranean Basin	47.050	WHOI #A101033	AGS-1341066	6,940
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	6,064
Inter-Rater Reliability Study of Student Assessment Data	47.050	EDC 11595.0.01.01.00.000	DRL-1338311	5,682
Student Participation in P2 Leg 2, CLIVAR/CO2 repeat Hydrography Program	47.050	UCSD 39019777	OCE-075290	4,698
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	4,687
Participation Plan for IODP Expedition 344 (CRISP II)	47.050	COCEANL T344A34	OCE-0652615	3,476
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	3,456
Enhancing Understanding of Ocean Drilling Discoveries through the Synergy of Earth2Class and Deep Earth Academy	47.050	COCEANL SA13-32	OCE-0652315	3,363
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	2,981
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	2,904
RCN: Building a sediment experimentalist network (SEN)	47.050	UTA13-000851	EAR-1324760	2,478
Consortium for Ocean Leadership IODP-USIO Support of 2014 Summer Intern at LDEO	47.050	COCEANIL OL130129	OCE-0352500	1,600
Integrated Data Management System for Critical Zone Observatories	47.050	SWRC 340039-55900	EAR-1332257	1,398
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	147
Integrated Ocean Drilling Program - PDM	47.050	JSC 4-03	OCE-03-52500	-135
An Investigation of Abyssal Mixing and Interior Transports in North Atlantic: Tracer Studies	47.050	WHOI A100723	OCE-0926848	-281
2012 Stratigraphic Core Drilling Capaign - North Bay, NW Greenland	47.050	COCEANL CU12-1233	NSF CU12-1233	-1,608
Mapping Saharan Dust Fluxes Through the Onset and Termination of the African Humid Period in a Transect of African Humid Period	47.050	MIT 5710003310	OCE-1265343	-2,370
Operation of the LDEO Ocean-bottom Seismometer Institutional Instrument Center: Wiens Recovery Costs	47.050	IRIS 57-OMO	OCE-1112722	-62,427
				\$10,543,452

Computer and Information Science and Engineering

Teaching Computers to Follow Verbal Instructions	47.070	BROWN 00000673	IIS-1414931	59,385
CI-ADDO-NEW: Collaborative Research for the Creation of a large Multilingual Multi Layered Representational Repository of Linguistic Code Switch Data	47.070	GWU 13-S29	CNS-1343530	7,187
CPS: Synergy: Multi-Robot Cyberphysical System for Assisting Young Developmentally-Delayed Children in Learning to Walk	47.070	HARVARD 167879-5068379	CNS-1329363	864
2011 COMPUTING INNOVATION FELLOW	47.070	CRA CIF-C-22	NSF 1019343	-79
A Richly Annotated Resource for Language Processing and Linguistics Research	47.070	VASSAR CU08-7825	CNS-0708952	-150
				\$67,207

Biological Sciences

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Arabidopsis 2010: The Arabidopsis salicylic acid signaling network : A paradigm for phytohormone signaling	47.074	BOYCE 09-03	IOS-0820405	45,627
UC Center for environmental Implications of Nanotechnology	47.074	UCLA 0521 G RA124	DBI-1266377	39,611
Building Capacity n Bayesian Analysis for Practicing Ecologists	47.074	UCOL G-9646-2	DEB-114520	579
				\$85,817

Social, Behavioral, and Economic Sciences

CNH: Pluvials, Droughts, Energetics and the Mongol Empire	47.075	WVC 12-285-CU	BCS-1210360	78,674
Robot Enhanced Mobility II: The Emergence of Mobility and Socialization in Young Children	47.075	UD 33955	BSC-1252876	59,919
IBSS: Measuring Justice, Managing Equity: An Interdisciplinary, Multi-Level Approach to Understanding Bias and Equity in Police Stops and Use of Force	47.075	UCLA 0875 G RC221	SES-1329162	48,305
Storable Votes: Part II	47.075	NBER 263441002796897700	SES-1350242	44,697
Testing the Scenarion hypothesis: The effect of Alternative characterizations of uncertainty on decision structuring	47.075	RANDSM 9920110116	SES-1062015	16,432
Idea and Economic Spillovers from Publicly-funded Biomedical Research	47.075	NBER 323552000799617700	SMA-1063907	437
Globalization, Technology, and the Skill Premium	47.075	NBER 26-3523-00-0-79-614	SES-0962261	-735
				\$247,729

Education and Human Resources

Urban Climate Education Partnership	47.076	FRANKLIN CU12-1201	DUE-1239782	60,786
STILES: Transforming STEM Learning Systematic Transformation for Inquiry Learning ENvironments (STILE) for Science, Technology, Engineering, and Mathematics	47.076	TC 513134	DRL-1238643	42,623
DIP: Interaction Research in Complex Informal Learning Environments (IRCILE)	47.076	NYSCI 1	IIS-1123832	28,292
Eye Tracking Study of Environmental Science Students	47.076	EDC 11597.0.01.00.000	DRL-1331505	8,833
IGERT - Inerdisciplinary Evolution Primatology: Conservation and Human Evolution Join Behavior, Bones and Genes	47.076	RFCUNY 40A66C	DGE-0966166	3,111
				\$143,645

Office of International and Integrative Activities

PRIE: Land-use, Ecosystems Services and the Fate of Marginal lands in the Globalized World	47.079	BROWNU 00000359	OISE-0968211	158,987
PIER: International Collaboration for Education, Training, and Research in Ice Core Science(ICE-ICS)	47.079	OREGSU S1315A-D	OISE-0968391	102,414
				\$261,401

Office of Cyberinfrastructure

I-Corps Node: New York City Regional Innovation Node (NYCRIN)	47.080	RFCUNY 40D14-A	NSF OIA-1305023	196,078
Terra Populus: A Global Population/Environment Data Network	47.080	H002341901	OCI-0940818	73,044
Leadership Class Scientific and Engineering Computing: Breaking Through the Limits	47.080	UIL 2007-01077-17	CSA OCI-0725070	60,479
				\$329,601

Trans-NSF Recovery Act Reasearch Support

ARRA -WHOI A100986	47.082	WHOI A100986	OCE-1232962	83,812
				\$83,812
Total Pass-through Programs				\$12,514,104
Total:				\$91,176,542

National Aeronautics & Space Administration

Direct Awards

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
National Aeronautics & Space Administration				
Socioeconomic Data and Applications Distributed Active Archive Center (DAAC) for the EOS Data and Information Systems	43.	NNG13HQ04C		3,929,427
Continued Operation of the Earth Observing System Data and Information System (EOSDIS)	43.	NNG08HZ11C		412,815
Socioeconomic Data and Applications Center (SEDAC)				
Stakeholder engagement through the International Research Institute for Climate and Society (IRI)	43.	NNM12AA54-C		156,344
Stakeholder engagement through the International Research Institute for Climate and Society (IRI)	43.	NNM12AA54-C		147,687
Development of Climate Analysis Section for the Presidents Malaria Initiative Impact Evaluation Reports in Three Countries	43.	NNM14AA11C		33,447
				\$4,679,720
Science				
Interdisciplinary Global Research	43.001	NNX11AR63A		1,600,026
IceBridge 2012-2015: Gravity and Magnetism	43.001	NNX13AD25A		1,383,681
GISS/Sobel Cooperative Agreement (Institutional)	43.001	NNX12AB87A		600,836
Interdisciplinary Research on Climate: Climate Modeling and the Impacts of Climate Change	43.001	NNX14AB99A		381,142
Modeling and observations of atmospheric circulation and cloud processes	43.001	NNX12AB01A		322,898
Linking NASA Models and Missions to Global Change	43.001	NNX12AR20A		305,954
Development of a Self-Consistent Model for Spatial and Temporal Variation of Sea Level Integrating	43.001	NNX11AC14G		304,719
Interdisciplinary Research on Climate Science & the Impact of Climate Change	43.001	NNX10AU63A		296,875
A Time series of sea surface nitrate and nitrate based new production in the global	43.001	NNX13AI29A		293,623
Interdisciplinary Research on Climate: Climate Modeling and the Impacts of Climate Change	43.001	NNX14AB99A		265,714
Regional Indicators of Daily-to-Yearly Variability in Background Ozone to Inform Air Quality Standard Setting and Decision-Making	43.001	NNX12AF15G		263,064
Rigorous Combination of Grace and Other Data Types for Simultaneous Estimation of Temporally and Spatially Variable Melting and Glacial Isostatic Adjustment	43.001	NNX12AF34G		215,173
Generating Homochirality in Amino Acids and Sugars and Nucleosides Under Credible Prebiotic Conditions	43.001	NNX12AD89G		207,645
Spatio-temporal Dynamics of the Ganges Brahmaputra Delta: Field-validated, multi sensor analysis of interannual flooding and channel movement.	43.001	NNX12AM20G		201,796
Characterization of Large and Unusual Noctiluca Blooms in the Northern Arabian Sea and Their Role in Carbon Cycling During the Winter Monsoon	43.001	NNX11AE22G		198,756
Climate and chemistry changes from 1975 to 2000 as observed and modeled in the coupled chemistry-aerosol-climate GISS ModelE Earth System Model	43.001	NNX09AK32G		198,186
The Response of Circumbinary Disk to a Black Hole Merger	43.001	NNX11AE05G		191,217
Interdisciplinary Research on Climate: Climate Modeling and the Impacts of Climate Change	43.001	NNX14AB99A		162,349
Modeling and observations of atmospheric circulation and cloud processes	43.001	NNX12AB01A		161,779
NRA: Research Opportunities in Space and Sciences - Roses 2009	43.001	NNX11AH98G		154,790
Mid-latitude ocean underestimate in GCM cloud cover: Assessment based on Terra and Aqua measurement	43.001	NNX11AH22G		153,651
GISS/Sobel Cooperative Agreement (Institutional)	43.001	NNX12AB87A		148,573
Interdisciplinary Research on Climate: Climate Modeling and the Impacts of Climate Change	43.001	NNX14AB99A		144,311
Spatial and Temporal Characteristics of Sea Surface Salinity Fluctuations and links to the Marine Hydrological Cycle	43.001	NNX09AU68G		129,953
Error and Variability in Satellite SST Data and Global High-Resolution Analyses	43.001	NNX09AF44G		125,513
Development and Implementation of Flood Risk Mapping, Water Bodies Monitoring and Climate Information for Disaster Management and Human Health (integration within SERVIR)	43.001	NNX12AQ70G		122,146
Interdisciplinary Study of the Ocean-Ice Shelf Interface Utilizing IceBridge Data	43.001	NNX12AB70G		119,597
EdGCM: A Realistic Global Climate Modeling Experience for Educational Institutions	43.001	NNX10AT85A		108,887

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
The fate and effects of forest fire emissions injected directly into the stratosphere	43.001	NNX13AK46G		104,534
Confronting Simulations of Dwarf Galaxy Formation with Observations of Resolved Stellar Populations	43.001	NNX12AH41G		99,041
Mechanism of Magnetar Activity	43.001	NNX13AI34G		96,695
FIREBALL-2: A Path to Flight for Future UV Missions (Co-I proposal)	43.001	NNX12AF29G		93,242
Intraseasonal variability and tropical cyclones in the NASA GISS General Circulation Model	43.001	NNX13AM18G		92,240
Interdisciplinary Global Research	43.001	NNX11AR63A		85,176
GISS/Sobel Cooperative Agreement (Institutional)	43.001	NNX12AB87A		82,961
Interdisciplinary Research on Climate, Climate Modeling and the Impacts of Climate Change	43.001	NNX14AB99A		76,975
FIREBALL-2: A Path to Flight for Future UV Missions (Co-I proposal)	43.001	NNX12AF29G		73,672
GISS/Sobel Cooperative Agreement (Institutional)	43.001	NNX12AB87A		71,958
Laboratory Measurements of Electron Impact Ionization in Support of the NASA Heliophysics Research Program	43.001	NNX12AD95G		71,568
Research Opportunities In Space And Earth Sciences 2010 (ROSÉS-2010)	43.001	NNX12AF33G		67,577
Dynamic Magnetospheres of Neutron Stars	43.001	NNX10AI72G		66,736
A Novel Photon-Counting Detector for Ultraviolet Astronomy and Beyond.	43.001	NNX11AO07H		63,736
Laboratory Study of sheer heating on faults and ridges of icy satellites using transient friction experiments	43.001	NNX13AL01G		61,515
HZE-induced mammary cancer development processes in murine and humanized models, and their influence on radiation quality functions	43.001	NNX09AE95G		61,409
Global constraints on radiative properties of ice clouds using MODIS and POLDER measurements	43.001	NNX11AG81G		60,643
OPERATION ICE BRIDGE SCIENCE TEAM	43.001	NNX11AC22G		59,960
GISS/Sobel Cooperative Agreement (Institutional)	43.001	NNX12AB87A		59,564
GISS/Sobel Cooperative Agreement (Institutional)	43.001	NNX12AB87A		53,987
Equivalence Principle Implications of Modified Gravity Models	43.001	NNX10AH14G		51,314
Understanding the Physics and Evolution of Central Compact Objects	43.001	NNX12AE24G		50,563
Further Measurements of Low Temperature Dielectronic Recombination Rate Coefficients for Photoionized Cosmic Plasmas	43.001	NNX09AF74G		47,658
Laboratory Studies of Halogen Chemistry in Interstellar Clouds in Support of the NASA Astrophysics Research Program	43.001	NNX12AE25G		45,184
The General Antiparticle Spectrometer Experiment (GAPS): A Search For Antideuteron-Generated Dark Matter	43.001	NNX09AC16G		43,527
Laboratory Studies of Halogen Chemistry in Interstellar Clouds in Support of the NASA Astrophysics Research Program	43.001	NNX12AE25G		43,140
Atmospheric Circulation of Hot Exoplanets	43.001	NNX11AD65G		39,699
NRA / NASA EARTH AND SPACE SCIENCE FELLOWSHIP (NESSF) PROGRAM - 2011	43.001	NNX11AL15H		36,295
X-Ray and Radio Monitoring of the Transient AXP/SGR 1E1547.0-5408 (Cycle 8)	43.001	NNX13AC73G		34,553
GISS/Sobel Cooperative Agreement (Institutional)	43.001	NNX12AB87A		34,052
Leveraging CMIPS and NASA/GMAO Coupled Modeling Capacity for SERVIR East Africa Climate Projections.	43.001	NNX12AR39G		33,282
Optimizing Timing Searches for Gamma-ray Pulsars Using New Technologies (A05)	43.001	NNX12AO89G		33,076
High Energy Studies of Astrophysical Dust	43.001	NNX11AO09H		31,523
Linking Remote Sensing Data and Energy Balance Models for Scalable agriculture Insurance Systems for sub-Saharan Africa	43.001	NNX14AD62G		30,183
Assessign the causes for the rise in abundance and seasonal productivity of the green mixotrophic dinoflagellate Noctiluca int the Arabian Sea ecosystem	43.001	NNX13AN81H		29,682
Investigating the Physics of Hard X-ray Outburst from Sgr A* with NuSTAR	43.001	NNX13AM31H		29,102

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
An Indirect Search for Dark Matter using Antideuterons: The GAPS Experiment	43.001	NNX12AF96G		28,705
Ice sheet Sliding Constrained by Assimilation of Stratigraphic Data	43.001	NNX13AN57H		27,870
Vulnerability of the U.S. Atlantic coast to hazards associated with extreme weather storms	43.001	NNX14AD48G		22,644
Shifting Seasonal cycle, changing monsoons, and the role of sea (John Dwyer)	43.001	NNX11AL88H		21,664
Spatial and temporal Characteristics of Sea surface Salinity Fluctuations and Links to the Marine Hydrological cycle Aquarius	43.001	NNX14AI90G		21,512
Vulnerability of the U.S. Atlantic coast to hazards associated with extreme weather storms	43.001	NNX14AD48G		14,796
Measuring the Spin-Down and Dipole Magnetic field of the CCO Pulsar 1E 1207.4-5209	43.001	NNX12AD41G		13,444
Accretion-Disk Fluctuations During Multiple States of CH Cygni	43.001	NNX13AC28G		7,307
Polarized 3D radiative transfer with application to remote sensing	43.001	NNX10AN85H		5,902
Intraseasonal Variability and Tropical Cyclones in the NASA GISS General Circulation Model	43.001	NNX09AK34G		5,804
Completing a Study of the Brightest CCOs	43.001	NNX14AF05G		4,445
Radiative processes in GRB jets	43.001	NNX13AP24G		4,445
Growing up fragmented: using hyperspectral imagery to improve estimates of ecosystem services from tropical reforestation	43.001	NNX10AP49H		3,472
An Indirect Search for Dark Matter using Antideuterons: The GAPS Experiment	43.001	NNX12AF96G		1,799
Further Measurements of Low Temperature Dielectronic Recombination Rate Coefficients for Photoionized Cosmic Plasmas	43.001	NNX09AF74G		668
Analysis of Enso Dynamics and Thermodynamics in the Western Pacific Warm Pool - An Application of Multi-Sensor Satellite Observations	43.001	NNX09AF55G		628
Intraseasonal Variability and Tropical Cyclones in the NASA GISS General Circulation Model	43.001	NNX09AK34G		333
The General Antiparticle Spectrometer Experiment (GAPS): A Search For Antideuteron-Generated Dark Matter	43.001	NNX09AC16G		144
The Surface-Bulk Partitioning of Aerosol Organic Material	43.001	NNX09AF26G		-1,483
Interdisciplinary Research on Climate Science & the Impact of Climate Change	43.001	NNX10AU63A		-4,023
Radio Timing of Key Fermi Pulsars	43.001	NNX12AE32G		-4,153
Climate Decision Support in the Gulf States: Assessing the Impacts of Key Uncertainties in End-to-End	43.001	NNX10AO10G		-5,737
Dynamics of the Hydrologic Cycle in a Changing Climate: Interactions of Low Frequency Climate Mechanisms and Hydrologic Extremes	43.001	NNX09AN91H		-15,832
NRA/Research Opportunities in Space and Earth Sciences-2009	43.001	NNX10AT69G		-37,890
				\$10,995,340

Exploration

Effects of Space Radiation on the Function of Human Brain Capillaries and the Blood-Brain-Barrier: Implications for Neurodegenerative Disorders	43.003	NNX11AR03G		363,439
The effect of high LET radiation on differentiation and tumorigenesis in the human hematopoietic system: Modeling in vitro and in vivo for risk assessment	43.003	NNX14AC27G		91,873
				\$455,312

Education

Clara Orbe Graduate Student Research Program	43.008	NNX11AO01H		4,406
				\$4,406
Total Direct Award Programs				\$16,134,778

Pass-through Awards

JET PROPULSION LAB, CALIFORNIA INSTITUTE

RF hydrogen assisted molecular beam epitaxial (MBE) growth of superlattices	43.	JPL 1481056	NNN12AA01C	85,681
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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
NASA - GODDARD SPACE FLIGHT CENTER				
ROSES10 A24-COUND is a project of using NASA A-Train satellite data for IPCC climate model evaluations	43.	JPL 1446325	NMO710968	16,051
National Aeronautics & Space Administration				
Columbia University Participation in The Nuclear Spectroscopic Telescope Array (NuSTAR): Bringing the High Energy Universe Into Focus (Bridge Phase)	43.	CALTECH 44A-1085100	NNG08FD60C	297,458
Operation, Densification, and Upgrade of Continuous GNSS Stations in Russia in the Framework of MOU between LDEO & JPL	43.	JPLCIT 1452786	NAS7-03001	89,094
Downscaling of Flooded Fraction Derived from Low-Resolution Microwave Measurements	43.	AER P1635-1	NNH13CH27C	82,733
Stellar Dynamics Goes Cosmology	43.	HST-HF-51323.01-A	NAS5-26555	71,141
Support of the Messenger Principal Investigator	43.	CIW DTM-3250-1123	NASW-0002	62,535
East Africa Drought and Agricultural Productivity Assessment and Prediction System	43.	JPLCIT 1471837	NNN13D785T	60,511
Where Have All the Central Compact Objects Gone?	43.	SAO GO4-15071X	NAS8-03060	56,081
Understanding the Gas Cycle in Galaxies: Probing the Circumgalactic Medium	43.	STSCI HST-GO-12603.02-A	NAS5-26555	55,421
Towards a Detailed Understanding of T Pyx, Its Outbursts and Shell	43.	HST-GO-12448.01-A	NAS5-26555	50,790
Computational Technology for 21st Century Remote Sensing: Three-Dimensional Tomographic Reconstruction of the Aerosol-Cloud Environment (3D-TRACE)	43.	JPL 1467883	NNN13D239T	43,707
Is the CCO Associated with SNR G350.1-0.3 an Anti-Magnetar?	43.	SAO GO3-14066X	NAS8-03060	42,484
The Surprising Ejecta Geometry of Recurrent Nova T Pyx	43.	STSCI HST-GO-13400.01-A	NAS5-26555	39,062
Investigating the Nature of the Unusual 59 ms Pulsar Calvera	43.	SAO GO2-13089X	NAS8-03060	36,210
Continuing the Ephemeris of the CCO Pulsar in Puppis A	43.	SAO GO3-14064X	NAS8-03060	35,918
Carbon Biosignatures of Early Ecosystems: Picomolar Scale Compound-Specific Isotope Analyses (Pico-CSIA)	43.	UPENN 4856-CU-NASA-I80G	NNX13AI80G	34,499
Measuring the Spin-Down and Dipole Magnetic Field of the CCO Pulsar 1E 1207.4-5209	43.	SAO G02-13070X	NAS8-03060	31,569
The Energetic New Magnetar in HESS J1713-381/CTB 37B	43.	SAO G02-13071X	NAS8-03060	27,752
3D Tomography of the Earth's Particulate Atmosphere	43.	JPL 1452779	NM0710968	23,479
Discriminating Different AGN Feedback Models with Multi-scale Hydrodynamic Simulations	43.	SAO TM3-14007A	NAS8-03060	16,890
The Origin and Nature of the Emission Nebulae around Symbiotic Stars	43.	JPLCIT 1490380	NNN12AA01C	15,594
SMASH: Spitzer Merger History and Shape of the Galactic Halo	43.	JPLCIT 1501911	NNN12AA01C	14,513
Stellar Dynamics Goes Cosmology	43.	HST-HF-51323.01-A	NAS5-26555	9,272
Warm Gas Flows in the Coma Cluster	43.	HST-GO-13382.001-A	NAS5-26555	7,937
SAINTS - Supernova 1987A INTensive Survey	43.	HST-GO-11653.03-A	NASS-26555	6,905
Searching for Millisecond Pulsars in Extremely Low-Mass White Dwarf Binaries	43.	SAO GO1-12019X	NAS8-03060	5,789
Hunting for Anti-Magnetars with Chandra	43.	SAO G02-13079X	NAS8-03060	3,603
Spin-down of the 44 MS pulsar Powering HESS J1813-178	43.	SAO GO1-12075X	NAS8-03060	3,372
Columbia University Participation in The Nuclear Spectroscopic Telescope Array (NuSTAR): Bringing the High Energy Universe Into Focus (Bridge Phase)	43.	CALTECH 44A-1085100	NNG08FD60C	246
CENSUS OF THE NORMAL SPIRAL ARM REGION	43.	SAO GO1-12068C	NAS8-03060	244
Constraining Neutron Star Close Binary Evolution with the Missing Link PSR J1723-2837	43.	SAO GO2-13049B	NAS8-03060	138
				\$1,326,679
Science				
Search for Signatures of Inflation with the EBEX Balloon-Borne Instrument	43.001	UMINN A003457302	NNX13AE49G	173,635

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Quantifying thresholds in arctic tundra vegetation structure & ecosystem function using LIDAR & multispectral remote sensing	43.001	UOFIA GNK882-SB-001	NNX12AK83G	94,723
Gravity recovery and Interior Laboratory	43.001	MIT 5710003521	NNM08AA18C	87,470
Fueling Galaxies and Polluting Halos in a Dusty Universe	43.001	HST-HF-51295.01-A	NAS5-26555	86,237
Genetic Determinants of Radiation Cataract Risk	43.001	CSU G-1980-2	NNX12AB54G-000001	81,604
Hubble Fellowship: The Morphological Evolution of Dwarf Galaxies over Cosmic Time	43.001	HST-HF-51284.01A	NAS5-26555	79,990
Bridging the last few kilometers: Accounting for Subgrid mixing and spatial gradients in global aerosol models.	43.001	UIL 2008-06014-02	NNX09AK66G	73,643
Remote Sensing and Ecosystem Modeling: Research Technology Development and Applications for Earth System Science & Education	43.001	131015-5037501A-S-A	NNX12AO18A	67,100
Implication of Changing Sea-Ice on Phytoplankton and Zooplankton Biomass and Community Structure in the Bering Sea	43.001	UWIS 257K935	NNX10AP10G	63,456
Hubble Fellowship: The Morphological Evolution of Dwarf Galaxies over Cosmic Time	43.001	HST-HF-51284.01A	NAS5-26555	37,753
Global Carbon Emissions from Fires: Improving Our Understanding of Interactions Between Land Use, Fire and Climate Change	43.001	UCI 2011-2653	NNX11AF96G	35,365
Environment & Socioeconomic Outcomes of the New African Green Revolution for the NASA Research Announcement: NNHZDA001N-LCLUC	43.001	27658SUB51479	NNX13AD61G	29,242
Columbia University Participation in the Cornell Space Grant Consortium	43.001	CU 61420-9284	NNX10AI94H	25,516
An Examination of the Relationships Between Aerosol, Cloud Vertical Structure, and Cloud Radiative Forcing in Midlatitude Cyclones	43.001	UMICHG 3001568909	NNX10AM20G	24,876
Using NASA Earth Science Datasets for National Climate Assessment Indicators: Urban Impacts of Heat Waves	43.001	BMI L398061	NNX13AN71G	18,900
Fueling Galaxies and Polluting Halos in a Dusty Universe	43.001	HST-HF-51295.01-A	NAS5-26555	14,848
Global Climate Change and Human Health Exploring Impacts in the Classroom using Innovative Technology	43.001	LAGT CU10-1492	NNX10AT46A	12,163
Developing Global Building Exposure for Disaster Forecasting, Mitigation, and Response	43.001	IMAGE 12-94-01:03	NNX12AQ30G	10,322
HERSCHEL VIRGO CLUSTER SURVEY (HEVICS)	43.001	JPLCIT 1369759	NMO711043	8,589
Deep Imaging of M37, A Better Hyades	43.001	SAO G02-13025A	NAS8-03060	6,727
X-RAY IMAGING OF NOVA SHELLS	43.001	SAO G01-12041A	NAS8-03060	4,885
A CASE OF MISTAKEN IDENTITY: DISRUPTED RECYCLED PULSARS OR ORPHANED ANTI-MAGNETARS	43.001	SOA G02-13097X	NAS8-03060	4,864
The Lives and Death of Planets and Stars in the Value-Added UV Photon Catalog	43.001	NYU F7079-01	NNX12AI50G	4,445
Modeling the Star Formation Histories and Kinematics of the Magellanic Clouds	43.001	HST-AR-12632.01-A	NAS5-26555	1,602
TESTING THE ROBUSTNESS OF QUIESCENT LOW-MASS X-RAY BINARY NEUTRON STAR RADIUS MEASUREMENTS	43.001	SAO AR2-13002X	NAS8-03060	23
Type-II Superlattices for Infrared Sensing Applications	43.001	JPLCIT 1456207	NMO711221	-166
ASCII: ALL SKY GALACTIC CII	43.001	JPLCIT 1428009	NASA 711043	-576
Search for Signatures of Inflation with the EBEX Balloon-Borne Instrument	43.001	UMINN A000239302	NNX12AD50G	-2,173
THE CONTRIBUTION OF FIRES TO THE GLOBAL CARBON CYCLE	43.001	UCI #2008-1969	NNX08AF64G	-4,012
				\$1,041,051

Aeronautics

Inverse Modeling and Attainment Analysis for Improved Decision Support of PM2.5 Air Quality Regulations	43.002	UCOL 154-6102	NASA NNX09AN77G	167,409
Investigations of Spatial and Temporal Variability of Ocean and Ice Conditions In and Near the marginal Ice Zone	43.002	1548570	NNX11AN57G	147,093
				\$314,502
Total Pass-through Programs				\$2,682,232
Total:				\$18,817,010

Department of Energy

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Direct Awards				
Office of Science Financial Assistance Program				
Theoretical High Energy Physics	81.049	DE-FG02-92ER40699		1,107,517
HIGH BETA TOKAMAK RESEARCH	81.049	DE-FG02-86ER53222		909,489
Jet and Heavy Flavor Probes of the Quark-Gluon Plasma	81.049	DE-FG02-86ER40281		582,416
DNA Grafting Building Blocks Designed to Self-Assemble into Desired Nanostructures	81.049	DE-SC0008772		569,100
MAGNETO HYDRODYNAM STABILITY/ACTIVE MODE CONTROL- OFF CAMPUS THE NATIONAL SPHERICAL TORUS EXPERIMENT	81.049	DE-FG02-99ER54524		460,382
MAGNETOHYDRODYNAMICS MODE CONTROL RESEARCH IN DIII-D	81.049	DE-FG02-04ER54761		413,353
CMCSN: Many Body Methods from Chemistry to Physics: Novel Computational Techniques for Materials-Specific Modeling a Computational Materials and Chemical Science Network	81.049	DE-SC0006613		375,894
ARRA -DE-SC0001085	81.049	DE-SC0001085		318,885
ARRA -DE-SC0001085	81.049	DE-SC0001085		262,007
Continues Evaluation of Fast Processes in Clime Models Using AM Measurements	81.049	DE SC0002125		244,485
Theoretical Studies of Photoactive Molecular Systems: Electron Transfer, Energy Transport, and Optical Spectroscopy	81.049	DE-FG02-90ER14162		230,293
Extracting hot carriers from photoexcited semiconductor nanocrystals	81.049	DE-SC0010692		203,238
Catalytic Applications of H Atom Transfer from Transition-Metal Hydride Complexes	81.049	DE-FG02-97ER14807		201,953
ARRA -DE-SC0001085	81.049	DE-SC0001085		201,123
ELECTRIC TRANSPORT IN NOVEL 2-DIMENSIONAL NANOSCALE SYSTEMS	81.049	DE-FG02-05ER46215		200,293
NONLINEAR DYNAMICS OF STRONG INTERCHANGE INSTABILITIES IN A ROTATING DIPOLE-CONFINED PLASMA	81.049	DE-FG02-00ER54585 A01		198,905
ARRA -DE-SC0001085	81.049	DE-SC0001085		198,083
ARRA -DE-SC0001085	81.049	DE-SC0001085		194,236
Regularized Finite Element Formulations for Shear Band Instabilities in Metals	81.049	DE-SC0008196		193,126
Theoretical High Energy Physics	81.049	DE-SC0011941		191,778
Fundamental Studies of Metal Centered Transformations Relavant to Catalysis	81.049	DE-FG02-93ER14339		190,137
ARRA -DE-SC0001085	81.049	DE-SC0001085		173,301
Measuring the importance of valence to chemistry of nanocrystal surfaces	81.049	DE-SC0006410		172,981
Physics and Control of Locked Modes in the DIII-D Tokamak	81.049	DE-SC0008520		171,197
Improving the representationof soluble iron in climate models	81.049	DE-SC0006713		167,495
Assembling Microorganisms into Energy Converting Materials	81.049	DE-SC0007999		166,582
ARRA -DE-SC0001085	81.049	DE-SC0001085		161,959
HIGH BETA TOKAMAK RESEARCH	81.049	DE-FG02-86ER53222		160,503
ARRA -DE-SC0001085	81.049	DE-SC0001085		160,040
ARRA -DE-SC0001085	81.049	DE-SC0001085		155,963
Impact of rising greenhouse gases on mid0latitude storm tracks and associated hydroclimate variability and change	81.049	DE-SC0005107		152,526
ARRA -DE-SC0001085	81.049	DE-SC0001085		151,042
ARRA -DE-SC0001085	81.049	DE-SC0001085		145,399
ARRA -DE-SC0001085	81.049	DE-SC0001085		141,706

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Theory of Ultra-Dense Matter and the Dynamics of High Energy Interactions Involving Nuclei	81.049	DE-FG02-93ER40764		140,864
ARRA -DE-SC0001085	81.049	DE-SC0001085		137,541
Laser Dynamic Studies of Photoreactions of Single-Crystal and Nanostructured Surfaces	81.049	DE-FG02-90ER14104		130,373
ARRA -DE-SC0001085	81.049	DE-SC0001085		129,868
MAGNETO HYDRODYNAM STABILITY/ACTIVE MODE CONTROL- OFF CAMPUS THE NATIONAL SPHERICAL TORUS EXPERIMENT	81.049	DE-FG02-99ER54524		127,830
Mapping the Electron Response of Nanomaterials	81.049	DE-FG02-04ER46157		124,478
ARRA -DE-SC0001085	81.049	DE-SC0001085		122,453
ARRA -DE-SC0001085	81.049	DE-SC0001085		122,166
ARRA -DE-SC0001085	81.049	DE-SC0001085		121,376
Quantum Field Theories for Cosmology	81.049	DE-SC0006395		105,361
Theory of Surface and Interface Physics of Correlated Electron Materials	81.049	DE-FG02-04ER46169		102,269
ARRA -DE-SC0001085	81.049	DE-SC0001085		98,959
Advancing cloud lifecycle representation in numerical models using innovative analysis methods that bridge arm observation over a breadth of scales	81.049	DE-SC0006712		97,961
Type 1 Collaborative Research: Decadal predication and stochastic simulation of hydroclimate over monsoonal Asia	81.049	DE-SC0006616		95,324
ARRA -DE-SC0001085	81.049	DE-SC0001085		94,363
ARRA -DE-SC0001085	81.049	DE-SC0001085		92,934
ARRA -DE-SC0001085	81.049	DE-SC0001085		92,339
HIGH BETA TOKAMAK RESEARCH	81.049	DE-FG02-86ER53222		91,406
ARRA -DE-SC0001085	81.049	DE-SC0001085		88,237
Optimizing immobilized enzyme performance in cell-free environments to produce liquid fuels	81.049	DE-SC0007019		85,335
Type 1 Collaborative Research: Decadal predication and stochastic simulation of hydroclimate over monsoonal Asia	81.049	DE-SC0006616		84,934
Using the KL-KS Mass Difference to Search for Physics Beyond the Standard Model	81.049	DE-SC0008718		75,683
ARRA -DE-SC0001085	81.049	DE-SC0001085		75,565
Collaborative research on ecophysiological controls on Amazonian precipitation seasonality and variability	81.049	DE-SC0011094		71,626
Spectroscopy of charge carriers and traps in field-doped single crystal organic semiconductors	81.049	DE-SC0010693		65,300
STELLARATORY THEORY DESIGN	81.049	DE-FG02-95ER54333		63,518
ARRA -DE-SC0001085	81.049	DE-SC0001085		62,615
Theory of Ultra-Dense Matter and the Dynamics of High Energy Interactions Involving Nuclei	81.049	DE-FG02-93ER40764		61,210
ARRA -DE-SC0001085	81.049	DE-SC0001085		59,224
Mapping the Electron Response of Nanomaterials	81.049	DE-FG02-04ER46157		58,860
ARRA -DE-SC0001085	81.049	DE-SC0001085		55,023
Type 1 Collaborative Research: Decadal predication and stochastic simulation of hydroclimate over monsoonal Asia	81.049	DE-SC0006616		54,667
Theory of Ultra-Dense Matter and the Dynamics of High Energy Interactions Involving Nuclei	81.049	DE-FG02-93ER40764		52,109
ARRA -DE-SC0001085	81.049	DE-SC0001085		50,433
ARRA -DE-SC0001085	81.049	DE-SC0001085		49,905
Mapping the Electron Response of Nanomaterials	81.049	DE-FG02-04ER46157		45,339

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Photochemistry at interfaces	81.049	DE-FG02-91ER14226		42,558
Probing the Transition from Shallow to Deep Convection Using ASR Data and Large-Eddy Simulations	81.049	DE-SC0008720		42,092
ARRA -DE-SC0001085	81.049	DE-SC0001085		41,924
ARRA -DE-SC0001085	81.049	DE-SC0001085		37,674
ELECTRIC TRANSPORT IN NOVEL 2-DIMENSIONAL NANOSCALE SYSTEMS	81.049	DE-FG02-05ER46215		37,466
Artificially Structured Semiconductors to Model Novel Quantum Phenomena	81.049	DE-SC0010695		37,163
RESISTIVE WALL MODES AND ERROR FIELD AMPLIFICATION	81.049	DE-FG02-03ER54696		34,471
Structure-property relationship in metal carbides and bimetallic alloys	81.049	DE-SC009476		33,331
ARRA -DE-SC0001085	81.049	DE-SC0001085		30,856
Jet and Heavy Flavor Probes of the Quark-Gluon Plasma	81.049	DE-FG02-86ER40281		29,636
ARRA -DE-SC0001085	81.049	DE-SC0001085		28,843
Data Movement Dominates: Advanced Memory Technology to Address the Real Exascale Power Problem	81.049	DE-SC0005114		28,078
Present and Future Modes of Low Frequency Climate Variability	81.049	DE-SC0005108		22,160
SCANNING TUNNELING MICROSCOPY STUDIES OF THE STRUCTURE AND CHEMISTRY OF POLYCYCLIC AROMATIC HYDROCARBONS ON GRAPHITIC	81.049	DE-FG02-88ER13937		20,913
Studies of Structure and Dynamics of Light Harvesting Complex 1 of R. Sphaeroides by solid state NMR	81.049	DE-SC0002386		14,272
ARRA -DE-SC0001085	81.049	DE-SC0001085		13,549
Algorithms for Mathematical Programming with Emphasis on Bi-Level Models	81.049	DE-FG02-08ER25856		9,787
Graphene Charge transfer and chemical reactions	81.049	DE-SC0006521		8,537
HIGH BETA TOKAMAK RESEARCH	81.049	DE-FG02-86ER53222		7,635
Collaborative Proposal on Separating Forced and Unforced Decadal Predictability in Models and Observations	81.049	DE-SC0005109		7,356
Modeling the Fracture of Ice Sheets on Parallel Computers	81.049	DE-SC0002137		6,373
HIGH BETA TOKAMAK RESEARCH	81.049	DE-FG02-86ER53222		5,443
Petascale Hierarchical Modeling via Parallel Execution	81.049	DE-SC0002099		5,290
Laser Dynamic Studies of Photoreactions of Single-Crystal and Nanostructured Surfaces	81.049	DE-FG02-90ER14104		4,734
Artificially Structured Semiconductors to Model Novel Quantum Phenomena	81.049	DE-SC0010695		4,326
RESISTIVE WALL MODES AND ERROR FIELD AMPLIFICATION	81.049	DE-FG02-03ER54696		3,700
GENETIC CONTROL OF THE TRIGGER FOR THE G2/M CHECKPOINT	81.049	DE-SC0001634		2,033
Partnership for Edge Physics Simulation	81.049	DE-SC0008532		1,424
Theoretical High Energy Physics	81.049	DE-FG02-92ER40699		984
NONLINEAR DYNAMICS OF STRONG INTERCHANGE INSTABILITIES IN A ROTATING DIPOLE-CONFINED PLASMA	81.049	DE-FG02-00ER54585 A01		746
Catalytic Growth of Molecular-Scale Wiring	81.049	DE-FG02-01ER15264		77
ARRA -DE-SC0001085	81.049	DE-SC0001085		17
ARRA -DE-SC0002676	81.049	DE-SC0002676		1
LEVITATED DIPOLE EXPERIMENT	81.049	DE-FG02-98ER54459		-1
MONTE CARLO AND DETERMINISTIC 3D RADIATIVE TRANSFER WORKING TOGETHER FOR ENHANCED DETECTION AND MONI	81.049	DE-FG52-08NA28779		-16
SCANNING TUNNELING MICROSCOPY STUDIES OF THE STRUCTURE AND CHEMISTRY OF POLYCYCLIC AROMATIC HYDROCARBONS ON GRAPHITIC	81.049	DE-FG02-88ER13937		-36

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Development of enabling scientific tools to characterize the geologic subsurfaces at Hanford	81.049	DE-SC0004625		-347
Low Dose Radiation Cataract	81.049	DE-FG02-07ER64334		-969
Photochemistry at interfaces	81.049	DE-FG02-91ER14226		-1,248
Catalytic Applications of H Atom Transfer from Transition-Metal Hydride Complexes	81.049	DE-FG02-97ER14807		-11,437
				\$13,264,230

Conservation Research and Development

ARRA -DE-EE0002892	81.086	DE-EE0002892		8,962
				\$8,962

Fossil Energy Research and Development

Tagging Carbon Dioxide to Enable Quantitative Inventories of Geological Carbon Storage	81.089	DE-FE0001535		96,824
Radiocarbon as a reactive tracer for tracking permanent CO2 storage in basaltic rocks	81.089	DE-FE0004847		68,216
Radiocarbon as a reactive tracer for tracking permanent CO2 storage in basaltic rocks	81.089	DE-FE0004847		11,696
Tagging Carbon Dioxide to Enable Quantitative Inventories of Geological Carbon Storage	81.089	DE-FE0001535		6,152
				\$182,888

Department of Energy

ARRA -DE-FE0002386	81.133	DE-FE0002386		-969
				\$-969

Advanced Research Projects Agency - Energy

Biofuels from C02 using ammonia-oxidizin-bacteria in a reseverse microbial fuel cell (NON ARRA FUNDS	81.135	DE-AR0000060 -01		954,739
Vertical GaN transistors using controlled spalling for substrate heterogeneity	81.135	DE-AR00000452		4,933
ARRA -DE-AR0000100	81.135	DE-AR0000100		-17,576
ARRA -DE-AR0000060	81.135	DE-AR0000060		-585,925
				\$356,171

Total Direct Award Programs				
				\$13,811,282

Pass-through Awards

Department of Energy

US Atlas High Energy Physics	81.	BNL-221654	DE-AC02-98CH10886	774,927
The Upgrade Constuction Project (LHC ATLAS-U) For WBS 1.1 Lar Calorimeter Trigger Readout	81.	BNL 241350	DE-AC02-98CH10886	248,965
Los Alamos National Laboratory Liquid Argon Project: Fabrication of back-end electronics to read-out signals from a liquid argon detector	81.	LANL 236171-1	DE-AC52-06NA25396	149,800
Dynamical Mean Field Theory for Oxide Heterostructures	81.	ARGNTL 3F-31382	DE-AC02-06CH11357	116,829
Data Movement Dominates: Advanced Memory Technology to Address the Real Exascale Power Problem	81.	SANDIA 1426332	DOE	114,815
Design of Carbide and Bimetallic Catalysts and Electrocatalysts	81.	BNL NO.233521	DE-AC02-98CH10886	110,522
Collaborative research on the Auger mechanism in semiconductor light-emitting diode	81.	SANDIA PO1362595	DE-AC04-94AL85000	102,183
Incorporating Silicon Photonics at the System Level	81.	SANDIA 1319001	DE-AC04-94AL85000	69,165
The Nanostructure Problem in Strongly Correlated Electron and Related Materials	81.	BNL CU08-9027	DE-AC02-98CH10886	54,681
BlueGene/Q dd-2	81.	BNL 0000192571	DE -AC02-98CH10886	48,500

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
BNL LDRD Complex Modeling Student sub	81.	BNL 254938	DE-AC02-98CH10886	38,982
Understanding the Scaling Behavior of Atmosphere Models on the Argonne BG/Q Platform Using Machine Learning Techniques	81.	3F-32501-COL	DE-AC02-06CH11357	33,357
The Nanostructure Problem in Strongly Correlated Electron and Related Materials	81.	BNL CU08-9027	DE-AC02-98CH10886	30,622
New Calorimeter Readout and Trigger System Subsystem	81.	BNL 229854	DE-AC02-98CH10886	25,678
Rigorous Analysis of X-Ray Scattering from Nanoparticles	81.	BNL 186258	DE-AC02-98CH10886	25,337
Film C-Si solar cells on laser crystallized seed layers on glass	81.	NREL XGA-2-22058-01	DE-AC36-08GO28308	17,064
DOE-BNL XPD summer programming project 2013	81.	BNL 248627	DE-AC02-98CH10886	11,606
Los Alamos National Laboratory Liquid Argon Project: Fabrication of back-end electronics to read-out signals from a liquid argon detector	81.	LANL 236171-1	DE-AC52-06NAA25396	10,005
SciDAC FASTMath Project	81.	LBNL 6995308	DE-AC02-05CH11231	8,527
Grid Science - Power System Control Under Uncertainty	81.	LANL 252599	DE-AC52-06NAA25396	7,084
Phase stability of the actinides	81.	UWIS 266K755	DE-AC07-05ID1451	2,542
New Calorimeter Readout and Trigger System Subsystem	81.	BNL 229854	DE-AC02-98CH10886	608
DOE-BNL DANSE SUSTENANCE FUNDS SUBCONTRACT	81.	BNL 189607	DE-AC02-98CH10886	-243
MODELING THE BEHAVIOR OF GRAFTED NANOPARTICLES	81.	SANDIA 0964214	DE-AC04-94AL-85000	-19,811
				\$1,981,745

Office of Science Financial Assistance Program

Research Agreement with Brookhaven National labs	81.049	BNL CU09-1814	DE-AC02-98CH10886	131,679
Dedicated Beamline Facilities for Catalytic Research	81.049	UD # 31781	DE-FG02-05ER15688	99,215
Synthesis and engineering of submonolayer type-II quantum dots to enhance material properties of wide bandgap semiconductors	81.049	RFCUNY 47829A	DE-SC0003739	78,902
Rational Design of Innovative Catalytic Technologies for Biomass Derivative Utilization	81.049	UD 32826	DE-SC0001004	75,818
Controlling Structural, Electronic and Energy Flow Dynamics of Catalytic Process Through Tailored Nanostructures	81.049	UCFL 24086040-01	DE-FG02-07ER15842	54,420
Metal Modified, Nanostructured Ceria and Zirconia Oxidation Catalysts	81.049	TUFTS #DOE170	DE-FG02-05ER15730	23,403
ARRA - CON ED No. SA-SG003	81.049	CON ED No. SA-SG003	DE-DE0000197	19,200
Hofstra University Center for Climate Study (HUCCS)	81.049	HOFSTRA CU10-2003	DE-SC0001985	3,791
Nanostructure Problem in Strongly Correlated Electron and Related Materials	81.049	BNL 140169	DE-AC02-98CH10886	-12
ARRA - UTHECHC NO.1162214	81.049	UTHECHC NO.1162214	DE-AR0000023	-906
ARRA - UCOL 1547442	81.049	UCOL 1547442	DE-PS02-09ER0902	-3,404
				\$482,106

Renewable Energy Research and Development

Pt-Based Bi-metallic Monolith Catalysts for partial Oprograding of Microalgae Oil	81.087	STEVENS 2102217-015	DE-EE0006063	49,631
				\$49,631

Fossil Energy Research and Development

Big Sky Regional Carbon Sequestration Partnership - Phase III	81.089	G132-12-W3521	DE-FC26-05NT42587	88,962
Mechanisms for methane transport and hydrate accumulation in coarse-grained reservoirs	81.089	UTA13-001088	DE-FE0013919	3,169
				\$92,131

Advanced Research Projects Agency - Energy

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Highly Dispatchable and Distributed Demand Response for the Integration of Distributed Generation	81.135	AUTOGRID 41067	DE-AR00025	103,317
Multiscale Development of L10 Materials for Rare-Earth-Free permanent Magnets	81.135	NU 503020-78053	DE-AR0000186	33,423
Developing Low-Cost, Robust, and Multifunctional Battery System for Electric Vehicles: A Non-Chemical Approach	81.135	UCSD 48161882	DE-AR0000396	26,809
ARRA -RFCUNY 47832 A	81.135	RFCUNY 47832 A	DE-AR0000114	2,291
ARRA -RFCUNY 47832 A	81.135	RFCUNY 47832 A	DE-AR0000114	-36,151
				\$129,689
Total Pass-through Programs				\$2,735,302
Total:				\$16,546,584

Department of Defense

Direct Awards

Defense Advanced Research Projects Agency

MEERKATS: Maintaining EnterprisE Resiliency via Kaleidoscopic Adaptation and Transformation of Software Services	12.	FA8650-11-C-7190		818,672
ESP: Embedded Scalable Platforms for Terascale Energy-Efficient Computing	12.	HR0011-13-C-0003		685,849
MEERKATS: Maintaining EnterprisE Resiliency via Kaleidoscopic Adaptation and Transformation of Software Services	12.	FA8650-11-C-7190		274,893
MEERKATS: Maintaining EnterprisE Resiliency via Kaleidoscopic Adaptation and Transformation of Software Services	12.	FA8650-11-C-7190		237,663
MEERKATS: Maintaining EnterprisE Resiliency via Kaleidoscopic Adaptation and Transformation of Software Services	12.	FA8650-11-C-7190		127,592
ESP: Embedded Scalable Platforms for Terascale Energy-Efficient Computing	12.	HR0011-13-C-0003		98,137
ESP: Embedded Scalable Platforms for Terascale Energy-Efficient Computing	12.	HR0011-13-C-0003		74,673
ESP: Embedded Scalable Platforms for Terascale Energy-Efficient Computing	12.	HR0011-13-C-0003		52,068
MEERKATS: Maintaining EnterprisE Resiliency via Kaleidoscopic Adaptation and Transformation of Software Services	12.	FA8650-11-C-7190		45,938

Defense Threat Reduction Agency

ALLOSTERIC EFFECTORS OF CHOLINESTERASE AS PRE-TREATMENTS FOR NERVE AGENCY EXPOSURE	12.	HDTRA1-11-C-006		250,238
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Department of Defense

Targeting Class I PI3Ks in the Treatment of T-cell Acute Lymphoblastic Leukemia	12.	W81XWH-10-1-0595		-204,041
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Department of the Air Force, Air Force Research

Digitization of Nuclear Explosion Seismograms from the former Soviet Union	12.	FA9453-12-C-0206		113,881
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Department of the Army

Rapid Identification of Unknown Pathogens	12.	W911SR-11-C-0077		2,219,420
Advanced Head/Neck Protection Against Traumatic Brain Injury	12.	W911QY-12-C-0114		467,379
Automated Non-Destructive Testing and Evaluation Method for Helmets	12.	W91CRB-13-C-0060		117,923

Department of the Army, Army Medical Research

Targeting Kinase in Prostrate Cancer	12.	W81XWH-11-1-0177		159,314
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Intelligence Advanced Research Projects

IARPA StoneSoup - Minestrone	12.	FA8650-10-C-7024		1,500,467
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The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Discovering and explaining technical emergence through analysis of the language and structure of scientific publications (DETAILS)	12.	D11PC20153		825,479
Practical and Secure Database Access Using Encrypted Bloom Filters	12.	D11PC20194		464,047
IARPA StoneSoup - Minestrone	12.	FA8650-10-C-7024		359,853
Discovering and explaining technical emergence through analysis of the language and structure of scientific publications (DETAILS)	12.	D11PC20153		318,977
Discovering and explaining technical emergence through analysis of the language and structure of scientific publications (DETAILS)	12.	D11PC20153		204,637
IARPA StoneSoup - Minestrone	12.	FA8650-10-C-7024		183,380
Discovering and explaining technical emergence through analysis of the language and structure of scientific publications (DETAILS)	12.	D11PC20153		157,408
Practical and Secure Database Access Using Encrypted Bloom Filters	12.	D11PC20194		107,939
Practical and Secure Database Access Using Encrypted Bloom Filters	12.	D11PC20194		105,115
Discovering and explaining technical emergence through analysis of the language and structure of scientific publications (DETAILS)	12.	D11PC20153		79,538
Discovering and explaining technical emergence through analysis of the language and structure of scientific publications (DETAILS)	12.	D11PC20153		11,107
Discovering and explaining technical emergence through analysis of the language and structure of scientific publications (DETAILS)	12.	D11PC20153		3,840
Discovering and explaining technical emergence through analysis of the language and structure of scientific publications (DETAILS)	12.	D11PC20153		-144
				\$9,861,242

Basic and Applied Scientific Research

Symbiotic, Polymorphic, Autotomic, Resilient, Clean-Slate, Host Security (SPARCHS)	12.300	FA8750-10-2-0253		1,084,147
DRATS: Detecting Relations and Anomalies in Text and Speech	12.300	FA8750-12-2-0347		892,121
Imaging how a neuron computes	12.300	W911NF-12-1-0594		881,798
Multifunctional Weathering System for Life Cycle Performance Investigation of Emerging Polymer Materials and Structures	12.300	N00014-13-1-0795		480,325
Symbiotic, Polymorphic, Autotomic, Resilient, Clean-Slate, Host Security (SPARCHS)	12.300	FA8750-10-2-0253		285,576
Integrated Molecular-Scale Electronic Devices via DNA Nanostructure Assembly	12.300	N00014-09-1-1117		271,018
Atomically Clean Graphene/Boron Nitride Heterostructures for Ultrahigh Performance and Multilayer Circuit Architecture	12.300	N00014-13-1-0662		234,081
Symbiotic, Polymorphic, Autotomic, Resilient, Clean-Slate, Host Security (SPARCHS)	12.300	FA8750-10-2-0253		220,442
DRATS: Detecting Relations and Anomalies in Text and Speech	12.300	FA8750-12-2-0347		188,120
Development of Semiconductor Spin Clocks	12.300	N00014-13-1-0316		185,988
Integrated Molecular-Scale Electronic Devices via DNA Nanostructure Assembly	12.300	N00014-09-1-1117		181,503
Nonlinear Channelizer: tunable RF Filters, integrated detectors, and coupled oscillators based on ultrahigh-Q optoelectronic oscillators in the CMOS Platform	12.300	N00014-14-1-0041		178,699
Symbiotic, Polymorphic, Autotomic, Resilient, Clean-Slate, Host Security (SPARCHS)	12.300	FA8750-10-2-0253		155,761
Ocean Surface Temperature to Atmosphere-Ocean Interaction of the MJO	12.300	N00014-11-1-0853		143,333
The Role of water in moisture swing absorption of CO2	12.300	N00014-13-1-0853		140,840
Engineered systems consisting of biological electronic devices integrated with CMOS nanoelectronics	12.300	N00014-13-1-0375		120,832
Continental Shelf Embayment of the Eastern Margin of the Philippines: Lamon Bay Stratification and Circulation	12.300	N00014-13-1-0275		118,837
Optimizing Energy Absorption in Hybrid Metal-Polymer-Composite-Ceramics (MPC2) Plates	12.300	N00014-12-1-0558		113,162
Filtered near-field thermal radiation: Isolating surface phonon polariton resonances in near-field radiative transfer	12.300	N00014-12-1-0996		111,439
Imaging how a neuron computes	12.300	W911NF-12-1-0594		109,200
Nonconvex Combinatorial Nonlinear Optimization: New Methodologies and Critical Applications	12.300	N00014-13-1-0042		105,845

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
High Performance Graphene Electronics on Pliable Substrates	12.300	N00014-12-1-0814		100,580
DRATS: Detecting Relations and Anomalies in Text and Speech	12.300	FA8750-12-2-0347		89,191
Imaging how a neuron computes	12.300	W911NF-12-1-0594		85,471
Next Generation of Advanced Laser Fluorescence Technology for Characterization of Natural Aquatic Environments	12.300	N00014-10-1-0205		85,438
DRATS: Detecting Relations and Anomalies in Text and Speech	12.300	FA8750-12-2-0347		84,717
Transparently Extending Programs at Compilation to Prevent Bugs	12.300	N00014-12-1-0166		82,919
Methods for System-Level Design and Programming of Heterogeneous Embedded Multi-Core Platforms	12.300	N00014-10-1-0739		81,714
Transparently Extending Programs at Compilation to Prevent Bugs	12.300	N00014-12-1-0166		77,734
Validation of Biogeochemical Measurements in the Arctic Ocean from Virginia and Sea Wolf Class Submarines	12.300	N00014-11-1-0517		75,215
SOLAR: Sparse and Low-Rank Object Approximation	12.300	N00014-13-1-0492		67,411
Imaging how a neuron computes	12.300	W911NF-12-1-0594		50,198
Imaging how a neuron computes	12.300	W911NF-12-1-0594		45,851
Passive Visual Intrusion Detection	12.300	N00014-11-1-0285		40,627
Bay of Bengal Surface and Thermocline and the Arabian Sea	12.300	N00014-14-1-0065		29,747
Imaging how a neuron computes	12.300	W911NF-12-1-0594		27,989
Remote Monitoring of Subsurface Flow Conditions in Rivers	12.300	N00014-11-1-0922		22,817
Extremely Low Rate Sampling for Distributed Detection, Estimation and Tracking	12.300	N00014-12-1-0043		22,662
Imaging how a neuron computes	12.300	W911NF-12-1-0594		21,525
Ocean Surface Wave Optical Roughness: Analysis of Innovative Measurements	12.300	N00014-11-1-0168		16,069
A Lagrangian Approach to Emerging Dynamics in the Marginal Ice Zone	12.300	N00014-11-1-0977		16,010
A Lagrangian Approach to Emerging Dynamics in the Marginal Ice Zone	12.300	N00014-11-1-0977		9,512
Bay of Bengal Surface and Thermocline and the Arabin Sea	12.300	N00014-13-1-0200		9,174
Electronics from One-dimensional Nanostructures of Two-Dimensional Materials	12.300	N00014-14-1-0501		8,771
Integrated Molecular-Scale Electronic Devices via DNA Nanostructure Assembly	12.300	N00014-09-1-1117		8,681
Validation of Biogeochemical Measurements in the Arctic Ocean from Virginia and Sea Wolf Class Submarines	12.300	N00014-11-1-0517		6,519
Integrated Molecular-Scale Electronic Devices via DNA Nanostructure Assembly	12.300	N00014-09-1-1117		3,196
Integrated Molecular-Scale Electronic Devices via DNA Nanostructure Assembly	12.300	N00014-09-1-1117		307
Graph-based Semi-Supervised Learning for Structure Discovery and Semantic Information Inferencing	12.300	N00014-10-1-0242		-7
The role of water in moisture swing absorption of CO2	12.300	N00014-12-1-0950		-43
Continental Shelf Embayments of the Eastern Margin of the Philippines: Lamon Bay stratification & circulation	12.300	N00014-10-1-0426		-360
A Lagrangian Approach to Emerging Dynamics in the Marginal Ice Zone	12.300	N00014-11-1-0977		-10,610
Integrated Molecular-Scale Electronic Devices via DNA Nanostructure Assembly	12.300	N00014-09-1-1117		-38,388
				\$7,323,704

Basic Scientific Research - Combating Weapons of Mass Destruction

Interfacial nonlinear spectroscopies as analytical methods for detection	12.351	HDTRA1-11-1-0002		283,925
Power Grid Vulnerability and Resilience to Geographically Correlated Failures	12.351	HDTRA1-13-1-0021		269,400

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Investigation of Data-Intensive Discovery Methods for Improved Seismic Monitoring	12.351	HDTRA1-11-1-0027		241,833
Improving Sensing with Tethered Capture and Surface Diffusion	12.351	HDTRA 1-12-1-0037		139,273
Physics of Radiation Exposure and Characterization for Future Electronic Materials	12.351	HDTRA1-11-1-0022		106,585
Power Grid Vulnerability and Resilience to Geographically Correlated Failures	12.351	HDTRA1-13-1-0021		94,840
Physics of Radiation Exposure and Characterization for Future Electronic Materials	12.351	HDTRA1-11-1-0022		77,644
Physics of Radiation Exposure and Characterization for Future Electronic Materials	12.351	HDTRA1-11-1-0022		37,756
Resilience of Networks to Geographically Corrected Failures	12.351	DTRA HDTRA10910057		14,453
				\$1,265,709

Military Medical Research and Development

A cell-based assay to identify neuroprotective molecules for the treatment of amyotrophic lateral sclerosis	12.420	W81XWH-13-1-0416		596,136
Activation of mTor Signaling by Gene Transduction to Induce Axon Regeneration in the Central Nervous System Following Neural Injury	12.420	W81XWH-12-1-0051		536,012
Ready-to-Use Tissue Construct for Military Bone and Cartilage Trauma	12.420	W81XWH-10-1-0933		481,819
Interaction of Synuclein and Inflammation in Dopaminergic Neurodegeneration	12.420	W81XWH-08-1-0465		451,404
The loss of proprioception as a mechanism underlying the SMA phenotype	12.420	W81XWH-11-1-0689		398,976
Racial Disparities in the Initiation and Intensity of Adjuvant Therapy for Breast Cancer	12.420	DDEF W81XWH-0510399		395,617
Transcriptome Annotation of Infectious Agents host Species using High Throughput Genomic Data	12.420	W81XWH-13-2-0029		254,529
The role of PP2A methylation in susceptibility and resistance to TBI and AD-induced neurodegeneration	12.420	W81XWH-12-1-0579		210,674
Pre-Clinical Testing of New Hydroxybutyrate Analogues	12.420	W81XWH-10-1-0539		202,612
Spinal Muscular Atrophy (SMA): Disease Phenotype and Mechanisms	12.420	W81XWH-09-1-0245		184,175
PREDICT: Pattern Representation and Evaluation of Data through Integration, Correlation, and Transformation	12.420	W81XWH-13-1-0056		181,616
Discovery of Akt-regulated Transcriptional Modules Associated with Malignant Phenotypes in Breast Cancer	12.420	W81XWH-12-1-0022		168,264
Ready-to-Use Tissue Construct for Military Bone and Cartilage Trauma	12.420	W81XWH-10-1-0933		162,385
Columbia SMA Project: A randomized, control trial of the effects of exercise on motor function and strength in patients with spinal Muscular atrophy (SMA)	12.420	W81XWH-10-1-0127		156,875
Olfactory Deficits in MCI as Predictor of Improved Cognition on Donepezil	12.420	W81XWH-12-1-0142		148,179
The role of PP2A methylation in susceptibility and resistance to TBI and AD-induced neurodegeneration	12.420	W81XWH-12-1-0579		144,742
Identification of master regulators of advanced and castrate-resistant prostate cancer under treatment with Abiraterone.	12.420	W81XWH-13-1-0422		136,459
Altered Astrocyte-Neuron Interactions and Epileptogenesis in Tuberous Sclerosis Complex Disorder	12.420	W81XWH-12-1-0196		116,474
Columbia SMA Project: Role of MMP-9 in Motor Neuron Susceptibility to SMA	12.420	W81XWH-10-1-0878		116,080
Columbia SMA Project: Identification of Genetic Modifiers of SMN Expression and Function	12.420	W81XWH-10-1-0126		112,490
Columbia SMA project: 4-AP as a potential SMA therapeutic agent and biological mechanisms of action	12.420	W81XWH-11-1-0753		111,915
Columbia SMA project: 4-AP as a potential SMA therapeutic agent and biological mechanisms of action	12.420	W81XWH-11-1-0753		100,715
Columbia SMA project: 4-AP as a potential SMA therapeutic agent and biological mechanisms of action	12.420	W81XWH-11-1-0753		95,336
Toward an Inexpensive Test for Vitamin D Levels in Blood	12.420	W81XWH-12-1-0624		89,029
Hippo Signaling in Prostate Regeneration and Cancer	12.420	W81XWH-12-1-0056		61,757
RACIAL DISPARITIES IN PALLIATIVE CARE FOR PROSTATE CANCER	12.420	W81XWH-10-1-0802		56,435
Functional analysis of E-Cadherin in prostate cancer progression	12.420	W81XWH-12-1-0073		38,215

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Targeting Class I PI3Ks in the Treatment of T-cell Acute Lymphoblastic Leukemia	12.420	W81XWH-10-1-0596		26,395
Columbia SMA project: 4-AP as a potential SMA therapeutic agent and biological mechanisms of action	12.420	W81XWH-11-1-0753		18,109
Systematic Characterization of the Immune Response to Gluten and Casein in Autism Spectrum Disorders	12.420	W81XWH-10-1-0887		16,338
Spinal Muscular Atrophy (SMA): Disease Phenotype and Mechanisms	12.420	W81XWH-09-1-0245		13,156
MYC-DEPENDENT DNA REPLICATION STRESS AND BREAST CANCER	12.420	W81XWH-09-1-0504		-170
EVALUATING INTERSTRAND CROSSLINK (ICL) REPAIR IN TRIPLE NEGATIVE BREAST CANCERS TO GUIDE CHEMOTHERAPY	12.420	W81XWH-11-1-0265		-174
Functional analysis of androgen receptor in prostate epithelial stem cells	12.420	W81XWH-11-1-0463		-610
Lineage Analysis of Cells of Origin for Prostate Cancer	12.420	W81XWH-11-1-0485		-1,056
Activation of mTor Signaling by Gene Transduction to Induce Axon Regeneration in the Central Nervous System Following Neural Injury	12.420	W81XWH-12-1-0051		-4,236
Therapeutic Targeting of Notch in Ovarian Cancer	12.420	W81XWH-09-1-0408		-18,091
				\$5,758,581

Basic Scientific Research

Collaborative Research: Ultra-Dense Quantum Communication Using Integrated Photonic Architecture	12.431	W911NF-10-1-0416		259,608
Engineering of an Extremely Thermostable Alpha/Beta Barrel Scaffold To Serve as a High Molecular Recognition Element for Use in Sensor Applications	12.431	W911NF-12-1-0279		215,012
Increased ER-Mitochondrial Communication in the Pathogenesis of Alzheimer Disease	12.431	W911NF-12-1-0159		134,350
Cortical Networks Underlying Rapid Decision Making	12.431	W911NF-11-1-0219		123,606
Modular Assembly of Hierarchically Structured Polymers by Solid Phase Synthesis	12.431	W911NF-11-1-0372		107,436
Ultracold Molecules in Optical Lattices: Efficient Production and Application to Molecular Clocks	12.431	W911NF-09-1-0504		104,896
Saturated Particle Transport in Porous Media: An Investigation into the Influence of Flow Direction	12.431	W911NF-10-1-0123		103,618
Self-Assembly and Self-organization in Nanocomposites Directed by Block Copolymer Ligands	12.431	W911NF-10-1-0184		100,438
A Computer cluster for developing, applying, and disseminating ab-initio methods for strongly correlated electron systems	12.431	W911NF-13-1-0331		99,998
Highly Ordered Semiconducting Polymers for Sensing Applications	12.431	W911NF-12-1-0252		94,905
High Strain Rate Failure Modeling Incorporating Shear Banding and Fracture	12.431	W911NF-13-1-0238		59,833
Brain Computer Interfaces for Enhanced Interaction with Mobile Robot Agents	12.431	W911NF-13-1-00292		27,275
Rare-event Analysis and Computational Methods for Stochastic Systems Driven by Random Fields	12.431	W911NF-14-1-0020		17,149
Electronic Structure at Oxide Interfaces	12.431	W911NF-09-1-0345		4,703
Synthetic Nanoparticles as Antimicrobial Surface Modifiers	12.431	W911NF-14-1-0137		4,325
Predicting Power, Influence and Rifts in Social Groups through Linguistic Analysis: A Study of English and Arabic Electronic Communication	12.431	W911NF-09-C-0141		3,816
Measurement of velocity fluctuations to infer attachment geometry and interactions of mechanically coupled molecular motors in one-dimensional arrays	12.431	W911NF-12-1-0384		168
ADAMS ADVANCED BEHAVIORAL SENSORS	12.431	W911NF-11-1-0140		-1,474
Collaborative Research: Ultra-Dense Quantum Communication Using Integrated Photonic Architecture	12.431	W911NF-10-1-0416		-2,158
				\$1,457,504

Basic, Applied, and Advanced Research in Science and Engineering

The Role of Implicit and Explicit Cognition in Cultural Learning	12.630	W911NF-13-1-0113		66,880
MULTI-PHOTON FOCK STATE MICROSCOPY AT THE DEBROGLIE WAVELENGTH	12.630	NGA HM1582-09-1-0018		2,769
				\$69,649

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Air Force Defense Research Sciences Program				
3-D Enzymatic Nanomaterial Architectures for Energy Harvesting	12.800	AFOSR FA950-12-10112		923,906
New Materials Approaches for Future Graphene-Based Devices	12.800	FA9550-09-1-0705		531,232
New Materials Approaches for Future Graphene-Based Devices	12.800	FA9550-09-1-0705		473,783
Identifying Deceptive Speech Across Cultures	12.800	FA9550-11-1-0120		367,826
New Materials Approaches for Future Graphene-Based Devices	12.800	FA9550-09-1-0705		303,769
Fundamental Mechanisms of NeuroInformation Processing: Inverse Problems and Spike Processing	12.800	FA9550-12-1-0232		298,530
New Materials Approaches for Future Graphene-Based Devices	12.800	FA9550-09-1-0705		179,065
New Materials Approaches for Future Graphene-Based Devices	12.800	FA9550-09-1-0705		167,840
(PECASE) Microscopic Electronic and Mechanical Properties of Ultra-thin Layered Materials	12.800	FA9550-11-1-0010		137,760
New Materials Approaches for Future Graphene-Based Devices	12.800	FA9550-09-1-0705		126,831
Designing for Measurable Security	12.800	FA9550-12-1-0162		122,512
Quantum Optics in Diamond Nanophotonic Chips	12.800	FA9550-12-1-0045		94,260
Plasticity in High Temperature Materials: Tantalum and Monazite	12.800	DAF FA9550-09-1-0048		74,545
New Materials Approaches for Future Graphene-Based Devices	12.800	FA9550-09-1-0705		58,817
Concurrency Attacks and Defenses	12.800	FA9550-12-1-0346		51,918
Nano Electronics on Atomically Controlled van der Waals Quantum Heterostructures	12.800	FA2386-13-1-4122		49,192
New Materials Approaches for Future Graphene-Based Devices	12.800	FA9550-09-1-0705		46,531
Designing for Measurable Security	12.800	FA9550-12-1-0162		1,012
Quantum Optics in Diamond Nanophotonic Chips	12.800	FA9550-11-1-0014		-208
THE GEOMETRY OF SWITCHING ARCHITECTURES FOR TIME ENCODING	12.800	DAF FA95500910350		-1,647
				\$4,007,474
Mathematical Sciences Grants Program				
Explicit Moduli Spaces and Arithmetic Applications	12.901	H98230-14-1-0103		18,978
				\$18,978
Research and Technology Development				
CMOS RF Field-programmable full-duplex t/r Module	12.910	DARPA HR0011-12-1-0006		246,160
CMOS RF Field-programmable full-duplex t/r Module	12.910	DARPA HR0011-12-1-0006		171,669
The Two-Dimensional Limit of Strongly-Correlated Materials	12.910	N66001-12-1-4216		108,096
Novel Functionality in oxides via Jahn-Teller ions: a DFT+DMFT study	12.910	D13AP00051		104,975
MIDAS: Mid IR Data Acquisition-transmission in Siliconbased Systems	12.910	HR0011-10-1-0080		281
				\$631,181
Total Direct Award Programs				\$30,394,022
Pass-through Awards				
Air Force Office of Scientific Research				
Integrated High-Complexity Systems in Silicon Photonics phase II STTR	12.	PBP CU13-1285	FA9550-12-C-0079	115,906

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Experimenting with the CU Core BARTER I	12.	ACS 2013010S	FA8750-14-C-0019	75,865
Defense Advanced Research Projects Agency				
BBN-DARPA BOLT: ASTRAL Adaptive Semantic Translation, Retrieval, Analysis and Learning	12.	BBN 9500010911	HR0011-12-C-0014	586,056
Broad Operational Language Translation (BOLT)	12.	IBM 4913003303	DARPA-BAA-11-40	228,662
BBN-DARPA BOLT: ASTRAL Adaptive Semantic Translation, Retrieval, Analysis and Learning	12.	BBN 9500010911	HR0011-12-C-0014	166,122
DARPA BOLT Program/SRI Team	12.	SRI 19-000204	DARPA-BAA-11-40	164,873
Photonic Enabled High-Performance Embedded Computing Processor-Memory Interconnection network Design and Performance Evaluation	12.	MIT 7000135026	FA8721-05-C-0002	162,168
Integrated Textile Reinforced Upper Body Support System, Phase 2	12.	UD 33999	W911QX-12-C-0042	157,723
Social Media in Strategic Communication	12.	IBM 4912038357	W911NF-12-C-0028	153,406
Photonic Enabled High-Performance Embedded Computing Processor-Memory Interconnection network Design and Performance Evaluation	12.	MIT 7000135026	FA8721-05-C-0002	113,991
DARPA SSIM SAGE: Spatio-Temporal Pattern Discovery adn Event Detection for Social Interaction	12.	SRI 206-000080	W91NF-12-C-0001	97,348
Linguistic Resources for Multilingual, Genre-independent Language Technologies (BOLT)	12.	UPENN 558006	HR0011-11-C-0145	68,545
Social Media in Strategic Communication	12.	IBM 4912038357	W911NF-12-C-0028	60,757
Efficient C-band photonic qubit upconversion in packaged nonlinear microresonators and waveguides	12.	OEWAIVES CU13-2745	W911NF-4-C-0028	59,590
DARPA Probabilistic for Advanced Machine Learning (PPAML)	12.	ACS 2013012S	FA8750-14-C-0019	51,196
DARPA BOLT Program/SRI Team	12.	SRI 19-000204	DARPA-BAA-11-40	48,756
Fluidic Micro-Truss Blast Protection System	12.	12022-201840-DS	#W31P4Q-12-C-0169	39,099
The Potential for Decoupling Explosions in Fractured Hard Rock: Examples from Kazakhstan Historical Data and a New Field Study	12.	WPGC CU11-1523	HDTRA1-08-10-BRCWMD-BAA	24,218
MADCAT Project	12.	BBN 13482	HR0011-08-C-0004	3,654
BBN-DARPA BOLT: ASTRAL Adaptive Semantic Translation, Retrieval, Analysis and Learning	12.	BBN 9500010911	HR0011-12-C-0014	368
DARPA BOLT Program/SRI Team	12.	SRI 19-000204	DARPA-BAA-11-40	48
Ultrahigh-Q stable and integrated MgF2 cavities for optical clocks	12.	OE CU12-2458	W31P4Q-12-C-0225	-233
PERSISTENT STARE EXPLOITATION AND ANALYSIS SYSTEM	12.	KITWARE K000135-S10	DARPA HR0011-10-CH-C0011	-1,562
Photonic Enabled High-Performance Embedded Computing Processor-Memory Interconnection network Design and Performance Evaluation	12.	MIT 7000135026	FA8721-05-C-0002	-3,584
DARPA BOLT Program/SRI Team	12.	SRI 19-000204	DARPA-BAA-11-40	-4,362
Photonic Enabled High-Performance Embedded Computing Processor-Memory Interconnection network Design and Performance Evaluation	12.	MIT 7000135026	FA8721-05-C-0002	-10,859
Ultrahigh-Q stable and integrated MgF2 cavities for optical clocks	12.	OE CU12-2458	W31P4Q-12-C-0225	-14,636
Department of Defense				
Optically Interconnected Data Centers	12.	APICC 27606	N00421-03-9-0002	33,787
Human Language Technology Center of Excellence	12.	JH 2000378590	H98230-07-C-0365/0000	-2,429
Department of the Army				
Super Resolution Electric and Magnetic Field Imaging SREMF1 Using Multifunctional Diamond Nano Sensors	12.	W31P4Q-13-C-0040-2	W31P4Q-13-C-0040	15,000
Department of the Army, Army Medical Research				
Design and Evaluation of an Arm Exoskeleton for Enhancing Control and stablization	12.	DELAWARE 32273	W911NF-07-2-0026	69,507
Department of the Army,Army Research Office				

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Printable and Flexible Dosimetric Sensors for Correlating Cumulative Environmental Vapor Exposure to Incidence of Respiratory Disorders	12.	JH 2001942113	RFP13-163	65,233
SUBCONTRACT TO INFOSCITEX CORP: AUTOMATED BLOOD COMPONENT SEPARATOR	12.	INFOSCITEX B1423-S00	W81XWH-11-C-005	-5,369
Intelligence Advanced Research Projects				
IARPA-IBM Babel Program	12.	IBM 4912046923	W911NF-12-C-0012	220,016
Automated Low Level Analysis and Description of Divers Intelligence Video Program	12.	BBN 13981	D11PC20071	207,161
IARPA-IBM Babel Program	12.	IBM 4912046923	W911NF-12-C-0012	191,967
IARPA-IBM Babel Program	12.	IBM 4912046923	W911NF-12-C-0012	189,549
Automated low-level analysis and description of Description Diverse Intelligence video program	12.	IBM 4911010105	IARPA D11PC20070	174,431
IARPA-IBM Babel Program	12.	IBM 4912046923	W911NF-12-C-0012	161,866
IARPA-IBM Babel Program	12.	IBM 4912046923	W911NF-12-C-0012	140,632
Automated low-level analysis and description of Description Diverse Intelligence video program	12.	IBM 4911010105	IARPA D11PC20070	139,232
Automated Low Level Analysis and Description of Divers Intelligence Video Program	12.	BBN 13981	D11PC20071	125,533
Automated low-level analysis and description of Description Diverse Intelligence video program	12.	IBM 4911010105	IARPA D11PC20070	101,854
IARPA-IBM Babel Program	12.	IBM 4912046923	W911NF-12-C-0012	35,863
IARPA-IBM Babel Program	12.	IBM 4912046923	W911NF-12-C-0012	13,405
IARPA-IBM Babel Program	12.	IBM 4912046923	W911NF-12-C-0012	6,063
Automated Low Level Analysis and Description of Divers Intelligence Video Program	12.	BBN 13981	D11PC20071	84
Algorithms for Learning Using Privileged Information	12.	TELCORDIA 20016028	FA8650-11-C-7161	-1,070
BABEL: Robust Features and Morphology for Agile Multilingual Keyword Spotting	12.	UCB 802CU	W911NF-12-C-014	-11,983
IARPA-IBM Babel Program	12.	IBM 4912046923	W911NF-12-C-0012	-156,954
Office of Naval Research				
MAGANIMOS: Integrated magnetic, Gan, and SOI CMOS for power conversion and RF power amplification	12.	IBM 4913900053	N00014-13-C-0167	2,483
ACXION/Dept of Navy-NADIA: Natural Language Processing Tools for Dialectal Arabic	12.	ACXION CU11-2609	N41756-12-C-4713	-10,176
				\$4,048,800

Basic and Applied Scientific Research

Extended-Range Prediction with Low-Dimensional, Stochastic-Dynamic Models: A Data-driven Approach	12.300	UCLA 2090 G QA272	N00014-12-1-0911	548,989
Extended-Range Prediction with Low-Dimensional, Stochastic-Dynamic Models: A Data-driven Approach	12.300	UCLA 2090 G QA272	N00014-12-1-0911	527,991
Seasonal COSEE: Environmental stress and human migration in two developing coastal nations: A comparison of the co-evolving human and physical landscapes in Bangladesh and Sri Lanka	12.300	VU 22539-S1	N00014-11-1-0683	213,618
RATIONAL DESIGN of Advanced Capacitor Films	12.300	UCONN 6966	N00014-10-1-0944	121,003
Tailoring Electronic Properties of Graphene at the Nanoscale	12.300	UMARY Z894102	N00014-09-1-1064	84,737
Tailoring Electronic Properties of Graphene at the Nanoscale	12.300	UMARY Z894102	N00014-09-1-1064	72,398
Tailoring Electronic Properties of Graphene at the Nanoscale	12.300	UMARY Z894102	N00014-09-1-1064	64,667
Seasonal COSEE: Environmental stress and human migration in two developing coastal nations: A comparison of the co-evolving human and physical landscapes in Bangladesh and Sri Lanka	12.300	VU 22539-S1	N00014-11-1-0683	54,315
MURI: Remote Multi-Modal Biometrics for Maritime Domain	12.300	UMARY Z887101	N00014-08-1-0638	54,261
MURI: Remote Multi-Modal Biometrics for Maritime Domain	12.300	UMARY Z887101	N00014-08-1-0638	44,476
Graphene photonics and nano-plasmonics	12.300	UCSD 38072517	N00014-13-1-0464	25,410

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
				\$1,811,865
Military Medical Research and Development				
c-jun-N-Terminal Kinase (JNK) for the treatment of amyotrophic lateral sclerosis	12.420	SRI 5-21306	W81XWH-12-1-0431	511,458
Ohio Army National Guard Mental Health Initiative: Risk and Resilience Factors for Combat-Related Posttraumatic Psychopathology and Post Combat Adjustment	12.420	UHOE CU11-3012	W81XWH-10-1-0579	235,065
Whole Exome Analysis of Early Onset Alzheimers Disease	12.420	UMIAM 66915A	W81XWH1210013	163,549
Safety Planning as a Brief Intervention to Reduce Suicide Risk in Military	12.420	HJFAMM 681181	W81XWH-09-2-0129	106,991
PTSD Trajectory, Co-morbidity and Utilization of Mental Health Services among National Guard Soldiers	12.420	HMJF 2166	W81XWH-08-2-0650	98,883
Organizing Cellular & Molecular Heterogeneity in High-Grade Serous Ovarian Cancer by Mass Cytometry	12.420	60167544-104703-B	W81XWH-12-1-0591	52,366
A Translational Epidemiological Approach to the Molecular Basis of PTSD and Substance Abuse Co-morbidity	12.420	IMNS 803-236	W81XWH-11-1-0245	41,669
Organizing Cellular & Molecular Heterogeneity in High-Grade Serous Ovarian Cancer by Mass Cytometry	12.420	60167544-104703-B	W81XWH-12-1-0591	12,480
WATER-BORNE MANGANESE EXPOSURE AND MOTOR FUNCTION IN YOUNG ADULTS	12.420	VU VUMC34539-R	W81XWH-05-1-0239	-1,098
				\$1,221,363

Basic Scientific Research

Blas Induced Threshold for Neural neTworks (BITNet)	12.431	UPENN 555860	W911NF-10-1-0526	293,081
Information Engines: Nanoscale Control, Computing, and Communication Out of Equilibrium	12.431	UCD 201301045	W911NF-13-1-0390	186,175
Image Database and Neuroimaging Data Collection for Rapid Visual Decision Making	12.431	APX03-S005	W911NF-10-D-0002	73,067
Multivariate Heavy Tail Phenomena: Modeling, Diagnostics, and Applications in Tactical Operations	12.431	CU 66220-9900	W911NF-12-1-0385	39,146
Image Database and Neuroimaging Data Collection for Rapid Visual Decision Making	12.431	APX03-S005	W911NF-10-D-0002	12,861
				\$604,330

Basic, Applied, and Advanced Research in Science and Engineering

DARPA Robotics Challenge	12.630	204111CU	N65236-12-1-1005	242,471
Constructing Mutually-derived Situational Awareness via EEG-informed Graph Based Transductive Inference	12.630	APX02-N004	W911-NF-10-2-0022	183,842
Constructing Mutually-derived Situational Awareness via EEG-informed Graph Based Transductive Inference	12.630	APX02-N004	W911-NF-10-2-0022	115,864
Constructing Mutually-derived Situational Awareness via EEG-informed Graph Based Transductive Inference	12.630	APX02-N004	W911-NF-10-2-0022	-53,846
				\$488,331

Air Force Defense Research Sciences Program

Ultra-compact, High-Resolution Photonic Crystal Based Spectrometer	12.800	CPLLC FA9101-12-C-0010-1	FA9101-12-C-0010	210,679
Mathematical Modeling in Random Media: from Homogenization to Stochasticity	12.800	25915490-47766-A	FA9550-10-1-0194	168,847
Hydrogen Storage via Functionalized Nanoporous Materials	12.800	FA9550-12-1-0159-01	FA9550-12-1-0159	95,687
MURI Center for Dynamic Megneto-Optics	12.800	UMICH 3003042215	FA9550-14-1-0040	4,445
Enhancement of Cognition	12.800	HJFAMM 718246	FA8650-10-2-6A02	-2
				\$479,656

Research and Technology Development

Circuit Cavity Optomechanics for Cooling and Amplification on a CMOS Chip	12.910	YU C11L10831	FA9550-10-1-0297	201,295
A broadband mixed-signal iterative downconversion spectrum analyzer for signal recognition applications	12.910	UTA11-001025	FA8650-11-1-7159	166,504
A broadband mixed-signal iterative downconversion spectrum analyzer for signal recognition applications	12.910	UTA11-001025	FA8650-11-1-7159	138,611

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Language Modeling Multilingual Automatic Document Classification Analysis and Translation	12.910	BBN PO#9500009242	HR0011-08-C-0004	47,848
Efficient, Digitally Linearized, High-Power Integrated mm-Silicon Transmitters	12.910	USC 146301	FA8650-10-1-7042	28,236
Video Imaging Retrieval and Analysis Tool	12.910	KITWARE HR001108C0135S7	HR0011-08-C-0135-S7	-46
Language Modeling Multilingual Automatic Document Classification Analysis and Translation	12.910	BBN PO#9500009242	HR0011-08-C-0004	-638
IMPROVING MACHINE TRANSLATION FROM DIALECTAL ARABIC INTO ENGLISH	12.910	BBN 13251	DARPA HR0011-06-C-0022	-2,574
C2S2: Addressing the Challenges of Future Circuits and Modules in a Collaborative Multi-University Focus Center for Circuit and System Solutions	12.910	CMU No.1041388-237981	DARPA HR0011-07-3-0002	-13,388
From Strained Molecules to Functional, Carbon-Based Materials	12.910	UCLA 0160 S MB 959	2009-NT-2048	-61,436
				\$504,412
Total Pass-through Programs				\$9,158,757
Total:				\$39,552,779

Department of Commerce

Direct Awards

Climate and Atmospheric Research

Global Decadal Hydroclimate Variability, Predictability and Change: A Data-Enriched Modeling Study	11.431	NA10OAR4310137		770,468
Consortium for Climate Risk in the Urban Northeast	11.431	NA10OAR4310212		366,512
IRAP: Integrating Climate Information and Decision Processes for regional Climate Resilience	11.431	NA13OAR4310184		173,381
Understanding and Attributing Tropical Cyclone Intensity and Frequency Changes in the 20th and 21st Centuries	11.431	NA10OAR4310124		135,812
Building resilience to storm surges and sea level rise: A comparative study of coastal zones in New York City and Boston	11.431	NA12OAR4310107		121,798
Collaborative Research: Tropical Cyclone Tracks in Present and Future Climates	11.431	NA11OAR4310093		102,756
Best Practices for Estimating Forecast Uncertainty in Seasonal-to-Decadal Predictions	11.431	NA12OAR4310086		96,530
Predictability of Atlantic Hurricane Activity by the NMME Coupled Models	11.431	NA12OAR4310076		81,180
Enhancing Seasonal Drought Prediction Capabilities for the US and the Globe Using the National Multi-Model Ensemble	11.431	NA12OAR4310088		72,811
U.S. National Multi-Model Ensemble ISI Prediction System	11.431	NA12OAR4310091		70,408
Sensitivity of Climate Variability to Anthropogenic and Natural Drivers during the Last Millennium	11.431	NA10OAR4310126		69,391
Consortium for Climate Risk in the Urban Northeast	11.431	NA10OAR4310212		68,883
Climate Predictability of Extreme Floods in the United States	11.431	NA10OAR4310159		67,607
Assessing Unstoppable Change: Ocean Heat Storage and Antarctic Glacial Ice Melt	11.431	NA10OAR4310138		52,637
Developing an Optimum multi-model ENSO prediction	11.431	NA12OAR4310082		47,665
THE AMERICAN MIDSUMMER DROUGHT: CASUAL MECHANISMS AND SEASONAL-TO-INTERANNUAL PREDICTABILITY	11.431	NA10OAR4310252		38,618
Consortium for Climate Risk in the Urban Northeast	11.431	NA10OAR4310212		32,600
Towards near-global reconstruction and understanding of hydroclimate variability and change over the past several centuries	11.431	NA10OAR4310123		32,017
Collaborative Research: Fossil Coral Estimates of Central Tropical Pacific SST and Hydrological Variability During the Last Millennium	11.431	NA11OAR4310166		24,264
Consortium for Climate Risk in the Urban Northeast	11.431	NA10OAR4310212		22,811
CLIMATOLOGY AND VARIABILITY OF TROPICAL RAINFALL IN THE 20TH CENTURY REANALYSIS	11.431	NA11OAR4310090		22,061
Building resilience to storm surges and sea level rise: A comparative study of coastal zones in New York City and Boston	11.431	NA12OAR4310107		18,055
Consortium for Climate Risk in the Urban Northeast	11.431	NA10OAR4310212		13,112

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Incorporating Scale and Predictability Information in Multi-Model Ensemble Climate Predictions	11.431	NA10OAR4310249		-2,735
The Continuation of the International Research Institute for Climate and Society 2010-2012	11.431	NA10OAR4310210		-9,411
				\$2,489,231

National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes

Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		249,476
Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		248,055
Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		86,883
Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		65,827
Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		52,256
Cooperative Institute for Climate Applications and Research (CICAR) (cooperation)	11.432	NA08OAR4320912		48,942
Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		40,046
Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		37,765
Cooperative Institute for Climate Applications and Research (CICAR) (cooperation)	11.432	NA08OAR4320912		15,933
Cooperative Institute for Climate Applications and Research (CICAR) (cooperation)	11.432	NA08OAR4320912		11,590
Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		7,213
Cooperative Institute for Climate Applications and Research (CICAR) (cooperation)	11.432	NA08OAR4320912		6,884
Cooperative Institute for Climate Applications and Research (CICAR) (cooperation)	11.432	NA08OAR4320912		2,618
Cooperative Institute for Climate Applications and Research (CICAR) (cooperation)	11.432	NA08OAR4320912		1,321
Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		1,093
Cooperative Institute for Climate Applications and Research (CICAR) (cooperation)	11.432	NA08OAR4320912		858
Cooperative Institute for Climate Applications and Research (CICAR)	11.432	NA08OAR4320754		46
Cooperative Institute for Climate Applications and Research (CICAR) (cooperation)	11.432	NA08OAR4320912		-1,321
Cooperative Institute for Climate Applications and Research (CICAR) (cooperation)	11.432	NA08OAR4320912		-5,399
				\$870,086

Environmental Sciences, Applications, Data, and Education

Development of 3-hourly, global, long-term, multisatellite-based TOA-to-surface radiative flux profile data product with high resolution and homogeneous quality	11.440	NA11NES4400002		168,239
				\$168,239

Measurement and Engineering Research and Standards

Intra and Inter Building control algorithms and smartgrid communication links to facilitate electricity storage in buildings	11.609	60NANB11D192		69,548
Summer Undergraduate Research Fellowship (SURF) NIST Boulder Programs - PML	11.609	NIST 70NANB13H046		9,100
				\$78,648
Total Direct Award Programs				\$3,606,204

Pass-through Awards

Climate and Atmospheric Research

Monitoring the Indonesian Throughflow and Weddell Sea Deep and Bottom Water Outflow	11.431	UCAR No. Z14-13996	NA11OAR4310213	107,438
Quantifying the Value and Communicating the Protective Service of Living Shorelines using Flood Risk Assessments	11.431	SIT 2102310-01	NA13OAR4310144	23,005

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Intergrated Seasonal Drought Forecast-Adaptive Management System for the Lower Colorado River Basin in Texas	11.431	MTU 1211078Z1	NA13OAR4310126	18,522
A Water Management Knowledge Network for the Urban Northeast	11.431	UMASSAMH 13-007351 A 00	NA120AR4310132	18,180
				\$167,145

National Oceanic and Atmospheric Administration (NOAA) Cooperative Institutes

Surface Water pCO2 Measurements from ships	11.432	UM S14-0014	NA10OAR4320143	89,896
Atlantic Ocean Acidification Test-Bed	11.432	S14-0012	NA10OAR4320143	34,914
				\$124,810

Center for Sponsored Coastal Ocean Research Coastal Ocean Program

ECOHAB: Linking biogeochemistry to harmful algal bloom nutritional physiology with gene expression analyses: a case study with Aureococcus	11.478	WHOI A100987	NA09NOS4780206	147,620
				\$147,620
Total Pass-through Programs				\$439,575
Total:				\$4,045,779

Department of Education

Direct Awards

National Resource Centers Program for Foreign Language and Area Studies or Foreign Language and International Studies Program and Foreign Language and Area Studies Fellowship Program

Foreign Language and Area Studies Fellowship	84.015	DE P015B100026-13		323,103
Foreign Language and Area Studies Fellowship	84.015	DE P015B100153		308,999
Foreign Language and Area Studies Fellowship	84.015	DE P015B100110		253,500
Foreign Language and Area Studies Fellowships	84.015	DE P015B100136		244,833
Foreign Language and Area Studies Fellowships	84.015	DE P015B100078-13		198,230
FOREIGN LANGUAGE AND AREA STUDIES FELLOWSHIP	84.015	DE P015B100078		158,624
National Resource Centers and Foreign Language and Students Fellowships Programs	84.015	DE P015A100078		150,244
Middle East Institute NRC/FLAS	84.015	DE P015A100110		115,490
National Resource and Foreign Language and Studies Fellowships Programs-International Comprehensive NRC	84.015	DE-P015A100054		114,122
Foreign Language and Area Studies Fellowship	84.015	DE-P015B100054		110,660
National Resource Centers and Fellowships Program for Language and Area or Language and International Studies	84.015	DE P015A100153		103,492
National Resource Centers and Fellowships Program for Language and Area or Language and International Studies	84.015	DE P015A100153		73,494
National Resource Center and Foreign Language Area Studies	84.015	DE-P015A100026		71,066
Foreign Language and Area Studies Fellowship	84.015	DE P015B100026-13		56,444
National Resource Center and Foreign Language Area Studies	84.015	DE-P015A100026		35,178
Foreign Language and Area Studies Fellowship	84.015	DE P015B100153		28,700
National Resource Center and Foreign Language Area Studies	84.015	DE-P015A100026		18,897
Middle East Institute NRC/FLAS	84.015	DE P015A100110		17,243
Foreign Language and Area Studies Fellowships	84.015	DE P015B100136		16,879
Foreign Language and Area Studies Fellowship	84.015	DE-P015B100054		16,500
National Resource Centers and Fellowships Program for Language and Area or Language and International Studies	84.015	DE P015A100153		14,042

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
National Resource Centers and Foreign Language and Students Fellowships Programs	84.015	DE P015A100078		12,422
Foreign Language and Area Studies Fellowship	84.015	DE P015B100110		12,223
National Resource Center and Foreign Language Area Studies	84.015	DE-P015A100026		11,938
National Resource Centers and Fellowships Program for Language and Area or Language and International Studies	84.015	DE P015A100153		11,564
National Resource Center and Foreign Language Area Studies	84.015	DE-P015A100026		7,259
Middle East Institute NRC/FLAS	84.015	DE P015A100110		5,616
FOREIGN LANGUAGE AND AREA STUDIES FELLOWSHIPS	84.015	DE-P015B100110-11		4,500
National Resource Center and Foreign Language Area Studies	84.015	DE-P015A100026		2,970
National Resource and Foreign Language and Studies Fellowships Programs-International Comprehensive NRC	84.015	DE-P015A100054		1,364
National Resource Centers and Fellowships Program for Language and Area or Language and International Studies	84.015	DE P015A100153		1,080
National Resource Center and Foreign Language Area Studies	84.015	DE-P015A100026		540
National Resource Center and Foreign Language Area Studies	84.015	DE-P015A100026		467
National Resource Center and Foreign Language Area Studies	84.015	DE-P015A100026		118
FOREIGN LANGUAGE AND AREA STUDIES FELLOWSHIP	84.015	DE P015B100153		-10,000
				\$2,491,801

Overseas Programs - Doctoral Dissertation Research Abroad

Fulbright-Hays Doctoral Dissertation Research Abroad	84.022	P022A130040		42,858
2012 Fulbright-Hays Doctoral Dissertation Research Abroad Program Application	84.022	P022A120036		4,085
				\$46,943

Department of Education

Jacob K. Javits Fellows	84.170	P170B110004-13B		240,521
Jacob Javits Fellowship 2001/2013	84.170	P170B080002-12		7,877
				\$248,398

Centers for International Business Education

Centers for International Business Program	84.220	P220A100023		87,416
Centers for International Business Program	84.220	P220A100023		52,117
Centers for International Business Program	84.220	P220A100023		18,200
Centers for International Business Program	84.220	P220A100023		10,400
Centers for International Business Program	84.220	P220A100023		208
				\$168,341

Education Research, Development and Dissemination

Getting Ready for School: An Integrated Curriculum to Help Teachers and Parents Support Preschool Children's Early Literacy, Math and Self-regulation Skills	84.305	DE R305A120783-13		473,767
Getting Ready for School: An Integrated Curriculum to Help Teachers and Parents Support Preschool Children's Early Literacy, Math and Self-regulation Skills	84.305	DE R305A120783-13		23,999
Practical Tools for Multilevel/Hierarchical Modeling in Education Research	84.305	DE R305D100017-12		11,990
Practical Solutions for Missing Data and Imputation	84.305	DE R305D090006		-109
				\$509,647

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Total Direct Award Programs				\$3,465,130
Pass-through Awards				
Department of Education				
Joint Appointment agreement between BSA/BNL and Columbia for Jingguang Chen Salary	84.	BNL CU13-1454	DE-AC02-98CH10886	496,686
Joint Appointment agreement between BSA/BNL and Columbia for Jingguang Chen Salary	84.	BNL CU13-1454	DE-AC02-98CH10886	69,717
				\$566,403
National Institute on Disability and Rehabilitation Research				
Collaborative Research: Science of Learning Center Visual Language and Visual Learning (VL2)	84.133	GU 2222	H133E080006-12	10,000
				\$10,000
Mathematics and Science Partnerships				
Teacher Quality Partnership (subcontract with Teachers College)	84.366	TC 511232	U336S090039	6,072
				\$6,072
Improving Teacher Quality State Grants				
Teacher Leader Quality Partnership Program	84.367	TC 520226	0247-05-0032	-9
				\$-9
Investing in Innovation (i3) Fund				
ARRA -NYCBED 9355046	84.411	NYCBED 9355046	U396C100941	64,159
				\$64,159
Total Pass-through Programs				\$646,625
Total:				\$4,111,755

Department of Health & Human Services

Pass-through Awards

Biomedical Advanced Research and Development

Integrated Biodosimetry System (IBiS) for High Throughput Medical Care After Radiologic and Nuclear Events	93.	ASU 10-378	HHSO100201000008C	293,871
				\$293,871
Total Pass-through Programs				\$293,871
Total: Department of Health & Human Services (Excluding NIH)				\$293,871

Corporation for National and Community Service

Pass-through Awards

Social Innovation Fund

AmidaCONNECT Project Evaluation	94.019	AMIDA CU11-3186	CORPNCS 10SIHDC0001	11,663
				\$11,663
Total Pass-through Programs				\$11,663
Total:				\$11,663

Department of Agriculture

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Direct Awards				
Agricultural Research Basic and Applied Research				
The Agriculture Model Inter-comparison and Improvement Project (Agmip)Subproject for Institution # 11-2525	10.001	USDA 59-3625-1-745		2,328,024
The Agriculture Model Inter-comparison and Improvement Project (Agmip)Subproject for Institution # 11-2525	10.001	USDA 59-3625-1-745		1,458,854
The Agriculture Model Inter-comparison and Improvement Project (Agmip)Subproject for Institution # 11-2525	10.001	USDA 59-3625-1-745		222,787
Evaluation of the Impact of Changing Climate on Food Security Through Global Agriculture Models	10.001	USDA No. 58-3625-0-646		36,870
				\$4,046,535
Agricultural and Rural Economic Research, Cooperative Agreements and Collaborations				
AgMIP workshop on incorporating water supply constraints in agricultural climate model arrays	10.250	USDA 58-6000-2-0095		13,627
				\$13,627
Cooperative Forestry Assistance				
Use of Long Term Experimental Forest Provenance Trials for Selection of Future Forests	10.664	SFES 10-JV-11242306-152		12,861
				\$12,861
Urban and Community Forestry Program				
THE URBAN FOREST CHILDHOOD ASTHMA AND COMMUNITY AIR QUALITY	10.675	SFES 10-DG-11420004-		-2,962
				\$-2,962
Total Direct Award Programs				\$4,070,061
Pass-through Awards				
Department of Agriculture				
RESEARCH PROGRAM ON CHILDHOOD HUNGER	10.	3048107834-12-325	AG-3198-B-10-0028	78,316
				\$78,316
Agriculture and Food Research Initiative (AFRI)				
New Tools and Incentives for Carbon, Nitrogen, and Greenhouse Gas Accounting and Management in Corn Cropping Systems	10.310	62583-9571	2011-67003-30205	97,336
Enhancing Food Security of Underserved Populations in the Northeast through Sustainable Regional Food Systems	10.310	PSU 4399CUUSDA0057	USDA 2011-68004-30057	48,708
				\$146,044
Total Pass-through Programs				\$224,360
Total:				\$4,294,421
Department of Homeland Security				
Pass-through Awards				
Centers for Homeland Security				
Center of Excellence for Emerging and Zoonotic Animal Disease (CEEZAD)	97.061	KSUNI S11045.03	2010-ST-061-AG0001	163,450
				\$163,450
Homeland Security Grant Program				
PRIVACY PRESERVING SHARING OF NETWORK TRACE DATA	97.067	BAESNSS 080043	H66001-09-C-0080	-13
				\$-13
Total Pass-through Programs				\$163,437

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Total:				\$163,437
Department of Interior				
Direct Awards				
National Park Service/Department of the Interior				
Improving Methods of Measuring Surface Water Flow Patterns and Velocities	15.	NPKS #H5284080029		8,867
U.S. Geological Survey/Department of the Interior				
Measurement of Tritum, Helium, Neon, 3He/4He and Noble Gases in Groundwater Samples	15.	USGS G11PC00051		127,920
IPA between Columbia University and USGS - Ekstrom	15.	USGS CU12-2729		12,452
Boron Isotope Measurements on Artic Ocean Foraminifera	15.	USGS G13PX01686		11,934
IPA between Columbia University and USGS - Nettles	15.	USGS CU12-2726		6,467
				\$167,640
Earthquake Hazards Research Grants				
The Lamont Cooperative Seismographic Network and the Advanced National Seismic System: Earthquake Hazard Studies in the Northeastern United States	15.807	USGS G10AC00094		315,796
IPA between Columbai University and USGS-Waldhauser	15.807	USGS CU13-1647		30,965
Evaluating the role of fluid injection in triggering the 2011 Oklahoma earthquake sequence: Collaborative Research with the University of Oklahoma, and Columbia University	15.807	USGS G13AP00024		20,082
				\$366,843
U.S. Geological Survey Research and Data Collection				
Project to Create a Virtual Simulation System for Research and Education on Debris-Flow Preparation and Evacuation Behaviors	15.808	G12AC20169		21,808
USGS -IEDA Partnership to Suppoert a Data Lifecycle Framework and Tools	15.808	USGS G13AC00381		21,696
				\$43,504
National Park Service Conservation, Protection, Outreach, and Education				
How can the contribution of climate variability, water release patterns and hydrologic performance	15.954	NPKS H528408003		27,532
				\$27,532
Total Direct Award Programs				\$605,519
Pass-through Awards				
WaterSMART (Sustaining and Manage America's Resources for Tomorrow)				
Back to the Future: Innovative tree ring suite analysis to reconstruct paleo climat and stream flows for improved urban water planning under climate change	15.507	11055301	R11AP40011	-381
				\$-381
National Climate Change and Wildlife Science Center				
A Proposal to the Department of Interior to Establish The Northeast Climate Science Center	15.820	UMASS 12007036D00	G12AC00001	82,717
				\$82,717
Total Pass-through Programs				\$82,336
Total:				\$687,855
Department of Justice				
Pass-through Awards				

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Department of Justice				
Development of Science Base and Open Source Software for Bloodstain Pattern Analysis	16.650	UIO 428-20-05	2010-DN-BX-K403	57,554
				\$57,554
Total Pass-through Programs				\$57,554
Total:				\$57,554
Department of State				
Direct Awards				
Professional and Cultural Exchange Programs - Citizen Exchanges				
Tibet Evaluation Marketing Project: ECA/PE/C Citizen Exchange Programs Project: GLOBAL	19.415	S-ECAPE-11-GR-199(MJ)		75,604
Tibet Evaluation Marketing Project: ECA/PE/C Citizen Exchange Programs Project: GLOBAL	19.415	S-ECAPE-11-GR-199(MJ)		17,350
				\$92,954
General Department of State Assistance				
Contract Negotiation for Extractive Industries by developing Countries	19.700	S-LMAQM-14-CA-1071		9,671
				\$9,671
Total Direct Award Programs				\$102,625
Pass-through Awards				
Academic Exchange Programs - Graduate Students				
FLTA Training 2013	19.400	IIE CU13-0979	DS S-ECAAE-10-CA-036	53,987
				\$53,987
Total Pass-through Programs				\$53,987
Total:				\$156,612
Department of Transportation				
Direct Awards				
Department of Transportation				
Application of the NASA GISS Global Composition-climate Modeling System to Quantify the Effects of Aviation Emissions on Climate	20.	DTRT57-10-C-10013		72,937
Critical Studies to Advance Brain Injury Biomechanics through SIMon	20.	DTNH22-08-C-00088		-1,575
Federal Highway Administration				
CORROSION MONITORING RESEARCH STUDY OF NEW YORK CITY BRIDGES	20.	FHADTFH61-04-C-00040		-5,060
				\$66,302
Pipeline Safety Research Competitive Academic Agreement Program (CAAP)				
Mitigating external corrosion of pipelines through nano-modified cement-based coatings	20.724	DTPH56-13-H-CAA06		14,234
				\$14,234
Total Direct Award Programs				\$80,536
Pass-through Awards				
Department of Transportation				

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Social Network Based Dynamic Transit Service through the OMITS System	20.	UTRC 49997-57-24	DTRT07-G-002	15,601
				\$15,601
University Transportation Centers Program				
Rutgers Center for Advanced Infrastructure and Transportation	20.701	RUTGERS S1760914	DTRT12-G-UTC16	98,251
Rutgers Center for Advanced Infrastructure and Transportation	20.701	RUTGERS S1760914	DTRT12-G-UTC16	34,558
Rutgers Center for Advanced Infrastructure and Transportation	20.701	RUTGERS S1760914	DTRT12-G-UTC16	17,556
Finite Element Model Updating and Damage Detection for Bridges Using Vibration Measurements	20.701	RFCUNY 49111-28-23	DTRT07-G-0002	16,619
Rutgers Center for Advanced Infrastructure and Transportation	20.701	RUTGERS S1760914	DTRT12-G-UTC16	9,581
PROTOTYPE DEVELOPMENT OF THE OPEN MODE INTEGRATED TRANSIT SY STEM	20.701	49111-08-23	DTRT07-G-0002	-459
				\$176,106
Total Pass-through Programs				\$191,707
Total:				\$272,243

Department of Veterans Affairs

Direct Awards

Department of Veterans Affairs

Regular and Off-Shift Nursing: Impacts on Patient Outcomes and Cost of Care	64.	DVAMC CU11-0233	69,200
Human Cocaine Vaccine (TA-CD) in the Treatment of Cocaine Dependence	64.	VACSP CU14-1325	60,000
			\$129,200
Total Direct Award Programs			\$129,200
Total:			\$129,200

Dept. of Housing & Urban Development

Direct Awards

Doctoral Dissertation Research Grants

GENTRIFICATION AND HEALTHY HABITATS IN NEW YORK CITY: 1990 TO PRESENT	14.516	HUD H-21598SG	6,000
			\$6,000

Transformation Initiataive: Rental Assistance Demonstration Small Research Grant Program

Examining the Impact of Rental Assistance Demonstration on Children Living in Public Housing Communities	14.535	HUD H-21666CA	46,211
			\$46,211

Healthy Homes Technical Studies Grants

Neighborhood Associated Domestic Risk Factors Accounting for Asthma Persistence	14.906	NYHHU0003-11	194,309
Fungal Exposure, Allergy Sensitization and Asthma Among Middle Income Children in NYC	14.906	NYHHU0021-13	79,484
			\$273,793
Total Direct Award Programs			\$326,004
Total:			\$326,004

Environmental Protection Agency

Direct Awards

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Science To Achieve Results (STAR) Research Program				
Columbia Center for Children Environmental Health - Admin Core	66.509	EPA RD-83450901-0		201,887
Columbia Center for Children Environmental Health - Admin Core	66.509	EPA RD-83450901-0		193,889
Columbia Center for Children Environmental Health - Admin Core	66.509	EPA RD-83450901-0		180,374
Predicting Extreme US Air Pollution Events	66.509	EPA 83520601		139,640
Diagnostic Monitoring of Bio-Geochemical Interactions of a shallow aquifer in response to a CO2 leak	66.509	EPA RD-83450301-2		72,786
Columbia Center for Children Environmental Health - Admin Core	66.509	EPA RD-83450901-0		70,641
Columbia Center for Children Environmental Health - Admin Core	66.509	EPA RD-83450901-0		52,384
Columbia Center for Children Environmental Health - Admin Core	66.509	EPA RD-83450901-0		51,949
Columbia Center for Children Environmental Health - Admin Core	66.509	EPA RD-83450901-0		47,398
Diagnostic Monitoring of Bio-Geochemical Interactions of a shallow aquifer in response to a CO2 leak	66.509	EPA RD-83450301-2		10,403
				\$1,021,351
P3 Award: National Student Design Competition for Sustainability				
Multifunction Energy Platform Pilot	66.516	EPA SU-83430201-0		70
				\$70
Regional Applied Research Efforts (RARE)				
Green Roof Research	66.517	AE-834846-01		12,812
				\$12,812
Total Direct Award Programs				\$1,034,233
Pass-through Awards				
Congressionally Mandated Projects				
Identification of the Active Fraction and Metabolic Pathways in Trace Organic Contaminants Removal	66.202	WERF U2R12	EM-83406901-0	78,400
				\$78,400
Science To Achieve Results (STAR) Research Program				
PROSPECTIVE STUDY OF ATHEROSCLEROSIS AND CLINICAL CARDIOVASCULAR DISEASE LONG TERM EXPOSURE TO AMBIENT...	66.509	UWASH 429111	EPA RD-8316901	345,018
Collaborative Research on Producing and Characterizing a Biosurfactant with Potentially Lower Environmental Impact for Salt Water Applications	66.509	IOWA 429-40-01A	EPA #83518101	80,014
A Standard Protocol for Assessing the Habitat Quality of Ecologically Enhanced Urban Shorelines	66.509	NEIWPCC 2014-001	EPA CE98272004	7,948
A Standard Protocol for Assessing the Habitat Quality of Ecologically Enhanced Urban Shorelines	66.509	NEIWPCC 2014-001	EPA CE98272004	6,472
				\$439,452
Environmental Policy and Innovation Grants				
Molecular characterization and tracking of microbial communities in mainstream deammonification reactors	66.611	OWC CU13-1697	CR-83419201	88,048
				\$88,048
Hazardous Waste Management Grant Program for Tribes				
Molecular Level through Whole Reactor Level Characterization of Greenhouse Nitrogen Emission from Wastewater Treatment Operations	66.812	WERF U4R07	EPA	10,740
				\$10,740

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Environmental Education Grants				
Designing Community Projects, US Environmental Protection Agency (EPA) grant	66.951	TC 515119	NE97200812	7,411
				\$7,411
Total Pass-through Programs				\$624,051
Total:				\$1,658,284
Japan US Friendship Commission				
Direct Awards				
Japan-U.S. Friendship Commission Grants				
2013-2014 Japan-US Friendship Commission Prize for the Translation of Japanese Literature	90.300	JAPUS 13-20		5,809
2012-2013 Japan-US Friendship Commission Prize for the Translation of Japanese Literature	90.300	JAPUS 12-13		1,304
				\$7,113
Total Direct Award Programs				\$7,113
Total:				\$7,113
Nat. Endowment for the Arts & Humanities				
Direct Awards				
National Science Foundation				
Collaborative Research: Hikurangi Ocean Bottom Investigation of Tremor and Slow Slip (HOBITSS)	45.050	OCE-1333311		101,348
				\$101,348
Promotion of the Humanities Challenge Grants				
Direct Operation Cost/Bridge Fund	45.130	NEH CH-50718-10		118,159
				\$118,159
Promotion of the Humanities Division of Preservation and Access				
Encyclopaedia Iranica Online Project	45.149	NEH PW-51507-13		17,999
Encyclopaedia Iranica Project	45.149	NEH PW-050882-11		-99,231
				\$-81,232
Promotion of the Humanities Research				
The Guhyasamaja Tantra: A foundation Buddhist Tantra in the Context of the Pradipoddyotana	45.161	RQ-50600-11		58,462
The Selected Papers of John Jay	45.161	RQ-50738-13		21,408
THE UNFINISHED: INDIAN STONE CARVERS AT WORK	45.161	NEH RZ-50997-09		-51
				\$79,819
Promotion of the Humanities Office of Digital Humanities				
SARIT: Enriching Digital Text Collections in Infology	45.169	NEH HG-50041-13		9,569
				\$9,569
National Leadership Grants				
Built Works Registry	45.312	IMLS LG-05-10-0104-10		181,676
				\$181,676

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Total Direct Award Programs				\$409,339
Pass-through Awards				
Promotion of the Humanities Division of Preservation and Access				
Expanding the Medical Heritage Library: Preserving and Providing Online Access to Historical Medical Periodicals	45.149	CPP CU13-2472	PW-51014-12	14,574
				\$14,574
Promotion of the Humanities Research				
Online Edition of the Secular Music of Luca Marenzio (ca. 1553-1599)	45.161	RFSUNY 58796-2-1097778	NEH	35,360
				\$35,360
National Leadership Grants				
ChartEx: Charter Excavator Project (Digging into Data Challenge)	45.312	UWASH 739728	LG-00-12-0455-12	32,207
				\$32,207
Total Pass-through Programs				\$82,141
Total:				\$491,480

National Archives and Records Administration

Direct Awards

National Historical Publications and Records Grants

The Selected papers of John Jay, Phase IV	89.003	NHPRC NO. PC-50072		121,708
				\$121,708
Total Direct Award Programs				\$121,708
Total:				\$121,708

Other Agencies / Gov't

Direct Awards

Department of Homeland Security

Advancved Situation Awareness of High Impact Malware Attacks Against the Internet Routing Infrastructure	97.	N66001-12-C-0134		400,709
Integrated Investigation of Polyurea Coatings for Infrastructure Protection	97.	HSHQDC-10-C-00080		-912
				\$399,797
Total Direct Award Programs				\$399,797

Pass-through Awards

Central Intelligence Agency

Assessment of the National Security Implications of Climate and Global Change	13.	SCITOR G1073-006	CIA CU09-2936	92,472
Assessment of the National Security Implications of Climate and Global Change	13.	SCITOR G1073-006	CIA CU09-2936	52,783
				\$145,255

Small Business Development Centers

SBDC Contract 2012-13	59.037	SUNYRF 62535	SBDC	-5,776
				\$-5,776

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Allergy, Immunology and Transplantation Research				
Mapping Drug Resistance Genes in Plasmodium Falciparum	93.855	TBRI 13-01112.008	5R37AI048071-13	55,623
				\$55,623
Department of Homeland Security				
Research on Progressive Collapse of Buildings	97.	CU002 2012	HSHQDC-10-F-00120	16,482
				\$16,482
U.S. Agency for International Development				
Increasing the Global Climate Change Teams Technical Support Capacity to Global Climate Change-Program Management, CLIN5	98.	101038.5010-IQC-IRI	EPP-1-00-04-0024	1,285,171
USAID African and Latin American Resilience to Climate Change (ARCC)	98.	TETRAARD 1842-001	EPP100060000800	423,347
Planning and resilience in east africa through policy, adaptation, research and economic development	98.	1075-TTARD-CIESIN-1301	AID-623-C-13-00003	181,131
Increasing the Global Climate Change Teams Technical Support Capacity to Global Climate Change-Program Management, CLIN5	98.	101038.5010-IQC-IRI	EPP-1-00-04-0024	178,041
Increasing the Global Climate Change Team s Technical Support Capacity to Global Climate Change, Adaptation, and Development Issues	98.	45000.5010-IQC-IRI	EPP-I-00-04-00024-00	161,458
Water Security and Climate Risk: A Philippine Climate Change Adaptation Strategy for the Agriculture Sector	98.	UPLBFI 2012-086	M-OAA-GRO-EGAS-DGP-11-0001	112,283
Partnership Agreement Between the Center for International Forestry Research and Columbia University - Post Doc	98.	CIFOR CU13-0514	MTO 069018	111,191
Increasing the Global Climate Change Teams Technical Support Capacity to Global Climate Change-Program Management, CLIN5	98.	101038.5010-IQC-IRI	EPP-1-00-04-0024	78,048
Better Futures, Better Lives: Reducing Child and Maternal Mortality in Liberia	98.	IRC CU12-1515	AID-OAA-A-12-00094	42,894
Increasing the Global Climate Change Team s Technical Support Capacity to Global Climate Change, Adaptation, and Development Issues	98.	45000.5010-IQC-IRI	EPP-I-00-04-00024-00	38,512
Gridded Crop & Near Term Climate Modeling Workshops and Coordination	98.	ENG CCRDSS0005	EPP-I-00-04-00024	33,701
Increasing the Global Climate Change Team s Technical Support Capacity to Global Climate Change, Adaptation, and Development Issues	98.	45000.5010-IQC-IRI	EPP-I-00-04-00024-00	5,061
Increasing the Global Climate Change Team s Technical Support Capacity to Global Climate Change, Adaptation, and Development Issues	98.	45000.5010-IQC-IRI	EPP-I-00-04-00024-00	3,270
Increasing the Global Climate Change Team s Technical Support Capacity to Global Climate Change, Adaptation, and Development Issues	98.	45000.5010-IQC-IRI	EPP-I-00-04-00024-00	1,469
Increasing the Global Climate Change Team s Technical Support Capacity to Global Climate Change, Adaptation, and Development Issues	98.	45000.5010-IQC-IRI	EPP-I-00-04-00024-00	-2,796
				\$2,652,781
New York State Department of Health				
Measuring quality of Transcranial Magnetic Simulation	99.	NYPH CU13-2091	ECRIP	47,661
				\$47,661
Total Pass-through Programs				\$2,912,026
Total:				\$3,311,823

Social Secuirty Administration

Pass-through Awards

Social Security Research and Demonstration

Individual Allocations and the Quality of the Investment Options in 401k Portfolios	96.007	BC 5001537-20	6RRC08098402-05	44,900
				\$44,900
Total Pass-through Programs				\$44,900
Total:				\$44,900

United States Agency for International Dvlpt.

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Direct Awards				
U.S. Agency for International Development				
Micro-Solar Utilities for Small-Scale Irrigation in Mali	98.	AID-OAA-A-13-00063		147,588
Micro-Solar Utilities for Small-Scale Irrigation in Mali	98.	AID-OAA-A-13-00063		1,105
				\$148,693
USAID Foreign Assistance for Programs Overseas				
Weather and Climate Information for Climate-resilient Development	98.001	AID-OAA-A-11-00011		1,152,330
SAInS: School Action for innovations in Science	98.001	AID-497-A-13-00001		640,577
Care and Protection of Children in Emergencies - A Good Practice - Policy Change Initiative	98.001	DFD-A-00-05-00252-00		563,274
Supporting Universities to Partner Across the Pacific	98.001	AID-497-A-12-00009		547,264
Restoration and conversation of biodiversity in El Salvador through the adaptation and dissemination of slash and mulch agroforestry	98.001	AID-519-A-12-00002		523,604
Combination Intervention Strategy For Linkage And Retention - Mozambique (NY)	98.001	AID-OAA-A-12-00027		517,138
Situkulwane Lesiphephile - Safe Generations: Swaziland (NY)	98.001	AID-OAA-A-12-00020		471,717
Water-Agriculture-Livelihood Security in India	98.001	AID-386-A-12-00001		298,896
Novel Frontline Diagnostic Service for Antenatal Care	98.001	AID-OAA-A-12-00007		269,291
Situkulwane Lesiphephile - Safe Generations: Swaziland (NY)	98.001	AID-OAA-A-12-00020		175,273
Combination Intervention Strategy For Linkage And Retention - Mozambique (NY)	98.001	AID-OAA-A-12-00027		107,535
Novel Frontline Diagnostic Service for Antenatal Care	98.001	AID-OAA-A-12-00007		85,525
Research Study on Tuberculosis Factors in Central Asia Migrants	98.001	AID-176-G-13-00002-00		81,001
Research Study on Tuberculosis Factors in Central Asia Migrants	98.001	AID-176-G-13-00002-00		43,215
Research Study on Tuberculosis Factors in Central Asia Migrants	98.001	AID-176-G-13-00002-00		31,375
Research Study on Tuberculosis Factors in Central Asia Migrants	98.001	AID-176-G-13-00002-00		21,738
Care and Protection of Children in Emergencies - A Good Practice - Policy Change Initiative	98.001	DFD-A-00-05-00252-00		-18,412
				\$5,511,341
Total Direct Award Programs				\$5,660,034

Pass-through Awards

U.S. Agency for International Development

Translating Research into Action (TRAction)	98.	URC FY13-G01-6990	AID GHS-A-00-09-00015-00	228,970
Open-Label Randomized Controlled Trial to Assess the Implementation Effectiveness and Safety of 1% Tenofovir Gel Provision through Family Planning Services in KwaZulu-Natal, South Africa	98.	EVMS PPA-12-144	AID GPO-A-00-08-00005-00	135,623
An Assessment of the Impact of the Navrongo Zurugelu Approach on Men's Concerns about Family Planning and Reproductive Health Services	98.	FHI 0344.0212	AID GPO-A-00-08-00001-00	-9,535
				\$355,058

USAID Foreign Assistance for Programs Overseas

PREDICT Pathogen Discovery	98.001	ECOA PREDICT Y5 2013	AID GHNA 0009 0001 000	564,401
PREDICT Pathogen Discovery	98.001	ECOA PREDICT Y5 2013	AID GHNA 0009 0001 000	510,130
UC Davis PREDICT	98.001	UCD 200910804-01	GHN-A-00-09-00010-00	276,072
Impact of Population Growth and Climate Change in Lebanon and Egypt on Water Scarcity, Agricultural Output and Food Security	98.001	FHI 4345-03-FOG-2013-01	263-A-00-10-000052-00	149,225

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

R&D Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Connect-FP	98.001	IFAHI CU13-0639	AID 621-A-12-00006	39,312
Improving Effectiveness of Treatment for Torture Survivors	98.001	2002124586	AID-DFD-A-00-08-00308	27,026
HPV Infection, Genital Inflammation and HIV Acquisition in Women in CAPRISA 004	98.001	FHID 0437.0196	AID GHO-A-00-09-00016-00	16,629
Evaluating the effect of site-specific soil information on farmer input choices and the relationship between poverty and soil quality	98.001	UCD 201121454-15	AID-OAA-L-12-00001	9,522
PREDICT Pathogen Discovery	98.001	ECOA PREDICT Y5 2013	AID GHNA 0009 0001 000	-88
CAPRISA 004 PHASE IIB	98.001	FHID 360 805275	AID GHO-A-00-09-00016-00	-1,088
				\$1,591,141

Cooperative Development Program (CDP)

Implementation Research: Tackling Disrespect and Abuse in Facility-Based Childbirth	98.002	URC FY11-G02-6990	AID GHS-A-00-09-00015-00	215,093
				\$215,093

USAID Development Partnerships for University Cooperation and Development

Building Capacity to Manage Water Resources and Climate Risk in the Caribbean	98.012	HED-149-9751-PHI-12-01	AEG-A-00-05-00007	514,741
Building Capacity to Manage Water Resources and Climate Risk in the Caribbean	98.012	HED-149-9751-PHI-12-01	AEG-A-00-05-00007	74,063
Building Capacity to Manage Water Resources and Climate Risk in the Caribbean	98.012	HED-149-9751-PHI-12-01	AEG-A-00-05-00007	-58,472
				\$530,332

U.S. Agency for International Development

Elucidation of Genetic Markets to Detect P. falciparum Resistance to MMV-Supported Antimalarials (Enabling Technologies)	98.999	MMV CU09-1816	AID CU09-1816	354,771
				\$354,771
Total Pass-through Programs				\$3,046,395
Total:				\$8,706,429
Total: RESEARCH & DEVELOPMENT CLUSTER				\$609,185,350

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Student Financial Assistance Cluster

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
STUDENT FINANCIAL ASSISTANCE CLUSTER				
Department of Health & Human Services				
Direct Awards				
Health Professions Student Loans, Including Primary Care Loans/Loans for Disadvantaged Students				
HRSA LOANS TO DISADVANTAGED STUDENTS FOR DENTISTRY	93.342	6 E31HP19096-01-01		9,751
HRSA HEALTH PROFESSIONS STUDENT LOANS FOR DENTISTRY	93.342	6 E11HP19072-01-01		-9,751
				\$0
Total Direct Award Programs				\$0
Total: Department of Health & Human Services (Excluding NIH)				\$0
Department of Education				
Direct Awards				
Federal Supplemental Educational Opportunity Grants				
Federal Supplemental Educational Opportunity Grant (FSEOG) 2013-2014	84.007	FSEOG 13/14		811,582
Federal Supplemental Educational Opportunity Grant (FSEOG) 2013-2014	84.007	FSEOG 13/14		621,140
FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY	84.007	SEOG 12/13		1,600
				\$1,434,322
Federal Work-Study Program				
Federal Work Study 2013-2014	84.033	P033A132737		2,967,581
Federal Work Study 2013-2014	84.033	P033A132737		1,041,528
Federal Work Study 2013-2014	84.033	P033A132737		621,847
Federal Work Study 2013-2014	84.033	P033A132737		134,948
Federal Work Study 2013-2014	84.033	P033A132737		52,728
Federal Work Study 2013-2014	84.033	P033A132737		48,672
Federal Work Study 2013-2014	84.033	P033A132737		40,560
Federal Work Study 2013-2014	84.033	P033A132737		40,560
Federal Work Study 2013-2014	84.033	P033A132737		40,560
Federal Work Study 2013-2014	84.033	P033A132737		39,656
Federal Work Study 2013-2014	84.033	P033A132737		36,279
Federal Work Study 2013-2014	84.033	P033A132737		36,053
Federal Work Study 2013-2014	84.033	P033A132737		32,781
Federal Work Study 2013-2014	84.033	P033A132737		32,780
Federal Work Study 2013-2014	84.033	P033A132737		32,448
Federal Work Study 2013-2014	84.033	P033A132737		32,448
Federal Work Study 2013-2014	84.033	P033A132737		32,448

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Student Financial Assistance Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Federal Work Study 2013-2014	84.033	P033A132737		30,689
Federal Work Study 2013-2014	84.033	P033A132737		28,392
Federal Work Study 2013-2014	84.033	P033A132737		24,336
Federal Work Study 2013-2014	84.033	P033A132737		24,336
Federal Work Study 2013-2014	84.033	P033A132737		24,336
Federal Work Study 2013-2014	84.033	P033A132737		23,435
Federal Work Study 2013-2014	84.033	P033A132737		20,995
Federal Work Study 2013-2014	84.033	P033A132737		20,280
Federal Work Study 2013-2014	84.033	P033A132737		16,224
Federal Work Study 2013-2014	84.033	P033A132737		14,733
Federal Work Study 2013-2014	84.033	P033A132737		12,336
Federal Work Study 2013-2014	84.033	P033A132737		8,444
Federal Work Study 2013-2014	84.033	P033A132737		8,112
Federal Work Study 2013-2014	84.033	P033A132737		8,112
Federal Work Study 2013-2014	84.033	P033A132737		7,274
Federal Work Study 2013-2014	84.033	P033A132737		6,110
Federal Work Study 2013-2014	84.033	P033A132737		4,275
Federal Work Study 2013-2014	84.033	P033A132737		4,100
Federal Work Study 2013-2014	84.033	P033A132737		4,056
Federal Work Study 2012/2013	84.033	DE-438-002707		4,000
Federal Work Study 2013-2014	84.033	P033A132737		2,200
Federal Work Study 2013-2014	84.033	P033A132737		1,684
Federal Work Study 2013-2014	84.033	P033A132737		1,653
Federal Work Study 2013-2014	84.033	P033A132737		1,630
Federal Work Study 2013-2014	84.033	P033A132737		1,484
Federal Work Study 2013-2014	84.033	P033A132737		1,371
Federal Work Study 2013-2014	84.033	P033A132737		1,313
Federal Work Study 2013-2014	84.033	P033A132737		1,043
Federal Work Study 2013-2014	84.033	P033A132737		734
Federal Work Study 2013-2014	84.033	P033A132737		600
Federal Work Study 2013-2014	84.033	P033A132737		308
Federal Work Study 2013-2014	84.033	P033A132737		256
Federal Work Study 2013-2014	84.033	P033A132737		47
Federal Work Study 2012/2013	84.033	DE-438-002707		-870
Federal Work Study 2012/2013	84.033	DE-438-002707		-880
				\$5,571,025

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Student Financial Assistance Cluster, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Federal Pell Grant Program				
Pell Grant Program 2013/2014-Engineering	84.063	DE-PELL 13/14		7,826,394
Pell Grant 2011/2012	84.063	DE-PELL 11/12		39
Pell Grant Program 2012-2013	84.063	DE-PELL 12/13		-3,488
				\$7,822,945
Federal Direct Student Loans				
Federal Direct Loan Program 2013-2014	84.268	P268K141840		252,265,903
Federal Direct Loan	84.268	P268K151840		16,403,057
Federal Direct Loan (2011-2012)	84.268	DE-P268K121840		-22
Federal Direct Loan Program	84.268	DE-P268K131840		-45,143
				\$268,623,795
Total Direct Award Programs				\$283,452,087
Total:				\$283,452,087
Total:	STUDENT FINANCIAL ASSISTANCE CLUSTER			\$283,452,087

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Hurricane Sandy Relief Cluster

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
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HURRICANE SANDY RELIEF CLUSTER

Department of Health & Human Services

Direct Awards

Fungal Exposure in NYC Homes Damaged by Hurricane Sandy and Respiratory Outcomes in Asthmatic Children	93.095	1U01TP000582-01		197,647
Community Factors that Promoted Resilience in the Aftermath of Hurricane Sandy	93.095	1 HITEP130003-01-00		186,337
Evaluation of Public Health System Response to Hurricane Sandy in NYC Ares	93.095	1U01TP000589		76,098
Assessing and Strengthening Resilience in Response to Disaster Among Residents of NYC High Rise Public Housing	93.095	1 HITEP130009-01-00		2,613
				\$462,695
Total Direct Award Programs				\$462,695

Pass-through Awards

Impact of Health Department worker Safety Training on Health Impacts after Sandy	93.095	NYMC 41-259-1	1U01OH010625-01	123,527
				\$123,527
Total Pass-through Programs				\$123,527

Total:

National Institute of Health

Pass-through Awards

Role of CGK11 in AMPA Receptor Transport	93.095	NYUMC 13-A0-S1-081248	3R01MH067229-10S1	24,539
				\$24,539
Total Pass-through Programs				\$24,539
Total: Hurricane Sandy Relief Cluster				\$610,761

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Highway Planning and Construction Cluster

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
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HIGHWAY PLANNING & CONSTRUCTION CLUSTER

Department of Transportation
Pass-through Awards

September 11th Memorial Program For Regional	20.205	RFCUNY 55606-02-25	USDOT DTRT12-G-UTC02	34,000
				\$34,000
Total Pass-through Programs				
				\$34,000
Total: Highway Planning and Construction Cluster				
				\$34,000

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Child Care Development Fund Cluster			
<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Expenditures</u>
CHILD CARE DEVELOPMENT FUND CLUSTER			
Department of Health & Human Services			
Direct Awards			
Child Care and Early Education Research Connections - ACF	93.575	90YE0143-01-00	438,789
Child Care and Early Education Research Connections - ACF	93.575	90YE0143-01-00	364,232
			\$803,021
Total Direct Award Programs			\$803,021
Total: Child Care Development Fund Cluster			\$803,021

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

	Trio Cluster			
Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
TRIO CLUSTER				
Department of Education				
Direct Awards				
Talent Search Program	84.044	P044A111023		326,884
				\$326,884
Upward Bound Program	84.047	P047A121775		650,745
UPWARD BOUND PROGRAM	84.047	DE P047A080458		-2,397
				\$648,348
Total Direct Award Programs				\$975,232
Total: Department of Education - Trio Cluster				\$975,232

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

				Medicaid Cluster
Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures

MEDICAID CLUSTER

State / City Government
Pass-through Awards

CAPP Component B: Improving Community Healthcare for Adolescents	93.778	SDH C-027009	CMS 05-1105-NY5-ADM	212,565
CAPP Component B: Improving Community Healthcare for Adolescents	93.778	SDH C-027009	CMS 05-1105-NY5-ADM	105,766
				\$318,331
Total Pass-through Programs				\$318,331
Total: Department of Health & Human Services - Medicaid Cluster				\$318,331

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Foreign Food Donation-USAID Cluster

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
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FOREIGN FOOD DONATION CLUSTER-USAID

United States Agency for International Dvlpt.
Direct Awards

Columbia University and Institut Pertanian Bogor Partnership to Build Capacity for Adaptation Climate Risks in Indonesia	98.007	AID-497-A-11-00011		191,178
Columbia University and Institut Pertanian Bogor Partnership to Build Capacity for Adaptation Climate Risks in Indonesia	98.007	AID-497-A-11-00011		22,599
				\$213,777
Total Direct Award Programs				\$213,777
Total: Department of State - Foreign Food Donation Cluster-USAID				\$213,777

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
OTHER PROGRAMS				
Department of Health & Human Services				
Direct Awards				
Centers for Disease Control and Prevention				
Overcoming Barriers to Occupational Bloodborne Pathogen Exposure Reporting and Case Management (ESIS Task Order 0003)	93.	CDC 200-2011-37935/0003		509,921
Evaluation of Integrated Community-Based and Clinical HIV/AIDS Interventions in Sinazongwe, Zambia (ESIS Task Order 0004)	93.	CDC 200-2011-37935/0004		180,284
ESIS TO1: External Quality Assurance Assessment of Male Circumcision Sites Funded by the President's Emergency Plan for AIDS Relief	93.	CDC 200-2011-37935/0001		46,495
TB Building and Strengthening Infection Control Strategies	93.	CDC 14IPA1417004		38,062
ESIS TO2: Evaluation of Adverse Events following Male Circumcision	93.	CDC 200-2011-37935/0002		-19,499
				\$755,263
Global AIDS				
Tanzania Endeleva 1998 - NY	93.067	5U2GPS001998-04		8,377,744
Eastern Kenya 1987 - NY	93.067	5U2GPS001987-04		8,370,509
Building Mozambican Capacity - NY	93.067	5U2GPS002756-04		7,621,750
Ethiopia Technical Assistance 0204 (NY)	93.067	5U2GGH000204-03		6,625,197
Kenya Nyanza 1314 - New York	93.067	5U2GPS001314-05		5,568,037
Ethiopia Technical Assistance 0204 (NY)	93.067	5U2GGH000204-03		4,841,055
Tanzania Endeleva 1998 - NY	93.067	5U2GPS001998-04		4,657,562
MZ Technical Assistance 0424 (NY)	93.067	5U2GGH000424-03		4,314,873
Building Mozambican Capacity - NY	93.067	5U2GPS002756-04		3,760,846
Swaziland Rapid Scale Up 2005 (NY)	93.067	5U2GPS002005-05		3,118,576
UTAP 2 CONGO: NY	93.067	5U2GPS001526-05		3,011,160
Swaziland Rapid Scale Up 2005 (NY)	93.067	5U2GPS002005-05		2,957,572
MZ Technical Assistance 0424 (NY)	93.067	5U2GGH000424-03		2,603,987
CI Care & Treatment 0119 (NY)	93.067	5U2GGH000119-03		2,404,125
Eastern Kenya 1987 - NY	93.067	5U2GPS001987-04		2,253,389
South Africa MSM 0249 (NY)	93.067	5U2GGH000249-03		1,887,509
Ethiopia Technical Assistance 1036 (NY)	93.067	1U2GGH001036-01		1,626,233
TB/HIV Lesotho 2011 - NY	93.067	5U2GPS002011-05		1,416,871
Ethiopia Technical Assistance 0204 (NY)	93.067	5U2GGH000204-03		1,154,613
South Africa MSM 0249 (NY)	93.067	5U2GGH000249-03		1,131,144
Tanzania Endeleva 1998 - NY	93.067	5U2GPS001998-04		1,127,026
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		970,172
CI Care & Treatment 0119 (NY)	93.067	5U2GGH000119-03		902,662
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		833,108

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		828,401
TB/HIV Lesotho 2011 - NY	93.067	5U2GPS002011-05		822,603
TB/HIV Lesotho 2011 - NY	93.067	5U2GPS002011-05		726,053
Eastern Kenya 1987 - NY	93.067	5U2GPS001987-04		699,407
UTAP 2: TANZANIA (NY)	93.067	5U2GPS001521-05		657,539
Ethiopia Technical Assistance 0204 (NY)	93.067	5U2GGH000204-03		626,752
Swaziland Rapid Scale Up 2005 (NY)	93.067	5U2GPS002005-05		615,470
Ethiopia Technical Assistance 0204 (NY)	93.067	5U2GGH000204-03		613,793
Building Mozambican Capacity - NY	93.067	5U2GPS002756-04		536,660
UTAP 2 CONGO: NY	93.067	5U2GPS001526-04		510,704
Building Mozambican Capacity - NY	93.067	5U2GPS002756-04		483,891
Central Asia Care & Treatment 3074 - NY	93.067	5U2GPS003074-04		467,668
Tanzania Endeleva 1998 - NY	93.067	5U2GPS001998-04		464,451
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		452,819
UTAP 2 CONGO: NY	93.067	5U2GPS001526-05		435,735
South Africa TB Training 0388 - NY	93.067	5U2GGH000388-03		418,473
Central Asia Care & Treatment - NY	93.067	5U2GPS003074-04		386,511
Tanzania Endeleva 1998 - NY	93.067	5U2GPS001998-04		367,754
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		315,494
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		314,198
Kenya Nyanza 1314 - New York	93.067	5U2GPS001314-05		306,959
MZ Technical Assistance 0424 (NY)	93.067	5U2GGH000424-03		304,572
Swaziland Rapid Scale Up 2005 (NY)	93.067	5U2GPS002005-05		271,688
CI Care & Treatment 0119 (NY)	93.067	5U2GGH000119-03		266,116
Building Mozambican Capacity - NY	93.067	5U2GPS002756-04		260,539
UTAP 2 CONGO: NY	93.067	5U2GPS001526-05		251,893
Tanzania Peds TB/HIV 0193 - NY	93.067	5U2GGH000193-03		245,099
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		237,563
TB/HIV Lesotho 2011 - NY	93.067	5U2GPS002011-05		221,673
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		212,220
Ethiopia Technical Assistance 1036 (NY)	93.067	1U2GGH001036-01		211,514
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		209,686
Rwanda SCMOH 1161 (NY)	93.067	5U2GPS001161-05		191,929
South Africa TB Training 0388 - NY	93.067	5U2GGH000388-03		178,894
Eastern Kenya 1987 - NY	93.067	5U2GPS001987-04		176,475
Central Asia Care & Treatment 3074 - NY	93.067	5U2GPS003074-04		172,341

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Central Asia Care & Treatment 3074 - NY	93.067	5U2GPS003074-04		167,215
Implementation of Prgms for the Prev, Care and Trmnt of HIV/AIDS in Nigeria under PEPFAR - ONSITE	93.067	5U2GPS001060-05		163,690
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		161,494
Tanzania Peds TB/HIV 0193 - NY	93.067	5U2GGH000193-03		148,883
GH13-1368 Global Technical Assistance - NY	93.067	1U2GGH000994-01		147,608
South Africa MSM 0249 (NY)	93.067	5U2GGH000249-03		141,784
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		134,536
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		132,135
Tanzania Peds TB/HIV 0193 - NY	93.067	5U2GGH000193-03		126,928
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		125,113
Central Asia Care & Treatment - NY	93.067	5U2GPS003074-04		118,620
Central Asia Care & Treatment - NY	93.067	5U2GPS003074-04		117,463
MZ Tech Assistance - NY	93.067	5U2GPS002828-04		116,614
Central Asia Care & Treatment - NY	93.067	5U2GPS003074-04		116,515
Mali Strategic Info 0398 (NY)	93.067	5U2GGH000398-03		115,876
Rwanda SCMOH 1161 (NY)	93.067	5U2GPS001161-05		109,758
Tanzania Endeleva 1998 - NY	93.067	5U2GPS001998-04		104,456
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		102,660
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		102,355
UTAP 2 SWAZILAND: NY	93.067	5U2GPS001534-05		96,713
UTAP 2 SWAZILAND: NY	93.067	5U2GPS001534-05		96,135
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		92,193
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		83,710
Mali Strategic Info 0398 (NY)	93.067	5U2GGH000398-03		83,274
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		82,504
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		79,582
UTAP 2 CONGO: NY	93.067	5U2GPS001526-05		75,631
MZ Technical Assistance 0424 (NY)	93.067	5U2GGH000424-03		73,368
South Africa MSM 0249 (NY)	93.067	5U2GGH000249-03		66,503
Central Asia Care & Treatment - NY	93.067	5U2GPS003074-04		66,075
South Africa TB Training 0388 - NY	93.067	5U2GGH000388-03		55,151
Tanzania Peds TB/HIV 0193 - NY	93.067	5U2GGH000193-03		54,224
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		53,495
UTAP 2: TANZANIA (NY)	93.067	5U2GPS001521-05		53,457
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		52,293
Implementation of Prgms for the Prev, Care and Trmnt of HIV/AIDS in Nigeria under PEPFAR - ONSITE	93.067	5U2GPS001060-05		49,573

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		49,266
CI Care & Treatment 0119 (NY)	93.067	5U2GGH000119-03		47,905
MZ Technical Assistance 0424 (NY)	93.067	5U2GGH000424-03		46,967
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		41,974
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		37,276
Central Asia Care & Treatment 3074 - NY	93.067	5U2GPS003074-04		34,903
South Africa TB Training 0388 - NY	93.067	5U2GGH000388-03		34,115
MZ Tech Assistance - NY	93.067	5U2GPS002828-04		28,937
Mali Strategic Info 0398 (NY)	93.067	5U2GGH000398-03		28,707
South Africa MSM 0249 (NY)	93.067	5U2GGH000249-03		25,895
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		22,973
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		19,888
Mali Strategic Info 0398 (NY)	93.067	5U2GGH000398-03		17,375
UTAP 2 CONGO: NY	93.067	5U2GPS001526-04		14,632
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		6,809
GH13-1368 Global Technical Assistance - NY	93.067	1U2GGH000994-01		6,118
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		5,313
Mali Strategic Info 0398 (NY)	93.067	5U2GGH000398-03		4,804
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		4,050
GH13-1368 Global Technical Assistance - NY	93.067	1U2GGH000994-01		2,611
South Africa MSM 0249 (NY)	93.067	5U2GGH000249-03		2,593
Ethiopia Technical Assistance 0204 (NY)	93.067	5U2GGH000204-03		1,845
Tanzania Endeleva 1998 - NY	93.067	5U2GPS001998-04		1,724
Ethiopia Technical Assistance 0204 (NY)	93.067	5U2GGH000204-03		1,583
Swaziland Rapid Scale Up 2005 (NY)	93.067	5U2GPS002005-05		1,501
Kenya Nyanza 1314 - New York	93.067	5U2GPS001314-05		1,147
Central Asia Care & Treatment - NY	93.067	5U2GPS003074-04		590
Central Asia Strategic Info - Tajikistan	93.067	5U2GPS003031-04		393
UTAP 2: TANZANIA (NY)	93.067	5U2GPS001521-05		68
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		-24
UTAP 2 Cote d Ivoire: NY	93.067	5U2GPS001539-05		-27
Building Mozambican Capacity - NY	93.067	5U2GPS002756-04		-1,631
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		-2,696
Swaziland Rapid Scale Up 2005 (NY)	93.067	5U2GPS002005-05		-3,262
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		-4,432
Tanzania Peds TB/HIV 0193 - NY	93.067	5U2GGH000193-03		-4,592

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

	Other Programs, continued			
Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Tanzania Peds TB/HIV 0193 - NY	93.067	5U2GGH000193-03		-4,681
Rwanda SCMOH 1161 (NY)	93.067	5U2GPS001161-05		-4,841
UTAP 2 CONGO: NY	93.067	5U2GPS001526-04		-4,924
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		-5,178
Eastern Kenya 1987 - NY	93.067	5U2GPS001987-04		-6,710
Tanzania Endeleva 1998 - NY	93.067	5U2GPS001998-04		-7,762
UTAP 2: TANZANIA (NY)	93.067	5U2GPS001521-05		-9,380
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		-9,824
UTAP 2 CONGO: NY	93.067	5U2GPS001526-04		-14,893
UTAP 2: HQ - New York PMTCT	93.067	5U2GPS001537-05		-101,625
				\$99,972,321
Public Health Emergency Preparedness				
NCDP Preparedness and Emergency Response Learning Center	93.069	5U90TP000419-04		249,212
NCDP Preparedness and Emergency Response Learning Center	93.069	5U90TP000419-04		98,299
NCDP Preparedness and Emergency Response Learning Center	93.069	5U90TP000419-04		-19,037
				\$328,474
Maternal and Child Health Federal Consolidated Programs				
HEALTHY TOMORROWS PARTNERSHIP FOR CHILDREN PROGRAM	93.110	5 H17MC07865-05-00		-18
HEALTHY TOMORROWS PARTNERSHIP FOR CHILDREN PROGRAM	93.110	5 H17MC07865-03-00		-440
				\$-458
Nurse Anesthetist Traineeships				
Nurse Anesthetist Traineeship	93.124	6 A22HP24483-01-01		450
				\$450
Emergency Medical Services for Children				
EMSC Network Development Demonstration Project (NDDP)	93.127	6U03MC00007-13-01		421,101
EMSC Network Development Demonstration Project (NDDP)	93.127	6U03MC00007-13-01		158,528
EMSC Network Development Demonstration Project (NDDP)	93.127	6U03MC00007-13-01		691
				\$580,320
Research on Healthcare Costs, Quality and Outcomes				
Building toward ICD-11. Improving the Coding of Quality and Patient Safety Data	93.226	5R13HS020543-02		40,582
				\$40,582
Nurse Faculty Loan Program (NFLP)				
Nurse Faculty Loan Program	93.264	1E01HP24595-01-00		132,478
Nurse Faculty Loan Program	93.264	1E01HP25868-01-00		125,020
				\$257,498
Health Systems Strengthening and HIV/AIDS Prevention, Care and Treatment under the President's Emergency Plan for AIDS Relief				

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		1,087,699
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		1,007,280
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		870,093
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		777,964
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		715,675
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		659,968
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		238,354
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		232,475
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		216,217
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		197,676
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		163,076
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		125,011
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		118,048
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		111,926
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		95,717
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		95,478
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		68,483
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		57,140
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		54,514
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		53,564
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		52,216
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		42,095
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		41,411
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		37,894
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		37,732
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		28,917
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		25,044
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		20,187
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		19,443
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		10,870
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		10,717
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		10,379
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		9,939
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		7,671
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		7,398
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		6,994

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		5,947
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		5,133
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		3,351
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		499
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-70
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-240
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-242
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-263
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-316
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-777
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-887
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-935
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-1,189
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-1,447
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-8,976
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-10,081
Global HIV/AIDS Nursing Initiative - NEPI NY (Coordinating Center CORE)	93.266	6 U92HA12772-06-01		-18,846
				\$7,285,926

Complex Humanitarian Emergency and War-Related Injury Public Health Activities

Developing and Establishing Techniques to Monitor the Grave Violations of the Rights of Children and Women	93.269	5UE2EH000540-05		116,638
Developing and Establishing Techniques to Monitor the Grave Violations of the Rights of Children and Women	93.269	5UE2EH000540-05		35,536
Developing and Establishing Techniques to Monitor the Grave Violations of the Rights of Children and Women	93.269	5UE2EH000540-05		-9,065
				\$143,109

Centers for Disease Control and Prevention Investigations and Technical Assistance

A Public Health Workplace Experience to Increase Minority Student Interest in Public Health	93.283	5U50MN000018-03		443,453
A Public Health Workplace Experience to Increase Minority Student Interest in Public Health	93.283	5U50MN000018-03		227,589
A Public Health Workplace Experience to Increase Minority Student Interest in Public Health	93.283	5U50MN000018-03		-13,298
				\$657,744

Health Professions Student Loans, Including Primary Care Loans/Loans for Disadvantaged Students

HRSA Health Professions Student Loans for Dentistry	93.342	1 E11HP26059-01-00		48,605
				\$48,605

Affordable Care Act (ACA) Public Health Training Centers Program

Affordable Care Act (ACA) Public Health Training Centers	93.516	6 UB6HP22830-03-03		162,714
Affordable Care Act (ACA) Public Health Training Centers	93.516	6 UB6HP22830-03-03		91,276
Affordable Care Act (ACA) Public Health Training Centers	93.516	6 UB6HP22830-03-03		-3,132
				\$250,858

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Early Head Start / Head Start				
Early Head Start - Programmatic Expenses	93.600	02CH3042/01		1,796,669
Early Head Start	93.600	02CH9933/10		334,287
Early Head Start - Programmatic Expenses	93.600	02CH3042/01		249,587
Early Head Start	93.600	02CH9933/10		28,674
Early Head Start	93.600	02CH9933/09		-13,129
Early Head Start	93.600	02CH9933/09		-18,180
Columbia University Head Start - Program Expense	93.600	02CH3022/02		539,223
Columbia University Head Start - Program Expense	93.600	02CH3022/02		370,049
Columbia University Head Start - Program Expense	93.600	02CH3022/02		72,856
Columbia University Head Start - Program Expense	93.600	02CH3022/02		55,857
				\$3,415,893
Ryan White HIV/AIDS Dental Reimbursement and Community Based Dental Partnership Grants				
Dental Care for Hard-to-Reach HIV/AIDS Populations in Harlem & South Bronx	93.924	2H65HA00014-12-00		302,518
Ryan White HIV Dental Reimbursement Program	93.924	1T22HA26468-01-00		80,792
Community Based Dental Partnership	93.924	6 H65HA00014-11-02		36,561
Community Based Dental Partnership	93.924	6 H65HA00014-11-02		574
				\$420,445
Healthy Start Initiative				
Eliminating Disparities in Perinatal Health: Downstate New York Healthy Start	93.926	6 H49MC00133-13-04		984,841
Eliminating Disparities in Perinatal Health: Downstate New York Healthy Start	93.926	6 H49MC00133-13-04		13,664
ELIMINATING DISPARITIES IN PERINATAL HEALTH: DOWNSTATE NEW Y ORK HEALTHY START	93.926	6 H49 MC00133-09-01		-5
ELIMINATING DISPARITIES IN PERINATAL HEALTH: DOWNSTATE NEW Y ORK HEALTHY START	93.926	6 H49 MC00133-10-01		-8
ELIMINATING DISPARITIES IN PERINATAL HEALTH: DOWNSTATE NEW Y ORK HEALTHY START	93.926	5 H49 MC00133-11-00		-642
				\$997,850
HIV Demonstration, Research, Public and Professional Education Projects				
PRESIDENTIAL EXPANSION PROJECT FOR AIDS RELIEF - RWANDA OFF	93.941	5 U62 PS223540-08		-25,465
PRESIDENTIAL EXPANSION PROJECT FOR AIDS RELIEF - RWANDA OFF	93.941	5 U62 PS223540-08		-41,099
				\$-66,564
Total Direct Award Programs				\$115,088,316

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The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Peer Support for HIV Treatment Adherence Training	93.	ICFI 13TWSK0015	200-2009-30981/0017	3,686
Health Resources and Services Administration				
Project for the Enhancement and Alignment of the Continuum of Care for HIV-Infected Youth (PEACOC)	93.	NYPH CU14-1625	1 H12HA24850-01-00	22,682
				\$95,046
Global AIDS				
Nigeria - CIHP Subcontract (NY)	93.067	CIHP CU11-1506	1U2GGH000145-01	66,275
TEGEMEZA: Implementation & Expansion of High Quality HIV Care, Prevention & Treatment (NY)	93.067	CFHS 802	1 U2G GH000097-01	59,070
TEGEMEZA: Implementation & Expansion of High Quality HIV Care, Prevention & Treatment (NY)	93.067	CFHS 802	1 U2G GH000097-01	50,019
TEGEMEZA: Implementation & Expansion of High Quality HIV Care, Prevention & Treatment (NY)	93.067	CFHS 802	1 U2G GH000097-01	23,278
TEGEMEZA: Implementation & Expansion of High Quality HIV Care, Prevention & Treatment (NY)	93.067	CFHS 802	1 U2G GH000097-01	2,999
SEV-CI GH1115 Sub (NY)	93.067	SEVCI CU11-1500	U2GGH000387	-508
Nigeria - CIHP Subcontract (NY)	93.067	CIHP CU11-1506	1U2GGH000145-01	-9,552
				\$191,581
Hospital Preparedness Program (HPP) and Public Health Emergency Preparedness (PHEP) Aligned Cooperative Agreements				
Hospital Preparedness Program FY 13/BP 2 - Emergency Preparedness for Nursing Staff Phase III - Tools Development (HPP 45)	93.074	PHS 13-CU-01	U90TP000546	50,648
				\$50,648
Substance Abuse and Mental Health Services Projects of Regional and National Significance				
New York City Project LAUNCH (Evaluation subcontract)	93.243	FPHNY 7104TRUCO-001	5 H79 SM060274-03	82,703
New York City Project LAUNCH (Evaluation subcontract)	93.243	FPHNY 7104TRUCO-001	5 H79 SM060274-03	25,281
				\$107,984
PPHF 2012: Community Transformation Grants and National Dissemination and Support for Community Transformation Grants - financed solely by 2012 Preventinon and Public Health Funds				
Alcohol in College/University Setting	93.531	FPHNY 7202TRUCO-001	CDC CU13-1025	10,000
				\$10,000
Early Head Start / Head Start				
Columbia University Head Start Program	93.600	NYCHRA 660TCOL	DHHS ACF CU09-4030	-261
Columbia University Head Start Program	93.600	NYCHRA 660TCOL	DHHS ACF CU09-4030	-325
				\$-586
Health Careers Opportunity Program				
Health Careers Opportunity Program	93.822	MSSM 0253-6296-4089	6D18HP10627-06-01	153,947
Health Careers Opportunity Program	93.822	MSSM 0253-6296-4089	6D18HP10627-06-01	118,682
Health Careers Opportunity Program	93.822	MSSM 0253-6296-4089	6D18HP10627-06-01	2,291
				\$274,920
Total Pass-through Programs				\$729,593
Total: Department of Health & Human Services (Excluding NIH)				\$115,817,909

National Institute of Health

Direct Awards

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Mental Health Research Grants				
Genetic and Neural Complexity in Psychiatry	93.242	5R13MH091947-05		20,897
				\$20,897
Trans-NIH Recovery Act Research Support				
ARRA -1G20RR030893-01	93.701	1G20RR030893-01		1,132,613
				\$1,132,613
Cardiovascular Diseases Research				
FIRST in CER (Begg/Davidson/Taylor)	93.837	5R25HL105401-04		207,520
FIRST in CER (Begg/Davidson/Taylor)	93.837	5R25HL105401-04		176,504
BEST-DP: Biostatistics Enrichment Summer Training Diversity Program	93.837	5R25HL096260-05		13,786
FIRST in CER (Begg/Davidson/Taylor)	93.837	5R25HL105401-04		-852
				\$396,958
Arthritis, Musculoskeletal and Skin Diseases Research				
Seventh Forum on Osteoporosis and Metabolic Bone Disease for fellows in training	93.846	1R13AR065361-01		15,000
				\$15,000
Extramural Research Programs in the Neurosciences and Neurological Disorders				
Summer Research Program for Science Teachers	93.853	5R25NS076444-04		54,324
R25 Neurology Research Education and Mentorship Program	93.853	5R25NS070697-05		23,280
R25 Neurology Research Education and Mentorship Program	93.853	5R25NS070697-05		20,020
				\$97,624
Allergy, Immunology and Transplantation Research				
Summer Immunology Research Program for High School Science Teachers	93.855	5 R25 AI080566-04		24,936
				\$24,936
Child Health and Human Development Extramural Research				
Inter-City Study of Community Engagement in Parks, Children and Adolescent Health	93.865	5R13HD071388-03		14,030
				\$14,030
Aging Research				
Interdisciplinary Lifecourse Approaches to African American Cognitive Aging	93.866	5R13AG044140-02		21,224
				\$21,224
Total Direct Award Programs				\$1,723,282
Pass-through Awards				
Cancer Research Manpower				
SWOG Purchase Service Agreement High Accrual	93.398	CMICH CU01-2860	NCI SWOG9921	16,100
SWOG Purchase Service Agreement High Accrual	93.398	CMICH CU01-2860	NCI SWOG9921	13,726
				\$29,826
Total Pass-through Programs				\$29,826

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Total: National Institute of Health				\$1,753,108

State / City Government

Pass-through Awards

Hospital Preparedness Program (HPP) and Public Health Emergency Preparedness (PHEP) Aligned Cooperative Agreements

Core Development - Planning Alliance Workgroup (HPP 50)	93.074	PHS 12-CU-01	NYCDOHMH CU12-3281	-282
				\$-282

Maternal and Child Health Services Block Grant to the States

NYSDOH Preventive Dental Services Program	93.994	SDH C027547	HRSA	57,835
NYS Genetic Service Program (2009)	93.994	SDH C023846	HRSA	57,293
				\$115,128
Total Pass-through Programs				\$114,846
Total:				\$114,846

National Science Foundation

Direct Awards

Engineering Grants

I Corps: High Frame rate Fluorescence Lifetime Imaging Microscopy	47.041	IIP-1243899		30,627
				\$30,627

Mathematical and Physical Sciences

MEGA 2013 (Effective Methods in Algebraic Geometry)	47.049	DMS-1303109		34,753
Analysis, Complex Geometry, and Mathematical Physics	47.049	DMS-1266145		34,412
REU Site at Nevis Labs, Columbia University	47.049	PHY-1062183		12,550
REU Site at Nevis Labs, Columbia University	47.049	PHY-1062183		485
				\$82,200

Computer and Information Science and Engineering

Research and Education Activities at ACM SIGMOD/PODS 2013	47.070	IIS-1246690		19,074
Workshop: UIST 2012 Doctoral Symposium	47.070	IIS-1245112		6,000
				\$25,074

Social, Behavioral, and Economic Sciences

Workshop: Governing Access to Essential Resources	47.075	SES-1228423		21,804
Dissertation Research: Out of the Shadows : Technical Democracy and HIV Risk in Morocco	47.075	SES-1127748		14,479
Workshop: Governing Access to Essential Resources	47.075	SES-1228423		-38,189
				\$-1,906

Education and Human Resources

IGERT: From Data to Solutions: A New PhD Program in Transformational Data & Information	47.076	DGE-1144854		337,999
New, GK-12 Columbia University Learning from Earth and Ecological Field Studies (LEEFS) Graduate Fellowship Program	47.076	DGE-0742450		86,410

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
New, GK-12 Columbia University Learning from Earth and Ecological Field Studies (LEEFS) Graduate Fellowship Program	47.076	DGE-0742450		26,276
NSF Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (Gerard Parkin) (PAESMEM)	47.076	DUE-0933971		3,679
New, GK-12 Columbia University Learning from Earth and Ecological Field Studies (LEEFS) Graduate Fellowship Program	47.076	DGE-0742450		-627
IGERT: From Data to Solutions: A New PhD Program in Transformational Data & Information	47.076	DGE-1144854		-25,937
				\$427,800

Trans-NSF Recovery Act Reasearch Support

ARRA -OIA-0963217	47.082	OIA-0963217		1,763,072
				\$1,763,072
Total Direct Award Programs				\$2,326,867

Pass-through Awards

Computer and Information Science and Engineering

CI Fellows Project: Robust Information Extraction	47.070	CIF-E-004	NSF 0937060	14,289
				\$14,289
Total Pass-through Programs				\$14,289
Total:				\$2,341,156

National Aeronautics & Space Administration

Pass-through Awards

National Aeronautics & Space Administration

Summer Research Program for Science Teachers	43.	CSDNR CU10-2873	NNX10AU94A	15,725
				\$15,725

Science

Question of Carbon Curriculum (QOC) and Online Teacher Education Course R&D and Implementation-subcontract	43.001	SCIMMN CU09-0703	NNX09AL39G	15,600
An Ecosystem Approach to Climate Change Education	43.001	SUAMC P0010607	NNX11AL98A	15,019
				\$30,619
Total Pass-through Programs				\$46,344
Total:				\$46,344

Department of Energy

Pass-through Awards

Office of Science Financial Assistance Program

BNL Support for Graduate Student Support for Petri, Andrea	81.049	BNL #122048	DE-AC02-98CH10886	5,129
BNL Support for Graduate Student Support for Petri, Andrea	81.049	BNL #122048	DE-AC02-98CH10886	3,205
				\$8,334
Total Pass-through Programs				\$8,334
Total:				\$8,334

Department of Defense

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Direct Awards				
Basic and Applied Scientific Research				
GS ADMISSIONS ONR GLOBAL COHORT 9	12.300	N00014-10-1-0855		27,720
GS ADMISSIONS ONR SERRANO COHORT 6	12.300	N00014-06-1-1097		210
				\$27,930
Total Direct Award Programs				\$27,930
Pass-through Awards				
Department of Defense				
Workshop on Cybersecurity Privacy Issues	12.	IDA A60398	DASW01-04-C-0003	7,871
				\$7,871
Total Pass-through Programs				\$7,871
Total:				\$35,801

Department of Education

Direct Awards

Department of Education

Jacob K. Javits Fellowship 2010-14	84.170	P170B100003-12B		305,165
Jacob Javits Fellowship 2011/2012	84.170	P170B090002		45,672
				\$350,837
Total Direct Award Programs				\$350,837
Total:				\$350,837

Department of Interior

Direct Awards

Cooperative Research and Training Programs □ Resources of the National Park System

Conduct Historical Research for Governors Island National Monument	15.945	NPS P12AC10964		8,238
Climate science synthesis and analysis	15.945	NPS H4503090700		1,259
				\$9,497
Total Direct Award Programs				\$9,497
Total:				\$9,497

Department of State

Direct Awards

Department of State

GS Financial Aid DOS Global Cohort 9	19.	DS SLMAQM09GR069		50,749
				\$50,749

Professional and Cultural Exchange Programs - Special Professional and Cultural Programs

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

				Other Programs, continued
Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
The Ngwang Choephel Fellows Program: Tibet Ecotourism Market Project	19.012	DS S-ECAPE-12-GR-188(RJ)		168,354
The Ngwang Choephel Fellows Program: Tibet Ecotourism Market Project	19.012	DS S-ECAPE-12-GR-188(RJ)		63,273
				\$231,627
Department of State				
GS Info Tech DOS Global Cohort 10	19.202	DS S-LMAQM-10-GR-076		179,062
GS Info Tech DOS Global Cohort 10	19.202	DS S-LMAQM-10-GR-076		500
				\$179,562
International Programs to Support Democracy, Human Rights and Labor				
Citezen s Rights, the Rule of Law, and Access to Justice Myanmar	19.345	S-LMAQM-13-GR-1165		108,947
				\$108,947
Total Direct Award Programs				\$570,885
Total:				\$570,885
Department of Veterans Affairs				
Direct Awards				
Department of Veterans Affairs				
IPA for Lisa Dixon - VISN 3 MIRECC	64.	DVAMC CU12-2962		39,009
VA, MARYLAND HEALTH CARE SYSTEM				
IPA for Lisa Dixon - VISN 5 MIRECC	64.	VAMHS CU13-0024		31,211
VA, NEW JERSEY HEALTH CARE SYSTEM				
Mindfulness-Based Cognitive Therapy for Preventing Suicide in Military Veterans	64.	VANJ CU13-2538		32,597
				\$102,817
Total Direct Award Programs				\$102,817
Total:				\$102,817
Nat. Endowment for the Arts & Humanities				
Direct Awards				
Promotion of the Arts Grants to Organizations and Individuals				
FY14 National Endowment for the Arts: Art Works (Music)	45.024	NEA 14-3100-7029		15,000
				\$15,000
Promotion of the Humanities Professional Development				
America s East Central Europeans: Migration and Memory	45.163	NEH EH-50405-13		67,500
Teaching & Researching 20th Century Transnational Migration, Diasporas, Accommodation, and Memory: America s Russian Speaking Immigrants & Refugees	45.163	EH-50310-12		32,689
America s East Central Europeans: Migration and Memory	45.163	NEH EH-50405-13		20,360
America s East Central Europeans: Migration and Memory	45.163	NEH EH-50405-13		15,462
America s East Central Europeans: Migration and Memory	45.163	NEH EH-50405-13		5,059
Teaching & Researching 20th Century Transnational Migration, Diasporas, Accommodation, and Memory: America s Russian Speaking Immigrants & Refugees	45.163	EH-50310-12		2,771

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

Other Programs, continued

<u>Federal Grantor / Pass-through Grantor</u>	<u>CFDA</u>	<u>Project No</u>	<u>Pass-through Contract Number</u>	<u>Expenditures</u>
Teaching & Researching 20th Century Transnational Migration, Diasporas, Accommodation, and Memory: America's Russian Speaking Immigrants & Refugees	45.163	EH-50310-12		2,700
				\$146,541
Total Direct Award Programs				\$161,541
Total:				\$161,541

Other Agencies / Gov't

Direct Awards

Equal Employment Opportunity Commission

EEOC Geoprocessing	30.	USEEOC CU13-3688		20,905
				\$20,905

Congressional Research Service

Changes in Bank Lending Portfolios	42.	CRS 13-03		2,603
				\$2,603

New York City Economic Development Corp

NYC BUSINESS PLAN COMPETITION	99.	NYCEDC 37150002 YR3		45,850
NYC Next Idea 2013-2014	99.	NYCEDC 37150003		490
				\$46,340
Total Direct Award Programs				\$69,848

Pass-through Awards

Small Business Development Centers

SBDC Contract 2013-14	59.037	RFSUNY 66139	1113670	84,630
RFSUNY Award 66290-NYS Hurricane Sandy Small Business Revitalization Assistance	59.037	RFSUNY 66290	1113974	69,670
RFSUNY Award 64330	59.037	RFSUNY 64330	7134938	45,854
THE NEW YORK STATE SMALL BUSINESS DEVELOPMENT CENTER (NYS/SB DC)	59.037	SUNYRF 55733	SBA1-603001-Z-0033-26	-821
				\$199,333

United States Institute of Peace

Two Sudans Forum	91.	IIE CU13-1502	USIP CU13-1502	2,000
				\$2,000

U.S. Agency for International Development

Malaria Diagnosis and Case Management Program	98.	PATH AID.1760-6233-CRT	AID CU13-1372	122,522
Women's Empowerment on Peace, Security and Development in Burma	98.	DEVALT BT1065	AID-OAA-TO-12-00053	74,934
				\$197,456
Total Pass-through Programs				\$398,789
Total:				\$468,637

United States Agency for International Development

Direct Awards

U.S. Agency for International Development

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York
Supplemental Schedule of Expenditures of Federal Awards
For year ended June 30, 2014

				Other Programs, continued
Federal Grantor / Pass-through Grantor	CFDA	Project No	Pass-through Contract Number	Expenditures
Malaria Laboratory Diagnosis and Monitoring Project - ONSITE	98.	AID 663-A-00-08-00433-00		497,480
Malaria Laboratory Diagnosis and Monitoring Project - ONSITE	98.	AID 663-A-00-08-00433-00		493,151
Malaria Laboratory Diagnosis and Monitoring Project - ONSITE	98.	AID 663-A-00-08-00433-00		8,312
Center on Child Protection at the University of Indonesia	98.	AID 497-A-00-10-00009-00		-718
Malaria Laboratory Diagnosis and Monitoring Project - ONSITE	98.	AID 663-A-00-08-00433-00		-10,879
				\$987,346

USAID Foreign Assistance for Programs Overseas

Combination Intervention Package to Enhance Antiretroviral Therapy Uptake and Retention During TB Treatment in Lesotho (NY)	98.001	AID-OAA-A-12-00022		324,228
Combination Intervention Package to Enhance Antiretroviral Therapy Uptake and Retention During TB Treatment in Lesotho (NY)	98.001	AID-OAA-A-12-00022		203,292
Healthcare Management and Administration (HMA) Education Twinning in Mozambique - COUNTRY	98.001	AID-656-A-14-00002		55,484
Healthcare Management and Administration (HMA) Education Twinning in Mozambique - COUNTRY	98.001	AID-656-A-14-00002		25,573
Healthcare Management and Administration (HMA) Education Twinning in Mozambique - COUNTRY	98.001	AID-656-A-14-00002		5,301
Healthcare Management and Administration (HMA) Education Twinning in Mozambique - COUNTRY	98.001	AID-656-A-14-00002		214
				\$614,092
Total Direct Award Programs				\$1,601,438

Pass-through Awards

USAID Foreign Assistance for Programs Overseas

USAID/KENYA APHIAplus, Health Service Delivery Projects (NY)	98.001	JHPIEGO 11-SBA-014	AID CU10-2068	840,456
Policy, Advocacy, and Civil Society Development in Georgia (G-PAC)	98.001	EWMI 494-10-100-3016-20	AID-114-A-10-00005	193,903
USAID/KENYA APHIAplus, Health Service Delivery Projects (NY)	98.001	JHPIEGO 11-SBA-014	AID CU10-2068	15,313
				\$1,049,672
Total Pass-through Programs				\$1,049,672
Total:				\$2,651,110

United States Institute of Peace

Direct Awards

Annual Grant Competition

Two Sudans Forum	91.001	USIP CU12-3724		480
				\$480
Total Direct Award Programs				\$480
Total:				\$480
Total:	OTHER PROGRAMS			\$124,433,302

Total Federal Award Expenditures: **\$1,020,025,861**

The accompanying footnotes are an integral part of the Supplemental Schedule of Expenditures of Federal Awards

The Trustees of Columbia University in the City of New York

Notes to Supplemental Schedule of Expenditures of Federal Awards

Year ended June 30, 2014 (expenditures in thousands)

1. Basis of Presentation

The accompanying Supplemental Schedule of Expenditures of Federal Awards (the "Schedule") has been prepared in accordance with OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations. The purpose of the Schedule is to present a summary of those activities of The Trustees of Columbia University in the City of New York (the "University") for the year ended June 30, 2014, which have been financed by the U.S. Government ("Federal awards"). For purposes of the Schedule, Federal awards include all Federal assistance entered into directly between the University and the Federal government and also between the University and other primary recipients of Federal government funds (pass-through), recorded on the accrual basis of accounting. Negative amounts listed on the Schedule represent adjustments, in the normal course of business, to amounts included on the prior year's Schedule. The project number and pass-through contract number on the Schedule represent the number assigned by the pass-through entity to the applicable program. Certain project numbers contain alpha numeric internal identifiers as a suffix used by the University to manage sponsored project spending. CFDA numbers and pass-through numbers are provided when applicable.

2. Subrecipients

During fiscal year 2014, the University provided \$105,357 to subrecipients in the following programs:

<u>Program or Cluster</u>	<u>CFDA No.</u>	<u>A m o u n t</u>
Research & Development Cluster	Various	\$ 84,756
HIV Demonstration, Research, Public and Professional Education Projects	93.067	17,743
	93	255
	93.941	78
	93.135	74
Other	93.266	1,140
	93.926	621
	93.127	213
	93.924	130
	19.202	97
	93.516	92
	19.345	82
	47.076	49
	93.855	27
Total		<u>\$ 105,357</u>

The Trustees of Columbia University in the City of New York

Notes to Supplemental Schedule of Expenditures of Federal Awards

Year ended June 30, 2014 (expenditures in thousands)

3. Facility and Administrative Costs

The University's negotiated predetermined cost rates for the year ended June 30, 2014 were as follows:

All campuses, excluding Lamont-Doherty Earth Observatory	
On-campus	60.0%
Off-campus	26.0%
Off-campus modified	29.4%
Lamont-Doherty Earth Observatory	
On-campus	53.0%
Off-campus	26.0%
Off-campus modified	29.4%
Other sponsored activity	
On-campus	31.0%
Off-campus	26.0%

4. Guaranteed Student Loan Programs

With respect to the Federal Direct Lending Program, the University is only responsible for the performance of certain administrative duties; therefore, the transactions and the balances of loans outstanding related to this program are not included in the University's consolidated financial statements. The Schedule includes the amounts loaned to students during the year ended June 30, 2014. It is not practical to estimate the outstanding balance of loans under this program.

5. Student Loan Programs

The University administers the following loan programs:

Federal Agency	Loan Program	Federal CFDA No.	Loans Issued for the year ended June 30, 2014	Outstanding Principal Balance at June 30, 2014
Education	Perkins Loan	84.038	\$ 8,100	\$ 60,537
DHHS	Health Professionals	93.342	1,376	8,668
DHHS	Nursing Students	93.364	273	992
			<u>\$ 9,749</u>	<u>\$ 70,197</u>

The University is responsible for the oversight and management of the Federal Perkins Loan Program and the Health Professional and Nursing Student Loan Funds funded by the U.S. Department of Education and the Department of Health and Human Services, respectively. The Federal Perkins Loan Program principal cancelled for the year ended June 30, 2014 is \$313.

The federally approved administrative cost allowed under the Title IV program for Federal Work study, Federal Perkins and Federal SEOG for the fiscal year ending June 30, 2014 was \$619. This expense was charged to one program, the Federal Work Study Program. The administrative cost allowance is determined as a percentage of the total program expenditures. The formula permits administrative cost charges at 4.5% of the first \$5,500 expended and 3% on expenditures over \$5,500.



**Independent Auditor's Report on Internal Control over Financial Reporting and on
Compliance and Other Matters Based on an Audit of Financial Statements Performed in
Accordance with *Government Auditing Standards***

To The Trustees of Columbia University in the City of New York:

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of The Trustees of Columbia University in the City of New York (the "University"), which comprise the consolidated balance sheet as of June 30, 2014, and the related consolidated statements of activities and of cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated October 14, 2014.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the University's internal control over financial reporting ("internal control") to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we do not express an opinion on the effectiveness of the University's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the University's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.



Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

PricewaterhouseCoopers LLP

New York, New York
October 14, 2014



**Independent Auditor's Report on Compliance with Requirements
That Could Have a Direct and Material Effect on Each Major Program and on Internal
Control Over Compliance in Accordance with OMB Circular A-133**

To The Trustees of Columbia University in the City of New York:

Report on Compliance for Each Major Federal Program

We have audited The Trustees of Columbia University in the City of New York's (the "University") compliance with the types of compliance requirements described in the *OMB Circular A-133 Compliance Supplement* that could have a direct and material effect on each of the University's major federal programs for the year ended June 30, 2014. The University's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with the requirements of laws, regulations, contracts, and grants applicable to its federal programs.

Auditor's Responsibility

Our responsibility is to express an opinion on compliance for each of the University's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*. Those standards and OMB Circular A-133 require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the University's compliance.

Opinion on Each Major Federal Program

In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2014.

Other Matters

The results of our auditing procedures disclosed instances of noncompliance, which are required to be reported in accordance with OMB Circular A-133 and which are described in the accompanying schedule of findings and questioned costs as items 2014-001 and 2014-002. Our opinion on each major federal program is not modified with respect to these matters.



The University's response to the noncompliance findings identified in our audit is described in the accompanying Management's Views and Corrective Action Plan. The University's response was not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

Report on Internal Control Over Compliance

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the University's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with OMB Circular A-133, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the University's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. *A material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. *A significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of OMB Circular A-133. Accordingly, this report is not suitable for any other purpose.

PricewaterhouseCoopers LLP

New York, New York
March 17, 2015

The Trustees of Columbia University in the City of New York

Summary of Independent Auditors' Results

For the year ended June 30, 2014

Section I—Summary of Independent Auditors' Results

Financial Statements

Type of independent auditors' report issued: Unmodified

Internal control over financial reporting:
 Material weakness (es) identified? _____ Yes X No

Significant deficiencies(s) identified that are not
 considered to be material weaknesses? _____ Yes X None reported

Noncompliance material to financial statements noted? _____ Yes X No

Federal Awards

Internal Control over major programs:
 Material weakness (es) identified? _____ Yes X No

Significant deficiencies(s) identified that are not considered
 to be material weaknesses _____ Yes X None reported

Type of independent auditors' report issued on compliance
 for major programs: Unmodified

Any audit findings disclosed that are required to be
 reported in accordance with Circular A-133 (Section .510(a))? X Yes _____ No

Identification of major programs:

<u>CFDA Number(s)</u>	<u>Name of Federal Program or Cluster</u>
Various	Research and Development Cluster
Various	Student Financial Assistance Cluster
93.067	Global Aids
93.600	Early Head Start / Head Start
93.283	A Public Health Workplace Experience to Increase Minority Student Interest in Public Health

Dollar threshold used to distinguish between
 Type A and Type B programs: \$3,273,464

Auditee qualified as low-risk auditee? X Yes _____ No

The Trustees of Columbia University in the City of New York

Schedule of Findings and Questioned Costs

For the year ended June 30, 2014

Section II—Financial Statement Findings

None noted.

Section III—Federal Award Findings and Questioned Costs

2014-001 – Allowable Costs – Service centers and shared costs

Applies to CFDA 93.396 (Mechanism of the Stromal Response to Smoothened Inhibition in Pancreatic Cancer/ Project No: 5R01CA157980-04) within the Research and Development Cluster.

Condition

Of the 25 service center charges selected for testing, one service center charge for \$934 was mistakenly charged to the project twice, resulting in an overcharge to the project.

Criteria

OMB Circular A-21, Cost Principles for Educational Institutions, defines allowable costs as those that are considered reasonable and necessary for the operation of the institution or the performance of the sponsored agreement.

Cause

Due to a manual error at the service center, the service center charge was booked to the project as an individual charge and then also processed as part of a batch of service center charges, resulting in a duplicate charge to the project.

Questioned Cost

The instance noted above resulted in an overcharge of \$934 on CFDA 93.396 for Project No: 5R01CA157980-04

Effect

In the instance noted above the grant was overcharged by the amount noted.

Recommendation

We recommend that the University enhance its review control processes to prevent and detect any duplicate service center charges to a project. In addition, the project noted above should be credited for the amount indicated above.

Management's View and Corrective Action Plan

Management's view and corrective action plan are included within this report.

The Trustees of Columbia University in the City of New York

Schedule of Findings and Questioned Costs

For the year ended June 30, 2014

2014-002 – Procurement, suspension and debarment

Applies to CFDA 93.283 (A Public Health Workplace Experience to Increase Minority Student Interest in Public Health / Project No: 5U50MN000018-03)

Condition

For the one selection tested for CFDA 93.283, the verification process undertaken to ensure the vendor was not suspended or debarred was not formally documented and maintained on file.

Criteria

OMB Circular A-110, Subpart B, Section 13 restricts subawards and contracts with certain parties who are debarred, suspended or otherwise excluded from or ineligible for participation in Federal assistance programs or activities. Prior to entering into subawards or contracts that exceed \$25,000, the University must verify that the company/organization is not suspended or debarred.

Cause

The vendor was established as a preferred vendor of the University based on certain criteria and diligence performed, however the verification that the vendor was not suspended or debarred was not formally documented as part of the diligence process performed.

Questioned Cost

Not applicable. The instance noted above related to documentation only and not a questioned cost.

Effect

The lack of documentation of the verification process did not provide formal documentary evidence of the verification process at the time the vendor was established as a preferred vendor.

Recommendation

We recommend the University formally document the process followed to verify that a vendor with expenditures in excess of \$25,000, including those established as a preferred vendor, is not suspended or debarred for participation in Federal programs.

Management's View and Corrective Action Plan

Management's view and corrective action plan are included within this report

The Trustees of Columbia University in the City of New York

Status of Prior Year's Findings

For the year ended June 30, 2014

2013-001 Enrollment Reporting

Condition: Of the 40 students tested by PwC for Enrollment Reporting, the change in enrollment status for 3 students was not reported timely to the National Student Clearing house (NSC) and the National Student Loan Data System (NSLDS). In these instances, the change in enrollment status was reported between 12-83 days late. Additionally, the change in enrollment status for 2 students was not reported.

It was noted that 2 of the instances of late reporting cited above and 1 instance of no reporting, occurred prior to the University implementing additional control procedures in September 2012 to enable timely student status change reporting. The other 2 instances occurred within the first three months of implementing the additional control procedures.

Status - Completed: Weekly meetings of staff from the Office of the University Registrar and the University Financial Aid Office continue the review of all withdrawal transactions submitted by the various schools. Documentation of each case is considered, and any problems are immediately addressed with responsible school staffs that are required to be available for consultation. Monthly meetings may also be held with school representatives to review significant findings from the weekly meetings and to reinforce correct reporting protocol. Feeds to the National Student Clearinghouse continue to be automatically generated on a weekly basis thereby ensuring key reporting deadlines are met irrespective of external events. The logic that pulls enrollment data for the NSC feeds is modified as necessary in response to ongoing case review ensuring the accurate transmission of enrollment information and status changes. Finally, manual review and comparison of withdrawal cases that are transacted at the end of a semester or between semesters with the cases transmitted to the Clearinghouse ensures that changes in enrollment status falling outside of the regular reporting schedule are captured and reported.

2013-002 Indirect Costs

Applies to the CFDA 11.432 (Cooperative Institute for Climate Application and Research / Project No. NA08OAR4320754) and 93 (The National Standard for Fetal Growth / Project No.: HHSN2752008000013C) within the Research and Development Cluster

Condition: Of the 26 awards selected for testing by PwC, the indirect cost rates for two of the awards selected, which are noted above, were incorrectly changed in the system resulting in an overcharge of indirect costs of \$18,435 and \$1,430, respectively.

Status - Completed: Sponsored Projects Administration Management has enhanced its controls over the ICR quality assurance process. The two areas that were not fully addressed in the first generation of the Data Center reports and review processes included activities with non-standard IC rates that were components within a standard project and the treatment of federal contracts. Management has implemented enhanced controls to address those areas; in addition to the existing Data Center rules that validate the standard indirect cost rates for federal awards, effective April 25, 2014 validation rules were added to ensure all non-standard F&A rates are captured upon validation of a new increment. As an additional control point management has implemented a Quality Assurance process to produce and review a weekly report of all overrides of indirect cost rate rules to ensure that these rules are not bypassed without sufficient justification.

Sponsored Projects Finance has implemented a process for monitoring and addressing Indirect Cost rate changes. The process leverages existing workload management systems, within which functionalities were enhanced to notify staff of, and age, indirect cost rate changes. A two-week timeframe was set for review and address of indirect cost rate changes, and an adjustment to total indirect costs applied to a project occurs as part of this review when an adjustment is necessary. Monitoring reports were enhanced to ensure timely review of indirect cost change.

COLUMBIA UNIVERSITY

IN THE CITY OF NEW YORK

OFFICE OF EXECUTIVE VICE PRESIDENT FOR FINANCE

Management's Response and Corrective Action Plan Regarding OMB Circular A-133 Audit Findings for the Year Ended June 30, 2014

2014-001 – Allowable Costs – Service Centers and Shared Costs

Management acknowledges this error. This was an isolated incident involving operator error. Per University operating guidelines, billing entries are reviewed for accuracy after they are posted to the financial reporting system. While performing the review of invoicing amounts to billing amounts recorded an error was identified. The billing error was corrected, however, the operator failed to correctly process the reversal of the original invoice at the time of the review resulting in the duplicate charge.

Upon identification, Management corrected the error and the duplicate charge was reversed. In addition, Management has enhanced its process for creating invoices and preparing journal entries by implementing an automated invoicing process on December 15, 2014. The new automated process enables service center staff to more easily compare billing data generated by the service center to the actual charges posted to projects. All service center staff associated with the billing process have been retrained to identify discrepancies and ensure correcting entries are posted in a timely manner.

2014-002 – Procurement, Suspension and Debarment

The University has established and documented processes for verifying, through an EPLS system, that all vendors with which it expects to have significant dollar transactions (primarily identified as vendors with which purchase orders or leases) are not debarred or suspended. Currently, the debarment status is verified prior to the issuance of every new purchase order. The University recognizes that there are opportunities for process improvements in this area related to non-purchase order vendors in the event that the aggregate spend exceeds the government threshold of \$25,000. While there have been no instances of payments being made to debarred or suspended vendors and it is rare that non-purchase order activity with a particular vendor would in the aggregate be in excess of \$25,000 in a given fiscal year, the University will undertake two new additional steps to reduce this risk.

First, the vendor set up staff whose function is to verify criteria for all vendors prior to making them available for selection in the University's procurement system will implement an automated process utilizing Visual Compliance, a tool which facilitates vendor status checks on a range of databases, including EPLS, to validate vendor debarment and suspension status during the establishment of a new vendor profile. This is irrespective of whether the vendor is likely to have purchase order activity or non-purchase order activity.

Second, the University will develop of a process for on-going monitoring of any changes to vendor status through the expansion of its utilization of Visual Compliance. For all vendors validated through the system, the software will provide the University with a timely notification. If a vendor is subsequently placed on a government suspension or debarment list, the vendor management team will review the notification and modify vendor's profile as necessary.

The University is developing its software integration plan and expects to implement the new automated process by October 15, 2015. In the interim, the University has implemented a manual process to identify and monitor all non-purchase order vendors approaching \$25,000 in payments and integrate those vendors into the EPLS check process already in place for vendors receiving purchase orders.

Responsible person contact name: Carl Sparano, Research Policy and Indirect Cost, contact number: (212) 851-1049.

A handwritten signature in black ink, appearing to read "Anne Sullivan", written in a cursive style.

Anne R. Sullivan
Executive Vice President for Finance
The Trustees of Columbia University in the City of New York