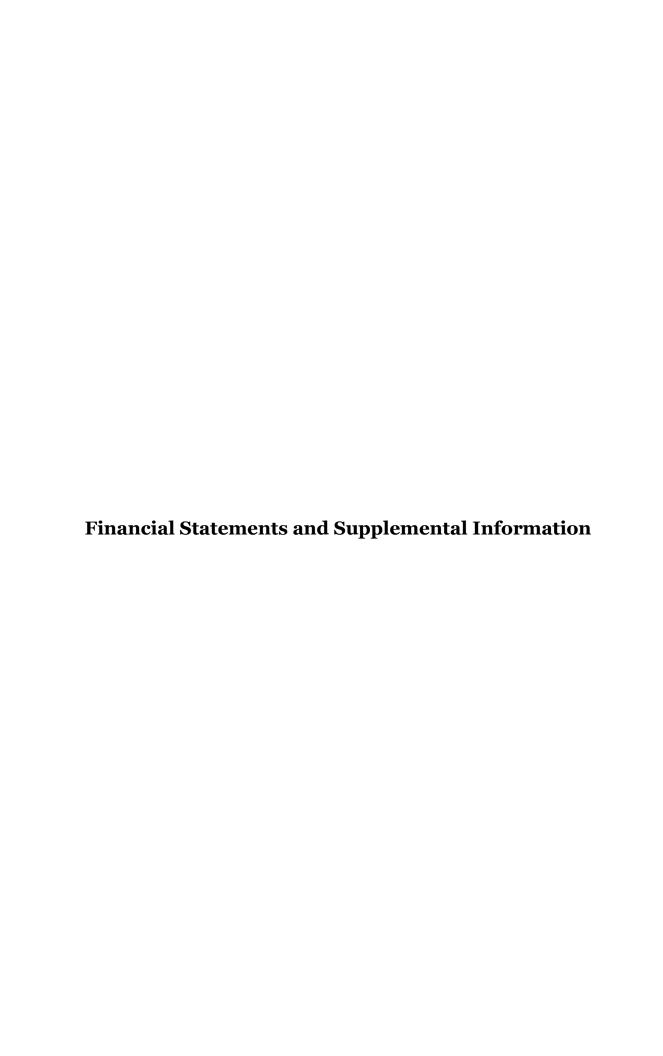
Washington University

Report on Federal Financial Assistance Programs in Accordance with Uniform Guidance For the Year Ended June 30, 2018 Employer Identification Number: 430653611

Washington University Report on Federal Financial Assistance Programs in Accordance with Uniform Guidance Index June 30, 2018

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Report of Independent Auditors

To the Board of Trustees of Washington University:

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Washington University and its subsidiaries (the "university"), which comprise the consolidated statements of financial position as of June 30, 2018 and 2017, and the related consolidated statements of activities and changes in net assets and of cash flows for the years then ended.

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.

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits 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 of America. 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 financial position of Washington University and its subsidiaries as of June 30, 2018 and 2017, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.



Other Matters

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 is presented for purposes of additional analysis as required by Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance) 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 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 September 25, 2018 on our consideration of the university'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. The purpose of that report is solely 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 the effectiveness of the university's 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 university's internal control over financial reporting and compliance.

St. Louis, Missouri September 25, 2018

Parcentehouse Coopes LLP

Washington University Consolidated Statements of Financial Position June 30, 2018 and 2017

(thousands of dollars)	2018	2017		
Assets				
Cash and cash equivalents	\$ 366,525	\$	128,870	
Investments	9,248,311		8,522,943	
Collateral received for securities lending	-		178,231	
Accounts and notes receivable, net	494,685		463,682	
Pledges receivable, net	439,318		202,762	
Other assets	231,280		191,768	
Fixed assets, net	 2,541,137		2,331,063	
Total assets	\$ 13,321,256	\$	12,019,319	
Liabilities				
Accounts payable and accrued expenses	\$ 484,625	\$	439,939	
Liabilities under securities lending transactions	-		173,889	
Deposits, advances and other	23,308		20,760	
Professional liability	73,756		69,106	
Deferred revenue	137,744		121,386	
Liabilities under split-interest agreements	40,842		35,048	
Government supported student loans	36,232		44,810	
Notes and bonds payable	2,030,781		1,632,202	
Total liabilities	2,827,288		2,537,140	
Net assets				
Unrestricted	5,154,934		4,738,453	
Temporarily restricted	3,413,014		2,942,867	
Permanently restricted	1,926,020		1,800,859	
Total net assets	10,493,968		9,482,179	
Total liabilities and net assets	\$ 13,321,256	\$	12,019,319	

Washington University Consolidated Statements of Activities Year Ended June 30, 2018

(thousands of dollars)	Uı	nrestricted	Temporarily Restricted		ermanently Restricted	Ju	ne 30, 2018 Total
Revenues							
Tuition and fees, gross Less: Scholarships	\$	659,893 (247,924)	\$ -	\$	-	\$	659,893 (247,924)
Tuition and fees, net		411,969	-		-		411,969
Endowment spending distribution		315,774	7,121				322,895
Investment income		21,245	320				21,565
Gifts		80,958	326,925				407,883
Grants and contracts revenues							
Direct costs recovered		433,507					433,507
Facilities and administrative costs recovered		155,381					155,381
Patient services, net		1,327,124					1,327,124
Auxiliary enterprises - sales and services		114,870					114,870
Educational activities - sales and services		180,874					180,874
Affiliated hospital revenues		127,595					127,595
Other revenue		40,017	(540				39,477
Net assets released from restriction	-	113,491	(113,491	<u>'</u> —			
Total revenues and other support		3,322,805	220,335		-		3,543,140
Expenses							
Instruction		1,988,694					1,988,694
Research		537,777					537,777
Academic support		203,196					203,196
Student services		96,666					96,666
Institutional support		155,835					155,835
Auxiliary enterprises expenditures		117,153					117,153
Other deductions		33,727					33,727
Total expenses		3,133,048			-		3,133,048
Net operating results		189,757	220,335		-		410,092
Non-operating revenues and (expenses)							
Investment returns net of endowment spending		225,639	260,272		(594)		485,317
Permanently restricted gifts					119,904		119,904
Gain (loss) on fixed asset disposals and other		1,085	(10,460)	5,851		(3,524)
Fair value of assets acquired in excess of consideration paid				_			_
Non-operating, net		226,724	249,812		125,161		601,697
Change in net assets	<u></u>	416,481	470,147		125,161		1,011,789
Net assets							
Beginning of the year		4,738,453	2,942,867		1,800,859		9,482,179
End of the year	ф.			\$	1,926,020	\$	
End of the year	\$	5,154,934	\$ 3,413,014	ф	1,920,020	ф	10,493,968

Washington University Consolidated Statements of Activities Year Ended June 30, 2017

(thousands of dollars)	Uı	nrestricted		emporarily Restricted	ermanently Restricted	Ju	ne 30, 2017 Total
Revenues							
Tuition and fees, gross Less: Scholarships	\$	626,033 (232,546)	\$	-	\$ -	\$	626,033 (232,546)
Tuition and fees, net		393,487		-	-		393,487
Endowment spending distribution		298,994		6,596			305,590
Investment income		12,174		369			12,543
Gifts		75,839		107,461			183,300
Grants and contracts revenues							
Direct costs recovered		408,630					408,630
Facilities and administrative costs recovered		144,988					144,988
Patient services, net Auxiliary enterprises - sales and services		1,194,694 115,768					1,194,694 115,768
Educational activities - sales and services		156,775					156,775
Affiliated hospital revenues		116,731					116,731
Other revenue		35,849					35,849
Net assets released from restriction		127,438		(127,438)			-
Total revenues and other support		3,081,367		(13,012)	-		3,068,355
Expenses							
Instruction		1,812,306					1,812,306
Research		507,786					507,786
Academic support		185,692					185,692
Student services		88,918					88,918
Institutional support		146,386					146,386
Auxiliary enterprises expenditures		115,088					115,088
Other deductions		37,237	-				37,237
Total expenses		2,893,413	_		 -		2,893,413
Net operating results		187,954		(13,012)	 -		174,942
Non-operating revenues and (expenses)							
Investment returns net of endowment spending		232,055		256,987	3,691		492,733
Permanently restricted gifts					68,466		68,466
Gain (loss) on fixed asset disposals and other		(42,563)		(3,983)	10,219		(36,327)
Fair value of assets acquired in excess of consideration paid		23,761		3,573	 10,250		37,584
Non-operating, net		213,253		256,577	92,626		562,456
Change in net assets		401,207		243,565	92,626		737,398
Net assets							
Beginning of the year		4,337,246		2,699,302	1,708,233		8,744,781
End of the year	\$	4,738,453	\$	2,942,867	\$ 1,800,859	\$	9,482,179

Washington University Consolidated Statements of Cash Flows Years Ended June 30, 2018 and 2017

(thousands of dollars)		2018		2017
Cash flows from operating activities				
Change in net assets	\$	1,011,789	\$	737,398
Adjustments to reconcile change in net assets to cash				
provided by operating activities				
Realized and unrealized net gains on investments		(835,751)		(804,486)
Depreciation expense		180,470		173,987
Permanently restricted gifts		(119,904)		(68,466)
Investments received as gifts - not permanently restricted		(11,765)		(8,797)
Proceeds from sales of investments received as gifts		11,765		8,797
Debt extinguishment costs		-		27,738
Fair value of non-cash assets acquired in excess of consideration paid Other non-cash adjustments		(10.090)		(37,509)
Changes in assets and liabilities		(10,083)		7,955
Accounts and notes receivable, net		(28,290)		(19,760)
Pledges receivable, net		(215,761)		26,738
Accounts payable and accrued expenses		33,066		55,272
Deposits and advances		(17,077)		(25,256)
Other assets and liabilities		14,301		(7,204)
Net cash provided by operating activities	-	12,761		66,407
Cash flows from investing activities		12,701		00,407
Proceeds from sales and maturities of investments		10,389,420		6,471,569
Purchases of investments		(10,278,075)		(6,414,436)
Sales (Purchases) of investments with securities lending collateral		173,889		(130,431)
Purchases of fixed assets		(379,906)		(223,272)
Student loans disbursed		(18,161)		(19,558)
Student loan payments received		23,087		22,655
Other		55_		(28)
Net cash used in investing activities		(89,691)		(293,501)
Cash flows from financing activities				
Principal payments of debt		(22,788)		(272,093)
Proceeds from long-term debt issuance		423,296		288,663
Contributions restricted for long-term investment		52,038		16,601
Proceeds from sales of investments received as gifts		46,553		48,970
Securities lending collateral (sold) received, net		(173,889)		130,431
Debt extinguishment costs		-		(27,738)
Other		(10,625)		(2,313)
Net cash provided by financing activities		314,585		182,521
Net increase/(decrease) in cash		237,655		(44,573)
Cash				
Beginning of year		128,870		173,443
End of year	\$	366,525	\$	128,870
Supplemental data	_		_	
Interest paid in cash	\$	57,122	\$	49,522
Noncash activities Fair value of accets acquired in every of consideration paid				(0= =00)
Fair value of assets acquired in excess of consideration paid Contributions of securities and other noncash assets				(37,509)
Net change in accounts payable for fixed assets		59,157		58,242 (6,568)
Net change in accounts payable for fixed assets Net change in accounts receivable for investments		4,328 (6,654)		(6,508)
Net change in accounts payable for investments		7,090		2,483
The change in accounts payable for investments		7,090		2,403

The accompanying notes are an integral part of these consolidated financial statements.

(All amounts in thousands of dollars)

1. Summary of Significant Accounting Policies

Organization

Washington University in St. Louis (the "university"), is an institution of higher education that, in furtherance of its role as a charitable and educational institution, engages in various activities, including instruction, research and provision of medical care.

Basis of Presentation and Use of Estimates

The consolidated financial statements have been prepared on the accrual basis of accounting. The consolidated financial statements are consolidated to include the accounts of the university and its affiliates.

The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the 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. Such estimates include, but are not limited to, the estimated useful lives of buildings and equipment, the fair value of certain investments (see footnote 2), the degree of precision in calculation of self-insurance reserves and adequacy of allowances for doubtful accounts. Actual results could differ from those estimates.

Net Assets

Resources are classified for accounting and reporting purposes according to externally (donor) imposed restrictions. Descriptions of the net asset categories follow:

- Unrestricted net assets are free of donor-imposed restrictions.
- Temporarily restricted net assets consist of gifts and related earnings that are subject to
 donor-imposed restrictions or legal stipulations that have not yet been met by actions of the
 university and/or passage of time.
- Permanently restricted net asset balances include gifts and trusts which, by donor restriction, are required to be held in perpetuity.

Revenues from sources other than contributions and investment returns are reported as increases in unrestricted net assets. Contributions are reported as increases in the appropriate category of net assets, except that contributions which impose restrictions that are met in the same fiscal year they are received are included in unrestricted revenues. Gains and investment income that are limited to specific uses by donor-imposed restrictions are reported as increases in unrestricted net assets if the restrictions are met in the same reporting period as the gains and income are recognized, except for gains and investment income earned by investment of donor-restricted endowments. Such amounts are not reported as unrestricted net assets until appropriated for expenditure. When a donor restriction expires, temporarily restricted net assets are reclassified to unrestricted net assets and reported in the Consolidated Statements of Activities as net assets released from restrictions. Permanently restricted gifts received are reported in the non-operating section of the Consolidated Statements of Activities. Gifts of long-lived assets with explicit restrictions that specify how the assets are to be used and gifts of cash or other assets that must be used to acquire long-lived assets are reported as restricted support. Absent explicit donor stipulations about how long those long-lived assets must be maintained, the university reports

(All amounts in thousands of dollars)

expirations of donor restrictions when the donated or acquired long-lived assets are placed in service. Expenses are reported as decreases in unrestricted net assets.

Temporarily and permanently restricted net assets are for the following purposes.

	20	18		2017						
	emporarily Restricted		ermanently Restricted	emporarily Restricted	Permanently Restricted					
General activities Student assistance Buildings and renovations Life income	\$ 2,355,920 553,676 491,345 12,073	\$	1,300,627 448,502 151,312 25,579	\$ 1,996,993 472,681 460,451 12,742	\$	1,226,591 399,311 150,658 24,299				
Total	\$ 3,413,014	\$	1,926,020	\$ 2,942,867	\$	1,800,859				

Investments

Investment gains (losses) in excess of endowment spending distribution and the unrealized appreciation (depreciation) on investments are reported in the non-operating section of the Consolidated Statements of Activities. Investments acquired by gift or bequest are initially recorded at market or appraised value at the date so acquired.

At June 30, 2018, investments include \$133,430 purchased with unexpended proceeds from the Series 2017 A Missouri Health and Educational Facilities Authority (MOHEFA) revenue bonds issued July 6, 2017. At June 30, 2017, investments included \$7,582 purchased with unexpended proceeds from the Series 2016 A and Series 2014 A MOHEFA revenue bonds issued in February 2016 and August 2014, respectively. These funds may only be expended for specific construction project costs and costs of issuance related to the MOHEFA bonds.

Fair Value of Financial Instruments

The carrying amount of accrued investment income, accounts receivable, accounts payable and other various accruals approximate fair value because of the short maturity of these financial instruments. The carrying amount of notes and bonds payable with variable interest rates approximates their fair value because the variable rates reflect current market rates for bonds with similar maturities and credit quality.

(All amounts in thousands of dollars)

Fixed Assets

Fixed assets are stated at cost or at fair market values if received as a gift, less accumulated depreciation, computed on a straight-line basis over the estimated useful lives of the assets. Fixed assets include equipment and other assets acquired through sponsored programs during which title is retained by the resource provider. It is probable the university will be permitted to keep the assets when the program terminates. The cost and accumulated depreciation of fixed assets are removed from the records at the time of disposal. Gains and losses on fixed asset disposals are reported in the non-operating section of the Consolidated Statements of Activities. Fixed assets by classification at June 30, 2018 and 2017 consist of the following:

	2018		2017
Construction in progress Land and improvements to land Buildings Equipment		400,842 150,995 3,850,398 553,156	\$ 282,513 146,326 3,673,747 486,528
Total cost		4,955,391	4,589,114
Accumulated depreciation		(2,414,254)	(2,258,051)
Total, net	\$	2,541,137	\$ 2,331,063

Collections

In addition to the Mildred Lane Kemper Art Museum, the university archives rare book collections, works of art, literary works, historical treasures and artifacts. These collections are protected and preserved for public exhibition, education, research and the furtherance of public service. They are neither disposed of for financial gain nor encumbered in any manner. Accordingly, such collections are not recognized or capitalized for financial statement purposes.

Financing Receivables

Financing receivables are principally loans made to students or their parents utilizing gifts, endowment payout, and university resources designated for that purpose and from funds provided by the United States government under the Federal Perkins and Health Professional Student Loan programs. Loan funds are reported at estimated realizable value, as it is not practical to determine the fair value of loan fund receivables, which include a large component of federally sponsored student loans. Federally sponsored student loans have significant government restrictions as to marketability, interest rates, and repayment terms. Federal funds are ultimately refundable to the government and are recognized as a liability in the Consolidated Statements of Financial Position (see footnote 5).

The university's loan portfolio includes over 8,800 individual loans and is geographically diverse. Loans that are made are due on the first day of the month and are considered past due if the minimum payment is not received within thirty-one days past the due date. At June 30, 2018 and 2017, respectively, 92% and 92% of the parent loans and 77% and 80% of the institutional student loans were considered current. Income earned on financing receivables is recorded on an accrual basis.

(All amounts in thousands of dollars)

Deferred Revenue

Deferred revenue is recognized on an accrual basis when payments for services are received in advance of performance by the university. The principle components of deferred revenue are clinical trial receipts, Grants and Contracts, and prepaid tuition and housing.

Tuition and Financial Aid

Demonstrated financial need is the major criteria for undergraduate students to receive financial aid. Graduate students often receive tuition support in connection with research assistant, teaching assistant and fellowship appointments. Total financial aid granted to students by the university, including aid provided to employees and their dependents, was \$356,526 in 2018 and \$326,646 in 2017. The table below identifies student aid by type. Scholarships are reported net against tuition in the Consolidated Statements of Activities. Other amounts are reported as expenses.

	2018		2017		
Scholarships from unrestricted sources Scholarship support from gifts, endowment	\$	188,072	\$	182,362	
and other restricted sources		59,853		50,184	
Total scholarships		247,925		232,546	
Employee and dependent tuition benefits		35,025		32,628	
Stipends		71,535		58,919	
Work study		2,041		2,553	
Total	\$	356,526	\$	326,646	

Gifts

Gifts, including unconditional promises to give, are recognized as revenues in the period the gift or promise is received. Gifts received for permanent endowments or perpetual trusts are reported as non-operating revenues. Gifts of assets other than cash are recorded at their estimated fair value at the date of gift and, unless instructed otherwise by the donor, are liquidated upon receipt or as soon as practical thereafter.

Conditional gifts and promises to give are not recognized until the conditions on which they depend are substantially met. Gifts, in the form of unconditional promises to give, to be received after one year are discounted at credit-adjusted tax exempt borrowing rates in accordance with fair value accounting. Pledges outstanding are discounted with rates ranging from 0.78% to 2.04%. Amortization of the discount is recorded as gift revenue. The university has received gifts which are recorded as gift revenue in the period the gift was made but are payable over a specified payment schedule of up to 10 years or more. During the gift payment term, the university is exposed to credit risk for the entity or individual that has made the gift. An allowance is made for uncollectible unconditional promises to give based upon management's judgment, past collections experience and other relevant factors. During 2018, the university received a pledge of \$20,000 annually to be received over a period of 10 years.

(All amounts in thousands of dollars)

A summary of pledges receivable is as follows:

	 2018	2017
In one year or less	\$ 148,143	\$ 101,098
Between two and five years	208,318	99,520
Over five years	 108,721	 10,543
	465,182	211,161
Less:		
Discount	(19,739)	(2,792)
Allowance for uncollectible amounts	 (6,125)	(5,607)
Total	\$ 439,318	\$ 202,762

Patient Services Revenue

The university recognizes revenues in the period in which services are rendered. The university has agreements with third-party payers that provide for payment to the university at amounts that are generally less than its established rates. Accordingly, patient revenue is reported net of contractual allowances, at estimated net realizable amounts from patients, third-party payers and others for services rendered. Also, reported in this caption are cost reimbursements from hospitals for services provided by university personnel in support of the hospital's clinical activities.

Tuition and Fee Revenue

Tuition and fee revenue, net of scholarships, is recorded in the fiscal year in which the educational programs are conducted.

Auxiliary Enterprises – Sales and Services

Auxiliary enterprises sales and services revenue is recorded in the fiscal year in which earned. This revenue is composed primarily of on and off campus housing charges, dining services, and parking and transportation fees.

Educational Activities – Sales and Services

Educational activities sales and services revenue is recorded in the fiscal year in which it is earned. This revenue is composed of a number of activities including clinical trial revenues, management services and salary reimbursements from affiliated hospitals, consulting, laboratory fees, conference center revenues and revenues from licensing and royalties.

Affiliated Hospital Revenues

Affiliated hospital revenue is recorded in the fiscal year in which earned. This revenue is composed of amounts received from affiliated hospitals for various services as more fully described in footnote 10.

(All amounts in thousands of dollars)

Grants and Contracts

The university receives grant and contract revenue from governmental and private sources. Revenue associated with the direct costs of sponsored programs is generally recognized as the related costs are incurred. The university records revenue in unrestricted net assets upon its recovery of direct and indirect costs applicable to those sponsored programs that provide for the full or partial reimbursement of such costs. The recovery of indirect costs, also referred to as facilities and administrative costs is based on negotiated rates and represents recoveries of facilities and administrative costs incurred under grants and contracts agreements. Recovery of facilities and administrative costs of Federally sponsored programs is at rates negotiated with the Department of Health and Human Services. During fiscal 2018, the university and the Federal government operated under an agreement that established facilities and administrative cost reimbursement rates under Federal grants and contracts through June 30, 2021.

Operating Results and Allocation of Certain Expenses

The university's measure of operations as presented in the Consolidated Statements of Activities includes income from tuition and fees, grants and contracts, medical services, contributions for operating programs, the endowment spending distribution and other revenues. Operating expenses are reported on the Consolidated Statements of Activities by functional categories, after allocating costs for operation and maintenance of plant, interest on indebtedness and depreciation expense. Operation and maintenance of plant and depreciation are allocated to functional categories largely based on square footage. Interest expense is allocated based on specific identification of the uses of debt proceeds. Instruction expenses include instruction, departmental research and patient care costs. Operating results exclude investment gains (losses) except for the portion of gains utilized for the endowment spending distribution, permanently restricted gifts, the fair value of net assets acquired in excess of consideration paid, and other non-operating amounts.

Split-Interest Agreements

The university's split-interest agreements with donors consist primarily of charitable gift annuities and irrevocable charitable remainder trusts for which the university serves as trustee. Assets are invested and payments are made to donors and/or other beneficiaries in accordance with the respective agreements. Contribution revenues for charitable gift annuities and charitable remainder trusts are recognized after recording liabilities for the present value of the estimated future payments to be made to the respective donors and/or other beneficiaries. The discount rate used is a credit-adjusted rate in existence at the date of the gift. The rates used range from 1.72% to 3.03% for 2018 and 1.02% to 3.03% for 2017. Annually, the university records the change in value of split-interest agreements by recording at fair value the assets that are associated with each trust and recalculating the liability for the present value of the estimated future payments to be made to the donors and/or other beneficiaries.

Cash and Cash Equivalents

The university considers cash on hand and in banks and all highly liquid financial instruments with an original maturity of 90 days or less, except those amounts assigned to and invested by its investment managers, which amounts are classified as investments, to be cash and cash equivalents.

(All amounts in thousands of dollars)

Income Taxes

The university is exempt from federal income taxes under Section 501 (c)(3) of the Internal Revenue Code except to the extent the university has unrelated business income or consolidated for-profit affiliates incur taxes. The Tax Cuts and Jobs Act (the "Act") was enacted on December 22, 2017. The Act impacts the university in several ways, including new excise taxes on executive compensation and net investment income, increases to unrelated business taxable income (UBTI) by the amount of certain fringe benefits for which a deduction is not allowed, changes to the net operating loss rules, repeal of the alternative minimum tax (AMT), and the computation of UBTI separately for each unrelated trade or business. Further, the Act reduces the U.S. federal corporate tax rate and federal corporate unrelated business income tax rate from 35% to 21%. The overall impact of the Act remains uncertain and the full impact of the Act will not be known until further regulatory guidance is provided to assist the university with calculating income and excise tax liabilities. The university continues to evaluate the impact of tax reform on the organization.

As of June 30, 2018, the university has made a reasonable estimate of the determinable effects of the enactment of the Act on existing deferred tax balances. These amounts are provisional, subject to change and not material to the university's consolidated financial statements. Management believes the university has no uncertain tax positions that result in material unrecognized tax expense/benefits.

Fair Value of Net Assets Acquired in Excess of Consideration Paid

The Barnard Free Skin and Cancer Hospital, also known as Barnard Cancer Institute (BCI), was established in accordance with the will of George D. Barnard principally to provide care, treatment and hospitalization to persons suffering from cancer or skin diseases and diseases allied thereto. In connection with termination of a trust supporting BCI and a court-approved settlement agreement entered into in 2006, the exempt purposes of BCI were redefined to consist of (a) providing financial support for medical, surgical and/or nursing care to persons suffering from cancer or skin diseases or diseases allied thereto who are unable to pay for such care, (b) the study of cancer, and (c) outreach programs and the dissemination of information in regard to these diseases and their treatment. BCI leases its owned property to the university or Barnes Jewish Hospital. BCI has no employees and contracts with the university for administrative services. University personnel occupy a majority of seats on the board of directors of BCI. Effective July 1, 2016, BCI entered into a contract with the university to pool its endowment with the endowment of the university for investment purposes, with the result that the BCI endowment is managed according to the university's endowment policy. Based on the factors of majority board control and combined economic interest, the assets, liabilities and operating results of BCI have been consolidated with the university financial results as of and for the fiscal year ended June 30, 2017. The net assets of BCI as of July 1, 2016 are reported as Fair value of net assets acquired in excess of consideration paid on the Consolidated Statements of Activities. BCI assets, liabilities and net assets at June 30. 2017 were \$38,739, \$187, and \$38,552, respectively. BCI revenues and changes in net assets for 2018 and 2017 were not material to the university's financial statements.

(All amounts in thousands of dollars)

Recent Accounting Pronouncements

During fiscal 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-14, Presentation of Financial Statements of Not-for-Profit Entities. ASU 2016-14, which will be effective for the university in fiscal 2019, will provide for presentation in the financial statements of two net asset categories; net assets with donor restrictions and net assets without donor restrictions, instead of the currently required three categories. Among other changes are greater disclosure of self-imposed limits on the use of resources without donor restrictions; qualitative and quantitative information on financial resources and liquidity; and expenses reported in both natural and functional classifications. The university is evaluating the impact of ASU 2016-14 to the consolidated financial statements.

During fiscal 2016, the FASB issued ASU 2016-02, Leases. The ASU requires lessees to recognize in the Statements of Financial Position for leases with a term of greater than one year, a liability to make lease payments and a right-of-use asset representing its right to use the asset for the lease term. Generally, lease payments will be recognized as interest expense and as a reduction of the liability. The asset will be amortized over the life of the lease. Accounting by a lessor will be largely unchanged from that required by current generally accepted accounting principles. Adoption of ASU 2016-02 is required for the university's fiscal year 2020. The university is evaluating the impact to the consolidated financial statements.

During 2014 the FASB issued ASU 2014-09, Revenue from Contracts with Customers. ASU 2014-09, effective in fiscal 2019, affects all contracts entered into with customers that result in a transfer of goods or services or a transfer of nonfinancial assets. The core principle of the standard is for organizations to recognize revenue in a way that depicts the transfer of goods or services to customers in amounts that reflect the consideration (payment) to which the organization expects to be entitled. Since 2014 the FASB has issued a number of clarifying updates. The university is currently evaluating the impact the adoption of ASU 2014-09 and subsequent updates will have on its consolidated financial statements.

2. Fair Value

The university follows FASB guidance for fair value measurements. This guidance defines fair value, establishes a framework for measuring fair value under generally accepted accounting principles and enhances disclosures about fair value measurements. 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 FASB guidance 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 university and unobservable inputs reflect the university's assumptions about how market participants would value an asset or liability based on the best information available. Valuation techniques used to measure fair value maximize the use of observable inputs and minimize the use of unobservable inputs. The fair value hierarchy is based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value.

(All amounts in thousands of dollars)

The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used by the university for financial instruments measured at fair value on a recurring basis. The three levels of inputs are as follows:

- Level 1 Quoted prices in active markets for identical assets or liabilities, such as exchange traded equity securities.
- Level 2 Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the same term of the assets or liabilities. Examples of Level 2 include U.S. Treasury securities and corporate bonds.
- Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

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.

The following table presents the financial instruments carried at fair value as of June 30, 2018, on the Consolidated Statements of Financial Position by caption and by the valuation hierarchy defined above. Amounts measured at net asset value are reported using the practical expedient under ASC topic 820 and excluded from the fair value hierarchy. Included as Level 2 fixed income are U.S. Treasury securities of approximately \$564,851.

	Quoted Prices in Active Markets (Level 1)		Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)		Measured at Net Asset Value		Balance June 30, 2018
Investments									
Public equity									
Domestic	\$	65,034	\$ 27	\$	-	\$	1,457,753	\$	1,522,814
International		189,839	-		-		1,358,790		1,548,629
Fixed income - Nominal		-	630,837		-		-		630,837
Absolute return		-	-		-		1,682,094		1,682,094
Private equities		-	-		118,087		2,349,105		2,467,192
Short-term investments		353,806	5,286		-		-		359,092
Real assets		-	-		18,833		703,925		722,758
Other investments		177,681	(1,537)		67,688		33,190		277,022
Total investments at fair value		786,360	634,613		204,608		7,584,857		9,210,438
Fixed income assets received from security borrowers		-	 -		-		-		
Total assets reported at fair value	\$	786,360	\$ 634,613	\$	204,608	\$	7,584,857	\$	9,210,438

(All amounts in thousands of dollars)

The following table presents the financial instruments carried at fair value as of June 30, 2017, by caption on the Consolidated Statements of Financial Position and by the valuation hierarchy defined above. Included as Level 2 fixed income are U.S. Treasury securities of approximately \$672,807.

	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)		Measured at Net Asset Value		Balance June 30, 2017
Investments								
Public equity								
Domestic	\$ 159,856	\$	7,163	\$	-	\$	1,489,956	\$ 1,656,975
International	397,290		-		-		1,441,174	1,838,464
Fixed income - Nominal	-		751,331		-		-	751,331
Absolute return	-		-		-		1,738,040	1,738,040
Private equities	-		-		94,045		1,476,963	1,571,008
Short-term investments	181,168		1,534		-		-	182,702
Real assets	-		-		-		595,750	595,750
Other investments	45,427		(2,057)		66,645		33,636	143,651
Total investments at fair value	783,741		757,971		160,690		6,775,519	8,477,921
Fixed income assets received from security borrowers	-		178,231	_			-	 178,231
Total assets reported at fair value	\$ 783,741	\$	936,202	\$	160,690	\$	6,775,519	\$ 8,656,152

Included as investments on the Consolidated Statements of Financial Position, at June 30, 2018 and 2017, respectively, but not reported in the tables above, are accrued investment income of \$4,114 and \$4,484 and investments in affiliates of \$33,759 and \$40,538, which are recorded on the equity basis of accounting. Beneficial interests in perpetual trusts held by third parties are valued at the present value of the future distributions expected to be received over the term of the agreement.

Following is a description of the university's valuation methodologies for assets and liabilities measured at fair value. The methods described below 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.

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 and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets. Inputs are obtained from various sources including market participants, dealers, and brokers.

(All amounts in thousands of dollars)

Fair value for Level 3 is based on valuation techniques that use significant inputs that are unobservable as they trade infrequently or not at all.

Investments measured at net asset value primarily consist of the university's ownership in alternative investments (principally limited partnership interests in absolute return, private equity investments, real assets, and other similar funds). The fair values (Net Asset Value ("NAV") or partner's capital per share) of the securities held by limited partnerships that do not have readily determinable fair values are determined by the respective general partners and are based on appraisals or other estimates that require varying degrees of judgment. If no public market exists for the investments, the fair value is determined by the general partners taking into consideration significant unobservable inputs including, among other things, the cost of the investments, prices of recent significant placements of investments of the same issuer, and subsequent developments concerning the companies to which the investments relate. Excluding the cost of the investment, significant increases or decreases in the remainder of those inputs could result in a significantly higher or lower fair value measurement. The university has performed due diligence with respect to these investments to ensure NAV or partner's capital per share is an appropriate measure of fair value as of June 30. NAVs are calculated by the investees in a manner consistent with generally accepted accounting principles for investment companies.

Significant terms of agreements with external investment managers or funds by major classes of investments are provided in the following tables.

The following table summarizes the significant terms of the agreements with external investment managers or funds by major category at June 30, 2018:

Investments	Unfunded Commitment (1)	Remaining Life (2)	Redemption Terms	Redemption Restrictions
Public equities	\$ 180,000	4 Years - No Limit	Daily to annually, with 1 day-1 year notice	Lock-up provision periods range from 0 to 5 years. Certain investments include side pockets subject to external manager discretion.
Fixed income and short-term investments	-	No Limit	Daily, 1-2 days notice	No lock-up provision periods
Absolute return	95,230	No Limit	Monthly to annually, with 30 -180 days notice	Lock-up provision periods range from 0 to 3 years. Certain investments include side pockets subject to external manager discretion.
Private equities	1,541,661	0 - 23 Years	Not eligible for redemption	Not redeemable
Real assets	419,530	0 - 12 Years	Not eligible for redemption	Not redeemable
Total	\$ 2,236,421	•		

(All amounts in thousands of dollars)

Footnote (1): The university is obligated under certain agreements to fund capital calls periodically up to specified commitment amounts. Such commitments are expected to be called over the life of the agreement and are not expected to be fully funded in the subsequent year.

Footnote (2): Assuming all extension options under the agreements are exercised and approved

The following table summarizes the significant terms of the agreements with external investment managers or funds by major category at June 30, 2017:

Investments	Unfunded Commitment	Remaining Life (1)	Redemption Terms	Redemption Restrictions
Public equities	\$ 18,750	No Limit	Daily to Annually, 1- 180 days notice	Lock-up provision periods range from 0 to 3 years. Some investments contain side pockets subject to external manager discretion.
Fixed income and short-term investments	-	No Limit	Daily, 1-2 days notice	No lock-up provision periods
Absolute return	135,385	135,385 No Limit		Lock-up provision periods range from 0 to 2 years. Some investments contain side pockets subject to external manager discretion.
Private equities	1,570,532	0 - 24 Years	Not eligible for redemption	Not redeemable
Real assets	332,243	0 - 13 Years	Not eligible for redemption	Not redeemable
Total	\$ 2,056,910			

Footnote (1): Assuming all extension options under the agreements are exercised and approved

Public Equities

Public equities include investments in publicly —traded securities in domestic, developed international, emerging, and frontier markets. The majority of assets are held in pooled comingled funds which are valued at NAV as described above. Investments held in custody accounts are valued at quoted market price in accordance with Level 1 and Level 2 valuation techniques as described above.

(All amounts in thousands of dollars)

Fixed Income and Short-Term Investments

Investments in this class include domestic and international nominal fixed income instruments. Fixed income investments are held principally as liquid vehicles for operating needs and as a source of diversification. A significant component of non-endowment fixed income investments is held in highly liquid funds. The valuation of these funds is determined using a market approach in accordance with the techniques for Level 2 as described above.

Absolute Return

Investments in absolute return are typically held in commingled funds that employ various uncorrelated investment strategies including but not limited to long/short equity, event driven and relative value. These funds are valued at net asset value as described above.

Private Equities

Investments in private equities strategies are made in targeted categories including buyout, venture capital, distressed credit, and corporate finance. Redemptions of such funds are not permitted and distributions are received as underlying investments are liquidated. These funds are primarily valued at net asset value as described above.

Real Assets

Investments in the real assets class are made in targeted categories. The majority of these assets are held in nonredeemable fund structures that invest primarily in real estate and natural resources. These funds are primarily valued at net asset value as described above.

The following tables roll forward the Statements of Financial Position amounts for financial instruments classified by the university within Level 3 of the fair value hierarchy defined above for the years ended June 30, 2018 and 2017.

	_	Balance le 30, 2017	and	Realized Unrealized Is (Losses)	Purchases, Sales and Settlements Net		and Settlements		Transfers in/(out) of Level 3, net		Balance June 30, 2018	
Investments (by strategy) Private equities Real assets Other investments	\$	94,045 - 66,645	\$	4,933 (214) 2,890	\$	16,109 9,945 6,719	\$	3,000 9,102 (8,566)	\$	118,087 18,833 67,688		
Total	\$	160,690	\$	7,609	\$	32,773	\$	3,536	\$	204,608		

The amount of realized and unrealized gains (losses) for Level 3 investments for the period included in net assets attributable to the change in unrealized gains or losses relating to assets still held at June 30, 2018, reported as investment returns net of endowment spending in the Statements of Activities by type of investment is:

Private equities	\$ 4,968
Real assets	(27,190)
Other investments	 1,339
Total	\$ (20,883)

(All amounts in thousands of dollars)

	_	Balance e 30, 2016	and	t Realized Unrealized ns (Losses)	chases, Sales Settlements Net	in	ransfers /(out) of vel 3, net	_	Balance ne 30, 2017
Investments (by strategy) Private equities Other investments	\$	141,248 62,683	\$	6,923 3,307	\$ (54,126) 1,822	\$	- (1,167)	\$	94,045 66,64 <u>5</u>
Total	\$	203,931	\$	10,230	\$ (52,304)	\$	(1,167)	\$	160,690

The amount of realized and unrealized gains (losses) for Level 3 investments for the period included in net assets attributable to the change in unrealized gains or losses relating to assets still held at June 30, 2017, reported as investment returns net of endowment spending in the Statements of Activities by type of investment is:

Private equities	\$ 7,217
Other investments	2,180
Total	\$ 9,397

3. Investment Return

The following summarizes the return on investments. Investment income represents earnings on non-endowed funds. Return on investments is presented net of investment management fees. Certain investments, including some but not all of those in the absolute return and private equity categories, report investment returns net of fees. Other fees paid directly to investment managers and internal investment management costs were \$69,011 and \$64,499 for 2018 and 2017, respectively.

	2018	2017		
Investment income	\$ 21,565	\$	12,543	
Pooled endowment dividends and interest income, net of investment management fees Pooled endowment distribution in excess of income	(27,538) 350,433		(6,164) 311,754	
Pooled endowment spending distribution	322,895		305,590	
Investment gains, net Gains distributed as endowment distribution	835,751 (350,433)		804,487 (311,754)	
Investment gains net of endowment spending distribution	485,318		492,733	
Net investment return	\$ 829,778	\$	810,866	

At June 30, 2018, the university had no securities out on loan. During the current fiscal year, the university terminated all accounts which had lendable securities. At June 30, 2017, investments with a fair value of \$173,570 were loaned to various brokers on an open-ended basis for average periods varying from several days to several months, depending on the type of loan. The university receives lending fees and continues to earn interest and dividends on the loaned securities. These securities are returnable on demand and are collateralized by cash deposits or U.S. Treasury securities amounting to 102.7% of the market value of the securities loaned at June 2017.

(All amounts in thousands of dollars)

The university is indemnified against borrower default by the financial institution that is acting as its lending agent. The borrowers provided \$178,207 of collateral in the form of cash or U.S. Treasury securities for the loaned securities at June 30, 2017. Cash collateral is reinvested in other vehicles by the lending agent. Cash and noncash collateral had a fair value of \$178,231 at June 30, 2017 and is reported in Collateral received for securities lending on the Consolidated Statements of Financial Position. The cost basis of collateral of \$173,889 at June 30, 2017 is reported as Liabilities under securities lending transactions on the Consolidated Statements of Financial Position.

4. Endowment

The state of Missouri has adopted legislation that incorporates the provisions outlined in the Uniform Prudent Management of Institutional Funds Act (UPMIFA). The statutory guidelines contained in this legislation relate to the prudent management, investment, and expenditure of donor-restricted endowment funds held by charitable organizations. Additionally, the legislation specifies factors for fiduciaries to consider prior to making a decision to appropriate from or accumulate into an institution's endowment funds.

At June 30, 2018, the university's endowment consists of 3,541 individual donor-restricted endowment funds and Board of Trustees or management-designated endowment funds for a variety of purposes plus split-interest agreements and other net assets where the assets have been designated for endowment. The net assets associated with endowment funds, including funds designated by the Board of Trustees or management to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The university has interpreted Missouri UPMIFA as requiring the preservation of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, 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) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted until the donor-imposed stipulations attached to those amounts have been met by actions of the university and/or passage of time and appropriated for expenditure in a manner consistent with the standard of prudence prescribed by UPMIFA.

Endowment net asset composition, which includes the effect of changes in endowment investments as well as other endowment-related assets and liabilities, by type of fund as of June 30, 2018:

	Ur	restricted	emporarily Restricted	rmanently Restricted	Total
Donor-restricted endowment funds Board-designated endowment funds	\$	(166) 2,757,498	\$ 2,816,366 233,195	\$ 1,833,276	\$ 4,649,476 2,990,693
Total endowment funds	\$	2,757,332	\$ 3,049,561	\$ 1,833,276	\$ 7,640,169

(All amounts in thousands of dollars)

Changes in endowment net assets for the year ended June 30, 2018:

	Unrestricted		Temporarily Restricted		Permanently Restricted		Total
Endowment net assets, beginning of year	\$	2,561,367	\$	2,795,236	\$	1,729,427 \$	7,086,030
Investment return							
Net investment income		(11,918)		(14,423)			(26,341)
Net appreciation (realized and							
unrealized)		367,415		479,354		(565)	846,204
Total investment return		355,497		464,931		(565)	819,863
Gifts		140		559		106,557	107,256
Appropriation of endowment assets for							
expenditure		(139,749)		(183,146)		-	(322,895)
Net transfers of funds		29,825		(6,866)		5,362	28,321
Allocation of endowment return to treasurers							
investment pool		(53,623)		(20,933)		-	(74,556)
Reclassification of deficits in donor-designated							
funds		35		(35)		-	-
Other activity		3,840		(185)		(7,505)	(3,850)
Endowment net assets, end of year	\$	2,757,332	\$	3,049,561	\$	1,833,276 \$	7,640,169

Of the amount classified as temporarily restricted endowment net assets, \$2,465,832 represents the portion of endowment funds subject to time restrictions under Missouri's enacted version of UPMIFA.

Endowment net asset composition by type of fund as of June 30, 2017:

	Un	restricted	emporarily Restricted	rmanently Sestricted	Total
Donor-restricted endowment funds Board-designated endowment funds	\$	(200) 2,561,567	\$ 2,579,388 215,848	\$ 1,729,427	\$ 4,308,615 2,777,415
Total endowment funds	\$	2,561,367	\$ 2,795,236	\$ 1,729,427	\$ 7,086,030

(All amounts in thousands of dollars)

Changes in endowment net assets for the year ended June 30, 2017:

	Unrestricted		Temporarily Restricted		Permanently Restricted		Total
Endowment net assets, beginning of year	\$	2,316,271	\$	2,529,810	\$	1,639,696 \$	6,485,777
Investment return							
Net investment income		(2,655)		(2,062)		-	(4,717)
Net appreciation (realized and							
unrealized)		344,158		453,375		3,861	801,394
Total investment return		341,503		451,313		3,861	796,677
Gifts		179		1,826		67,764	69,769
Appropriation of endowment assets for							
expenditure		(131,648)		(173,942)		-	(305,590)
Net transfers of funds		84,459		10,333		14,743	109,535
Allocation of endowment return to treasurers							
investment pool		(55,668)		(18,008)		-	(73,676)
Reclassification of deficits in donor-designated							
funds		3,789		(3,789)		-	-
Other activity		2,482		(2,307)		3,363	3,538
Endowment net assets, end of year	\$	2,561,367	\$	2,795,236	\$	1,729,427 \$	7,086,030

Of the amount classified as temporarily restricted endowment net assets, \$2,265,185 represents the portion of endowment funds subject to time restrictions under Missouri's enacted version of UPMIFA.

Permanently Restricted Net Assets

The portion of perpetual endowment funds net assets that is required to be retained permanently by explicit donor stipulation:

	2018			2017		
Restricted for general activities Restricted for student assistance Restricted for buildings and renovations Life income	\$	1,218,398 437,987 151,312 25,579	\$	1,166,424 388,046 150,658 24,299		
Total endowment net assets classified as permanently restricted net assets	\$	1,833,276	\$	1,729,427		

(All amounts in thousands of dollars)

Temporarily Restricted Net Assets

Temporarily restricted endowment funds net assets:

	 2018	2017		
Restricted for general activities Restricted for student assistance Restricted for buildings and renovations Life income	\$ 2,017,498 536,114 483,810 12,139	\$	1,874,381 462,794 445,233 12,828	
Total endowment net assets classified as temporarily restricted net assets	\$ 3,049,561	\$	2,795,236	

Endowment Funds With Deficits

As determined under UPMIFA, the fair value of assets associated with individual donor-restricted endowment funds may fall below the value of the initial and subsequent donor gift amounts (i.e., deficit). When donor endowment deficits exist, they are classified as a reduction of unrestricted net assets. Deficits of this nature reported in unrestricted net assets were immaterial as of June 30, 2018 and 2017, respectively. The deficits resulted largely from unfavorable market fluctuations that occurred shortly after the investment of newly established endowments.

Return Objectives and Risk Parameters

The university has adopted endowment investment and spending policies that attempt to provide a predictable stream of funding to programs supported by its endowment while seeking to maintain the purchasing power of endowment assets. Under this policy, the return objective for the endowment assets, measured over a full market cycle, shall be to meet or exceed the return of its policy benchmark, based on the endowment's target allocation applied to the appropriate individual benchmarks. The university expects its endowment funds, over time, to provide an average rate of return that will exceed the sum of inflation and the spending rate. Actual returns in any given year may vary from this amount.

Strategies Employed for Achieving Investment Objectives

To achieve its long-term rate of return objectives, the university relies on a total return strategy in which investment returns are achieved through both capital appreciation (realized and unrealized gains) and current yield (interest and dividends). The university targets a diversified global asset allocation that places greater emphasis on equity-based and alternative investments to achieve its long-term objectives within prudent risk constraints.

Endowment Spending Allocation and Relationship of Spending Policy to Investment Objectives

The university has an endowment spending distribution policy designed to stabilize annual spending levels and preserve the real value of the endowment over time. Under this policy, earnings of the pooled endowment are distributed at a rate set annually to the schools and other units of the university. Consideration is given to the provisions of UPMIFA in determining the amount to appropriate. This spending rate must fall within the range of 3.0% to 5.5% of the five-year average market value of a unit of the pooled endowment. For 2018, the spending rate from the pooled endowment was 4.5% of the beginning market value of the pooled endowment. The spending rate is funded from current earnings and, in years when current earnings are insufficient, from previously accumulated earnings of the endowment.

(All amounts in thousands of dollars)

The university's endowment assets at June 30 are as follows:

	 Fair Market Value at June 30, 2018		Fair Market Value at June 30, 2017	
Pooled endowment and other funds Life income trusts and pools Externally administered trusts Separately invested endowment	\$ 8,471,155 80,779 32,123 7,085	\$	7,872,501 75,686 37,040 6,512	
Total	8,591,142		7,991,739	
Less: Operating funds invested in pool	 (903,750)		(776,781)	
Net endowment assets	\$ 7,687,392	\$	7,214,958	

5. Accounts and Notes Receivable

Accounts and notes receivable at June 30 were as follows:

	2018		2017	
Patient services	\$	398,705	\$ 327,044	
Student and parent loans				
Parent loan fund		46,095	45,091	
Government student loans		33,332	40,200	
Institutional student loans		22,780	23,229	
Due from affiliates		108,872	117,483	
Sponsored project receivables		56,028	62,667	
Other		61,132	 45,948	
		726,944	661,662	
Less: Allowance for contractual adjustments				
and doubtful accounts		(232,259)	(197,980)	
Total	\$	494,685	\$ 463,682	

The university is exposed to credit risk on amounts receivable from student and parent loans. Parent loan funds are offered by the university as a way for parents to finance their children's education at a fixed rate. Institutional student loans are offered by the university based on financial need. Both parent and institutional loans typically have ten year terms and, in the case of parent loans, existing economic conditions are evaluated annually in determining the interest rates for these loans. Government sponsored student loans carry minimal risk for the university.

(All amounts in thousands of dollars)

The principal credit quality indicator used by the university for the portfolio of nongovernment student and parent loans is collection experience. In order to reduce its credit risk, the university has adopted credit policies which include a review of credit limits and maintaining an active collections process with the assistance of third party collection agencies as necessary. At June 30, 2018, the allowance for parent and institutional student loans was \$4,377 compared to \$4,400 at June 30, 2017. Accounts are considered past due if a scheduled payment is thirty-one days late. The balance in such accounts was \$8,386 and \$7,569 at June 30, 2018 and June 30, 2017, respectively. Allowances are established based on management's best estimate of exposure at June 30 and are influenced by historical losses, existing economic conditions, and the current payment activity on loans. Activity in these allowances was not significant.

Parent loans and institutional student loans are sent to a third party collection agency if the loan is past due for a period of time and the university has been unable to collect payment. As these loans are non-dischargeable in bankruptcy, accounts are not typically considered uncollectible until all collection efforts have been exhausted with no receipt of payment. At this time, a loan will be written off.

6. Notes and Bonds Payable

Outstanding principal on bonds and notes payable at June 30, 2018 and 2017 consists of the following:

	Rates at June 30, 2018	Maturity	2018	2017
Missouri Health and Educational Facilities Authority \$142,400 of 1996A, B, C and D Series Variable Rate Bonds, due in full	.57% - 1.81%	September 1, 2030	\$ 142,400 \$	S 142,400
\$88,000 of 2000B and C Series Variable Rate Bonds, due in full	.53% - 1.78%	March 1, 2040	88,000	88,000
\$25,135 of 2003B Series Variable Rate Bonds, due in full	.49% - 1.90%	February 15, 2033	25,135	25,135
\$22,985 of 2011A Series Revenue Bonds due in full	5.00%	November 15, 2041	22,985	22,985
\$96,350 of 2011B Series Revenue Bonds due in full November 15, 2030 (\$39,050) and November 15, 2037 (\$57,300)	5.00%	November 15, 2030 and 2037	96,350	96,350
\$77,495 of 2011C Series Revenue Bonds due serially from November 15, 2012 to November 15, 2037	.75% - 5.06%	November 15, 2037	57,740	61,215
\$200,785 of 2012A Series Revenue Bonds due serially from February 15, 2023 to February 15, 2047	2.39% - 3.69%	February 15, 2047	200,785	200,785
\$150,000 of 2014A Series Revenue Bonds due in full	4.07%	October 15, 2044	150,000	150,000
\$402,920 of 2016A Series Revenue Bonds due in full January 15, 2036 (\$109 ,300) and January 15, 2046 (\$293,620)	3.47% - 3.65%	January 15, 2036 and 2046	402,920	402,920
\$272,750 of 2016 B Series Revenue Bonds due in full	3.09%	September 15, 2051	272,750	272,750
\$375,000 of 2017 A Series Revenue Bonds, due in full	3.65%	August 15, 2057	375,000	-
Other Bonds: \$131,435 of 2015A Series Taxable Bonds due in full	3.79%	October 15, 2055	131,435	131,435
Other notes payable			68,798	39,816
Total outstanding notes and bonds payable			2,034,298	1,633,791
Unamortized original issue premiums/discounts and cost of issuance, net			(3,517)	(1,589)
Total			\$ 2,030,781 \$	1,632,202

(All amounts in thousands of dollars)

Bonds payable are redeemable at the option of the university at various times from 2018 through 2057. The university is required to maintain certain ratios and comply with other restrictive covenants principally that the university maintain a ratio of expendable financial resources to debt of at least 1.25 times. The university is in compliance with this covenant. During 2018 and 2017, interest, accretion of debt discount and related fees incurred on notes and bonds payable totaled \$67,862 and \$54,036, respectively.

Maturities on notes and bonds payable for the next five fiscal years are as follows:

2019	\$ 17,273
2020	2,470
2021	57,199
2022	2,380
2023	22,475
Thereafter	1,932,501

During fiscal 2018, the university issued \$375,000 of taxable Series 2017A Missouri Health and Educational Facilities Authority (MOHEFA) bonds. The bonds bear a fixed rate of 3.652% and will mature on August 15, 2057. The proceeds of these bonds will be used to finance various construction projects.

During fiscal 2017, the university issued \$272,750 of taxable Series 2016B bonds \$243,395 of net proceeds from the issuance and other funds were placed in an irrevocable trust to be used to satisfy all interest and principal payments, including principal to be paid at the first scheduled call date, for \$149,625 of the 2008 Series A MOHEFA Bonds and \$93,770 of the 2009 Series A MOHEFA Bonds. In accordance with the terms of the MOHEFA Bond indentures and loan agreements, establishment of the trust results in the legal defeasance of the university's obligation under the bonds. The transaction was accounted for as an extinguishment with a recognized loss of \$23,980 reported on the Gain (Loss) on fixed asset disposals and other line of the Consolidated Statements of Activities.

The university has other lines of credit, which generally expire annually, aggregating \$298,500, of which \$243,595 is available at June 30, 2018. The university expects that these lines of credit will be renewed but can make no assurances.

7. Derivative and Other Financial Instruments

The University utilizes derivative instruments including futures, swaps, and options, to manage market risk, to provide temporary investment exposure in stocks and bonds, and to manage currency and interest rate exposures. When directly implementing a derivative strategy, the University uses a third party manager to execute, settle and manage the positions on a nondiscretionary basis. These contracts are valued at periodic intervals such as daily, monthly, and quarterly as well as at June 30, with the resulting changes in the values of the contracts either added to or deducted from the University's custodial account. Gains or losses from these derivative instruments are reported as realized and unrealized gains or losses in the Consolidated Statements of Activities. Indirect strategies in derivatives held by limited partnerships and commingled investment trusts in which the University invests pose no off-balance sheet risk to the University due to the limited liability structure of the investments. Derivatives are also used to manage

(All amounts in thousands of dollars)

operating expenses but are not material to the consolidated financial statements. No derivative contracts are designated as hedges for accounting purposes.

8. Commitments and Contingencies

At June 30, 2018, the university had outstanding commitments under certain construction contracts in the amount of \$190,356.

The university maintains a self-insurance program for professional liability at the Medical School and a separate program for Washington University Physicians in Illinois. This program is supplemented with commercial excess insurance above the university's self-insurance retention. Funding for the program reserves is based on claims made. The assets supporting the funded reserve are reported as investments in the Consolidated Statements of Financial Position. The university also accrues for an estimate of claims incurred but not reported. Reserves, funded and unfunded, are based upon actuarial studies and represent undiscounted estimated claims and related costs. The total self-insurance reserves at June 30, 2018 and 2017, respectively, were\$73,756 and \$69,106. Self-insurance reserves are necessarily estimates based on historical loss experience and other factors, and while management believes that the reserves are adequate, the ultimate liabilities may be in excess of or less than the amounts provided.

The university is a party, along with other universities, to an agreement with a reciprocal risk retention group for purposes of obtaining general liability and auto liability insurance coverage in excess of a pre-determined retention level. Under the terms of these agreements, the university can be called upon to make additional capital contributions. In management's view, any such capital calls would not be material.

The university is involved in various legal proceedings arising in the normal course of operations. Although the outcome of any legal proceeding cannot be predicted with certainty, it is the opinion of the university's management that the outcome of these proceedings individually or in the aggregate, will not have a material adverse effect on the business, Consolidated Statements of Activities, financial position or liquidity of the university.

9. Retirement Plan

The university provides its faculty and staff with a defined contribution (403(b)) retirement savings plan in which employee contributions, university contributions and investment earnings accumulate to assist employees at retirement. Participating employees own individual retirement accounts through the Teachers Insurance and Annuity Association (TIAA) and College Retirement Equity Fund (CREF). Under this arrangement, the university and plan participants make monthly contributions to TIAA-CREF. For employees who were benefits eligible as of August 31, 2006, the amount of contribution made by the university, commencing after two years of eligible service, is based upon the employee's age and salary. For benefits-eligible employees hired or rehired after August 31, 2006, the university contribution commences after two years of eligible service and is based upon the employee's years of eligible service and salary. Vesting provisions are full and immediate. The university's share of the cost of these benefits in 2018 and 2017 was \$82,065 and \$75,739, respectively.

(All amounts in thousands of dollars)

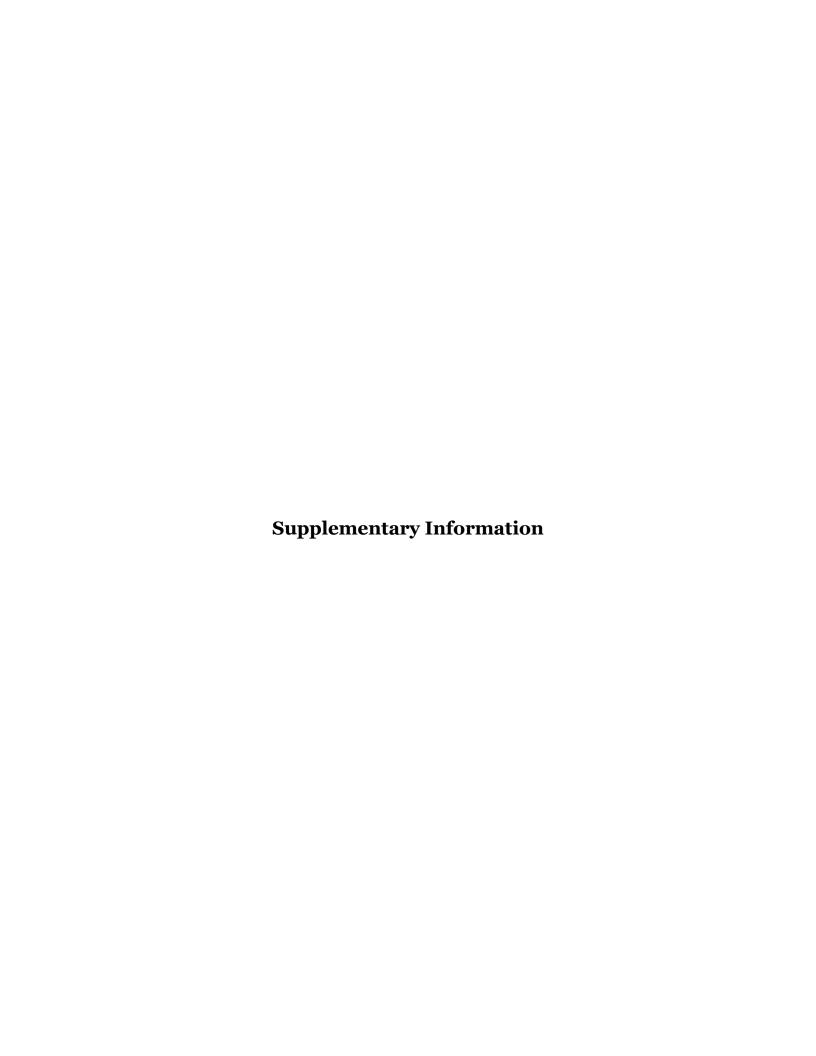
10. Agreements With Affiliated Hospitals

The university has affiliation agreements, extended during fiscal 2018 to December 31, 2027, with Barnes Jewish Hospital (BJH) and St. Louis Children's Hospital (SLCH), collectively the Hospitals. This includes operating activities of Barnes Jewish Hospital at Barnes Jewish West County Hospital (BJWCH), Barnes Jewish Orthopedic Center (OC) in Chesterfield, the Siteman Cancer Center – South County, and the Children's Specialty Care Center in Town and Country.

The terms of the affiliation agreements provide for the university to be responsible for providing professional medical staff and direction, supervision of residents and interns, appropriate resources for research and medical education, and participation in joint clinical planning. BJH and SLCH are responsible for the hospitals and health care delivery facilities. BJH and SLCH compensate the university for services provided by the university through a fixed annual base payment (adjusted annually for inflation) and an additional contingent payment equal to a share of the combined BJH and SLCH adjusted net operating income. The combined compensation payments are reported as Affiliated hospital revenue on the Consolidated Statements of Activities. In addition, the university derives revenue from patient services provided at Barnes-Jewish at St. Peters Hospital under an agreement with that hospital and BJH. During 2013, BJH agreed to fund on a cost-reimbursement basis over a period of years, certain expenditures by the university. Payments of \$37,941 and \$34,483 were received or accrued as gifts on the Consolidated Statements of Activities under the agreement during 2018 and 2017, respectively.

11. Subsequent Events

The university has performed an evaluation of subsequent events through September 25, 2018, which is the date the consolidated financial statements were issued.



Washington University Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2018

Cluster Title/Federal Grantor/Program Title	CFDA Numbe		Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Research and Development Cluster	rumo	i uso imough zmity	Tuentmention Trumper	Expenditures	Sub receiptenes
DEPARTMENT OF DEFENSE					
Advanced Research Projects Agency					
Research and Technology Development	12.910			\$ 1,458,885 \$	
Research and Technology Development	12.910	Vanderbilt University Medical Center	HR00111820001	298,511	
Defense Advanced Research Projects Agency	12.910	valider blit Chiversity Medical Center	11K00111820001	290,511	
Defense Advanced Research Projects Agency	12	Two Six Labs	HR00117C0111	400,120	_
Defense Advanced Research Projects Agency	12	Raytheon BBN Technologies	HR001117C0049	65,605	_
Defense Threat Reduction Agency		,		-3,3	
Basic Scientific Research - Combating Weapons of Mass Destruction	12.351			1,554,019	782,021
Basic Scientific Research - Combating Weapons of Mass Destruction	12.351	Georgia State University	HDTRA11710005	52,865	,,
Basic Scientific Research - Combating Weapons of Mass Destruction	12.351	Georgia State University	HDTRA11610033	215,052	_
Department of the Air Force, Material Command				0,-0	
Air Force Defense Research Sciences Program	12.800			943,300	77,508
Air Force Defense Research Sciences Program	12,800	UES, INC.	FA865015D5405	50,679	-
Department of the Navy, Office of the Chief of Naval Research			0.000	0-7-77	
Basic and Applied Scientific Research	12.300			2,088,799	-
Basic and Applied Scientific Research	12,300	University of California, Davis	Noo0141712961	163,007	_
U.S. Army	-	· ·	., .		
U.S. Army	12	CFD Research Corporation	W911QY17C0008	136,014	-
U.S. Army	12	University of Minnesota	, , ,	61	-
U.S. Army Material Command		·			
Basic Scientific Research	12.431			182,623	-
Basic Scientific Research	12.431	Georgia Institute of Technology	W911NF1310244	62,490	-
Basic Scientific Research	12.431	Georgia Institute of Technology	W911W6-11-2-0010	30	-
Basic Scientific Research	12.431	Georgia Institute of Technology	W911W61720002	30,790	-
Basic Scientific Research	12.431	University of Dayton Research Institute	RSC15032 W911NF1510178	54,299	-
U.S. Army Medical Command					
Military Medical Research and Development	12.420			6,501,196	161,527
Military Medical Research and Development	12.420	Brigham and Women's Hospital	W81XWH1510269	27,387	-
Military Medical Research and Development	12.420	Johns Hopkins University	W81XWH09200108	2,460	-
Military Medical Research and Development	12.420	Johns Hopkins University	W81XWH1020090	1,500	-
Military Medical Research and Development	12.420	Johns Hopkins University	W81XWH-15-2-0067	75,129	-
Military Medical Research and Development	12.420	Northern California Institute for Research and Education	W81XWH1310259	5,214	-
Military Medical Research and Development	12.420	Stanford University	W81XWH1510131	106,002	-
Military Medical Research and Development	12.420	University of Alabama, Birmingham	W81XHW0510615	(32)	-
Military Medical Research and Development	12.420	University of California, San Diego	W81XWH1710393	33,221	-
Military Medical Research and Development	12.420	University of Kentucky	W81XWH1210550	51,567	-
Military Medical Research and Development	12.420	University of Minnesota	W81XWH1710633	13,530	-
Military Medical Research and Development	12.420	University of Missouri	W81XWH1520037	5,007	-
Military Medical Research and Development	12.420	University of Pittsburgh	W81XWH1720073	1,973	-
Military Medical Research and Development	12.420	University of Virginia	W81XWH1010818	7,041	-
Military Medical Research and Development	12.420	Wayne State University	W81XWH180039	5,211	-
Military Medical Research and Development	12.420	Johns Hopkins University	USAMRA (DOD)	670	-
TOTAL DEPARTMENT OF DEFENSE				14,594,224	1,021,056

Washington University Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2018

Cluster Title/Federal Grantor/Program Title	CFDA Numbe		Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
DEPARTMENT OF EDUCATION					
Institute of Education Sciences					
Education Research, Development and Dissemination	84,305	Duke University	R305A130535	66,294	_
National Institute on Disability and Rehabilitation Research	-4.5-5	y	0-00-000	***=>4	
Switzer Research Fellowship Program	84.133	Gallaudet University	90RE50200201	23,656	_
Office of Postsecondary Education	- 1 00	· · · · · · · · · · · · · · · · · · ·	, ,	0,-0-	
Overseas Programs - Doctoral Dissertation Research Abroad	84.022			14,190	-
Graduate Assistance in Areas of National Need	84.200			183,149	-
Office of Special Education and Rehabilitative Services					
Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	84.325			418,166	-
Special Education - Personnel Development to Improve Services and Results for Children with Disabilities	84.325	Salus University	H325H14000216	149,300	-
TOTAL DEPARTMENT OF EDUCATION				854,755	
DEPARTMENT OF ENERGY					
Department of Energy					
Office of Science Financial Assistance Program	81.049			6,844,390	2,084,029
Office of Science Financial Assistance Program	81.049	Georgia Tech	DESC0012577	86,080	
Office of Science Financial Assistance Program	81.049	Smithsonian Institute	DE-FG02-91ER40635	15,047	-
Renewable Energy Research and Development	81.087			962,867	554,429
Renewable Energy Research and Development	81.087	University of Missouri, St. Louis.	DEEEooo7656	20,654	-
Renewable Energy Research and Development	81.087	West Virginia Research Corporation	DEP10000017	249,296	-
Fossil Energy Research and Development	81.089			702,630	68,747
Fossil Energy Research and Development	81.089	University of Illinois, Urbana-Champaigne	DEFE0029161	149,848	-
Fossil Energy Research and Development	81.089	Electric Power Research Institute	10007331	294,893	-
Stewardship Science Grant Program	81.112	Carnegie Institution of Washington	DENA0020006	33,647	-
Advanced Research Projects Agency - Energy	81.135			595,081	114,023
Advanced Research Projects Agency - Energy	81.135	Danforth Plant Science Center	DEAR0000594	1,966	-
Department of Energy	81			30,734	-
Department of Energy	81	Allicance for Sustainable Energy, LLC National Renewable Energy Laboratory	DEAC3609GO28308	85,890	-
Department of Energy	81	Linde LLC	DEFE0031592	11,159	-
Department of Energy	81	Proton Energy Systems, Inc.	DESC0007574	69,975	-
Department of Energy	81	Sandia National Labs	DENA0003525	11,605	-
Department of Energy	81	University of California, Lawrence Berkley National Laboratory	DEAC0205CH11231	211,084	-
TOTAL DEPARTMENT OF ENERGY				10,376,847	2,821,228
DEPARTMENT OF HEALTH AND HUMAN SERVICES					
Administration for Children and Families					
State Court Improvement Program	93.586			85,448	-
Head Start	93.600			86,474	-
Social Services Research and Demonstration	93.647			6,084	-
Child Abuse and Neglect Discretionary Activities	93.670			285,726	1,572
Administration for Community Living					
ACL National Institute on Disability, Independent Living, and Rehabilitation Research	93.433			186,463	-
ACL National Institute on Disability, Independent Living, and Rehabilitation Research	93.433	University of Kansas Center for Research	90RT20150202	42,060	-
State Grants for Protection and Advocacy Services	93.873			621	-

Washington University Schedule of Expenditures of Federal Awards For the Year Ended June 30, 2018

Cluster Title/Federal Grantor/Program Title	CFDA Numb		Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
	Numb	er rass inrough Entity	Identification Number	Expenditures	Sub-Recipients
Agency for Healthcare Research and Quality					
Research on Healthcare Costs, Quality and Outcomes	93.226			1,691,285	16,704
Research on Healthcare Costs, Quality and Outcomes	93.226		1R01HS02545601	18,501	-
Research on Healthcare Costs, Quality and Outcomes	93.226	University of Maryland	5R01HS02545602	2,532	-
Centers for Disease Control					
Birth Defects and Developmental Disabilities - Prevention and Surveillance	93.073			488,937	-
Prevention of Disease, Disability, and Death by Infectious Diseases	93.084			1,750,631	685,900
Prevention of Disease, Disability, and Death by Infectious Diseases	93.084	Duke University	5U54CK00048302	86,518	-
Prevention of Disease, Disability, and Death by Infectious Diseases	93.084	Harvard Pilgram Healthcare	5U54CK00048402	110,187	-
Prevention of Disease, Disability, and Death by Infectious Diseases	93.084	University of Pennsylvania	5U54CK00048502	267,846	-
Prevention of Disease, Disability, and Death by Infectious Diseases	93.084		6U54CK00048102	(5)	-
Prevention of Disease, Disability, and Death by Infectious Diseases	93.084	Rush University	6U54CK00048103	22,373	-
Prevention of Disease, Disability, and Death by Infectious Diseases	93.084	Rush University	5U54CK00048103	16,681	-
Centers for Research and Demonstration for Health Promotion and Disease Intervention	93.135	University Of South Florida	5U48DP00502403	7,573	-
Occupational Safety and Health Program	93.262			284,715	-
Occupational Safety and Health Program	93.262		1R43OH01149901	4,700	-
Occupational Safety and Health Program	93.262		5U6oOHoo976208	47,136	-
Occupational Safety and Health Program	93.262	Center For Construction Research & Training	5U6oOHoo976209	180,290	-
Occupational Safety and Health Program	93.262	University of Iowa	2U19OH00886811	51,604	-
Occupational Safety and Health Program	93.262	University of Iowa	5U10OH00886812	178,874	-
Centers for Disease Control and Prevention, Investigations and Technical Assistance	93.283			683,032	277,221
National Organizations for Chronic Disease Prevention and Health Promotion	93.809	National Association For Chronic Disease Director	5NU58DP0061280200	133,436	-
Preventive Health Services	93.977			386,046	4,477
Centers for Disease Control	93			120,916	-
Centers for Disease Control	93	Healthcore, Inc.	200201142070004	485,610	-
Centers for Disease Control	93	Healthcore, Inc.	200201142070	35,932	-
Centers for Medicare and Medicaid Services					
Pre-existing Condition Insurance Program	93.529	University of Colorado, Denver	2R01GM10022505	1,713	-
Pre-existing Condition Insurance Program	93.529	University of Colorado, Denver	5R01GM10022506	16,134	-
Health Care Innovation Awards (HCIA)	93.610		-	745,290	-
Food and Drug Administration					
Food and Drug Administration Research	93.103			84,601	-
Food and Drug Administration Research	93	University of Southern California	HHSF223201400115C	25,352	_
Health Resources and Services Administration	,,,		0 1 1 0 0	0.00	
Grants to Increase Organ Donations	93.134	Johns Hopkins University	1R39OT311030100	8,033	-
Rural Health Research Centers	93.155	University of Iowa	5U1CRH2041909	152,510	-
Rural Health Research Centers	93.155	University of Iowa	6U1CRH204190803	27,401	_
Rural Health Research Centers	93.155	University of Iowa	6U1GRH076331000	39,015	_
National Institutes of Health	, o oo		1,100	0,7,- 0	
Environmental Health	93.113			2,760,642	415,657
Environmental Health	93.113	Baylor College of Medicine	5U01ES02671903	38,060	
Environmental Health	93.113	Johns Hopkins University	5R01ES02696102	53,717	-
Oral Diseases and Disorders Research	93.121	· · · · · · · · · · · · · · · · · · ·	• · · · · · · · · · · · · · · · · · · ·	1,346,726	142,570
NIEHS Superfund Hazardous Substances Basic Research and Education	93.143	University of Louisville	5P42ES02371602	19,701	-4-50/ -
	7543	· · · · · · · · · · · · · · · · · · ·	0	- /1/	

	CFDA	n of Indi	Pass-through Entity	Total	Passed to
Cluster Title/Federal Grantor/Program Title	Number	Pass Through Entity	Identification Number	Expenditures	Sub-Recipients
Human Genome Research	93.172			18,226,623	1,434,950
Human Genome Research		California Institute of Technology	U41HG002223D	4,490	-
Human Genome Research		California Institute of Technology	5U41HG00222318	39,391	-
Human Genome Research		Cog-Acrin Cancer Research Group	5U10CA18082004	6,601	-
Human Genome Research	, ,	Cog-Acrin Cancer Research Group	5U10CA18082005	3,333	-
Human Genome Research		ackson Laboratory	5U41HG00749704	11,056	-
Human Genome Research	, ,	Nationwide Children's Hospital	3U41HG00763504S1	228,179	-
Human Genome Research		Nationwide Children's Hospital	7U41HG00763504	55,985	-
Human Genome Research		Nawgen, LLC	5R41HG00856702	68,388	-
Human Genome Research	, ,	Stanford University	1UM1HG00944201	229,540	
Research Related to Deafness and Communication Disorders	93.173		D . DG	6,829,396	562,323
Research Related to Deafness and Communication Disorders		Barron Associates, Inc.	5R44DC01008003	21,430	-
Research Related to Deafness and Communication Disorders	, , , ,	ather Flanagan's Boys Home	5R01DC01538502	152,070	-
Research Related to Deafness and Communication Disorders	70 70	ackson Laboratory	5R01DC00430118	62,486	-
Research Related to Deafness and Communication Disorders	, , , ,	Cemple University	5R01DC01306304	17,133	-
Research Related to Deafness and Communication Disorders Research Related to Deafness and Communication Disorders		Cemple University	5R01DC01306305	12,180	-
Research Related to Deafness and Communication Disorders Research Related to Deafness and Communication Disorders		Jniversity of Alabama	1R01DC01598001A1	96,214	-
Research Related to Deafness and Communication Disorders Research Related to Deafness and Communication Disorders		Jniversity of Kansas	5R01DC00180322	48,845	-
Research Related to Deafness and Communication Disorders Research Related to Deafness and Communication Disorders		Jniversity of Kansas Jniversity of Michigan	5R01DC00180323 1R01DC01580901	36,812	-
Research Related to Deafness and Communication Disorders	, , , ,	Jniversity of Nevada, Reno	5P01AG05144303	4,310 13,624	-
Research Related to Deafness and Communication Disorders		Jniversity of Nevada, Reno	1P01AG05144301A1	259	-
Research Related to Deafness and Communication Disorders		Jniversity of Nevada, Reno	1R01DC01513501A1	10,076	-
Research Related to Deafness and Communication Disorders		Jniversity of Nevada, Reno	1R01DC01513501A1 1R01DC01609901		-
Research Related to Deafness and Communication Disorders		Jniversity of Nevada, Reno	5P01AG05144302	35,457 106,205	-
Research Related to Deafness and Communication Disorders		Jniversity of Nevada, Reno	5R01DC01513502	55,984	-
Research Related to Deafness and Communication Disorders		Jniversity of Virginia	5R01DC01313502 5R01DC01425403	9,828	-
Research and Training in Complementary and Integrative Health	93.213	diversity of virginia	5K01DC01425403	348,331	-
Mental Health Research Grants	93.242			23,240,002	5,282,295
Mental Health Research Grants		Columbia University	1P50MH10942901A1	97,974	5,262,295
Mental Health Research Grants		Emory University	1R01MH11469201	22,715	_
Mental Health Research Grants		Emory University	5R01MH11469202	8,366	_
Mental Health Research Grants		cahn School of Medicine Mount Sinai	5R25MH080663	19,223	_
Mental Health Research Grants		ndiana University	5R01MH10846703	114,476	_
Mental Health Research Grants		Veurolux, Inc.	1R44MH11494401	153,912	_
Mental Health Research Grants		Northwestern University	4U01MH09743504	20,075	_
Mental Health Research Grants		Research Foundation for Mental Hygiene	1P50MH11584301	17,897	_
Mental Health Research Grants		Rutgers University	2U24MH06845715	19,143	_
Mental Health Research Grants		Rutgers University	5U24MH06845715	352,632	_
Mental Health Research Grants		Scripps Research Institute	5R01MH10269804	208,875	_
Mental Health Research Grants		Scripps Research Institute	5R01MH10269805	28,088	_
Mental Health Research Grants		The State University of New York	5U01HL13155203	65,827	_
Mental Health Research Grants		The State University of New York	1U01HL13155201	477	_
Mental Health Research Grants		The State University of New York	5U01HL13155202	659,047	-
Mental Health Research Grants		'he Miriam Hospital	1R01MH11465701	30,480	_
	75		1.0/**	3-,4	

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Mental Health Research Grants	93.242 Univ	iversity of California, Los Angeles	4R01MH10002710	227,293	
Mental Health Research Grants		iversity of California, San Diego	5R01MH10734503	98,236	
Mental Health Research Grants		iversity of Camorina, San Diego iversity of Missouri, St. Louis.	R01MH108559	114,428	
Mental Health Research Grants		iversity of North Carolina, Chapel Hill	5U01MH11092502	6,495	
Mental Health Research Grants		iversity of South Florida	5D43MH10816903	9,029	
Mental Health Research Grants		iversity of Washington	5R01MH10854802	9,317	
Mental Health Research Grants		e University	1R01MH11274601A1	32,041	
Mental Health Research Grants		e University	5R01MH10859002	54,751	
Alcohol Research Programs	93.242 1410	Conversity	3K01M110039002	1,081,758	89,363
Alcohol Research Programs		search Foundation For The State University of New York	2U10AA00840126	(160)	
Alcohol Research Programs		search Foundation For The State University of New York	5U10AA00840128	213,692	
Alcohol Research Programs		search Foundation For The State University of New York	5U10AA00840129	873,505	
Alcohol Research Programs		iversity of Illinois, Urbana-Champaigne	7R01AA02410303	4,930	
Alcohol Research Programs		e University	5R01AA02354904	66,306	
Drug Abuse and Addiction Research Programs	93.279	Committee	3110111013394904	7,939,328	267,143
Drug Abuse and Addiction Research Programs		I International	1R01DA04209003	11,519	
Drug Abuse and Addiction Research Programs		I International	1R01DA04401401	25,016	_
Drug Abuse and Addiction Research Programs		I International	5R01DA03863204	73,591	_
Drug Abuse and Addiction Research Programs		I International	5R01DA03582502	(6,478)	_
Drug Abuse and Addiction Research Programs		iversity of Iowa	5R01DA03764804	21,128	_
Drug Abuse and Addiction Research Programs		iversity of Minnesota	5U01DA04112002	15,429	_
Drug Abuse and Addiction Research Programs		iversity of Minnesota	5U01DA04112003	1,624,533	_
Drug Abuse and Addiction Research Programs		iversity of Minnesota	5U01DA04112004	141,534	_
Drug Abuse and Addiction Research Programs		ginia Commonwealth University	5R01DA02142109	5,665	_
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	,		3,838,463	603,573
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286 Corr	rnell University	1R21EB02436601	13,501	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286 Corr	rnell University	5R21EB02436602	10,963	-
Discovery and Applied Research for Technological Innovations to Improve Human Health		ware, Inc.	5R01EB02139602	17,384	-
Discovery and Applied Research for Technological Innovations to Improve Human Health		iversity of Massachusetts	1U01EB02195601	2,556	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286 Univ	iversity of Massachusetts	5U01EB02195602	237,802	-
Discovery and Applied Research for Technological Innovations to Improve Human Health		iversity of Pittsburgh	5R01EB01913504	70,390	-
Minority Health and Health Disparities Research	93.307	, ,		627,657	-
Minority Health and Health Disparities Research	93.307 Univ	iversity of Pittsburgh	5R01MD000911804	12,076	-
Trans-NIH Research Support	93.310			1,946,826	231,357
Trans-NIH Research Support		gham and Women's Hospital	5UGOD02326802	31,662	-
Trans-NIH Research Support	93.310 Brig	gham and Women's Hospital	1UGOD02326801	3,377	-
Trans-NIH Research Support	93.310 Calif	ifornia Institute of Technology	7R01CA18656705	50,355	-
Trans-NIH Research Support	93.310 Drex	exel University	1UG3OD02334201	13,228	-
Trans-NIH Research Support		exel University	5UG3OD02334202	58,473	-
Trans-NIH Research Support		e Broad Institute	3U54DK10257703	2,335	-
Trans-NIH Research Support		iversity of North Carolina, Chapel Hill	1U24DK11620401	247,292	-
Trans-NIH Research Support		iversity of Wisconsin, Madison	1UG3OD02328201	6,993	-
Trans-NIH Research Support	93.310 Univ	iversity of Wisconsin, Madison	5UG3OD02328202	185,535	-

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National Center for Advancing Translational Sciences	93.350			13,981,248	688,226
National Center for Advancing Translational Sciences	93.350	Dystonia Coalition - Emory	U54TR001456	1,631	-
National Center for Advancing Translational Sciences		Oregon Health & Science University	1U24TR00230601	286,123	-
National Center for Advancing Translational Sciences		University of Pittsburgh	5UL1TR00185702	74,644	-
National Center for Advancing Translational Sciences	7000	Yale University	ULTR00186302S2	134,928	-
Research Infrastructure Programs	93.351			3,990,670	550,563
Research Infrastructure Programs		Texas State University	5R24OD01112010	88,925	-
Research Infrastructure Programs	93.351	University of Oregon	5R24OD01855505	25,022	00
21st Century Cures Act - Beau Biden Cancer Moonshot 21st Century Cures Act - Beau Biden Cancer Moonshot	93-353	Post Harthian Community	-IIM-04(2,059,271	528,438
Nursing Research		Fred Hutchinson Cancer Research	2UM1CA15496707	2,924	190 404
Nursing Research	93.361 93.361	Barnes Jewish Hospital	1R15NR01682801A1	2,096,441	180,434
Nursing Research	93.361	Brightoutcome Inc.	5R44NR01618303	9,940 127,731	_
Nursing Research		University of California, San Francisco	5R01NR01522305	123,649	
Nursing Research		University of Pittsburgh	5R01NR01422104	15,121	
ACL Independent Living State Grants		University of Iowa	5R01CA17474306	87,757	_
Cancer Cause and Prevention Research	93.393	onreiony or roma	31101011/4/4300	4,515,551	409,731
Cancer Cause and Prevention Research		Baylor University	1U19CA20365401A1	12,036	
Cancer Cause and Prevention Research		Dartmouth College	1U19CA20365401A1	5,851	_
Cancer Cause and Prevention Research		Emory University	5U01CA15428205	(68)	-
Cancer Cause and Prevention Research		Health Communication Impact	1R44CA19244201	14,376	-
Cancer Cause and Prevention Research	93-393	Mayo Clinic	1U01CA19556802	93,140	-
Cancer Cause and Prevention Research	93-393	Mayo Clinic	5U01CA19556804	26	-
Cancer Cause and Prevention Research	93.393	Memorial Sloan Kettering Cancer Center	1R01CA22323101A1	5,001	-
Cancer Cause and Prevention Research	93.393	Northwestern University	1R01CA21843601	14,577	-
Cancer Cause and Prevention Research	93.393	Ohio State University	5P01CA10073013	213,744	-
Cancer Cause and Prevention Research	93-393	Ohio State University	5P01CA10073014	362,376	-
Cancer Cause and Prevention Research	93.393	Research Foundation For The State University of New York	5R01CA19735103	32,178	-
Cancer Cause and Prevention Research	93.393	Stanford University	5R01CA19369402	27,993	-
Cancer Cause and Prevention Research	70070	University of California, San Francisco	5R01CA18568703	13,642	-
Cancer Cause and Prevention Research	93-393	University of Iowa	5R01CA19324902	156,704	-
Cancer Cause and Prevention Research Cancer Cause and Prevention Research	93.393	University of North Carolina	5U01CA1528105 1U01CA20611001	13,511	-
Cancer Cause and Prevention Research	93-393	University of Utah University of Utah	5U01CA20611001 5U01CA20611002	31,460	-
Cancer Detection and Diagnosis Research	93.393	University of Ctan	5001CA20011002	203,502 7,820,691	2,172,856
Cancer Detection and Diagnosis Research	93-394 93-394	Boston University	5R01CA20859902	4,042	2,1/2,050
Cancer Detection and Diagnosis Research	93-394	Case Western Reserve University	5R21CA17932702	(7,349)	_
Cancer Detection and Diagnosis Research		Johns Hopkins University	5U01CA14020405	39,594	_
Cancer Detection and Diagnosis Research		New York University School of Medicine	1U24CA21097201	65,695	_
Cancer Detection and Diagnosis Research	93.394	New York University School of Medicine	5U24CA21097202	166,391	_
Cancer Detection and Diagnosis Research	93.394	Princeton University	1U24CA21100001	2,112	_
Cancer Detection and Diagnosis Research	93.394	Princeton University	5U24CA21100002	8,217	-
Cancer Detection and Diagnosis Research		University of Arkansas Health Sciences	5U01CA18701304	7,899	-
Cancer Detection and Diagnosis Research	93-394	University of Arkansas Health Sciences	5U01CA18701305	26,975	-
Cancer Detection and Diagnosis Research	93-394	University of California, San Francisco	1R01CA21214801	247,558	-

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Cancer Detection and Diagnosis Research	93.394 University of C	Colorado, Denver	5U01CA15771505	27,186	-
Cancer Detection and Diagnosis Research	93.394 University of I	llinois	4R01CA02583636	60,372	-
Cancer Detection and Diagnosis Research	93.394 University of F	ittsburgh	5U01CA20046602	51,141	-
Cancer Detection and Diagnosis Research	93.394 University of F	ittsburgh	5U01CA20046603	19,045	-
Cancer Treatment Research	93-395			8,483,257	531,917
Cancer Treatment Research	93.395 Altor Biosciene	ce Corporation	1R44CA19581201A1	85,419	-
Cancer Treatment Research	93.395 American Coll	ege of Radiology	5U24CA18080304IROC	194,662	-
Cancer Treatment Research		men's Hospital	3U10CA18082103	189,692	-
Cancer Treatment Research	93.395 Brigham & Wo		3U10CA18082104S1	34,507	-
Cancer Treatment Research	93.395 Brigham & Wo		U10CA180821	10,493	-
Cancer Treatment Research		pital of Philadelphia	5U10CA18088604	117,234	-
Cancer Treatment Research		pital of Philadelphia	UM1CA097452	5,669	-
Cancer Treatment Research		pital of Philadelphia	5U10CA18088603	61,223	-
Cancer Treatment Research		pital of Philadelphia	5UM1CA09745214	11,916	-
Cancer Treatment Research		pital of Philadelphia	1UG1CA18995501	35,995	-
Cancer Treatment Research		spital of Philadelphia	5U10CA18088604	30,292	-
Cancer Treatment Research		spital of Philadelphia	3U10CA1808860227	14,728	-
Cancer Treatment Research		spital of Philadelphia	1U10CA18088601	34,185	-
Cancer Treatment Research	93.395 Doseimaging,		1R41CA20298001A1	89,402	-
Cancer Treatment Research	93.395 Duke Universi		3UM1CA18670403S1	124,981	-
Cancer Treatment Research	93.395 Duke Universi		5UM1CA18670402	47,212	-
Cancer Treatment Research	93.395 Duke Universi		5UM1CA18670403	165,579	-
Cancer Treatment Research		edical Research Foundation	5U10CA18082004	30,539	-
Cancer Treatment Research		edical Research Foundation	5U10CA18082005	11,179	-
Cancer Treatment Research		edical Research Foundation	PDS137629	90,715	-
Cancer Treatment Research	,00,0	on Cancer Research Center	5U01CA15496706	(2,431)	-
Cancer Treatment Research		te of Technology	5R01CA11250308	13,716	-
Cancer Treatment Research	93.395 Johns Hopkin		5UM1CA13744307	5,848	-
Cancer Treatment Research		General Hospital	1U01NS9366301A1	11,882	-
Cancer Treatment Research	93.395 Medical Guida		1R41CA19600201A1	(2,389)	-
Cancer Treatment Research	93.395 Medical Guida		1R43CA21068701	5,145	-
Cancer Treatment Research	93.395 NRG Oncology		5U10CA18086804	24,430	-
Cancer Treatment Research	93.395 NRG Oncology		5U10CA18086805	5,015	-
Cancer Treatment Research	93.395 NRG Oncology	roundation	1U10CA1808601	7,122	-
Cancer Treatment Research	93.395 Protexase	T 11. 1	1R43CA22483201A1	7,439	-
Cancer Treatment Research	93.395 Sloan Ketterin		5R01CA18255105	(495)	-
Cancer Treatment Research		California, Los Angeles	2UM1CA12194709	125,183	-
Cancer Treatment Research		California, San Diego	4P01CA08153416	4,211	-
Cancer Treatment Research	93.395 University of M		5P01CA11141212	19,868	-
Cancer Treatment Research	93.395 University of F		5R01CA19733203	3,317	-
Cancer Treatment Research	20.020		1R01CA21489001A1	14,943	-
Cancer Treatment Research		nonwealth University	1R01CA14930505	23,941	
Cancer Biology Research	93.396			7,428,391	142,296

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Cancer Biology Research	93.396	Dana-Farber Cancer Institute	5R01CA1309880608	3,175	-
Cancer Biology Research	93.396	Dana-Farber Cancer Institute	5R01CA13098809	58,231	_
Cancer Biology Research	93.396	Emory University	5U01CA16088205	15,279	_
Cancer Biology Research	93.396	University of Iowa	7R01CA17474305	5,137	_
Cancer Biology Research	93.396	University of Texas M.D Anderson Cancer Center	5R01CA17265204	52,076	-
Cancer Biology Research	93.396	University of Wisconsin, Madison	5R01CA18729904	15,044	-
Cancer Center Support Grants	93.397			11,890,030	1,015,066
Cancer Center Support Grants	93.397	Case Western Reserve University	2U54CA16306006	42,827	-
Cancer Center Support Grants	93-397	Case Western Reserve University	2U54CA16306007	7,177	-
Cancer Center Support Grants	93.397	Johns Hopkins University	5U54CA21017302	132,340	-
Cancer Center Support Grants	93.397	Sarcoma Alliance	U54CA16851204	18,301	-
Cancer Center Support Grants	93.397	Sarcoma Alliance	U54CA16851205	11,971	-
Cancer Research Manpower	93.398			3,982,491	-
Cancer Control	93.399			221,555	16,715
Trans-NIH Recovery Act Research Support		University of South Alabama	Ro1CA164940	82	
Alzheimer's Disease Initiative	93.763	Memory Home Care Solutions	90ALGG00210100	12,899	-
Cardiovascular Diseases Research	93.837			22,779,971	1,876,096
Cardiovascular Diseases Research	93.837	Albert Einstein College of Medicine	5R01HL12807105	119,869	-
Cardiovascular Diseases Research	93.837	Auxagen, Inc.	1R43HL13267901	38,937	-
Cardiovascular Diseases Research	93.837	Boston Children's Hospital	2R01HL10810705	122,761	-
Cardiovascular Diseases Research	93.837	Brigham & Women's Hospital	5U01HL10142203	20,364	-
Cardiovascular Diseases Research	93.837	Brigham & Women's Hospital	5P50HL11234905	21,592	-
Cardiovascular Diseases Research	93.837	Brigham & Women's Hospital	5U01HL13016303	1,341	-
Cardiovascular Diseases Research	93.837	Capella Imaging LLC	1R42HL13934201	200,112	-
Cardiovascular Diseases Research	93.837	Children's Hospital Medical Center	5R24HL10533305	552	-
Cardiovascular Diseases Research	93.837	Children's Hospital of Philadelphia	5R01HL13154403	22,113	-
Cardiovascular Diseases Research	93.837	Com Affiliation Inc.	5R01HL12807103	21,403	-
Cardiovascular Diseases Research	93.837	Com Affiliation Inc.	5R01HL12807104	185,253	-
Cardiovascular Diseases Research	93.837	Duke University	5U10HL08490408	31,019	-
Cardiovascular Diseases Research	93.837	Duke University	R01HL105448	1,545	-
Cardiovascular Diseases Research	93.837	Harvard Pilgram Healthcare	5R01HL11548505	39,261	-
Cardiovascular Diseases Research	93.837	Massachusetts General Hospital	5R01HL13864602	153,294	-
Cardiovascular Diseases Research		Massachusetts General Hospital	5U01HL12333603	90,422	-
Cardiovascular Diseases Research		Medical College of Wisconsin	5R01HL12558002	77,854	-
Cardiovascular Diseases Research		Medical College of Wisconsin	5R01HL12558009	70,728	-
Cardiovascular Diseases Research		National Marrow Donor Program	1U24HL138660	5,833	-
Cardiovascular Diseases Research		National Marrow Donor Program	5U01HL10913702	360	-
Cardiovascular Diseases Research		National Marrow Donor Program	1U10HL10913701	1,000	-
Cardiovascular Diseases Research		National Marrow Donor Program	4U10HL06929416	3,501	-
Cardiovascular Diseases Research		New England Research Institute	1U24HL13569101	47,277	-
Cardiovascular Diseases Research		New England Research Institute	4U10HL06827015	6,866	-
Cardiovascular Diseases Research		New York University School of Medicine	5R01HL04509527	19,747	-
Cardiovascular Diseases Research	93.837	New York University School of Medicine	5R01HL04509528	3,563	-
Cardiovascular Diseases Research	93.837	Northwestern University	1R01HL13694202	3,679	-

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Cardiovascular Diseases Research	93.837	Northwestern University	1R01HL13694201	31,456	-
Cardiovascular Diseases Research	93.837	Pennsylvania State University	5U10HL09811507	246,769	_
Cardiovascular Diseases Research	93.837	Rightcare Solutions, Inc.	4R44HL12492303	(139)	_
Cardiovascular Diseases Research	93.837	Sentiar, Inc	1R44HL14089601	17,673	-
Cardiovascular Diseases Research	93.837	St. Louis University	5R01HL12542403	108,168	-
Cardiovascular Diseases Research	93.837	University of Alabama	5U01HL12033803	44,768	-
Cardiovascular Diseases Research	93.837	University of California, Davis	1UG3HL14180001	490,784	-
Cardiovascular Diseases Research	93.837	University of Cincinnati	5U01HL13175502	1,011	-
Cardiovascular Diseases Research	93.837	University of Kentucky	5R01HL09135708	225,668	-
Cardiovascular Diseases Research	93.837	University of Kentucky	7R01HL05567320	181,591	-
Cardiovascular Diseases Research	93.837	University of Michigan	4U01HL09434506	3,625	-
Cardiovascular Diseases Research	93.837	University of North Carolina, Chapel Hill	5U54HL09645813	6,728	-
Cardiovascular Diseases Research	93.837	University of North Carolina, Chapel Hill	5U54HL09645814	35,113	-
Cardiovascular Diseases Research	93.837	University of Pennsylvania	1R01HL13490501	50,164	_
Cardiovascular Diseases Research	93.837	University of Pennsylvania	5R01HL13490502	33,284	_
Cardiovascular Diseases Research	93.837	University of Rochester	1R34HL13352601	13,622	_
Cardiovascular Diseases Research	93.837	University of South Florida	R01HL073646	21,118	-
Cardiovascular Diseases Research	93.837	Wayne State University	5R01HL10909004	29,283	_
Cardiovascular Diseases Research	93.837	Wayne State University	5R01HL11145905	3,500	_
Lung Diseases Research	93.838	· ·		9,758,289	299,971
Lung Diseases Research	93.838	Boston Children's Hospital	4U01HL10768105	(135)	
Lung Diseases Research	93.838	Brigham & Women's Hospital	5P01HL13282502	86,172	_
Lung Diseases Research	93.838	Case Western Reserve University	5P01HL10187106	956	_
Lung Diseases Research	93.838	Children's Hospital Medical Center	5U01HL13474502	28,075	_
Lung Diseases Research	93.838	Children's Hospital Medical Center	5U01HL13474503	842	_
Lung Diseases Research	93.838	Indiana University	5R01HL11621103	(202)	_
Lung Diseases Research	93.838	Palo Alto Medical Foundation	5R01HL11984503	(864)	_
Lung Diseases Research	93.838	Pennsylvania State University	3U10HL10908606S1	14,478	_
Lung Diseases Research	93.838	Pennsylvania State University	4U10HL10908606	28,438	_
Lung Diseases Research	93.838	Seattle Children's Hospital	1U01HL11462301A1	6,727	_
Lung Diseases Research	93.838	University of Arizona	1U01HL3004501	(109)	_
Lung Diseases Research	93.838	University of Arizona	5U01HL3004502	399,184	_
Lung Diseases Research	93.838	University of Arizona	5U01HL3004503	25,091	_
Lung Diseases Research	93.838	University of Pittsburgh	5R01HL12512803	26,611	_
Lung Diseases Research	93.838	University of Pittsburgh	5U01HL1995203	140,691	_
Lung Diseases Research	93.838	Xemed LLC	5R44HL11239704	6,243	_
Blood Diseases and Resources Research	93.839			8,234,864	782,529
Blood Diseases and Resources Research	93.839	Apt Therapeutics	1R44HL13599301	133,222	
Blood Diseases and Resources Research	93.839	Kalocyte	5R42HL13596502	102,700	_
Blood Diseases and Resources Research	93.839	Medical University of South Carolina	1R01HL13389601A1	15,431	_
Translation and Implementation Science Research for Heart, Lung, Blood Diseases and Sleep Disorders	93.840	· ·		68,110	-
Translation and Implementation Science Research for Heart, Lung, Blood Diseases and Sleep Disorders	93.840	RASD Rwanda	1U24HL13979001	11,607	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		. 02/2	13,021,065	557,031
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Brigham & Women's Hospital	4R01AR05555710	316	-

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Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Brigham & Women's Hospital	5U01AR06804302	20,201	
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		1R34AR06663101A1	1,658	
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		5R34AR06663102	1,104	
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		2R01AR05783606A1	59,069	
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		1U19AR06952601	50,092	
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		5UH2AR06768103	(6,582)	
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	Northwestern University	5UH2AR06768104	1,109	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		5R01AR06482105	14,324	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		5R01AR06843803	3,398	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		5R21AR06801202	10,451	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	University of Colorado	5R01AR06479304	35,644	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	University of Colorado	5R01AR06479305	16,040	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		1R01AR07087301A1	12,434	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		5R01AR06906202	35,268	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	University of Pennsylvania	5R01AR06906203	18,680	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	University of Rochester	4P50AR05404110	26,941	_
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	University of Rochester	5P50AR05404110	823	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	University of Southern California	1R01AR07221201	44,418	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	University of Texas Houston	1R21AR07287001	12,431	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	•		38,248,906	2,269,927
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Augusta University	U24DK11525501	13,231	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Baylor Research Institute	1R21DK11136902	56,031	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Boston University	5R01DK10150103	60,957	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Brigham & Women's Hospital	5U01DK10430804	17,524	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	California Institute of Technology	2R01DK07893807A1	33,611	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	2U01DK09415707	185,864	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	4U01DK09415706	(1,160)	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	DK11481201	1,114	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	1DP3DK10107401	13,317	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Case Western Reserve University	1DP3DK10443801	1,466	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Cedars-Sinai Medical Center	2U01DK06241316	43,457	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Children's Mercy Hospital	5U01DK06614315	33,150	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	George Washington University	2U01DK09824606	166,208	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	George Washington University	4U01DK09824605	18,759	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	George Washington University	5U01DK06123014	164,267	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	George Washington University	5U01DK06123015	31,869	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Henry M Jackson Foundation For The Advancement of Military Medicine	5R01DK10411501	(1,004)	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Henry M Jackson Foundation For The Advancement of Military Medicine	5R01DK10411502	13,898	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Icahn School of Medicine Mount Sinai	2U24DK06242918	31,801	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Icahn School of Medicine Mount Sinai	5U01DK06242917	14,989	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Joslin Diabetes Center, Inc.	1UC4DK10110801	60,033	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Joslin Diabetes Center, Inc.	2UC4DK10110802	162,881	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Massachusetts General Hospital	1R01DK10135403	13,645	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	Massachusetts General Hospital	5R01DK10135404	301,013	-

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
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Diabetes, Digestive, and Kidney Diseases Extramural Research		egill University	1R01DK11073701	33,793	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		edical University of South Carolina	5U01DK10483303	64,307	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		tionwide Children's Hospital	4UM1DK10086604	(240)	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		tionwide Children's Hospital	5UM1DK10086602	(5,505)	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		tionwide Children's Institute	5UM1DK10086605	38,275	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		orthwestern University	2R01DK09221404A1	84,501	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		orthwestern University	2R01DK09221705	39,366	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		osthetic Desing, Inc.	PDS141908	4,698	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		EMD Biotherapeutics	4R42DK10830502	210,852	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		Louis University	5U01DK08287110	61,488	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		Louis University	5R01DK11040602	170,441	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		ate University of New York	5R01DK11045602	4,767	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		niversity of California, San Diego	1UG3DK11493301	85,451	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		niversity of Chicago	2P01DK05678816A1	12,658	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		niversity of Houston	R21DK11352501A1	20,595	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		niversity of Illinois	1R01DK11308001A1	20,301	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		niversity of Iowa	3U01DK10832803S1	76	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		niversity of Michigan	5R01DK10662102	20,714	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		niversity of Michigan	5R01DK10790402	32,138	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		niversity of Michigan	5U54DK08391208	10,673	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847 Uni	niversity of Michigan	5U54DK08391209	41,961	-
Diabetes, Digestive, and Kidney Diseases Extramural Research		niversity of Pennsylvania	Ro1DK054481	14,851	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847 Uni	niversity of Pittsburgh	5U01DK07214610	56,382	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847 Uni	niversity of Pittsburgh	5U01HD04244415	1,297	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847 Uni	niversity of South Florida	5R01DK10269104	43,159	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847 Uni	niversity of Southern California	3U01DK10735002S1	56,889	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847 Uni	niversity of Southern California	5U01DK10735003	124,247	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847 Virg	rginia Commonwealth University	5R01DK09481802	17,711	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847 Virg	rginia Commonwealth University	5R01DK09481805	15,415	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853			36,914,982	2,160,510
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Bay	ylor College of Medicine	1R01NS09365201	17,858	-
Extramural Research Programs in the Neurosciences and Neurological Disorders		Rankings, LLC	5R44AG05440502	34,124	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Bos	ston University	1U01NS09333401	10,357	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Bos	ston University	5U01NS09333403	5,168	-
Extramural Research Programs in the Neurosciences and Neurological Disorders		ston University	5U01NS08665904	105,337	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Brai	ain Plasticity Institute	5R44NS07178004	3,197	-
Extramural Research Programs in the Neurosciences and Neurological Disorders		lifornia Institute of Technology	1R01NS10221301A1	81,832	_
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Chil	ildren's Hospital Medical Center	5R01NS09605303	2,972	_
Extramural Research Programs in the Neurosciences and Neurological Disorders		ildren's Research Institute	7U01NS10768105	16,617	_
Extramural Research Programs in the Neurosciences and Neurological Disorders		nory University	5U54TR00145608	9,577	_
Extramural Research Programs in the Neurosciences and Neurological Disorders		nory University	5U54TR00145609	125,710	_
Extramural Research Programs in the Neurosciences and Neurological Disorders		ckson Laboratory	1R01NS10263301	130,394	_
Extramural Research Programs in the Neurosciences and Neurological Disorders		hns Hopkins University	T702705	193,998	_
Extramural Research Programs in the Neurosciences and Neurological Disorders		hns Hopkins University	4U01NS08082404	504	_
	/3.033 0011		7	304	

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Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Johns Hopkins Uni		5U01NS08082405	26,441	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 LA Biomedical Rese		1R01NS10081501	41,763	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 LA Biomedical Rese		5R01NS10081502	11,448	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Massachusetts Gen		1U01NS09025901A1	8,191	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Massachusetts Gen		4U44NS09061602	17,885	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Massachusetts Gen		4K12NS08022305	151,112	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Massachusetts Gen		1U01NS07916301	17,496	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Massachusetts Gen		U01NS082329	41,340	-
Extramural Research Programs in the Neurosciences and Neurological Disorders Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Massachusetts Gen	erai Hospitai	U01NS096767 1R01NS10321201	122	-
Extramural Research Programs in the Neurosciences and Neurological Disorders Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Mayo Clinic 93.853 Michigan State Uni	romaiter	R01NS094460	2,069	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Michigan State Uni 93.853 Mount Sinai School			2,399	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Northwestern Univ		0255-3731-4609 5U01NS0808185	4,775 36,041	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Ohio State Universi		5R01NS09307302	37,614	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Pulse Therapeutics		4R44NS08908202	24,980	
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Rutgers University	nic.	5U24NS09591402	24,900	
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Rutgers University		5U24NS09591402 5U24NS09591403	147,596	_
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Seattle Children's H	osnital	5R01NS09597902	32,760	
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Alaba		5U01NS09259502	1,634	_
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Califo		5R01NS08876603	28,412	_
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Califo		5R01NS08876604	33,089	_
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Califo		1R21NS099766	57,770	_
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Califo	nia, San Francisco	1U01NS09276401A1	(24)	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Califo	nia, San Francisco	5U01NS09276402	116,431	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of California	nia, San Francisco	5R01NS07146303	(6)	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of California		1R01NS09429201	94,986	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of California		5U54NS09208903	850	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Cincir		4U01NS06283503	16,925	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Michi		4R01NS07794605	5,115	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Pittsb		5R01NS09671403	2,046	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Pittsb		5R21HD08780202	584	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Pittsb		U01NS107681	620	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of South		5R01NS03446720	123,000	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Texas	Austin	7R01NS09061703	75,147	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Utah		U01NS095388	536	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Virgin		5U01NS08803404	7,800	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 University of Washi		5R01NS09161803	65,094	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853 Wayne State Univer	sity	5R01NS09457002	80,818	
Allergy and Infectious Diseases Research Allergy and Infectious Diseases Research	93.855 93.855 Albert Einstein Coll	ogo of Madiaina	5R21AI12809002	47,475,956	11,426,299
Allergy and Infectious Diseases Research	93.855 Baylor College of M		5U01AI095050	19 (265)	-
Allergy and Infectious Diseases Research	93.855 Baylor College of M 93.855 Boston Children's F		5U01A1095050 5U01AI12661402		-
Allergy and Infectious Diseases Research	93.855 Brigham & Women		5U01A112661402 5UM1AI06863612	114,204 523,839	
Allergy and Infectious Diseases Research	93.855 Brigham & Women		5UM1AI06863612 5UM1AI06863611	523,639 207,856	
Allergy and Infectious Diseases Research	93.855 Case Western Reser		5R01AI12520202	(5,501)	
Anergy and infectious Diseases Research	93.055 Case Western Reser	ve oniversity	5K01A112520202	(5,501)	-

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Allergy and Infectious Diseases Research	93.855	Case Western Reserve University	5R01AI2520203	155,407	
Allergy and Infectious Diseases Research	93.855	Cincinnati Children's Hospital Medical Center	5R01AI11262603	92,914	_
Allergy and Infectious Diseases Research	93.855	Children's Hospital Los Angeles	5U54AI08297307	159	_
Allergy and Infectious Diseases Research	93.855	Children's Hospital of Philadelphia	1R01AI13023101A1	188,704	_
Allergy and Infectious Diseases Research	93.855	Drexel University	1U19AI12891001	125,411	-
Allergy and Infectious Diseases Research	93.855	Duke University	5UM1AI10468106	1,795	-
Allergy and Infectious Diseases Research	93.855	Emory University	5R21AI11745902	52,658	-
Allergy and Infectious Diseases Research	93.855	George Washington University	5R01AI12343302	42,193	-
Allergy and Infectious Diseases Research	93.855	George Washington University	5R01AI12343303	33,905	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	5R01AI11465403	91,453	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	5U19AI10944505	675,543	-
Allergy and Infectious Diseases Research	93.855	Georgia State University	7U19AI10944504	92,378	-
Allergy and Infectious Diseases Research	93.855	Icbiome, Inc.	1R43AI13194401A1	4,901	-
Allergy and Infectious Diseases Research	93.855	Massachusetts General Hospital	1R01AI11191804	86,787	-
Allergy and Infectious Diseases Research	93.855	Michigan State University	1U01AI12661001	8,778	-
Allergy and Infectious Diseases Research	93.855	Michigan State University	5U01AI12661002	105,177	-
Allergy and Infectious Diseases Research	93.855	Microbiotix, Inc	R41AI27009	62,336	-
Allergy and Infectious Diseases Research	93.855	Mount Sinai School of Medicine	5U01AI06359413	6,534	-
Allergy and Infectious Diseases Research	93.855	Mount Sinai School of Medicine	5U01AI06359414	65,131	-
Allergy and Infectious Diseases Research	93.855	Mount Sinai School of Medicine	HHSN272201400008C	296,420	-
Allergy and Infectious Diseases Research	93.855	Ohio State University	R01AI06252011	5,829	-
Allergy and Infectious Diseases Research	93.855	Oregon Health & Science University	5U01AI09577604	(677)	-
Allergy and Infectious Diseases Research	93.855	Oregon Health & Science University	4R01AI09872305	73,537	-
Allergy and Infectious Diseases Research	93.855	Oregon Health & Science University	5R01AI13218602	198,004	-
Allergy and Infectious Diseases Research	93.855	Salk Institute	2R01AI10140005	243,694	-
Allergy and Infectious Diseases Research	93.855	Salk Institute	5R01AI10140006	144,703	-
Allergy and Infectious Diseases Research	93.855	The Benaroya Research Institute	5UM1AI10956503	(1,473)	-
Allergy and Infectious Diseases Research	93.855	The Scripps Research Institute	1R56AI13251501	118,185	-
Allergy and Infectious Diseases Research	93.855	University of Alabama	5U19AI0968004	184,702	-
Allergy and Infectious Diseases Research	93.855	University of Alabama	5U19AI0968005	72,740	-
Allergy and Infectious Diseases Research	93.855	University of Arizona	1R21AI13291001A1	11,946	-
Allergy and Infectious Diseases Research	93.855	University of California, Berkeley	5P01AI10669502	334	-
Allergy and Infectious Diseases Research	93.855	University of California, Berkeley	5P01AI10669503	62,707	-
Allergy and Infectious Diseases Research	93.855	University of California, San Francisco	4U01AI10080705	34,753	-
Allergy and Infectious Diseases Research	93.855	University of California, San Francisco	5U54AI8297309	3,150	-
Allergy and Infectious Diseases Research	93.855	University of Chicago	1R01AI12777401	223,991	-
Allergy and Infectious Diseases Research	93.855	University of Colorado	7R01AI06252012	13,950	-
Allergy and Infectious Diseases Research	93.855	University of Michigan	5R01AI11262604	11,101	-
Allergy and Infectious Diseases Research	93.855	University of North Carolina, Chapel Hill	5U19AI10996504	234,306	-
Allergy and Infectious Diseases Research	93.855	University of North Carolina, Chapel Hill	5U19AI10996505	52,709	-
Allergy and Infectious Diseases Research	93.855	University of Pittsburgh	5R01AI12334805	302,281	-
Allergy and Infectious Diseases Research	93.855	University of South Florida	5R01AI06447809	90,571	-
Allergy and Infectious Diseases Research	93.855	University of Texas Austin	1R21AI12950501	17,671	-
Allergy and Infectious Diseases Research	93.855	University of Texas Health Science Center At San Antonio	5U19AI07041210	138,566	-

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Allergy and Infectious Diseases Research	93.855	University of Vermont	2R01AI05145411A1	63,719	
Allergy and Infectious Diseases Research	93.855	University of Washington	5R01AI10400205	252,799	-
Allergy and Infectious Diseases Research	93.855	University of Washington	5U19AI08301909	400,147	-
Allergy and Infectious Diseases Research	93.855	University of Washington	5U19AI08301910	68,190	_
Allergy and Infectious Diseases Research	93.855	University of Wisconsin, Madison	1R01AI13251901A1	1,733	-
Allergy and Infectious Diseases Research	93.855	University of Wisconsin, Madison	5UM1AI11427103	62,102	-
Allergy and Infectious Diseases Research	93.855	University of Wisconsin, Madison	5UM1AI11427104	582,483	-
Allergy and Infectious Diseases Research	93.855	University of Wisconsin, Madison	4U19AI10677204	6,735	-
Allergy and Infectious Diseases Research	93.855	University of Wisconsin, Madison	5U19AI10677205	447,833	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University	5U01AI10433606	36,400	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University Medical Center	501AI12782802	202,504	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University Medical Center	5R01AI11481604	137,810	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University Medical Center	5R01AI11481605	103,956	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University Medical Center	5UM1AI06943912	147,930	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University Medical Center	5UM1AI06943913	202,038	-
Allergy and Infectious Diseases Research	93.855	Vanderbilt University Medical Center	5UM1AI06861912	694,797	-
Allergy and Infectious Diseases Research	93.855	Vaxnewmo	1R41AI13174201	72,503	-
Allergy and Infectious Diseases Research	93.855	Vaxnewmo	1R41AI13623301	17,593	-
Microbiology and Infectious Diseases Research	93.856			208,116	94,459
Biomedical Research and Research Training	93.859			23,115,651	895,512
Biomedical Research and Research Training	93.859	California Institute of Technology	R01GM084211	90,148	-
Biomedical Research and Research Training	93.859	Nationwide Children's Hospital	5R01GM09420305	488	-
Biomedical Research and Research Training	93.859	North Carolina State University	5R01GM11323905	3,624	-
Biomedical Research and Research Training	93.859	Protein Metrics	1R41GM12113301A1	21,149	-
Biomedical Research and Research Training	93.859	Radiologics	1R44GM12543801	5,993	-
Biomedical Research and Research Training	93.859	Stanford University	1R01GM10607804	115,524	-
Biomedical Research and Research Training	93.859	University of Colorado, Denver	1R01GM12374601	32,960	-
Biomedical Research and Research Training	93.859	University of Michigan	5R01GM09583206	25,690	-
Biomedical Research and Research Training	93.859	University of Michigan	2U54GM10329706	149,798	-
Biomedical Research and Research Training	93.859	University of Michigan	4P50GM10329705	10,894	-
Biomedical Research and Research Training	93.859	University of Pittsburgh	5R01GM10038705	19,743	-
Biomedical Research and Research Training	93.859	University of Texas, Austin	5R01GM11423704	202,738	-
Child Health and Human Development Extramural Research	93.864			126,939	
Child Health and Human Development Extramural Research Child Health and Human Development Extramural Research	93.865	Cincinnati Children's Hospital Medical Center	2K12HD00085003	15,647,844	4,696,567
Child Health and Human Development Extramural Research	93.865	Cincinnati Children's Hospital Medical Center Cincinnati Children's Hospital Medical Center	5R01HD08601103	87,551	-
Child Health and Human Development Extramural Research	93.865 93.865	Cincinnati Children's Hospital Medical Center Cincinnati Children's Hospital Medical Center	1R01HD08601103	6,799 (763)	
Child Health and Human Development Extramural Research	93.865	Cincinnati Children's Hospital Medical Center Cincinnati Children's Hospital Medical Center	5K12HD00085032		-
Child Health and Human Development Extramural Research	93.865	Cincinnati Children's Hospital Medical Center	5R01HD08601102	174	-
Child Health and Human Development Extramural Research		Columbia University	1R01HD09100301	75,933	-
Child Health and Human Development Extramural Research	93.865 93.865	Inquisit Health, Inc.	5R44HD09100301	13,912	-
Child Health and Human Development Extramural Research	93.865	Nemours Children's Clinic	5R44HD08183003 5R01HD07846305	4,971 140,736	-
Child Health and Human Development Extramural Research	93.865	Nemours Children's Clinic Nemours Children's Clinic	5R01HD07846305 5R01HD07846303	38,890	-
Child Health and Human Development Extramural Research	93.865	Oklahoma State University	5R01HD07846303 5R01HD07457907	38,890 890	-
Chia freath and Fulhan Development Extramural Research	93.005	Orianoma state omversity	5K0111D0/45/90/	090	-

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Child Health and Human Development Extramural Research	93.865 Oklahoma St	ate University	7R01HD07457906	3,902	-
Child Health and Human Development Extramural Research	93.865 Pennsylvania	State University	5DP1HD08607103	1,791	-
Child Health and Human Development Extramural Research		State University	5DP1HD08607104	1,066	-
Child Health and Human Development Extramural Research	93.865 Preemie Pace	r LLC	R43HD032210WU	33,803	-
Child Health and Human Development Extramural Research	93.865 Research Fou	ndation For The State University of New York	5R01HD08029203	37,941	-
Child Health and Human Development Extramural Research	93.865 Seattle Childs	en's Hospital	5R01HD07336205	727	-
Child Health and Human Development Extramural Research		California, Davis	U01HD062417	(68)	_
Child Health and Human Development Extramural Research		California, Los Angeles	5R01HD09247102	7,460	_
Child Health and Human Development Extramural Research	93.865 University of	California, San Francisco	1R01HD09241901	132,712	-
Child Health and Human Development Extramural Research	93.865 University of		1R01HD08523302	(18,356)	_
Child Health and Human Development Extramural Research	93.865 University of	Michigan	7R01HD08523303	49,157	_
Child Health and Human Development Extramural Research		North Carolina, Chapel Hill	2R01HD05574111	290,144	_
Child Health and Human Development Extramural Research		North Carolina, Chapel Hill	4R01HD05574110	56,534	_
Child Health and Human Development Extramural Research		Southern California	5R01HD08134603	46,328	_
Child Health and Human Development Extramural Research		Texas Southwestern Medical Center	1P01HD08438701A1	333,311	_
Child Health and Human Development Extramural Research		Wisconsin, Madison	5R01HD08300102	126,540	_
Child Health and Human Development Extramural Research	93.865 Vanderbilt U		5U01HD07673305	6,577	-
Child Health and Human Development Extramural Research	93.865 Yale Universi		5U01HD05592510	258	_
Child Health and Human Development Extramural Research	93.865 Yale Universi		1R21HD08913101A1	5,658	_
Aging Research	93.866	*	,0	44,087,843	6,610,507
Aging Research		earch Institute of The City of Hope	5R01AG03703705	(25,074)	-
Aging Research		erapeutics, Inc.	1RF1AG05778001	273,743	_
Aging Research	93.866 Columbia Un	iversity	1U24AG05627001	68,534	_
Aging Research	93.866 Columbia Un		5R01AG04179705	6,513	_
Aging Research	93.866 Duke Univers		7R24AG05435503	32,300	_
Aging Research		bilitation Center	5R24AG05425902	10,754	_
Aging Research		of Medicine Mount Sinai	5U01AG05241102	220,665	_
Aging Research	93.866 Mayo Clinic		5U01AG04539003	(9,797)	_
Aging Research	93.866 Mayo Clinic		5U01AG04539004	137,475	_
Aging Research	93.866 Neural Stem	Cell Institute	1R01AG05629301	64,255	_
Aging Research		ifornia Institute For Research & Education	2U19AG02490411	42,340	_
Aging Research		ifornia Institute For Research & Education	5U19AG02490412	136,257	_
Aging Research	93.866 Northwestern		5R01AG04741603	16,506	_
Aging Research	93.866 St. Louis Uni		5K01AG04907504	6,232	_
Aging Research		California, San Diego	5U01AG01048326	60,182	_
Aging Research		California, San Francisco	2R01AG03879106A1	6,070	_
Aging Research		California, San Francisco	5R01AG04561105	15,268	_
Aging Research		Nebraska Medical Center	5R01AG03712005	2,678	_
Aging Research	93.866 University of		1R01AG05443501A1	195,272	_
Aging Research	93.866 University of		5R01AG04150205	64,009	_
Aging Research	93.866 University of		5U01AG05140602	(37,052)	_
Aging Research	93.866 University of		5U01AG05140603	121,589	_
Aging Research		Southern California	5U01AG02490410	60,431	_
Aging Research		Southern California	5U19AG01048325	13,641	_
00	,5.230 CHITCION 01		33	13,041	

Cluster Title/Federal Grantor/Program Title	CFDA Numbe		Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Aging Research	93.866	University of Southern California	5P01AG05235002	93,256	-
Aging Research	93.866	University of Southern California	5P01AG05235003	73,453	_
Aging Research	93.866	University of Southern California	2U19AG02490412	63,728	_
Aging Research	93.866	University of Southern California	RF1AG041845	(1,652)	_
Aging Research	93.866	University of Texas, Austin	1R21AG052060	83,324	_
Aging Research	93.866	University of Texas Southwestern Medical Center	5R01AG04974902	368,147	_
Aging Research	93.866	University of Texas Southwestern Medical Center	5R01AG04867804	177,218	_
Aging Research	93.866	University of Virginia	5R21AG05206202	7,062	_
Aging Research	93.866	University of Washington	5U01AG01697619	56,904	_
Vision Research	93.867		3,,,	12,478,687	1,936,862
Vision Research	93.867	Boston University	5R21EY02759002	102,289	
Vision Research	93.867	Case Western Reserve University	1R24EY02728301	108,406	_
Vision Research	93.867	Case Western Reserve University	5U01EY02545103	46,681	_
Vision Research	93.867	Duke University	5R01EY02500903	72,092	_
Vision Research	93.867	Johns Hopkins University	5R01EY01701510	63,901	_
Vision Research	93.867	Johns Hopkins University	5U10EY02452702	2,911	_
Vision Research	93.867	New York University School of Medicine	1U10EY02686901	4,863	_
Vision Research	93.867	University of Illinois	R21EY02761202	90,898	_
Vision Research	93.867	University of Michigan	5R01Y02664102	8,334	_
Vision Research	93.867	University of Texas M.D Anderson Cancer Center	5R01EY01958716	(88)	_
Vision Research	93.867	Viewpoint Theraputics, Inc.	1R43EY02647401	20,451	_
Medical Library Assistance	93.879	,		481,566	102,556
Medical Library Assistance	93.879	California Institute of Technology	1U01LM012672A01	12,650	-
Medical Library Assistance	93.879	University of Arkansas	1R01LM01248201	23,638	_
Medical Library Assistance	93.879	University of Arkansas	5R01LM01248202	122,416	_
Global Health Research and Research Training	93.989	Regional Allicance for Sustainable Development (RASD) Rwanda	5D43TW01033503	74,265	_
Global Health Research and Research Training	93.989	Vanderbilt University Medical Center	5UM1AI06861911	(104,367)	_
Fogarty International Center (FIC)	93	Implementation Science Network	ISN AWARD	23,643	_
National Cancer Institute (NCI)	93	Massachusetts General Hospital	218211	(7,501)	_
National Cancer Institute (NCI)	93	Massachusetts General Hospital	220778	59,756	
National Cancer Institute (NCI)	93	Massachusetts General Hospital	2U19CA02123939	375,951	
National Cancer Institute (NCI)	93	American College of Radiology	ACRIN6685	71	
National Cancer Institute (NCI)	93	National Childhood Cancer Foundation	TMP2496	(789)	_
National Cancer Institute (NCI)	93	NRG Oncology Foundation	LPMO011	96,416	37,242
National Cancer Institute (NCI)	93	Queen's University at Kingston	TMP2763	(6,144)	3/,=4=
National Cancer Institute (NCI)	93	Westat	HHSN261201600007I	19,390	_
National Heart, Lung and Blood Institute (NHLBI)	93	restat	111101120120100000/1	11,566	
National Heart, Lung and Blood Institute (NHLBI)	93	Ocean Nanotech, LLC	HHSN268201400042C	217,430	
National Heart, Lung and Blood Institute (NHLBI)	93	Radiological Society of North America	HHSN26820120078C	165,372	
National Heart, Lung and Blood Institute (NHLBI)	93	University of Michigan	HHSN268201200/8C	7,675	
National Institute of Allergy and Infectious Diseases (NIAID)	93	Oniversity of Michigan	11110112002011000200	3,076,619	797,254
National Institute of Allergy and Infectious Diseases (NIAID) National Institute of Allergy and Infectious Diseases (NIAID)		Emory University	HHSN272201200031C		/9/,454
National Institute of Allergy and Infectious Diseases (NIAID) National Institute of Allergy and Infectious Diseases (NIAID)	93 93	Integral Molecular	HHSN272201400031C HHSN272201400058C	1,347 88,656	-
reational institute of Allergy and fillectious Diseases (NIAID)	93	integral Molecular	nnon2/2201400050C	00,050	-

Cluster Title/Federal Grantor/Program Title	CFDA Numbe		Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
National Institute of Allergy and Infectious Diseases (NIAID)	93	Northwestern University	HHSN272201200026C	67,163	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	Northwestern University	HHSN272201700060C	441,655	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	Rutgers University	HHSN271201400020C	241,891	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	St. Jude Children's Research Institute	HHSN272201400006C	14,086	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Alabama, Birmingham	HHSN272201100036C	2,969	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Alabama, Birmingham	HHSN272201100035C	12,561	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Alabama, Birmingham	HHSN272201100037C	7,687	-
National Institute of Allergy and Infectious Diseases (NIAID)	93	University of Rochester	HHSN272201200005C	55,414	-
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	93	George Washington Univesity	TRIALNET	17,706	-
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	93	Children's Mercy Hospital	5U01DK06614302	9,435	-
National Institute of Health Clinical Research Center	93			17,289	-
National Institutes of Health (NIH)	93	Albert Einstein College of Medicine		41,888	-
National Institutes of Health (NIH)	93	Amercian College of Radiology	TMP2135	15,791	-
National Institutes of Health (NIH)	93	NIH/American College of Surgeons	Z1071	130	
National Institutes of Health (NIH)	93	Case Western Reserve University	CTN0801	(314)	-
National Institutes of Health (NIH)	93	Etiometry	2R44HL11734005	2,950	-
National Institutes of Health (NIH)	93	ICF Macro Inc.	HHSN26120140002B	58,499	-
National Institutes of Health (NIH)	93	Mathmatica	HHSP233201500035I/HHSP233	71,646	-
National Institutes of Health (NIH)	93	NSABP Foundation	STAR	66,657	-
National Institutes of Health (NIH)	93	University of Colorado, Denver	CER150327915	(22,233)	-
National Institutes of Health (NIH)	93	University of Missouri	CLARK16Po	23,676	-
Substance Abuse and Mental Health Services Administration					
Projects of Regional and National Significance	93.243			177,775	-
Substance Abuse and Mental Health Services Administration	93	St. Louis County	SAMHSA	8,969	
TOTAL DEPARTMENT OF HEALTH AND HUMAN SERVICES				457,377,945	50,794,666
NATIONAL AERONAUTICS AND SPACE ADMINSTRATION			•	40/30//3/40	3-1/741
National Aeronautics and Space Administration					
Science	43.001			5,341,499	43,611
Science	43.001	Bay Area Environmental Research	NNX17AC02G	54,860	-
Science	43.001	Brown University	NNX16AG49G	46,363	_
Science	43.001	California Institute of Technology	NNX13AH66G	64,193	-
Science	43.001	California Institute of Technology	NNX15AH53G	45,566	-
Science	43.001	California Institute of Technology	80NSSC18K0223	38,456	_
Science	43.001	Cornell University	JPL1536058	244,179	_
Science	43.001	Johns Hopkins University	80NSSC17K0418	7,254	_
Science	43.001	Smithsonian Astrophysical Observatory	NASA03060	55,980	_
Science	43.001	University of New Mexico	NNX17AE25G	26,791	_
Science	43.001	University of Washington	NNA13AA39A	28,722	_
Space Operations	43.007			293,646	_
Education	43.008	Missouri University of Science and Technology	NNX14AN17A	149,096	_
Education	43.008	Missouri University of Science and Technology	NNX15AK03H	38,269	_
Space Technology	43.012			209,073	_
NASA	43	Arizona State University	NNG07EK00C	118,554	_
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	1575459	16,666	_
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NM0710630	44,107	_
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NMO710805	108,842	_
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NNN12A01C	63,805	_
Jet Propulsion Laboratory	43	Jet Propulsion Laboratory	NNN12AA01C	196,189	_
NASA	43	Johns Hopkins University	JPL1277793	93,746	_
NASA	43	Southwest Research Institute	H99063CT	15,140	_
NASA	43	Southwest Research Institute	NASW02008	18,837	_
NASA	43	University of Texas Austion	NNM16AA26C	20,828	_
TOTAL NATIONAL AERONAUTICS AND SPACE ADMINSTRATION	43	A			40.611
TOTAL NATIONAL AERONAUTICS AND SPACE ADMINSTRATION				7,340,659	43,611

Cluster Title/Federal Grantor/Program Title	CFDA Numbe	er Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
NATIONAL SCIENCE FOUNDATION					
National Science Foundation					
Engineering Grants	47.041			3,017,260	365,270
Engineering Grants	47.041	Arch Innotek, LLC	1722313	64,810	303,270
Engineering Grants	47.041	Rensselaer Polytechnic Institute	EFRI1433311	98,993	_
Engineering Grants	47.041	University of Illinois	1512043	59,060	_
Engineering Grants	47.041	University of Illinois	1740737	56,091	
Engineering Grants	47.041	University of Pennsylvania	CMMI1548571	677,624	
Engineering Grants	47.041	University of Texas at Austin	1710922	56,546	
Engineering Grants	47.041	Yale University	1542815	61,369	
Mathematic and Physical Sciences	47.049	Tale University	1342013	3,202,089	26,663
Mathematic and Physical Sciences	47.049	Oregon State University	1606982	103,591	20,003
Mathematic and Physical Sciences	47.049	Oregon State University	S1412AA CHE112637	(2,644)	
Geosciences	47.050	Oregon state oniversity	51412121 C11211203/	1,028,387	
Geosciences	47.050	Cornell University	1654568	163,956	
Computer and Information Science and Engineering	47.070	Cornell Olliversity	1034300	2,634,056	29,304
Computer and Information Science and Engineering	47.070	Virginia Polytech Institute	ACI4547580	20,000	29,304
Computer and Information Science and Engineering	47.070	University of California, Berkely	NSF1640899	125,760	
Biological Sciences	47.074	Chiversity of Camorina, Berkely	1101 1040099	4,691,977	326,294
Biological Sciences	47.074	Michigan State University	1644965	8,508	320,294
Biological Sciences	47.074	Michigan State University	CNS1405273	156,152	
Biological Sciences	47.074	Michigan State University	IOS1455405 NSF	1,601	
Biological Sciences	47.074	University of Wisconsin, Madison	IOS-1339325	1,612	
Social, Behavioral, and Economic Sciences	47.075	Chiversity of Wisconsin, Madison	103-1339325	883,834	11,982
Social, Behavioral, and Economic Sciences	47.075	Colorado State University	SMA1519987	104,370	11,902
Social, Behavioral, and Economic Sciences	47.075	Georgia State University	1740201	19,536	_
Education and Human Resources	47.076	Georgia State University	1/40201	1,693,284	_
Education and Human Resources	47.076	Business-Higher Education Forum	DUE1331063	84,958	_
Education and Human Resources	47.076	Harris-Stowe State University	1619639	134,760	_
Education and Human Resources	47.076	Indiana University	DUE1534014	112,200	_
Education and Human Resources	47.076	University of Wisconsin	1726625	14,546	
Office of International Science and Engineering	47.079	Arkansas Science and Technology Authority	IIA-1430427(NSF)	4,541	_
Office of International Science and Engineering	47.079	University of Missouri	IIA1430428NSF	127,091	_
Office of Integrative Activities	47.083	University of Missouri	OIA-1355406	252,737	
5	47.003	Chiversity of Missouri	011-1333400		
TOTAL NATIONAL SCIENCE FOUNDATION				19,658,655	759,512
RESEARCH & DEVELOPMENT PROGRAMS FROM OTHER FEDERAL AGENCIES AGENCY FOR INTERNATIONAL DEVELOPMENT Agency for International Development					
Agency for International Development	98	Drugs for Neglected Diseases	AIDOAAG1400010	151,226	-
Agency for International Development	98	International AIDS Vaccine Initiative	AIDOAAA1600032	253	-
Agency for International Development	98	Michigan State University	EDHA00070000500	580,826	122,382
Agency for International Development	98	National Academy of Sciences	ESPA00050000100	91,115	· · ·
Agency for International Development	98	Task Force for Global Health	AIDOAAG1400008	65,673	-
Agency for International Development	98	Tufts University	AIDOAAC1600020	582,034	112,092
DEPARTMENT OF AGRICULTURE		•			
Agricultural Research Service Agricultural Research - Basic and Applied Research	10.001			39,624	-

Cluster Title/Federal Grantor/Program Title	CFDA Numbe	r Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
, , ,	Numbe	i ass imough Entity	identification Number	Expenditures	Sub-Recipients
National Institute of Food and Agriculture					
Biotechnology Risk Assessment Research Agriculture and Food Research Initiative (AFRI)	10.219			70,731	-0.6
Agriculture and Food Research Initiative (AFRI) Agriculture and Food Research Initiative (AFRI)	10.310 10.310	University of Rhode Island	20158701622942	146,661	58,610
DEPARTMENT OF COMMERCE	10.310	Chiversity of Khode Island	20158/01022942	12,751	-
National Institute of Standards and Technology					
Science, Technology, Business and/or Education Outreach	11.620			5,500	_
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	11.020			3,300	
Department of Housing and Urban Development					
Office of Healthy Homes and Lead Hazard Control	14			122,353	_
Healthy Homes Technical Studies Grants	14.906			75,797	_
DEPARTMENT OF THE INTERIOR					
U.S. Geological Survey					
Research & Data Collection	15.808			18,831	-
DEPARTMENT OF JUSTICE					
Violence Against Women Office					
OVW Research and Evaluation Program	16.026			87,237	-
Department of Justice	16.123	City of St. Louis	18-51	6,463	-
Department of Justice	16.830	Annie Malone Children & Family Services	2016GJFXK006	20,082	-
DEPARTMENT OF TRANSPORTATION					
Federal Highway Administration		and the common control of			
Police Traffic Services	20.600	Missouri Dept of Transportation	18DL02002	94,032	-
DEPARTMENT OF THE TREASURY DEPARTMENT OF VETERANS AFFAIRS					
Department of Veterans Affairs	64			6 40=	
ENVIRONMENTAL PROTECTION AGENCY	04			6,487	-
Office of Research and Development					
Science To Achieve Results (STAR) Research Program	66,509	Missouri University of Science and Technology	83575101	41,712	_
NATIONAL ENDOWMENT FOR THE HUMANITIES	00.309	institution, or selence and recliniology	033/3101	41,/12	
Promotion of the Humanities - Fellowships and Stipends	45.160			25,200	_
NATIONAL FILM PRESERVATION FOUNDATION	40			-0,	
National Film Preservation Foundation	89			3,645	
Total R&D Programs from Other Federal Agencies				2,248,231	293,084
Total Research & Development Cluster				512,451,317	55,733,158
Other Sponsored Programs DEPARTMENT OF DEFENSE U.S. Army Medical Command					
Military Medical Research and Development	12.420	Boston Children's Hospital	W81XWH1710532	16,160	_
Military Medical Research and Development	12.420	Neumedicines, Inc.	2015-SWI-004	85,334	_
Military Medical Research and Development	12.420	Sarcoma Alliance	W81XWH1310072	4,346	_
Military Medical Research and Development	12.420	University of Alabama, Birmingham	W81XWH1210155	5,061	-
Military Medical Research and Development	12.420	University of Alabama, Birmingham	W81XWH1720037	1,336	-

Cluster Title/Federal Grantor/Program Title	CFDA Numbe	r Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
Military Medical Research and Development	12.420	University of Colorado	W81XWH1510504	19,637	
TOTAL MILITARY MEDICAL RESEARCH AND DEVELOPMENT				131,874	-
U.S. Army					
U.S. Army	12	Johns Hopkins University	W81XWH1020134	336	<u> </u>
DEPARTMENT OF HEALTH AND HUMAN SERVICES				132,210	
Administration for Children and Families					
Healthy Marriage Promotion and Responsible Fatherhood Grants	93.086	Fathers Support Center St. Louis	HHS2015ACFOFAFK0993	302,763	-
Agency for Healthcare Research and Quality Research on Healthcare Costs, Quality and Outcomes	93.226			28,997	
Centers for Disease Control					
Blood Disorder Program: Prevention, Surveillance, and Research	93.080	University of Texas Health Science Center	5NU27DD0011550300	9,702	-
Blood Disorder Program: Prevention, Surveillance, and Research TOTAL BLOOD DISORDER PROGRAM: PREVENTION, SURVEILLANCE, AND RESEARCH	93.080	University of Texas Health Science Center	5NU27DD0011550200	6,651 16,353	<u>-</u> _
CBA to Strengthen Public Health Infrastructure and Performance	93.424	National Association for Chronic Diesease	5NU38OT00022505	60,000	
Centers for Disease Control and Prevention	93.424	State of Missouri	5NU58DP00481705	52,363	
HIV Prevention Activities_Non-Governmental Organization Based	93.939	University of Missouri, Kansas City	5U65PS00448105	6,391	=
HIV Prevention Activities_Non-Governmental Organization Based TOTAL HIV PREVENTION ACTIVITIES NON-GOVERNMENTAL ORGANIZATION BASED	93.939	University of Missouri, Kansas City	5U65PS00448104	16,104 22,495	
HIV Prevention Activities_Health Department Based	93.940	City of St. Louis Department of Health	HRSA1166	97,807	
Centers for Disease Control and Prevention	93			490,019	=
Department of Health and Human Services					
Department of Health and Human Services Department of Health and Human Services	93 93	Health Research Inc. Healthcore, Inc.	HRSA15-0696-05 200201142070005	(152) 75,256	42,514
Department of Health and Human Services	93	St. Louis Effort for AIDS	PDS156548	227,887	42,514
TOTAL DEPARTMENT OF HEALTH AND HUMAN SERVICES				302,991	42,514
Food and Drug Administration_Research	93.103	Johns Hopkins University	5R01FD00481904	196	-
Health Resources and Services Administration					
Trans-NIH Research Support Trans-NIH Research Support	93.110 93.110	University of Texas Health Science Center At San Antonio University of Texas Health Science Center At San Antonio	2H30MC2405106 5H30MC240510700	21,892 171	-
TOTAL TRANS-NIH RESEARCH SUPPORT	93.110	onversity of realist received extended extended in sum announce	31130110240310700	22,063	=
Emergency Medical Services for Children	93.127	Cincinnati Children's Hospital Medical Center	6U03MC226840601	17,275	=
Emergency Medical Services for Children	93.127	Cincinnati Children's Hospital Medical Center	6U03MC226840701	62,263	<u> </u>
TOTAL EMERGENCY MEDICAL SERVICES FOR CHILDREN				79,538	<u> </u>
Grants to Increase Organ Donations Grants to Increase Organ Donations	93.134 93.134	University of Arizona University of Arizona	6U13HS305860101 5U13HS305860200	2,579 8,896	-
TOTAL GRANTS TO INCREASE ORGAN DONATIONS	931-34	omreisky stransia	3013110303000200	11,475	_
Coordinated Services and Access to Research for Women, Infants, Children, and Youth	93.153			1,340,137	98,540
Sickle Cell Treatment Demonstration Program	93.365			618,070	346,906
HIV Emergency Relief Project Grants	93.914	City of St. Louis Department of Health	HRSA1166CTR7113549	139,023	-
HIV Emergency Relief Project Grants TOTAL HIV EMERGENCY RELIEF PROJECT GRANTS	93.914	City of St. Louis Department of Health	USDHHS - RYAN WHITE	1,012,746	 _
HIV Care Formula Grants	93.917	St. Clair County	RYAN WHITE HIV/AIDS	66,728	67,080
HIV Care Formula Grants	93.917	State of Missouri	DH1706A00003	382,809	-

Cluster Title/Federal Grantor/Program Title	CFDA Number	Pass Through Entity	Pass-through Entity Identification Number	Total Expenditures	Passed to Sub-Recipients
HIV Care Formula Grants TOTAL HIV CARE FORMULA GRANTS	93.917 State of Missouri		RFA 1706	108,204 557,741	13,150 80,230
Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease Special Projects of National Significance	93.918 93.928			625,464 339,143	26,674
Office of Minority Health Community Programs to Improve Minority Health Community Programs to Improve Minority Health	93.137 St. Louis Integrated 93.137 St. Louis Integrated		1CPIMP1611360200 1CPIMP1611360100	55,880	-
TOTAL COMMUNITY PROGRAMS TO IMPOVE MINORITY HEALTH				56,583	-
Office of Population Affairs Family Planning Services Office of the Secretary of Health and Human Services	93.217 Missouri Family He	alth Council	DHHS TITLE X	186,287	-
Research on Research Integrity Substance Abuse and Mental Health Services Administration	93.085			140,488	-
Substance Abuse and Mental Health Services_Projects of Regional and National Significance	93.243			412,939	=
OTHER FEDERAL PROGRAMS DEPARTMENT OF JUSTICE				6,915,681	594,864
Office of Juvenile Justice and Delinquency Prevention					
Children of Incarcerated Parents Department of Justice DEPARTMENT OF THE TREASURY Internal Revenue Service	16.831 Fathers Support Cer 16.123 United Way of Grea		2014IGBX0005 2016MUMUK012	(5,180) 52,848	-
Low Income Taxpayer Clinics INSTITUTE OF MUSEUM AND LIBRARY SERVICE	21.008			97,552	-
Museums for America	45.301			15,694	-
National Leadership Grants NATIONAL ARCHIVES AND RECORDS ADMINISTRATION National Archives and Records Administration	45.312			44,304	-
National Historical Publications and Records Grants NATIONAL ENDOWMENT FOR THE HUMANITIES Promotion of the Humanities - Challenge Grants	89.003			22,918	-
Promotion of the Humanities - Channenge Grants Promotion of the Humanities Fellowships and Stipends	45.130 45.160			4,213 71,400	<u> </u>
Total Other Sponsored Programs from Other Federal Agencies				303,750	
Total Other Sponsored Programs				7,351,640	594,864
Student Financial Assitance Cluster DEPARTMENT OF EDUCATION					
Federal Supplemental Educational Opportunity Grant	84.007			1,213,814	-
Federal Work-Study Program Federal Pell Grant Program	84.033 84.063			1,130,721 4,113,615	-
Federal Direct Student Loans	84.268				
Outstanding Loans as of July 1, 2017 New Loans Issued during 2018	84.268			85,489,972	-
Administrative Cost Allowance	84.268			-	-
Federal Perkins Loans Outstanding Loans as of July 1, 2017	84.038			39,564,017	
New Loans Issued during 2018	84.038			542,902	-
Administrative Cost Allowance	84.038			65,000	-
DEPARTMENT OF HEALTH AND HUMAN SERVICES Health Professions Student Loans including Primary Care Loans/Loans for Disadvantaged Students					
Outstanding Loans as of July 1, 2017	93.242			197,738	-
New Loans Issued during 2018 Administrative Cost Allowance	93.242 93.242			-	-
Total Student Financial Assistance Cluster	90.444			132,317,779	
TRIO Cluster					
DEPARTMENT OF EDUCATION TRIO - Student Support Services	84.042			351,400	_
Total Federal Award Expenditures	04.042			\$ 652,472,136 \$	56,328,022

The accompanying notes are an integral part of this schedule.

1. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying Schedule of Expenditures of Federal Awards (the "Schedule") summarizes the expenditures of Washington University (the "university") under programs of the Federal Government for the year ended June 30, 2018. Expenditures of direct awards to the university are reported in total by program. The information in this schedule is presented in accordance with the requirements of Title 2 U.S. Code of Federal Regulation Part 200, *Uniform Administrative Requirements, Cost Principals, and Audit Requirements for Federal Awards* (Uniform Guidance). Therefore, some amounts presented in this schedule may differ from amounts presented in, or used in the preparation of, the basic financial statements. The university includes the amounts in the Schedule in the unrestricted net assets of the university's Consolidated Statement of Activities for the year ended June 30, 2018.

The Schedule is prepared on the accrual basis of accounting. Expenditures are recognized following the cost accounting principles contained in the Uniform Guidance wherein certain types of expenditures are not allowable or are limited to reimbursement. Moreover, expenditures include a portion of costs associated with general university activities which are allocated to awards under negotiated formulas commonly referred to as facilities and administrative cost rates.

Federal Awards

For purposes of the Schedule, federal awards include all grants, contracts and similar agreements entered into directly by the university with agencies and departments of the Federal Government and all awards received as a subrecipient from nonfederal organizations pursuant to federal grants, contracts and similar agreements.

2. Facilities and Administrative Costs

The university recovers facilities and administrative costs under federal financial assistance programs using predetermined rates ranging from 25.5% to 54.5%. The university does not use the 10% de minimis cost rate but instead has negotiated the rates above with the Department of Health and Human Services through June 30, 2021.

3. Federal Student Loan Programs

The following schedule includes the SFA loan balances outstanding as of June 30, 2018:

Student Financial Aid	Federal CFDA Number	utstanding Balances
U.S. Department of Education Federal Perkins Loan Program	84.038	\$ 32,688,558
U.S. Department of Health and Human Services Health Profession Student Loans, Primary Care Loans	93.342	\$ 158,174

The university had an Administrative Cost Allowance (ACA) of \$65,000 for fiscal year 2018.





Report of Independent Auditors 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 Board of Trustees of Washington University

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 Washington University (the "university"), which comprise the consolidated statement of financial position as of June 30,2018, and the related consolidated changes in its net assets and its cash flows for the year then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated September 25, 2018.

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 a 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

Pricevaterhose Coopes LLP

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.

St. Louis, Missouri September 25, 2018



Report of Independent Auditors 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 the Uniform Guidance

To the Board of Trustees of Washington University

Report on Compliance for Each Major Federal Program

We have audited Washington University's (the "university") compliance with the types of compliance requirements described in the *OMB 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, 2018. The university's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' 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 the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance 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, 2018.



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 the Uniform Guidance, 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 the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

St. Louis, Missouri February 19, 2019

Pricevaterhouse Coopes LLP

Schedule of Independent Auditors' Findings and Questioned Cost

Washington University EIN# 43-0653611 Schedule of Independent Auditors' Findings and Questioned Costs Year Ended June 30, 2018

Part I - Summary of Auditors' Results

Financial Statements	
Type of auditors' report issued:	Unmodified
Internal control over financial reporting: Material weakness (es) identified?	Yes <u>X</u> No
Significant deficiency (ies) identified not considered to be material weaknesses?	Yes <u>X</u> None reported
Noncompliance material to financial statements noted?	Yes <u>X</u> No
Federal Awards	
Type of auditor's report issued on compliance for major programs:	Unmodified
Internal control over major programs:	
Material weakness (es) identified? Significant deficiency (ies) identified not considered to be material weaknesses?	Yes <u>X</u> No Yes <u>X</u> None reported
Any audit findings disclosed that are required to be reported in accordance with Uniform Guidance Section 200.516(a)?	Yes <u>X</u> No
<u>Identification of Major Programs</u> :	
CFDA Number(s)	Name of Federal Program or Cluster
Various	Student Financial Aid Cluster
Various	Research and Development and Research Training Cluster
Dollar threshold used to distinguish between Type A and Type B programs:	\$3,000,000
Auditee qualified as low-risk auditee?	X Yes No

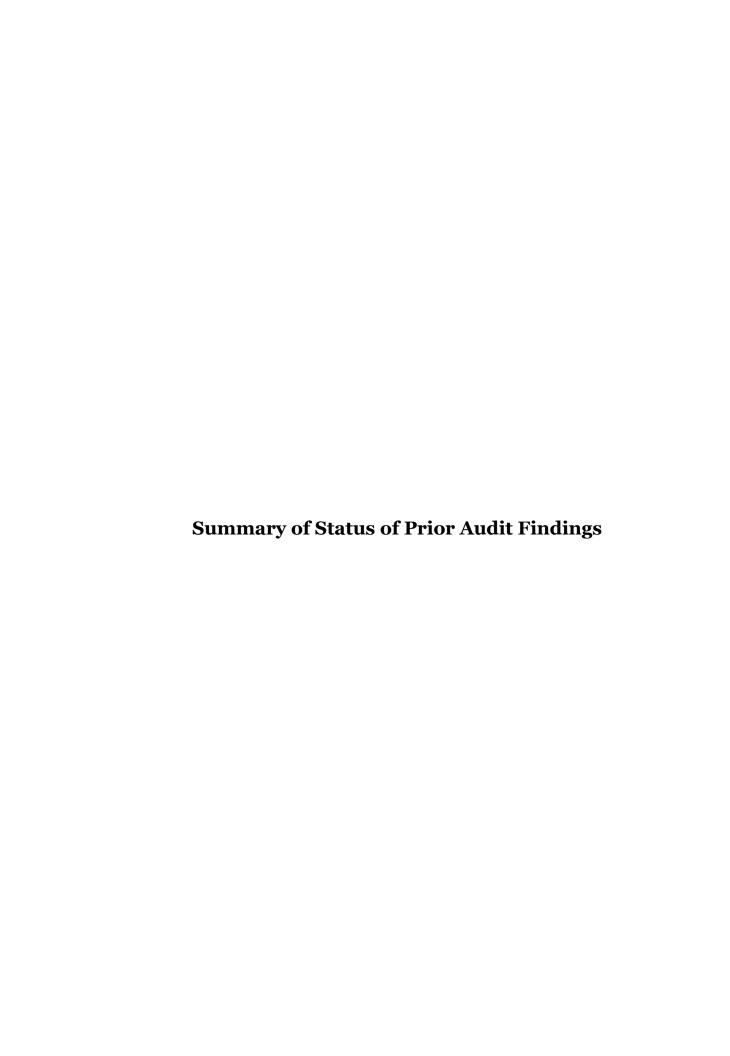
Washington University EIN# 43-0653611 Schedule of Independent Auditors' Findings and Questioned Costs Year Ended June 30, 2018

Part II – Financial Statement Findings

There are no financial statement findings to report.

Part III – Federal Award Findings and Questioned Costs

There are no federal award findings and questioned costs to report.



Washington University Summary of Status of Prior Audit Findings Year Ended June 30, 2018

There were no federal award findings and questioned costs in the prior year.