Mass General Brigham

Report on Federal Awards in Accordance with the OMB Uniform Guidance September 30, 2020 EIN 04-3230035

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September 30, 2020

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Report of Independent Auditors

To the Board of Directors of Mass General Brigham Incorporated

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Mass General Brigham Incorporated (Mass General Brigham) and its affiliates, which comprise the consolidated balance sheets as of September 30, 2020 and 2019, and the related consolidated statements of operations, of changes in net assets and of cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to Mass General Brigham'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 Mass General Brigham's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Mass General Brigham Incorporated and its affiliates as of September 30, 2020 and 2019, and the results of their operations, changes in net assets and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the consolidated financial statements, Mass General Brigham Incorporated changed the manner in which it accounts for lease and net periodic pension and postretirement benefit costs in 2020. Our opinion is not modified with respect to these matters.

Other Matters

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards for the year ended September 30, 2020 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. The 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 taken as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated December 11, 2020 on our consideration of Mass General Brigham's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters for the year ended September 30, 2020. 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 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 Mass General Brigham's internal control over financial reporting and compliance.

TricuraturbusuCoopers 11P
Boston, Massachusetts
December 11, 2020

Mass General Brigham Incorporated and Affiliates Consolidated Balance Sheets September 30, 2020 and 2019

(in thousands of dollars)	2020	2019
Assets Current assets		
Cash and equivalents Investments Current portion of investments limited as to use Patient accounts receivable, net Research grants receivable, net Other current assets	\$ 2,129,189 1,142,275 4,424,436 983,273 149,685 589,078	\$ 283,807 2,791,502 2,235,171 1,129,594 136,557 673,745
Total current assets	9,417,936	7,250,376
Investments limited as to use, less current portion Long-term investments Property and equipment, net Right-of-use operating lease assets Other assets	5,168,054 2,179,220 6,411,117 1,139,626 724,410	4,498,716 1,997,617 6,557,206 - 928,458
Total assets	\$ 25,040,363	\$ 21,232,373
Liabilities and Net Assets Current liabilities Current partian of lang term obligations	¢ 426.466	Φ 455.4C5
Current portion of long-term obligations Accounts payable and accrued expenses Accrued medical claims and related expenses Accrued employee compensation and benefits Current portion of operating lease obligations Unexpended funds on research grants Total current liabilities	\$ 436,166 1,885,784 84,638 1,219,905 191,259 367,858 4,185,610	\$ 455,165 866,107 57,550 932,870 - 262,017 2,573,709
Accrued professional liability Accrued employee benefits Interest rate swaps liability Accrued other Operating lease obligations, less current portion Long-term obligations, less current portion	567,770 2,044,913 662,384 197,986 797,096 5,964,310	542,136 2,410,974 510,579 187,060 - 5,260,196
Total liabilities	14,420,069	11,484,654
Commitments and contingencies		
Net assets Unrestricted Donor restricted Total net assets	8,099,064 2,521,230 10,620,294	7,358,335 2,389,384 9,747,719
Total liabilities and net assets	\$ 25,040,363	\$ 21,232,373

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

Mass General Brigham Incorporated and Affiliates Consolidated Statements of Operations Years Ended September 30, 2020 and 2019

(in thousands of dollars)	2020				
Operating revenues Net patient service revenue Premium revenue Direct academic and research revenue Indirect academic and research revenue	\$ 9,609,196 830,191 1,591,241 469,144	\$ 10,145,150 791,356 1,594,085 463,247			
Other revenue Total operating revenues	1,558,855 14,058,627	957,499 13,951,337			
Operating expenses Employee compensation and benefit expenses Supplies and other expenses Medical claims and related expenses Direct academic and research expenses Depreciation and amortization expenses Interest expense	7,678,213 3,594,613 610,310 1,591,241 742,187 192,576	7,212,688 3,339,331 556,110 1,594,085 686,374 180,922			
Total operating expenses (Loss) income from operations	14,409,140 (350,513)	13,569,510 381,827			
Nonoperating gains (expenses) Income from investments Change in fair value of interest rate swaps Other nonoperating (expenses) income Academic and research gifts, net of expenses Non-service related pension income	612,355 (151,805) (73,366) 168,527 58,317	182,829 (271,527) (123,911) 214,267 102,679			
Total nonoperating gains, net Excess of revenues over expenses	614,028 263,515	104,337 486,164			
Other changes in net assets Funds utilized for property and equipment Change in funded status of defined benefit plans Other changes in net assets Cumulative effect of accounting change Increase in unrestricted net assets	80,894 376,740 19,580 - \$ 740,729	111,641 (1,415,364) 2,478 1,100,081 \$ 285,000			

Mass General Brigham Incorporated and Affiliates Consolidated Statements of Changes in Net Assets Years Ended September 30, 2020 and 2019

(in thousands of dollars)		nrestricted	F	Donor Restricted	Total
Net assets at September 30, 2018	\$	7,073,335	\$	1,899,246	\$ 8,972,581
Increases (decreases)					
Income from operations		381,827		-	381,827
Income (loss) from investments		182,829		(5,536)	177,293
Change in fair value of interest rate swaps		(271,527)		-	(271,527)
Other nonoperating (expenses) income		(123,911)		379,892	255,981
Academic and research gifts, net of expenses		214,267		-	214,267
Non-service related pension income		102,679		-	102,679
Funds utilized for property and equipment		111,641		(83,281)	28,360
Change in funded status of defined benefit plans		(1,415,364)		-	(1,415,364)
Other changes in net assets		2,478		1,880	4,358
Cumulative effect of accounting change		1,100,081		197,183	1,297,264
Change in net assets		285,000		490,138	775,138
Net assets at September 30, 2019		7,358,335		2,389,384	9,747,719
Increases (decreases)					
Loss from operations		(350,513)		-	(350,513)
Income from investments		612,355		85,376	697,731
Change in fair value of interest rate swaps		(151,805)		-	(151,805)
Other nonoperating (expenses) income		(73,366)		93,334	19,968
Academic and research gifts, net of expenses		168,527		-	168,527
Non-service related pension income		58,317		-	58,317
Funds utilized for property and equipment		80,894		(48,658)	32,236
Change in funded status of defined benefit plans		376,740		-	376,740
Other changes in net assets		19,580		1,794	21,374
Change in net assets		740,729		131,846	872,575
Net assets at September 30, 2020	\$	8,099,064	\$	2,521,230	\$ 10,620,294

Mass General Brigham Incorporated and Affiliates Consolidated Statements of Cash Flows Years Ended September 30, 2020 and 2019

(in thousands of dollars)		2020	2019
Cash flows from operating activities			
Change in net assets	\$	872,575	\$ 775,138
Adjustments to reconcile change in net assets to net cash			
provided by operating activities			
Change in funded status of defined benefit plans		(376,740)	1,415,364
Loss on refunding of debt		24,817	836
Change in fair value of interest rate swaps		151,805	271,527
Depreciation and amortization		742,187	686,374
Amortization of bond discount, premium and issuance costs		(11,838)	(10,698)
Gain on disposal of property		(1,258)	(129)
Change in right-of-use operating lease assets		170,854	(201 166)
Net realized and change in unrealized appreciation on investments Cumulative effect of accounting change		(907,825)	(381,166) (1,297,264)
Restricted contributions and investment income		(121,064)	(303,785)
Cash premium upon issuance of bonds		79,262	(505,705)
Increases (decreases) in cash resulting from a change in		70,202	
Patient accounts receivable		148,008	(51,508)
Other assets		29,700	(41,960)
Accounts payable and other accrued expenses		510,870	136,895
Accrued medical claims and related expenses		27,088	(6,848)
Operating lease obligations		(211,546)	-
Settlements with third-party payers		35,040	(1,887)
Medicare accelerated payments		1,018,093	
Net cash provided by operating activities		2,180,028	 1,190,889
Cash flows from investing activities			
Purchases of property and equipment		(563,746)	(837,584)
Proceeds from sale of property		1,353	410
Purchase of investments		(2,350,917)	(3,653,436)
Proceeds from sales of investments		1,867,763	 2,561,465
Net cash used for investing activities		(1,045,547)	 (1,929,145)
Cash flows from financing activities			
Borrowings under lines of credit		375,000	-
Repayments under lines of credit		(375,000)	(52,848)
Payments on long-term obligations		(83,806)	(81,071)
Proceeds from long-term obligations, net of financing costs		1,463,860	559,238
Decrease in auction rate securities holdings		(29,985)	(405.454)
Deposits into refunding trusts		(760,232)	(105,454)
Restricted contributions and investment income	-	121,064	 303,785
Net cash provided by financing activities		710,901	 623,650
Net increase (decrease) in cash and equivalents		1,845,382	(114,606)
Cash and equivalents			
Beginning of year		283,807	 398,413
End of year	\$	2,129,189	\$ 283,807

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

(in thousands of dollars)

1. Organization and Community Benefit Commitments

Mass General Brigham Incorporated (the Company) (formerly known as Partners HealthCare System, Inc.) is the parent organization and sole corporate member of numerous organizations whose financial condition and operations are described in these consolidated financial statements. The terms Mass General Brigham, We, Our or Us as used herein, unless otherwise stated or indicated by context, refer collectively to the Company and its affiliated organizations.

Mass General Brigham operates academic medical centers, community acute care hospitals, inpatient and outpatient mental health services facilities, urgent care centers, facilities that provide rehabilitation medicine and long-term care services, physician organizations, home health services, nursing homes and a graduate level program for health professions. Our mission is to provide world class health care services to the local communities in which we operate as well as to patients across the United States and the world. In addition, we are a nonuniversity-based non-profit private medical research enterprise and a principal teaching affiliate of the medical and dental schools of Harvard University. Our licensed, not-for-profit managed care organization and licensed, for-profit insurance company (collectively referred to as AllWays Health) provide health insurance products and administrative services to the Massachusetts Medicaid program (MassHealth), ConnectorCare (a state subsidized program for adults who meet income and immigration guidelines) and commercial populations.

Community Benefit

Through our community benefit programs we work with community residents and organizations to make measurable, sustainable improvements in the health status of underserved populations. In addition, we support initiatives related to equity, social determinants of health and work force development. Our hospitals and licensed affiliated health centers partner with the community to help low-income, vulnerable families overcome barriers to health and wellbeing.

Charity Care

We provide charity care to all emergent patients regardless of their ability to pay. The cost of and reimbursement for providing that care, as reflected in the consolidated statements of operations, is summarized below.

State Programs Massachusetts

Acute care hospitals in The Commonwealth of Massachusetts (the Commonwealth or Massachusetts) are partially reimbursed for charity care services through the statewide Health Safety Net Trust Fund (HSN). A portion of the funding for the HSN is paid by an assessment on acute care hospitals' charges for private sector payers. The statewide assessment was \$165,308 in both 2020 and 2019 and the assessment expense on our acute care hospitals was \$61,973 and \$59,918 in 2020 and 2019, respectively.

Acute care hospitals are reimbursed for charity care based on claims for eligible patients and services that are submitted to and adjudicated by the HSN. Payments are based on Medicare rates and payment policies. The HSN was under-funded by approximately \$42,738 and \$61,461 in 2020 and 2019, respectively. This shortfall is allocated to acute care hospitals based on their share of total statewide patient care costs with our share being approximately \$12,064 and \$20,564 in 2020 and 2019, respectively. Each hospital's share of the overall state shortfall cannot exceed its total charity care reimbursement. Hospitals with a high proportion of charity care and

(in thousands of dollars)

government funding receive more favorable reimbursement, including limiting their shortfall allocation to no more than 15% of their payments for charity care. In aggregate, our acute care hospitals received charity care funding covering 62% and 60% of the estimated cost of charity care provided in 2020 and 2019, respectively.

The Commonwealth levies an additional assessment on Massachusetts hospitals that is redistributed to the hospitals based on pay-for-performance criteria. The total assessment was \$257,500 in both 2020 and 2019 and our assessment expense was \$97,393 and \$93,053 in 2020 and 2019, respectively. The total amount redistributed to hospitals was \$265,000 in both 2020 and 2019 of which we received \$55,542 and \$56,496 in 2020 and 2019, respectively. Additionally, there is a separate assessment for our post-acute hospitals which totaled \$6,783 and \$6,912 in 2020 and 2019, respectively.

New Hampshire

The State of New Hampshire (New Hampshire) imposes a Medicaid Enhancement Tax (MET) on hospital net patient service revenue. For both of New Hampshire's fiscal years ended June 30, 2020 and 2019, the MET imposed was 5.4%. We incurred \$18,513 and \$18,825 of MET in 2020 and 2019, respectively.

New Hampshire acute care hospitals receive disproportionate share payments based on a portion of their charity care relative to other acute care hospitals. We received \$10,697 and \$9,097 in 2020 and 2019, respectively.

Medicaid

Medicaid is a health insurance program jointly funded by the states and the federal government. Each state administers its own program and sets rules for eligibility, benefits and provider payments within broad federal guidelines and in some cases, including the Commonwealth and New Hampshire, within a Waiver Agreement between each state and the federal government. The program provides health care coverage to low-income adults and children. Eligibility is determined by a variety of factors which include income relative to the federal poverty line, age, immigrant status and assets.

Medicaid payments to our providers do not cover the full cost of services provided to Medicaid patients. In aggregate, reimbursement from Medicaid covered approximately 62% and 64% of the estimated cost of services provided in 2020 and 2019, respectively.

Federal Program

Medicare

Medicare is a federally sponsored health insurance program for people age 65 or older, under age 65 with certain disabilities and any age with End-Stage Renal Disease. Medicare's payments historically have not kept pace with increases in the cost of care provided at many hospitals. Additionally, payments to physicians have seen little or no increases over the past several years. Compounding this shortfall in payments is the continued shift of care from higher paying inpatient services to lower paying outpatient services.

Consequently, Medicare payments to our providers do not cover the full cost of services provided. In aggregate, reimbursement from Medicare covered approximately 68% and 73% of the estimated cost of services provided in 2020 and 2019, respectively.

(in thousands of dollars)

Summary

For charity care, Medicaid and Medicare, the estimated cost of services provided is either obtained directly from a costing system or based on an entity specific ratio of cost to gross charges. In the latter case, cost is derived by applying this ratio to gross charges associated with providing care to charity care, Medicaid and Medicare patients. The following summarizes, by program, the cost of services provided, net reimbursement and cost of services in excess of reimbursement for each year:

	Years Ended September 30,					
	2020			2019		
Cost of services provided						
Charity care	\$	90,473	\$	84,758		
Medicaid	·	1,275,389	•	1,216,139		
Medicare		4,134,589		3,947,938		
	\$	5,500,451	\$	5,248,835		
Net reimbursement				_		
Charity care	\$	45,632	\$	40,251		
Medicaid		795,865		781,013		
Medicare		2,800,316		2,876,749		
	\$	3,641,813	\$	3,698,013		
Cost of services in excess of reimbursement						
Charity care	\$	44,841	\$	44,507		
Medicaid		479,524		435,126		
Medicare		1,334,273		1,071,189		
	\$	1,858,638	\$	1,550,822		

In addition to charity care and inadequate funding from the Medicaid and Medicare programs, there are significant losses related to self-pay patients who fail to make payment for services rendered or insured patients who fail to remit co-payments and deductibles as required under the applicable health insurance arrangement. The estimated cost of providing these services was approximately \$65,171 and \$70,743 for 2020 and 2019, respectively.

2. Summary of Significant Accounting Policies

Basis of Accounting

The accompanying consolidated financial statements have been prepared on the accrual basis of accounting and include the accounts of the Company and its affiliates. Significant interaffiliate accounts and transactions have been eliminated.

(in thousands of dollars)

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant estimates are made in the areas of patient accounts receivable, research grants receivable, investments, receivables and accrual for settlements with third-party payers, accrued medical claims and related expenses, accrued employee compensation and benefits, accrued professional liability, interest rate swaps liability and accrued other.

Income Taxes

The Company and substantially all of its affiliates are tax-exempt organizations under Sections 501(c)(3) or 501(c)(4) of the Internal Revenue Code (IRC) or are disregarded entities for tax purposes.

In December 2017, the U.S. Government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (Tax Act). The Tax Act, effective in phases beginning in 2018, made broad and complex changes to the U.S. tax code. Beginning in 2018, the Tax Act required us to consider certain transportation fringe benefits provided to employees as unrelated business taxable income (UBTI). In addition, beginning in 2019, we were required to determine unrelated business income or loss on an activity-by-activity basis. In December of 2019, the provision of the Tax Act that considered certain transportation fringe benefits provided to employees as UBTI was repealed retroactive to its enactment. As a result, we filed amended tax returns to refund the taxes paid relative to this provision.

Total income tax (credit) expense of (\$6,666) and \$3,750 was recognized for the years ended September 30, 2020 and 2019, respectively.

Adoption of New Accounting Guidance

Mass General Brigham adopted the following Accounting Standards Updates (ASU) in 2020: Compensation – Retirement Benefits, Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost (Pension Standard) and Leases (Leases Standard).

The Pension Standard requires that the service cost be presented in the same line item(s) as other employee compensation costs and that nonservice cost related income (expense) be presented within nonoperating results. Upon adoption of this standard, amounts related to nonservice cost components of pension and postretirement expenses for 2019 of \$102,679 were reclassified from employee compensation and benefit expenses to nonoperating gains (expenses) as the Pension Standard required retrospective adoption.

The Leases Standard requires a lessee to recognize a right-of-use asset and lease liability in its balance sheet, initially measured at the present value of the lease payments. The standard also expands the required quantitative and qualitative disclosures for leases. Effective October 1, 2019, we recognized approximately \$1,167,000 of lease assets and \$1,056,000 of lease liabilities as a result of the adoption of the Leases Standard. Prior year comparative financial statements have not been restated to reflect the adoption of this standard.

(in thousands of dollars)

We adopted the following ASU's in 2019: Revenue From Contracts with Customers (Revenue Standard); Financial Instruments-Overall: Recognition and Measurement of Financial Assets and Financial Liabilities (Financial Instruments Standard); Presentation of Financial Statements for Notfor-Profit entities (Not-For-Profit Standard); and Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made (Contributions Standard).

The Revenue Standard implements a single framework for recognition of all revenue earned from customers in exchange contracts. This framework ensures that entities appropriately reflect the consideration to which they expect to be entitled in exchange for goods and services by allocating transaction price to identified performance obligations and recognizing revenue as performance obligations are satisfied. Qualitative and quantitative disclosures are required to enable users of financial statements to understand the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The Revenue Standard was adopted on October 1, 2018 using the modified retrospective transition method. The adoption of this standard did not have a significant impact on operations and applicable disclosures have been included.

The Financial Instruments Standard made changes to the recognition of and measurement of financial assets. We now record marketable investments at fair value with changes in fair value recognized as nonoperating investment income. The Financial Instruments Standard was adopted on October 1, 2018 with prospective application and a cumulative effect adjustment at the date of adoption. The impact of adopting this new accounting guidance resulted in a cumulative effect of accounting change of \$1,100,081 to unrestricted net assets and \$197,183 to donor restricted net assets.

The Not-For-Profit Standard makes targeted changes to the not-for-profit financial reporting model. The primary change under the new guidance is the presentation of two net asset classes versus the previously required three. The guidance also requires new disclosure about information useful for assessing liquidity and availability of resources. The Not-For-Profit Standard was adopted on October 1, 2018 using the retrospective transition method. The adoption of this standard did not have a significant impact on operations.

The Contributions Standard clarifies the definition of an exchange and nonexchange transaction and provides guidance on determining whether a nonexchange transaction (contribution) is conditional or unconditional. The Contributions Standard was adopted on October 1, 2018 using the modified prospective transition method. The adoption of this standard did not have a significant impact on operations.

Fair Value of Financial Instruments

The fair value of financial instruments approximates the carrying amount reported in the consolidated balance sheets for cash and equivalents, investments and investments limited as to use, patient accounts receivable, research grants receivable, accounts payable and accrued expenses and interest rate swaps liability.

(in thousands of dollars)

Cash and Equivalents

Cash and equivalents represent cash, registered money market funds and highly liquid debt instruments with a maturity at the date of purchase of three months or less. Our cash and equivalents are maintained with several national banks, and cash deposits typically exceed federal insurance limits. Our policy is to monitor these banks' financial strength on an ongoing basis, and no losses have been experienced to date.

Investments

Investments in equity securities with readily determinable fair values, debt securities and alternative investments are measured at fair value. Alternative investments, consisting of various hedge funds, private equity funds, private debt funds, other private partnerships and restricted securities of public companies that are not traded on a national securities exchange, are valued based on amounts reported by the fund manager and evaluated by management. Investments in securities sold short or traded on a national securities exchange are valued based on quoted market prices.

Income from investments (including realized gains and losses, unrealized change in value of investments, interest, dividends and endowment income distributions) is included in excess of revenues over expenses unless the income or loss is restricted by donor or law. Income from investments is reported net of investment-related expenses.

Each year as part of our endowment spending policy, we establish a fixed distribution rate for spending. Distributions will come from either income and/or net accumulated appreciation.

Investments Limited as to Use

Investments limited as to use primarily include assets whose use is contractually limited by external parties as well as assets set aside by the boards (or management) for identified purposes and over which the boards (or management) retain control such that the boards (or management) may, at their discretion, subsequently use such assets for other purposes. Certain investments corresponding to deferred compensation are accounted for such that all income and appreciation (depreciation) is recorded as a direct addition (reduction) to the asset and corresponding liability.

Derivative Instruments

Derivatives are recognized on the balance sheet at fair value with changes in the fair value recorded in excess of revenues over expenses.

Patient Accounts Receivable

The payments received for healthcare services rendered from federal and state agencies (under the Medicare and Medicaid programs), managed care payers, commercial insurance companies and patients are subject to explicit and implicit discounts. These discounts are based on contractual agreements, discount policies and management's assessment of historical experiences and are reflected in the period of service.

Research Grants Receivable

Mass General Brigham receives research funding from departments and agencies of the U.S. Government, industry and other foundation sponsors. Research grants receivable include amounts due from these sponsors of externally funded research. These amounts have been billed or are billable to the sponsor, or in limited circumstances, represent accelerated spending in anticipation of future funding. Research grants receivable are recognized at net realizable value.

(in thousands of dollars)

As of September 30, 2020, and 2019, we have approximately \$4,075,000 and \$3,760,000, respectively, of conditional research grants for future research to be performed. The timing and amounts of funds received under such grants are subject to continued government funding and may change over time.

Other Current Assets

Other current assets include prepaid expenses, inventory, nonpatient receivables, current portion of receivable for settlements with third-party payers, current portion of pledges receivable and premiums receivable. Inventory (primarily supplies and pharmaceuticals) is stated at an average cost or the lower of cost (first-in, first-out method) or market.

Property and Equipment

Property and equipment is reported on the basis of cost less accumulated depreciation. Donated items are recorded at fair value at the date of contribution. All research grants received for capital are recorded in the year of expenditure as a change in unrestricted net assets. Property and equipment is reviewed for impairment whenever events or changes in circumstances indicate that its carrying amount may not be recoverable. Depreciation of property and equipment is calculated by use of the straight-line method at rates intended to depreciate the cost of assets over their estimated useful lives, which generally range from three to fifty years. Interest costs incurred on borrowed funds during the period of construction of capital assets are capitalized, net of any interest earned, as a component of the cost of acquiring those assets.

Asset Retirement Obligations

Asset retirement obligations, reported in accrued other, are legal obligations associated with the retirement of long-lived assets. These liabilities are initially recorded at fair value and the related asset retirement costs are capitalized by increasing the carrying amount of the related assets by the same amount as the liability. Asset retirement costs are subsequently depreciated over the useful lives of the related assets. Any changes to the liability due either to the passage of time, better information or the settlement of an obligation are reflected in the current period.

Other Assets

Other assets consist of long-term receivables, intangible assets, malpractice insurance receivables, receivable for settlements with third-party payers, investments in healthcare related limited partnerships and long-term pledges and contributions receivable. The carrying value of other assets is evaluated for impairment if the facts and circumstances suggest that the carrying value may not be recoverable.

Compensated Absences

In accordance with formal policies concerning vacation and other compensated absences, accruals of \$375,627 and \$312,312 were recorded as of September 30, 2020 and 2019, respectively.

Unexpended Funds on Research Grants

Research grants received in advance of corresponding grant expenditures are accounted for as a direct addition to investments limited as to use and unexpended funds on research grants.

Self-Insurance Reserves

We are generally self-insured for employee healthcare, disability, workers' compensation and certain other employee benefits. These costs are accounted for on an accrual basis to include estimates of future payments for claims incurred prior to year-end.

(in thousands of dollars)

Net Assets

Donor restricted net assets include (a) the historical dollar amounts of contributions and the income and gains on such contributions which are required by donors to be retained and (b) contributions and the income and gains on these contributions which can be expended but for which restrictions have not yet been met. Such restrictions include purpose restrictions where donors have specified the purpose for which the net assets are to be spent, or time restrictions imposed by donors or implied by the nature of the contribution (capital projects, pledges to be paid in the future and life income funds) or by interpretations of law (gains available for appropriation but not appropriated in the current period). All remaining net assets are considered unrestricted.

Realized gains and losses are classified as unrestricted net assets unless they are restricted by the donor or law. Realized gains and net unrealized appreciation on donor restricted contributions are classified as donor restricted until appropriated for spending in accordance with policies established by Mass General Brigham and applicable provisions of the Uniform Prudent Management of Institutional Funds Acts (UPMIFA). Net losses on donor restricted endowment funds are classified as a reduction to donor restricted net assets.

Contributed Securities

Our policy is to sell securities contributed by donors upon receipt, unless prevented from doing so by donor request. For the years ended September 30, 2020 and 2019, contributed securities of \$80,461 and \$59,356, respectively, were received and liquidated. Donors restricted \$10,787 and \$18,949 of the proceeds received from the sale of these contributed securities for long-term purpose for the years ended September 30, 2020 and 2019, respectively.

Statement of Operations

Activities deemed by management to be ongoing, major and central to the provision of healthcare services, teaching, research activities and health insurance are reported as operating revenues and expenses. Other activities are deemed to be nonoperating and include unrestricted contributions (net of fundraising expenses), external community benefit program support, net change in unexpended academic and research contributions, change in fair value of interest rate swaps, substantially all income (loss) from investments, interest on advanced borrowings and nonservice related pension income. Academic and research contributions largely consist of donor contributions (and the related investment income including realized gains and losses) designated to support the clinical, teaching or research efforts of a physician or department as directed by the donor. These contributions are reported as unrestricted, net of related support expenses, when donor restrictions are of a general nature that are inherent in the normal activities of the organization.

The consolidated statements of operations include excess of revenues over expenses. Changes in unrestricted net assets, which are excluded from excess of revenues over expenses, include contributions of long-lived assets (including assets acquired using contributions which by donor restriction were to be used for acquisition of such assets), change in funded status of defined benefit plans and cumulative effect of accounting change.

(in thousands of dollars)

Revenues

To determine the appropriate revenue recognition policy, we first assess whether the transaction is an exchange or nonexchange transaction in accordance with accounting guidance. In general, an exchange transaction consists of an exchange of goods and/or services for commensurate value. Transactions that consist of transferring goods and/or services without receiving commensurate value in return are considered nonexchange transactions.

For exchange transactions, revenue is recognized as goods and/or services are provided and is based on the amount expected to be received in exchange for those goods and/or services. Revenue recognized as exchange transactions include net patient service revenue, premium revenue and other revenue.

Nonexchange transactions include contributions and grants for which the service provider does not receive commensurate value in return for the funding.

Contributions

Contributions are reported as other nonoperating gains in the consolidated statements of operations. Unconditional promises to give cash and other assets are reported at fair value at the date the promise is received. Conditional promises to give are recognized when the conditions are substantially met. Contributions are reported as donor restricted support if they are received with donor stipulations that limit the use of the donated assets. Donor restricted contributions whose restrictions are met within the same year as received are reported as unrestricted contributions in the consolidated statements of operations.

Contributions of long-lived assets with explicit restrictions that specify use of assets and contributions of cash or other assets that must be used to acquire long-lived assets are reported as additions to donor restricted net assets if the assets are not placed in service during the year.

Grants

Grants and contracts normally provide for the recovery of direct and indirect costs, subject to audit. Revenue associated with direct and indirect costs is recognized as direct costs are incurred. The recovery of indirect costs is based on predetermined rates for U.S. Government grants and contracts and negotiated rates for other grants and contracts.

Medical Claims and Related Expenses

AllWays Health contracts with various community health centers, hospital-based primary care physician practices and other health care providers for the delivery of services to its members and compensates these providers on a capitated, fee-for-service, per diem or diagnosis-related group basis.

The cost of contracted health care services is accrued in the period in which services are provided and include certain estimated amounts. The estimated liability for medical claims and related expenses is actuarially determined based on analysis of historical claims-paid experience, modified for changes in enrollment, inflation and benefit coverage. The liability for medical claims and related expenses represents the anticipated cost of claims incurred but unpaid at the balance sheet date. The estimates for claims expense may differ than the amounts ultimately paid when claims are settled and changes in estimates are reflected in the current period in the consolidated statements of operations.

(in thousands of dollars)

In the normal course of business, overpayments are recouped through reductions in future payments made to hospitals and other providers. Such overpayments are the result of, among other things, coordination of benefits and provider claim audits. For the years ended September 30, 2020 and 2019, we recorded a reduction in medical claims expense of \$19,968 and \$32,213, respectively, for such overpayments. As of September 30, 2020 and 2019, respectively, approximately \$1,629 and \$803 are recorded as receivables related to such overpayments.

Reinsurance

Reinsurance premiums are reported in medical claims and related expenses and reinsurance recoveries are reported as reductions in medical claims and related expenses.

Settlements

AllWays Health contracts with certain providers at negotiated rates based on historical and anticipated experience. These methods of reimbursement result in settlements based on actual versus anticipated experience which could result in either payments due from (to) these providers. Settlements receivable of \$5,514 and \$2,423 were recorded in other current assets as of September 30, 2020 and 2019, respectively. Settlements payable of \$2,921 and \$701 were recorded in accrued medical claims and related expenses as of September 30, 2020 and 2019, respectively. The settlements are intended to include both reported and unreported incurred claims as of September 30, 2020 and 2019.

In 2014, the Affordable Care Act introduced new settlements related to a risk adjustment program, a risk corridor program and a reinsurance program designed to mitigate the transitional impact on insurers for new members. The risk corridor program and reinsurance program ended on December 31, 2016 in accordance with the provision of the Affordable Care Act. Our estimated net receivable due from the federal government for these programs was \$65,753 and \$56,370 at September 30, 2020 and 2019, respectively. Similar to the federal program, Executive Office of Health and Human Services of the Commonwealth (EOHHS) has a risk corridor program, and our estimated net payable due to EOHHS was \$2,186 and \$7,848 as of September 30, 2020 and 2019, respectively.

Premium Deficiency Reserves

Premium deficiency reserves are assessed and recognized on a product line basis based upon expected premium revenue, medical expense and administrative expense levels, and remaining contractual obligations using historical experience. There were no premium deficiency reserves as of September 30, 2020 or 2019.

Claims Adjustment Expenses

Claims adjustment expenses (CAE) are those costs expected to be incurred in connection with the adjustment and recording of health claims. We have recorded an estimate of unpaid CAE associated with incurred but unpaid claims, which is included in medical claims and related expenses in the accompanying consolidated statements of operations. Management believes the amount of the liability for unpaid CAE as of September 30, 2020, is adequate to cover the cost for the adjustment and recording of unpaid claims; however, actual expenses may differ from those established estimates. Adjustments to the estimates for unpaid CAE are reflected in operating results in the period in which the change in estimate is identified.

(in thousands of dollars)

3. Pandemic

On March 11, 2020, the World Health Organization designated COVID-19 as a global pandemic resulting in an extraordinary impact to patient activity in 2020. Federal and state policies, including declarations of a state of emergency by the governors of Massachusetts and New Hampshire on March 10 and March 27, respectively, were enacted to help contain the spread of COVID-19. Beginning on March 18, 2020, our Massachusetts facilities were prohibited from performing nonessential elective procedures. On June 8, 2020, Massachusetts entered phase two of its reopening plan, which permitted our Massachusetts facilities to provide in-person care for certain routine services. Our New Hampshire facilities generally followed a similar timeline.

In response to COVID-19, the Coronavirus Aid Relief and Economic Security (CARES) Act was enacted which provided different types of economic support to a wide variety of companies and individuals. Mass General Brigham employed several CARES Act provisions, with the most significant impacts summarized below.

Medicare Accelerated Payments (MAP)

As of September 30, 2020, we received approximately \$1,018,093 in MAP funding which is recorded in the current portion of accrual for settlements with third-party payers. Medicare will recoup these payments beginning in April 2021 by withholding 25% of Medicare reimbursements through February 2022, 50% of Medicare reimbursements beginning in March 2022 and final recoupments completed by August 2022.

Deferred Payment of Employer Payroll Taxes

As of September 30, 2020, we have accumulated \$165,088 of deferred employer payroll taxes within accrued employee compensation and benefits. The CARES Act allows for deferred payments of only the employer share of payroll taxes through December 31, 2020 and requires payment of 50% of these deferred taxes by December 31, 2021 and 50% by December 31, 2022. We intend to continue to defer our payments until the end of the calendar year 2020.

Provider Relief Funds (PRF)

For the year ended September 30, 2020, we recognized approximately \$546,373 of permanent grants from the PRF within other operating revenue. PRF were used to prevent, prepare for and respond to known or suspected cases of COVID-19, to maintain health care capacity and for lost revenues attributable to COVID-19. Based on our interpretation of available information as of September 30, 2020, we have deferred \$51,759 of PRF we received. These estimates could change as additional guidance becomes available.

4. Operating Revenues

Net Patient Service Revenue

Mass General Brigham's providers maintain agreements with The Centers for Medicare and Medicaid Services under the Medicare program, the Commonwealth under the Medicaid program and various managed care payers that govern payment for services rendered to patients covered by these agreements. The agreements generally provide for per case or per diem rates or payments based on discounted charges for inpatient care and discounted charges or fee schedules for outpatient care. Certain contracts also provide for payments that are contingent upon meeting agreed upon quality and efficiency measures.

(in thousands of dollars)

We recognize net patient service revenue for services provided to patients who have third-party payer coverage based on contractual rates for the services rendered. For uninsured patients that do not qualify for charity care, we recognize revenue based on our standard rates (subject to discounts) for services provided. Based on our historical experience, a significant portion of uninsured patients are unable or fail to pay for the services provided. Consequently, we have provided implicit discounts to uninsured patients. These discounts represent the difference between amounts billed to patients and amounts expected to be collected based on historical experience. The following summarizes net patient service revenue, net of contractual adjustments and discounts by significant payer:

	Years Ended September 30,					
	2020		2019	2019		
Net patient service revenue (net of contractual adjustments and discounts)						
Medicare	\$ 2,348,346	24.5%	\$ 2,495,102	24.6%		
Medicare managed care	451,970	4.7%	446,198	4.4%		
Medicaid	644,897	6.7%	651,594	6.4%		
Medicaid managed care	150,968	1.6%	151,204	1.5%		
Massachusett's managed care organizations	3,579,093	37.2%	3,970,248	39.1%		
Other commercial	1,999,249	20.8%	1,906,389	18.8%		
All others	434,673	4.5%	524,415	5.2%		
Total all payers	\$ 9,609,196	100.0%	\$ 10,145,150	100.0%		

Net patient service revenue includes estimated retroactive revenue adjustments due to future audits, reviews and investigations. Retroactive adjustments are considered in the recognition of revenue on an estimated basis in the period the related services are rendered, and such amounts are adjusted in future periods as adjustments become known or as years are no longer subject to such audits, reviews and investigations. Contracts, laws and regulations governing the Medicare, Medicaid and charity care programs and managed care payer arrangements are complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates will change by a material amount in the near term. A portion of the accrual for settlements with third-party payers has been classified as long-term because such amounts, by their nature or by virtue of regulation or legislation, will not be paid within one year.

Third-party payers (accrual) receivable consists of the following:

	Balance Sheet Classification	Septen	nber 30,
		2020	2019
Current portion			
Receivable for settlements with third-party payers	Other current assets	\$ 70,633	\$ 116,791
Accrual for settlements with third-party payers	Accounts payable and accrued expenses	(1,080,524)	(75,287)
		(1,009,891)	41,504
Long-term portion			
Receivable for settlements with third-party payers	Other assets	15,340	10,776
Accrual for settlements with third-party payers	Accrued Other	(33,291)	(26,989)
		(17,951)	(16,213)
Third-party payers (accrual) receivable		\$ (1,027,842)	\$ 25,291

(in thousands of dollars)

We recognize changes in third-party payer settlements and other estimates in the year of the change in estimate. For the years ended September 30, 2020 and 2019, adjustments to prior year estimates resulted in an increase to income from operations of \$28,474 and \$40,448, respectively. Subsequent changes to estimated discounts are generally recorded as adjustments to net patient service revenue in the period of change.

We provide either full or partial charity care to patients who cannot afford to pay for their medical services based on income and family size. Charity care is generally available to qualifying patients for medically necessary services. We report certain bad debts related to emergency services as charity care. As there is no expectation of collection, there is no net patient service revenue recorded related to charity care.

Premium Revenue

Premiums are due monthly and are recorded as earned during the period in which members are eligible to receive services. Premiums received prior to the first day of the coverage period are recorded as unearned premiums in accounts payable and accrued expenses.

Academic and Research Revenue

Academic and research revenue is recognized as either an exchange or nonexchange transaction, depending on the contract type. The following table sets forth total academic and research revenue received by funding source:

	Υe			
	2020		2019	
National Institute of Health and other federal agencies	\$ 873,811	42.4%	\$ 890,493	43.3%
Federal subcontracts	188,050	9.1%	188,008	9.1%
Industry/Corporate	159,593	7.8%	162,670	7.9%
Foundations/non-profits and other sponsors	589,261	28.6%	583,800	28.4%
Total research revenue	1,810,715		1,824,971	
Academic revenue	249,670	12.1%	232,361	11.3%
Total academic and research revenue	\$ 2,060,385	100.0%	\$ 2,057,332	100.0%

(in thousands of dollars)

Other Revenue

Other revenue includes all other operating revenue sources, the most significant being the following:

	Years Ended September 30,				
		2020	2019		
Provider relief funds (CARES)	\$	546,373	\$	-	
Specialty and retail pharmacy operations		298,070		178,994	
Intellectual property and royalties		92,301		96,558	
Parking and office rentals		59,770		76,110	
Tuition		59,216		61,993	
Outsourced services		36,832		38,729	
Cafeteria sales		27,959		37,729	
Contract administrative fees		32,432		33,410	
International contracts		18,971		31,246	
Blood factor sales		26,071		27,530	
Accountable care organization administration fees		23,706		21,118	
Consulting services		15,096		15,004	
Investment income		13,716		13,759	
Other		308,342		325,319	
Total other revenue	\$	1,558,855	\$	957,499	

5. Liquidity and Availability

Cash and investments are managed centrally under policies developed by the Investment Committee and reviewed by the Finance Committee of the Company's Board of Directors. Wherever possible, funds are commingled and are assigned to one of three investment pools (the Money Market Pool, the Aggregate Bond Pool and the Long-Term Pool, collectively, the Pools) which have been structured to provide a range of investment objectives, risk profiles and rates of return appropriate for our assets. Funds are allocated among the Pools based on expected liquidity needs as determined by multi-year financial plans, restrictions and management judgment.

The tiered time horizon structure of the Pools is designed to meet anticipated and contingent liquidity needs. The following tables set forth the periods within which funds are available to meet liquidity needs and, based on redemption provisions with investment managers, the specific Pools from which such funds would be drawn as of:

	September 30, 2020							
Investment Pool	Same Day	1 Week	1 Month	3 Months 1 Year		> 1 Year	Total	
Money market Aggregate bond Long-term	\$ 2,278,647 550,234 1,559,655	\$ - 71,194 524,340	\$ 29,985 - 1,729,144	\$ - - 1,995,487	\$ - - 1,463,834	\$ - - 3,791,263	\$ 2,308,632 621,428 11,063,723	
Total	\$ 4,388,536	\$ 595,534	\$1,759,129	\$1,995,487	\$ 1,463,834	\$ 3,791,263	\$ 13,993,783	
Cumulative total	\$ 4,388,536	\$ 4,984,070	\$ 6,743,199	\$ 8,738,686	\$10,202,520	\$ 13,993,783		

(in thousands of dollars)

				Septemb	er 30, 2019			
Investment Pool	S	ame Day	1 Week	1 Month	3 Months	1 Year	> 1 Year	Total
Money market Aggregate bond Long-term	\$	251,956 459,594 31,011	\$ - 70,043 1,593,065	\$ - 60,856 2,236,094	\$ - - 1,716,957	\$ - - 837,611	\$ - - 3,455,405	\$ 251,956 590,493 9,870,143
Total	\$	742,561	\$1,663,108	\$ 2,296,950	\$1,716,957	\$ 837,611	\$ 3,455,405	\$10,712,592
Cumulative total	\$	742.561	\$ 2.405.669	\$ 4.702.619	\$ 6.419.576	\$ 7.257.187	\$ 10.712.592	

The market value of the Aggregate Bond Pool consisted of the following:

	September 30,			
		2020		2019
Short-term investments and U.S. Treasuries Separately managed mortgage and asset-backed	\$	317,812	\$	459,594
securities and corporate bonds Commingled fixed income vehicles		169,060 134,556		70,043 60,856
Total of Aggregate Bond Pool	\$	621,428	\$	590,493

As of September 30, 2020 and 2019, we had cash and equivalents not included in the Pools of \$79,817 and \$198,775, respectively. As of September 30, 2020 and 2019, we had net patient accounts receivable of \$983,273 and \$1,129,594, respectively, that would be available for general expenditures within one year of the balance sheet dates.

In addition, we maintain two lines of credit aggregating \$375,000 as well as a \$500,000 Taxable Commercial Paper program that provide access to same day funds.

6. Investments and Investments Limited as to Use

Investments are either invested in the Pools or separately managed. Substantially all affiliates participate in the Pools. Their respective ownership interests are tracked and updated monthly and are accounted for using the fair value method. Income (including realized gains and losses) from the Pools is allocated to each participant on a monthly basis based on its proportionate interest in the Pools.

Oversight of the management of the investable assets, including the Pools and pension assets, is provided by the Investment Committee of the Company's Board of Directors which seeks to achieve incremental returns by manager selection and asset allocation (increasing/decreasing allocations within allowable ranges based on current and projected valuations). The Committee is supported by a professional staff, an outside investment consultant and a pension actuarial consultant.

(in thousands of dollars)

We utilize a target allocation policy and balance projected returns, correlation and volatility of various asset classes within the overall risk tolerance. Asset allocations are managed based on relative valuations among and within asset classes and the perceived ability of managers to outperform passive benchmarks. Exposure by asset class is the sum of allocation to those mangers whose mandates most closely fit the listed asset classes. Asset allocation can and will deviate from target exposures and is regularly monitored for rebalancing.

The Pools invest in a variety of assets which include private partnerships whose assets include equity, fixed income and other investments. As of September 30, 2020, the Pools have unfunded commitments of approximately \$1,213,640 which will be drawn down by the various general partners over the next several years. The maximum annual drawdown is expected to be 3% to 5% of investments and investments limited as to use.

Investments and investments limited as to use are recorded in the balance sheet as follows:

	September 30,			
		2020		2019
Current assets				
Investments	\$	1,142,275	\$	2,791,502
Current portion of investments limited as to use	_	4,424,436		2,235,171
		5,566,711		5,026,673
Long-term assets				
Investments limited as to use, less current portion		5,168,054		4,498,716
Long-term investments		2,179,220	_	1,997,617
	\$	12,913,985	\$	11,523,006

Investments limited as to use consist of the following:

	September 30, 2020					September 30, 2019			
		Current Portion		Long-Term Portion		Current Portion	L	ong-Term Portion	
Internally designated funds									
Reserved for capital expenditures	\$	1,025,715	\$	-	\$	1,153,160	\$	-	
Unexpended academic and research gifts		-		3,989,810		-		3,659,920	
Deferred compensation		-		474,875		-		405,032	
Other		2,721,020		666,489		612,505		398,384	
		3,746,735	_	5,131,174		1,765,665		4,463,336	
Externally limited funds									
Unexpended funds on research		367,858		-		262,017		-	
Contributions held for others		1,742		-		2,051		-	
Professional liability trust fund		-		36,880		-		35,380	
Held by trustees under debt and other									
agreements		308,101		-		205,438		-	
		677,701		36,880		469,506		35,380	
	\$	4,424,436	\$	5,168,054	\$	2,235,171	\$	4,498,716	

(in thousands of dollars)

Investment income and gains (losses) from cash and equivalents, investments, investments limited as to use and beneficial interests in perpetual trusts comprise the following:

	Years Ended September 30,			
		2020		2019
Unrestricted				
Dividends, interest and other income	\$	27,512	\$	55,891
Endowment income distributions, net of reinvested gains		68,404		57,559
Net realized gains on investments		348,020		419,858
Change in unrealized appreciation of investments		399,666		(97,045)
Total investment activity included in excess of				
revenues over expenses		843,602		436,263
Donor restricted				
Dividends and interest income		1,105		5,630
Endowment income distributions		(75,868)		(69,519)
Net realized gains on investments		74,061		91,044
Change in unrealized appreciation of investments		86,078		(32,691)
Change in value of beneficial interests in perpetual trusts		1,794		916
Total donor restricted investment activity		87,170		(4,620)
Total investment income and gains	\$	930,772	\$	431,643

Investment income included in operating results and excess of revenues over expenses comprise the following:

	Years Ended September 30,			
		2020		2019
Investment income included in operations and reported in other revenue Investment income included in nonoperating gains and reported in	\$	13,716	\$	13,759
Income from investments Academic and research gifts, net of expenses		612,355 217,531	-	182,829 239,675
Total investment activity included in excess of revenues over expenses	\$	843,602	\$	436,263

7. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (also referred to as exit price). Therefore, a fair value measurement should be determined based on the assumptions that market participants would use in pricing the asset or liability. In determining fair value, the use of various valuation approaches, including market, income and cost approaches, is permitted.

(in thousands of dollars)

Fair Value Hierarchy

A fair value hierarchy has been established based on whether the inputs to valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the reporting entity's assumptions about the inputs market participants would use. The fair value hierarchy requires the reporting entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. In addition, for hierarchy classification purposes, the reporting entity should not look through the form of an investment to the nature of the underlying securities held by an investee.

The hierarchy is described below.

- Level 1 Valuations using quoted prices in active markets for identical assets or liabilities.

 Valuations of these products do not require a significant degree of judgment. Level 1 assets and liabilities primarily include debt and equity securities that are traded in an active exchange market.
- Valuations using observable inputs other than Level 1 prices such as quoted prices in active markets for similar assets or liabilities; quoted prices for identical or similar assets or liabilities in markets that are not active; broker or dealer quotations; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Level 2 assets and liabilities primarily include debt securities with quoted prices that are traded less frequently than exchange-traded instruments as well as debt securities and derivative contracts whose value is determined using a pricing model with inputs that are observable in the market or can be derived principally from or corroborated by observable market data.
- Level 3 Valuations using unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Level 3 includes assets and liabilities whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques reflecting the reporting entity's assumptions about the assumptions market participants would use as well as those requiring significant management judgment.

Valuation Techniques

Pooled investments, separately invested short-term investments and debt and equity securities are classified within Level 1 or Level 2 of the fair value hierarchy as they are valued using quoted market prices, broker or dealer quotations, or other observable pricing sources. Certain types of investments are classified within Level 3 of the fair value hierarchy because they have little or no market activity and therefore have little or no observable inputs with which to measure fair value.

The valuation of interest rate swaps is determined using widely accepted valuation techniques, including discounted cash flow analysis on the expected cash flows of each derivative. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves and implied volatilities.

(in thousands of dollars)

The following tables summarize financial assets and liabilities measured at fair value on a recurring basis as of:

				Septembe						
				air Value Meas	urem	nents Using				
	i M Ide	oted Prices in Active larkets for ntical Items (Level 1)		Significant Other Observable Inputs (Level 2)		Significant nobservable Inputs (Level 3)	Usi	vestments Valued ng NAV as a Practical Expedient		Total
Assets										
Pooled investments										
Short-term investments	\$	1,628,674	\$	679,958	\$	-	\$	-	\$	2,308,632
Separately managed investments		1,693,788		732,375		-		-		2,426,163
Mutual funds Commingled funds		134,555		- 1,164,116		_		_		134,555 1,164,116
Private partnerships and other		_		1,104,110		-		7,960,317		7,960,317
i iivato paraiorempe ana otiloi	-	3,457,017		2,576,449				7,960,317		13,993,783
Separately invested	-	0, 101,011		2,010,110				.,000,0		.0,000,00
Short-term investments		103,865		_		_		_		103,865
Equities		66,803		-		-		-		66,803
Mutual funds		532,755		130,690		-		-		663,445
Beneficial interests in										
perpetual assets		-		-		52,864		-		52,864
		703,423	_	130,690	_	52,864		7,000,047	_	886,977
	\$	4,160,440	\$	2,707,139	\$	52,864	\$	7,960,317	\$	14,880,760
Interest rate swaps Liabilities			\$	(662,384)					\$	(662,384)
	-		Fa	Septembe						
	Qu	oted Prices		air Value Meas			In	vestments		
	i M Ide	oted Prices in Active larkets for ntical Items (Level 1)			urem		Usi	vestments Valued ng NAV as a Practical Expedient		Total
Assets	i M Ide	in Active larkets for ntical Items		air Value Meas Significant Other Observable Inputs	urem	Significant nobservable Inputs	Usi	Valued ng NAV as a Practical		Total
Pooled investments	i M Ide	in Active larkets for ntical Items (Level 1)	(air Value Meas Significant Other Observable Inputs (Level 2)	urem S Ur	Significant nobservable Inputs	Usi:	Valued ng NAV as a Practical		
Pooled investments Short-term investments	i M Ide	in Active larkets for ntical Items (Level 1)		air Value Meas Significant Other Observable Inputs (Level 2)	urem	Significant nobservable Inputs	Usi	Valued ng NAV as a Practical	\$	251,955
Pooled investments Short-term investments Separately managed investments	i M Ide	in Active larkets for ntical Items (Level 1) 77,760 1,697,302	(air Value Meas Significant Other Observable Inputs (Level 2)	urem S Ur	Significant nobservable Inputs	Usi:	Valued ng NAV as a Practical	\$	251,955 1,963,140
Pooled investments Short-term investments Separately managed investments Mutual funds	i M Ide	in Active larkets for ntical Items (Level 1)	(air Value Meas Significant Other Observable Inputs (Level 2) 174,195 265,838	urem S Ur	Significant nobservable Inputs	Usi:	Valued ng NAV as a Practical	\$	251,955 1,963,140 70,043
Pooled investments Short-term investments Separately managed investments Mutual funds Commingled funds	i M Ide	in Active larkets for ntical Items (Level 1) 77,760 1,697,302	(air Value Meas Significant Other Observable Inputs (Level 2)	urem S Ur	Significant nobservable Inputs	Usi:	Valued ng NAV as a Practical Expedient	\$	251,955 1,963,140 70,043 1,451,470
Pooled investments Short-term investments Separately managed investments Mutual funds	i M Ide	in Active larkets for ntical Items (Level 1) 77,760 1,697,302	(air Value Meas Significant Other Observable Inputs (Level 2) 174,195 265,838	urem S Ur	Significant nobservable Inputs	Usi:	Valued ng NAV as a Practical	\$	251,955 1,963,140 70,043
Pooled investments Short-term investments Separately managed investments Mutual funds Commingled funds Private partnerships and other	i M Ide	in Active larkets for ntical Items (Level 1) 77,760 1,697,302 70,043	(air Value Meas Significant Other Observable Inputs (Level 2) 174,195 265,838 - 1,451,470	urem S Ur	Significant nobservable Inputs	Usi:	Valued ng NAV as a Practical Expedient 6,975,984	\$	251,955 1,963,140 70,043 1,451,470 6,975,984
Pooled investments Short-term investments Separately managed investments Mutual funds Commingled funds	i M Ide	in Active larkets for ntical Items (Level 1) 77,760 1,697,302 70,043	(air Value Meas Significant Other Observable Inputs (Level 2) 174,195 265,838 - 1,451,470	urem S Ur	Significant nobservable Inputs	Usi:	Valued ng NAV as a Practical Expedient 6,975,984	\$	251,955 1,963,140 70,043 1,451,470 6,975,984
Pooled investments Short-term investments Separately managed investments Mutual funds Commingled funds Private partnerships and other Separately invested	i M Ide	77,760 1,697,302 70,043 1,845,105	(air Value Meas Significant Other Observable Inputs (Level 2) 174,195 265,838 - 1,451,470	urem S Ur	Significant nobservable Inputs	Usi:	Valued ng NAV as a Practical Expedient 6,975,984	\$	251,955 1,963,140 70,043 1,451,470 6,975,984 10,712,592
Pooled investments Short-term investments Separately managed investments Mutual funds Commingled funds Private partnerships and other Separately invested Short-term investments Equities Mutual funds	i M Ide	in Active larkets for ntical Items (Level 1) 77,760 1,697,302 70,043 - 1,845,105	(air Value Meas Significant Other Observable Inputs (Level 2) 174,195 265,838 - 1,451,470	urem S Ur	Significant nobservable Inputs	Usi:	Valued ng NAV as a Practical Expedient 6,975,984	\$	251,955 1,963,140 70,043 1,451,470 6,975,984 10,712,592
Pooled investments Short-term investments Separately managed investments Mutual funds Commingled funds Private partnerships and other Separately invested Short-term investments Equities Mutual funds Beneficial interests in	i M Ide	77,760 1,697,302 70,043 1,845,105	(air Value Meas Significant Other Observable Inputs (Level 2) 174,195 265,838 - 1,451,470 - 1,891,503	urem S Ur	nents Using Significant nobservable Inputs (Level 3)	Usi:	Valued ng NAV as a Practical Expedient 6,975,984	\$	251,955 1,963,140 70,043 1,451,470 6,975,984 10,712,592 124,688 36,266 568,297
Pooled investments Short-term investments Separately managed investments Mutual funds Commingled funds Private partnerships and other Separately invested Short-term investments Equities Mutual funds	i M Ide	77,760 1,697,302 70,043 1,845,105 124,688 36,266 534,423	(nir Value Meas Significant Other Observable Inputs (Level 2) 174,195 265,838 - 1,451,470 - 1,891,503	urem S Ur	ents Using Significant nobservable Inputs (Level 3)	Usi:	Valued ng NAV as a Practical Expedient 6,975,984	\$	251,955 1,963,140 70,043 1,451,470 6,975,984 10,712,592 124,688 36,266 568,297 50,457
Pooled investments Short-term investments Separately managed investments Mutual funds Commingled funds Private partnerships and other Separately invested Short-term investments Equities Mutual funds Beneficial interests in	\$	77,760 1,697,302 70,043 1,845,105 124,688 36,266 534,423	\$	174,195 265,838 1,451,470 1,891,503	Urr	ents Using Significant hobservable Inputs (Level 3)	\$	Valued ng NAV as a Practical Expedient	\$	251,955 1,963,140 70,043 1,451,470 6,975,984 10,712,592 124,688 36,266 568,297 50,457 779,708
Pooled investments Short-term investments Separately managed investments Mutual funds Commingled funds Private partnerships and other Separately invested Short-term investments Equities Mutual funds Beneficial interests in	i M Ide	77,760 1,697,302 70,043 1,845,105 124,688 36,266 534,423	(nir Value Meas Significant Other Observable Inputs (Level 2) 174,195 265,838 - 1,451,470 - 1,891,503	Urr	ents Using Significant nobservable Inputs (Level 3)	\$	Valued ng NAV as a Practical Expedient 6,975,984	_	251,955 1,963,140 70,043 1,451,470 6,975,984 10,712,592 124,688 36,266 568,297 50,457

(in thousands of dollars)

8. Pledges and Contributions Receivable

Pledges receivable represent unconditional promises to give and are net of allowances for uncollectible amounts. Pledges are recorded at the present value of their estimated future cash flows. Pledges collectible within one year are classified as other current assets, net of allowances, and total \$101,517 and \$107,586 as of September 30, 2020 and 2019, respectively. Estimated cash flows due after one year are discounted using published treasury bond and note yields that are commensurate with estimated collection risks. The blended discount rate was 0.2% and 1.6% for 2020 and 2019, respectively. Pledges are expected to be collected as follows:

	September 30,				
	2020			2019	
Amounts due					
Within one year	\$	128,375	\$	127,396	
In one to five years		151,247		178,196	
In more than five years		51,820		60,339	
Total pledges receivable		331,442		365,931	
Less: Unamortized discount		1,401		11,714	
		330,041		354,217	
Less: Allowance for uncollectibles		31,473		24,138	
Net pledges receivable		298,568		330,079	
Contributions receivable from trusts		59,294		62,431	
	\$	357,862	\$	392,510	

9. Property and Equipment

Property and equipment consists of the following:

	September 30,				
		2020		2019	
Land and land improvements	\$	353,815	\$	341,650	
Buildings and building improvements		8,768,567		8,287,126	
Equipment		2,858,382		2,957,515	
Construction in progress		343,874		609,146	
Finance right-of-use lease assets		1,992			
		12,326,630		12,195,437	
Less: Accumulated depreciation		5,915,513		5,638,231	
Property and equipment, net	\$	6,411,117	\$	6,557,206	

Depreciation expense for the years ended September 30, 2020 and 2019 was \$710,684 and \$681,807, respectively. Interest costs, net of interest earned, aggregating \$1,581 and \$7,406 were capitalized in 2020 and 2019, respectively.

(in thousands of dollars)

For the years ended September 30, 2020 and 2019, fully depreciated assets with an original cost of \$433,402 and \$388,575, respectively, were written off.

10. Levels of Capital and Surplus

Risk-based capital (RBC) is a methodology adopted by the National Association of Insurance Commissioners for determining the minimum level of capital and surplus deemed necessary for an insurer based upon the types of assets held and business written. The Company has guaranteed to the Massachusetts Division of Insurance (DOI) (the RBC Guaranty) to maintain AllWays Health's capital and surplus at a specified minimum level, measured quarterly in accordance with an RBC methodology permitted by DOI. The RBC Guaranty may be enforced by the DOI. In 2020 and 2019, AllWays Health returned capital of \$50,000 and \$100,000, respectively, to the Company. AllWays Health's current contract with EOHHS requires AllWays Health to maintain a minimum net worth and/or financial insolvency insurance in an amount equal to the Minimum Net Worth calculation as defined in Massachusetts General Law 176G, Section 25. At December 31, 2019 and 2018 (AllWays Health's statutory year end), the minimum net worth requirement, as determined in accordance with EOHHS guidelines, was \$40,527 and \$64,942, respectively. AllWays Health's statutory net worth was \$160,753 and \$271,421 at December 31, 2019 and 2018, respectively, and thus exceeded the EOHHS requirements by \$120,226 and \$206,479, respectively.

11. Accrued Medical Claims and Related Expenses

Accrued medical claims and related expenses include estimates of expected trends in claims severity, frequency, and other factors, which could vary as the claims are ultimately settled and are based principally upon historical experience. For the years ended September 30, 2020 and 2019, changes in estimates resulted in an increase (decrease) of accrued medical claims and related expense of \$3,874 and (\$3,613), respectively. Increases (decreases) of this nature occur as the result of claim settlements and recoveries during the current year and as additional information is received regarding individual claims, causing changes from the original estimates of the cost of these claims. Ongoing analysis of the recent loss development trends is also taken into account in evaluating the overall adequacy of the reserves.

(in thousands of dollars)

Changes in accrued medical claims and related expenses are as follows:

	2020	2019
Balance at beginning of year	\$ 57,550	\$ 64,398
Less:		
Accrual for claims adjustment expenses	(3,040)	(994)
Accrued medical payables - other	(1,154)	(9,874)
Plus: Settlements payable, net	 35,610	 30,506
Net balance at beginning of year	88,966	84,036
Incurred related to		
Current year	606,436	559,723
Prior years	3,874	 (3,613)
Total incurred	610,310	556,110
Paid related to		
Current year	497,575	487,195
Prior years	64,656	 63,985
Total paid	 562,231	 551,180
Net balance at end of year	137,045	88,966
Plus:		
Accrual for claims adjustment expenses	1,475	3,040
Accrued medical payables - other	13,609	1,154
Less: Settlements payable, net	(67,491)	 (35,610)
Balance at end of year	\$ 84,638	\$ 57,550

Medical claims and related expenses in the accompanying consolidated statements of operations include other nonclaims related costs. These nonclaims related expenses were for directly delivered services and medical cost risk sharing and incentives.

(in thousands of dollars)

12. Long-Term Obligations

Mass General Brigham's long-term obligations consist of the following:

	Final	Septemb	er 30,
	Maturity	2020	2019
Massachusetts Health and Educational Facilities Authority Revenue Bonds			
Series 2005 F*, variable interest rate of 0.29% and 1.71%	2040	229.650	231,300
Series 2007 G*, variable interest rate of 0.20% and 1.90%	2042	75,000	75,000
Series 2008 H*, variable interest rate of 0.19% and 1.38%	2042	165,195	167,700
Series 2009 I*, average fixed interest rate of 4.76%	20.2	-	18,175
Series 2010 J*, average fixed interest rate of 5.00%		-	49,035
Series 1997 P*, variable interest rate of 0.09% and 1.54%	2027	150,000	150,000
Massachusetts Development Finance Agency Revenue Bonds Series 2011 K*, average fixed interest rate of 4.76%,			
variable interest rate of 0.12% and 1.56%	2046	110,720	122,170
	2023	15,770	87,705
Series 2012 L*, average fixed interest rate of 4.54% Series 2014 M*, average fixed interest rate of 4.38%	2023	26,835	295,000
	2044	129,650	,
Series 2014 N*, variable interest rate of 0.68% and 2.06%	2045	,	131,300
Series 2015 O*, average fixed interest rate of 4.44%		193,545	307,840
Series 2016 Q*, average fixed interest rate of 4.80%	2047	417,845	420,280
Series 2016 R*, variable interest rate of 0.67% and 1.97% Series 2017 S*, average fixed interest rate of 4.62%,	2052	100,000	100,000
variable interest rate of 0.59% and 2.05%	2047	940,130	942,850
Series 2019 T*, variable interest rate of 0.66% and 2.12%	2049	158,250	158,250
Series 2020 A*, average fixed interest rate of 4.85%	2050	304,885	-
New Hampshire Health and Education Facilities Authority Revenue Bonds			
Series 2017, average fixed interest rate of 5.00%	2041	95,160	97,405
MGB Taxable Debt			
Series 2007 Bonds, fixed interest rate of 6.26%	2037	100,000	100,000
Series 2011 Bonds, fixed interest rate of 3.44%		-	250,000
2012 Senior Notes, fixed interest rate of 4.11%	2052	400,000	400,000
2014 Senior Notes, fixed interest rate of 4.73%	2044	150,000	150,000
Series 2015 Bonds, fixed interest rate of 4.12%	2055	300,000	300,000
2016 Senior Notes, fixed interest rate of 3.89%	2046	225,000	225,000
Series 2017 Bonds, fixed interest rate of 3.77%	2048	303,644	303,644
2018 Senior Notes, fixed interest rate of 4.60%	2049	400,000	400,000
Series 2020 Bonds, average fixed interest rate of 3.29%	2060	1,017,135	-
2020 Term Loan, fixed interest rate of 2.42%	2022	150,000	-
Other obligations		7,388	6,912
Finance lease liability			1,870
Total long-term obligations, par value		6,165,802	5,491,436
Unamortized discounts and premiums, net		290,870	247,170
Deferred financing costs		(26,211)	(23,245)
Total long-term obligations, net		6,430,461	5,715,361
Less			
Current portion Auction rate securities held		436,166 29,985	455,165 -
		\$ 5,964,310	\$ 5,260,196

^{*} Denotes series is issued in multiple subseries.

Variable interest rates are presented at September 30, 2020 and 2019, respectively.

(in thousands of dollars)

As of September 30, 2020, we held \$29,985 of the Series 2005 F and Series 2007 G Revenue Bonds issued as auction rate securities. Although not legally extinguished, the bonds held by us have been reflected as extinguished under generally accepted accounting principles.

Aggregate maturities and payments of long-term obligations during the next five years and thereafter (including the impact of unamortized discounts and premiums, net and deferred financing costs) and other amounts classified as current liabilities, are as follows:

	Scheduled Maturities	Bonds pported by Self Liquidity	Bonds pported by Bank Facilities	Total
2021	\$ 83,851	\$ 249,190	\$ 103,125	\$ 436,166
2022	251,885	-	-	251,885
2023	84,719	-	-	84,719
2024	90,782	-	-	90,782
2025	104,296	-	-	104,296
Thereafter	5,432,628	 	 	 5,432,628
	\$ 6,048,161	\$ 249,190	\$ 103,125	\$ 6,400,476

The scheduled maturities represent annual payments as required under debt repayment schedules. The current portion of long-term obligations includes the payments scheduled to be made in 2021, bonds supported by self-liquidity that can be tendered prior to September 30, 2021, and bonds supported by bank facilities with financial institutions (standby bond purchase agreements or letters of credit) that expire prior to September 30, 2021. The bonds supported by self-liquidity provide the bondholder with an option to tender the bonds to the Company. Accordingly, these bonds are classified as a current liability. The bonds supported by bank facilities provide the bondholder with an option to tender the bonds to the liquidity provider. Generally accepted accounting principles require bonds backed by bank facilities expiring within one year of the balance sheet date as well as potential principal amortization under bank facilities' term out provisions due within one year of the balance sheet date to be classified as a current liability.

If bonds supported by bank facilities cannot be remarketed, the repayment terms of those bank facilities would result in repayments of \$56,250 in 2021, \$137,661 in 2022, \$81,411 in 2023, \$37,661 in 2024, \$11,111 in 2025 and \$5,556 thereafter. If the bonds supported by self-liquidity cannot be remarketed, the bonds would be tendered to the Company on their respective earliest tender dates, which differ from scheduled maturity dates, and would result in payments of \$249,190 in 2021, \$50,230 in 2022, \$119,870 in 2023, \$69,250 in 2024, \$61,935 in 2025 and \$206,020 thereafter.

(in thousands of dollars)

Scheduled maturities of long-term debt for each of the next five years (excluding the impact of unamortized discounts and premiums, net and deferred financing costs), assuming bonds backed by bank facilities are remarketed and the standby purchase agreements are renewed and bonds supported by self-liquidity are remarketed, are as follows:

2021	\$ 83,851
2022	256,490
2023	104,624
2024	110,887
2025	124,751
Thereafter	 5,485,199
	\$ 6,165,802

Interest expense paid during the years ended September 30, 2020 and 2019 was \$251,804 and \$230,348, respectively.

In January 2020, we issued \$304,885 of Mass General Brigham Series 2020 A Revenue Bonds, plus bond premium of \$79,262. The bond proceeds, net of issuance costs of \$1,511, were used to refund portions of Series J Bonds (\$38,765), Series M Bonds (\$50,000) and Series O Bonds (\$50,000), and to finance certain capital projects (\$243,871).

In January 2020, we issued \$1,017,135 of Mass General Brigham Series 2020 Taxable Bonds. The bond proceeds, net of issuance costs of \$6,649, were used to refund portions of Series L Bonds (\$57,313), Series M Bonds (\$241,104) and Series O Bonds (\$68,559), to refund Series 2011 Taxable Bonds (\$250,000), and to finance certain capital projects (\$393,510).

In January 2019, we issued \$158,250 of Partners HealthCare System Series 2019 T Revenue Bonds. The bond proceeds were used to refund Massachusetts Eye and Ear Infirmary Series D Bonds (\$55,402), refund Series M-2 Bonds (\$50,000) and repay the borrowing under the Credit Agreement (\$52,848).

In December 2018 and January 2019, we issued \$350,000 and \$50,000, respectively, of Partners HealthCare System 2018 Taxable Senior Notes. Proceeds from the Notes were used to finance certain capital projects.

Mass General Brigham bonds are general obligations of the Company supported by guarantees from Brigham Health, Inc., The Brigham and Women's Hospital, Inc., The Massachusetts General Hospital and The General Hospital Corporation which may be suspended under certain conditions.

Our debt agreements contain certain covenants, including a minimum debt service coverage ratio and limitations on additional indebtedness and asset transfers.

Lines of Credit

The Company maintains two lines of credit aggregating \$375,000 that provide access to same day funds. Advances under the lines of credit bear a variable rate of interest based on the London Interbank Offered Rate (LIBOR). As of September 30, 2020, there were no amounts outstanding under the lines of credit. The \$250,000 line of credit expires in June 2023. The \$125,000 line of credit expires in June 2021.

(in thousands of dollars)

Term Loan

In May 2020, the Company executed a \$150,000 Term Loan with a fixed interest rate of 2.42% and final maturity in May 2022.

Taxable Commercial Paper

In September 2020, the Company established a \$500,000 Taxable Commercial Paper (CP) program. As of September 30, 2020, there were no amounts outstanding under the CP program.

13. Derivatives

Interest Rate Swaps

We utilize swap contracts to lock-in long-term synthetic fixed rates and manage fluctuations in cash flows resulting from interest rate risk on certain of our variable rate bonds. These bonds expose us to variability in interest payments due to changes in interest rates. Management believes that it is prudent to limit this variability. To meet this objective and to take advantage of low interest rates, we have entered into various swap contracts involving the exchange of fixed rate payments by us for variable rate payments from several counterparties that are based on a percentage of LIBOR.

By using swap contracts to manage the risk of changes in interest rates, we expose ourselves to credit risk and market risk. Credit risk is the failure of the counterparty to perform under the terms of the swap contracts. When the fair value of a swap contract is positive, the counterparty has a liability to us, which creates credit risk. We minimize our credit risk by entering into swap contracts with several counterparties and requiring the counterparty to post collateral for our benefit based on the credit rating of the counterparty and the fair value of the swap contract. Conversely, when the fair value of a swap contract is negative, we have a liability to the counterparty and, therefore, we do not have credit risk. Under certain circumstances, we may be required to post collateral for the benefit of the counterparty. Market risk is the adverse effect on the value of a financial instrument that results from a change in interest rates. The market risk associated with interest rate changes is managed by establishing and monitoring parameters that limit the types and degree of market risk that we may undertake.

(in thousands of dollars)

The following is a summary of the outstanding positions under our swap contracts as of September 30, 2020:

Effective Date	-	Notional Amount	Maturity	Rate Paid	Rate Received
5/1/03	\$	150,000	7/1/35	4.40%	67% 1-month LIBOR
10/15/03		9,945	1/1/31	3.85%	70% 1-month LIBOR
7/1/05		150,000	7/1/40	3.63%	67% 1-month LIBOR
7/1/05		19,100	7/1/25	5.11%	67% 6-month LIBOR
9/1/05		2,445	1/1/23	3.26%	70% 1-month LIBOR
7/1/07		150,000	7/1/42	3.46%	67% 1-month LIBOR
7/1/09		100,000	7/1/44	3.71%	67% 1-month LIBOR
7/1/11		100,000	7/1/46	3.74%	67% 1-month LIBOR
7/1/13		100,000	7/1/48	3.80%	67% 1-month LIBOR
7/1/15		50,000	7/1/50	3.80%	67% 1-month LIBOR
4/1/16		100,000	7/1/52	3.76%	67% 1-month LIBOR
7/1/17		50,000	7/1/52	3.74%	67% 1-month LIBOR
7/1/19		50,000	7/1/49	1.85%	67% 1-month LIBOR
7/1/21		50,000	7/1/51	1.84%	67% 1-month LIBOR
7/1/23		50,000	7/1/53	1.82%	67% 1-month LIBOR
7/1/24		100,000	7/1/54	1.81%	67% 1-month LIBOR
7/1/25		50,000	7/1/55	1.77%	67% 1-month LIBOR
7/1/26		100,000	7/1/56	1.78%	67% 1-month LIBOR
7/1/27		100,000	7/1/57	1.78%	67% 1-month LIBOR
	\$	1,481,490			

Our swap contracts contain provisions that require collateral to be posted if the fair value of the swap exceeds certain thresholds. The collateral thresholds reflect the current credit ratings issued by major credit rating agencies on our and the counterparty's debt. Declines in our or the counterparty's credit ratings would result in lower collateral thresholds and, consequently, the potential for additional collateral postings by us or the counterparty. As of September 30, 2020 and 2019, we have posted collateral of \$307,469 and \$204,916, respectively. We have established procedures to ensure that liquidity and securities are available to meet collateral posting requirements.

Upon the occurrence of certain events of default or termination events identified in the swap contracts, either the Company or the counterparty could terminate the contracts in accordance with their respective terms. Termination results in the payment of a termination amount by one party that attempts to compensate the other party for its economic losses. If interest rates at the time of termination are lower than those specified in the swap contract, we would make a payment to the counterparty. Conversely, if interest rates at such time are higher, the counterparty would make a payment to us.

(in thousands of dollars)

14. Leases

We lease property and equipment under both finance and operating lease agreements. Upon adoption of the Leases Standard, we recognize leases with a term greater than twelve months on the balance sheet. We elected the package of practical expedients permitted by the Leases Standard and did not reassess expired agreements for lease identification or classification as a finance or operating lease, or for the reassessment of initial direct costs.

Some lease agreements require us to pay variable costs including property taxes, insurance, maintenance and repairs. Variable costs are excluded from the right-of-use asset and liability. Lease and nonlease components of agreements are not separated. Some leases contain rental escalation clauses and renewal options that are included in lease payment calculations when appropriate. The estimated incremental borrowing rate is used to discount the lease payment amounts.

The components of lease expense consist of the following for the year ending September 30, 2020:

	Year Ended September 30, 2020					
	Supplies and Other Expenses		Academic and Research Gifts, Net of Expenses			Total
Operating lease expense Short-term lease expense Variable lease expense Finance lease expense	\$	204,709 14,415 69,930	\$	7,687 117 1,009	\$	212,396 14,532 70,939
Amortization of leased assets Interest on lease liabilities		593 65_		- -		593 65
Total lease expense	\$	289,712	\$	8,813	\$	298,525

Lease related assets and liabilities are as follows:

	Balance Sheet Classification	September 30,		
			2020	
Operating lease assets Finance lease assets	Right-of-use operating lease assets Property and equipment, net	\$	1,139,626 1,400	
Total lease assets		\$	1,141,026	
Current operating lease liability Current finance lease liability Noncurrent operating lease liability Noncurrent finance lease liability	Current portion of operating lease obligations Accounts payable and accrued expenses Operating lease obligation, less current portion Accrued other	\$	191,259 597 797,096 633	
Total lease liabilities		\$	989,585	

(in thousands of dollars)

Supplemental cash flow and other information related to leases as of and for the year ended September 30, 2020 are as follows:

Cash paid for amounts included in the measurement of lease liabilities	
Operating cash flow for operating leases	\$ 257,165
Operating cash flow for finance leases	51
Financing cash flows for finance leases	404
Weighted-average remaining term (years):	
Operating leases	12.8
Finance leases	1.5
Weighted-average discount rate:	
Operating leases	4.17%
Finance leases	4.17%

Commitments related to noncancelable operating and finance leases for each of the next five years and thereafter are as follows:

	Operating Leases	Finance Leases
2021	\$ 193,154	\$ 597
2022	168,569	597
2023	151,591	281
2024	122,770	51
2025	106,530	-
Thereafter	456,102	
Total minimum future payments	1,198,716	1,526
Less: Amount representing interest	 210,361	 296
Present value of minimum future payments	988,355	1,230
Less: Current portion	 191,259	 597
Long-term lease obligations	\$ 797,096	\$ 633

(in thousands of dollars)

As reflected in the fiscal 2019 financial statements, minimum future lease commitments under noncancelable leases for the next five years and thereafter are as follows:

	Capital Leases	Operating Leases
2020	\$ 1,170	\$ 185,630
2021	754	171,807
2022	-	151,033
2023	-	137,278
2024	-	112,198
Thereafter	 	 539,233
Total lease payments	1,924	\$ 1,297,179
Less: Amount representing interest	54	
Capital lease obligations at September 30, 2019	\$ 1,870	

Rental expense under operating leases approximated \$192,208 in 2019.

We are also a lessor and sublessor of real estate under operating leases. Lease income for the year ended September 30, 2020 was \$12,831 and is included in other revenue in the consolidated statements of operations. Some of these leases include expenses such as utilities and maintenance costs in rent charges, however this variable lease income is not considered material. The practical expedient permitted by the Leases Standard has been elected that allows lessors to not separate lease and nonlease components by class of underlying asset for all asset classes. The underlying real estate assets are included in property and equipment, net in the consolidated balance sheets.

The future undiscounted cash flows to be received from these leases for each of the next five years and thereafter is as follows:

2021	\$ 6,317
2022	5,453
2023	3,968
2024	3,608
2025	3,210
Thereafter	 166,539
	\$ 189,095

15. Pension and Postretirement Healthcare Benefit Plans

Substantially all Mass General Brigham employees are covered under noncontributory defined benefit pension plans and various defined contribution pension plans. In addition, certain affiliates provide subsidized healthcare benefits for retired employees on a self-insured basis, with the benefit obligation being partially funded. These retiree healthcare benefits are administered through an insurance company and are accounted for on the accrual basis, which includes an estimate of future payments for claims incurred.

(in thousands of dollars)

In 2019, a voluntary retirement program was offered to a sub-set of Newton-Wellesley Hospital employees who met specific criteria. For those employees who accepted the voluntary retirement package, the benefits of this program were conveyed as increased contributions to the defined benefit pension plan and the postretirement health plan. The total cost of this program was approximately \$31,803, of which approximately \$29,266 was for the defined benefit plan and \$2,537 was for the postretirement plan. In September 2019, approximately \$28,400 was funded into the defined benefit plan related to this program with the remaining \$866 being funded in October 2019.

Total expense for Mass General Brigham plans consists of the following:

	Y	ears Ended	Septo	ember 30,
		2020		2019
Defined benefit plans	\$	350,894	\$	256,768
Defined contribution plans		181,972		179,195
Postretirement healthcare benefit plans		1,069		(110)
	\$	533,935	\$	435,853

Information regarding benefit obligations, plan assets, funded status, expected cash flows and net periodic benefit cost is as follows:

Benefit Obligations

20.10.11	Defined Pensio		Postretirement Healthcare Benefit Plans				
	2020		2019		2020		2019
Change in benefit obligations							
Benefit obligations at beginning of year	\$ 8,683,960	\$	7,028,994	\$	201,237	\$	171,425
Service cost	406,668		324,429		3,612		3,105
Interest cost	303,374		309,280		6,170		6,618
Plan amendments (gain) loss	-		827		-		-
Actuarial (gain) loss	64,352		1,231,610		8,978		17,396
Special termination benefits	-		29,266		-		2,537
Benefits paid	(266,939)		(227,558)		(8,615)		(8,464)
Expenses paid	(13,670)		(13,017)		-		-
Employee contributions	117		129		11,398		8,620
Benefit obligations at end of year	\$ 9,177,862	\$	8,683,960	\$	222,780	\$	201,237

(in thousands of dollars)

The accumulated benefit obligation for all defined benefit pension plans at the end of 2020 and 2019 was \$8,902,070 and \$8,267,644, respectively.

		Benefit n Plans		nt Healthcare t Plans
	2020	2019	2020	2019
Weighted-average assumptions used to determine end of year benefit obligation Discount rate	3.16%	3.40%	2.50% - 3.00%	3.05% - 3.30%
Rate of compensation increase	3.00% - 4.45%	3.00% - 4.45%	N/A	N/A
Postretirement healthcare cost trend rate for next year	N/A	N/A	5.00%	5.50%
Rate to which the cost trend rate is to decline	N/A	N/A	5.00%	5.00%
Year that rate reaches the ultimate trend rate	N/A	N/A	2020	2020

Assumed healthcare cost trend rates have a significant effect on the amounts reported for the postretirement healthcare plans. A one-percentage-point change in assumed healthcare cost trend rates would have the following effect:

		One-Percentage-Point					
	In	crease	D	ecrease			
Effect on postretirement benefit obligation	\$	3,442	\$	(3,939)			

Plan Assets

	 Defined Benefit Pension Plans				Postretirement Healthcare Benefit P			
	2020		2019		2020		2019	
Change in plan assets								
Fair value of plan assets at beginning of year	\$ 6,799,224	\$	6,527,812	\$	121,772	\$	117,742	
Actual return on plan assets	813,785		253,581		4,147		(534)	
Employer contributions	426,977		258,277		3,068		4,408	
Employee contributions	117		129		11,398		8,620	
Benefits paid	(266,939)		(227,558)		(8,615)		(8,464)	
Expenses paid	(13,670)		(13,017)				_	
Fair value of plan assets at end of year	\$ 7,759,494	\$	6,799,224	\$	131,770	\$	121,772	

The assets of the defined benefit pension plans are aggregated in a single master trust (Master Trust) and managed as one asset pool. The investment objective for the Master Trust is to achieve the highest reasonable total return after considering (i) plan liabilities, (ii) funding status and projected cash flows, (iii) projected market returns, valuations and correlations for various asset classes and (iv) ability and willingness to incur market risk.

Within the Master Trust, assets are allocated to managers with investment mandates that may range from a single sub-asset class to very broad mandates; with restrictions that range from long-only to unconstrained; and with management structures ranging from separately managed funds to mutual/commingled funds to private partnerships. Less market sensitive managers employ long/short equity and diversified strategies. Investment risks (concentration, correlation, valuation, liquidity, leverage, mandate compliance, etc.) are monitored at the manager level as well as the pool level.

(in thousands of dollars)

The following table presents the capital allocations and reported exposures by manager mandate within the Master Trust. Some managers, particularly less market sensitive managers, invest capital among multiple asset classes. The Long-Term Policy Benchmark is 70% Morgan Stanley Capital International All Country World Index and 30% Barclays Global Aggregate Bond.

	September 30, 2020			Septembe	r 30, 2019
		Reported			Reported
	Dollars	Exposures		Dollars	Exposures
Global equity	\$ 1,397,021	18.0 %	\$	865,191	12.7 %
Traditional U.S. equity	876,049	11.3 %		758,228	11.2 %
Traditional foreign developed equity	582,253	7.5 %		781,196	11.5 %
Traditional emerging markets equity	775,927	10.0 %		713,761	10.5 %
Private equity	1,139,772	14.7 %		763,774	11.2 %
Real assets	306,262	4.0 %		271,875	4.0 %
Less Market Sensitive managers	2,305,636	29.7 %		2,287,076	33.6 %
Fixed income managers	376,574	4.8 %		358,124	5.3 %
	\$ 7,759,494	100.0 %	\$	6,799,225	100.0 %

The postretirement healthcare benefit plans assets are invested in commingled funds with the objective of achieving returns to satisfy plan obligations and with a level of volatility commensurate with our overall financial profile.

The following tables summarize plan assets measured at fair value on a recurring basis (using the fair value hierarchy defined in Note 7) as of:

		_						
		oted Prices n Active arkets for ntical Items Level 1)		Significant Other Observable Inputs (Level 2)	Us	nvestments Valued ing NAV as a Practical Expedient	_	Total
Defined benefit pension plans								
Short-term investments	\$	63,627	\$	-	\$	_	\$	63,627
Separately managed investments		651,353	·	236,350	·	-		887,703
Commingled funds		-		1,434,895		-		1,434,895
Private partnerships		-		-		5,373,269		5,373,269
		714,980		1,671,245		5,373,269		7,759,494
Postretirement healthcare benefit plans								
Commingled funds		25,388		97,318		9,064		131,770
Total plan assets	\$	740,368	\$	1,768,563	\$	5,382,333	\$	7,891,264

(in thousands of dollars)

			_				
		Fair V					
		oted Prices n Active arkets for ntical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Us	nvestments Valued ing NAV as a Practical Expedient	_	Total
Defined benefit pension plans							
Short-term investments	\$	103,891	\$ -	\$	-	\$	103,891
Separately managed investments		666,531	191,541		310		858,382
Commingled funds		-	1,506,425		-		1,506,425
Private partnerships		88,551	 -		4,241,975		4,330,526
		858,973	1,697,966		4,242,285		6,799,224
Postretirement healthcare benefit plans							
Commingled funds		28,405	 81,577		11,790		121,772
Total plan assets	\$	887,378	\$ 1,779,543	\$	4,254,075	\$	6,920,996

In evaluating the Level at which private partnerships have been classified within the fair value hierarchy, management has assessed factors including but not limited to price transparency, the ability to redeem these investments at net asset value at the measurement date and the existence or absence of certain restrictions at the measurement date. Investments in private partnerships generally have limited redemption options for investors and, subsequent to final closing, may or may not permit subscriptions by new or existing investors. These entities may also have the ability to impose gates, lockups and other restrictions on an investor's ability to readily redeem out of their investment interest in the fund. As of September 30, 2020 and 2019, we have excluded all assets from the fair value hierarchy for which fair value is measured using net asset value per share as a practical expedient.

(in thousands of dollars)

Funded Status

The funded status of the plans recognized in the balance sheet and the amounts recognized in unrestricted net assets is as follows:

	 Defined Benefit Pension Plans				Postretirement Healthcare Benefit Plans			
	2020		2019		2020		2019	
End of year		_		_		_		
Fair value of plan assets at measurement date Benefit obligations at measurement date	\$ 7,759,494 (9,177,862)	\$	6,799,224 (8,683,960)	\$	131,770 (222,780)	\$	121,772 (201,237)	
Funded status	\$ (1,418,368)	\$	(1,884,736)	\$	(91,010)	\$	(79,465)	
Amounts recognized in the balance sheet consist of								
Current liabilities Long-term liabilities	\$ (1,433) (1,416,935)	\$	(2,562) (1,882,174)	\$	(1,190) (89,820)	\$	(1,161) (78,304)	
	\$ (1,418,368)	\$	(1,884,736)	\$	(91,010)	\$	(79,465)	
Amounts not yet recognized in net periodic benefit cost and included in unrestricted net assets consist of								
Actuarial net loss (gain) Prior service cost (credit)	\$ 2,434,412 (227,789)	\$	2,858,791 (261,883)	\$	49,478 (13,642)	\$	41,230 (18,931)	
	\$ 2,206,623	\$	2,596,908	\$	35,836	\$	22,299	
Amounts recognized in unrestricted net assets consist of								
Current year actuarial (gain) loss Amortization of actuarial gain (loss) Current year prior service cost (credit)	\$ (255,997) (168,383)	\$	1,440,052 (89,760) 827	\$	11,917 (3,661)	\$	25,870 (861)	
Amortization of prior service (cost) credit	 34,095		33,947	_	5,289		5,289	
	\$ (390,285)	\$	1,385,066	\$	13,545	\$	30,298	

As of September 30, 2020 and 2019, the projected benefit obligation, accumulated benefit obligation and fair value of plan assets for pension plans with an accumulated benefit obligation in excess of plan assets were as follows:

	 September 30,					
	2020		2019			
Accumulated benefit obligation in excess of plan assets						
Projected benefit obligation	\$ 9,177,862	\$	8,683,960			
Accumulated benefit obligation	8,902,070		8,267,644			
Fair value of plan assets	7,759,494		6,799,224			

(in thousands of dollars)

Expected Cash Flows

Information about the expected cash flows for the defined benefit and postretirement healthcare benefit plans is as follows:

		Defined Benefit Pension Plans	Н	tretirement ealthcare Benefit Plans	re			
Expected employer contributions 2021	\$	435,984	\$	3,931				
2021	Ψ	400,004	Ψ	3,331	Medicare Subsidy			
Expected benefit payments (receipts)								
2021		550,643		11,493	(24)			
2022		377,554		12,501	(20)			
2023		404,489		13,364	(18)			
2024		415,561		14,221	(15)			
2025		439,942		14,895	(13)			
2026-2030		2,484,120		78,892	(35)			

Net Periodic Benefit Cost

		Defined Pensio			Postretirement Healthcare Benefit Plans				
•		2020 2019				2020	2019		
Service cost	\$	406,668	\$	324,429	\$	3,612	\$	3,105	
Special termination benefits				29,266				2,537	
		406,668		353,695		3,612		5,642	
Interest cost		303,374		309,280		6,170		6,618	
Expected return on plan assets Amortization of		(493,436)		(462,020)		(7,085)		(7,942)	
Prior service cost (credit)		(34,095)		(33,947)		(5,289)		(5,289)	
Actuarial net (gain) loss		168,383		89,760		3,661		861	
Non-service related pension income		(55,774)		(96,927)		(2,543)		(5,752)	
Net periodic benefit cost	\$	350,894	\$	256,768	\$	1,069	\$	(110)	

(in thousands of dollars)

Amounts expected to be amortized from unrestricted net assets into net periodic benefit cost during the year ending September 30, 2021 are as follows:

			Defined Benefit Pension Plans	Postretirement Healthcare Benefit Plans			
Actuarial net loss (gain)		\$	148,542	\$ 4,856			
Prior service cost (credit)			(33,869)	(5,289)			
	Pensio	Benefit n Plans	Ве	retirement Healthcare Benefit Plans			
	2020	2019	2020	2019			
Weighted-average assumptions used to determine net periodic pension and postretirement cost							
Discount rate	3.40 %	4.31 %	3.05% - 3.30				
Expected return on plan assets	7.00 %	7.25 %	6.00 %	6.75 %			
Rate of compensation increase	3.00% - 4.45%	3.00% - 4.45%		N/A			
Healthcare cost trend rate for this year Rate to which the cost trend rate is to decline	N/A N/A	N/A N/A	5.00% - 5.50 5.00 %	9% 6.00% 5.00%			
Year that rate reaches the ultimate trend rate	N/A N/A	N/A N/A	2021	2021			
. Ca. t.a Ca Ca Ca a life diamate from rate		14//	2021	2021			

We use a long-term return assumption which is validated annually by obtaining long-term asset return, volatility and correlation projections for relevant asset class indexes; modifying volatility and correlations to reflect the actual historical experience of the active managers; calculating the expected return using benchmark weights and indexes; and comparing the return assumption to the sum of the expected return and the historical outperformance of the actual return versus the benchmark. We regularly monitor the active risk of the Master Trust by a statistical regression of the return series of the actual portfolio to that of the policy benchmark.

Assumed healthcare cost trend rates have a significant effect on the amounts reported for the postretirement healthcare plans. A one-percentage-point change in assumed healthcare cost trend rates would have the following effect:

	One-Perce	ntage	-Point
	Increase	Decrease	
Effect on service and interest cost	\$ 150	\$	(152)

(in thousands of dollars)

16. Professional Liability Insurance

We insure substantially all of our professional and general liability risk on a claims-made basis in cooperation with other healthcare organizations in the Greater Boston area through a captive insurance company, Controlled Risk Insurance Company Ltd. (CRICO). The Company owns 11% of CRICO. The policies cover claims made during their respective terms, but not those occurrences for which claims may be made after expiration of the policy. Management intends to renew its coverage on a claims-made basis and has no reason to believe that it will be prevented from such renewal. During 2020, CRICO announced and paid a dividend to member organizations. As a result, we recognized dividend income of \$57,997 as a nonoperating gain. During 2020, CRICO also made a payment to member organizations for certain tail liabilities they had previously assumed on an occurrence basis, which was recorded as a reduction in the insurance receivable from CRICO of \$88,939.

We follow the accounting policy of establishing reserves to cover the ultimate costs of medical malpractice claims, which include costs associated with litigating or settling claims. The liability also includes an estimated tail liability, established to cover all malpractice claims incurred but not reported to the insurance company as of the end of the year. The total malpractice liability of \$567,770 and \$542,136 as of September 30, 2020 and 2019, respectively, is presented as an accrued professional liability in the consolidated balance sheets. These reserves have been recorded on a discounted basis using an interest rate of 3.0% and 3.25% as of September 30, 2020 and 2019, respectively.

We also recognize an insurance receivable from CRICO at the same time that it recognizes the liability, measured on the same basis as the liability, subject to the need for a valuation allowance for uncollectible amounts. The insurance receivable of \$397,017 and \$459,634 as of September 30, 2020 and 2019, respectively, is reported as a component of other assets in the consolidated balance sheets.

Management is not aware of any claims against us or factors affecting CRICO that would cause the expense for professional liability risks to vary materially from the amount provided.

17. Concentration of Credit Risk

Financial instruments that potentially subject us to concentration of credit risk consist of patient accounts receivable, research grants receivable, pledges receivable, premiums receivable, certain investments and interest rate swaps.

Mass General Brigham provider organizations receive a significant portion of payments for services rendered from a limited number of government and commercial third-party payers, including Medicare, Medicaid, Blue Cross and Blue Shield of Massachusetts, Harvard Pilgrim Health Care and Tufts Health Plan. Research funding is provided through many government and private sponsors. AllWays Health receives a portion of premium revenue from the Commonwealth. Pledges receivable are due from multiple donors. We assess the credit risk for pledges based on history and the financial wherewithal of donors, most of which are individuals or organizations well known to us.

(in thousands of dollars)

Investments, which include government and agency securities, stocks and corporate bonds, private partnerships and other investments, are not concentrated in any corporation or industry or with any single counterparty. Alternative investments are less liquid than other investments. The reported values of the alternative investments may differ significantly from the values that would have been used had a ready market for those securities existed. These instruments may contain elements of both credit and market risk. Such risks include, but are not limited to, limited liquidity, absence of oversight, dependence upon key individuals, emphasis on speculative investments and nondisclosure of portfolio composition.

We minimize our credit risk exposure under interest rate swap agreements by utilizing several counterparties and requiring the counterparties to post collateral for our benefit when the fair value of the swap is positive. We minimize our counterparty risk by contracting with nine counterparties, none of which accounts for more than 20% of the aggregate notional amount of the swap contracts.

18. Net Assets

Donor restricted net assets are available for the following purposes:

	September 30,					
		2020		2019		
Donor restricted						
Charity care	\$	183,988	\$	173,946		
Buildings and equipment		126,464		133,542		
Clinical care, research and academic		2,210,778		2,081,896		
	\$	2,521,230	\$	2,389,384		

Endowment

Our endowment consists of numerous individual funds established for a variety of purposes and includes both donor restricted endowment funds and funds designated by boards to function as endowment.

We have interpreted UPMIFA as requiring the preservation of the value of the original contribution of the donor restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, we classify as donor restricted net assets the original value of all contributions with donor stipulations to maintain in perpetuity, accumulated gains required to be maintained in perpetuity by explicit donor stipulation or accumulated gains which have been appropriated for expenditure in a manner consistent with the standard of prudence prescribed by UPMIFA. In accordance with UPMIFA, we consider several factors in making a determination to appropriate or accumulate donor restricted endowment funds. These factors include: the duration and preservation of the fund; the purposes of the organization and the donor restricted endowment fund; general economic conditions; the possible effect of inflation and deflation; the expected total return from income and the appreciation of investments; other resources of the organization; and the investment policies of the organization.

(in thousands of dollars)

Endowment Funds with Deficits

From time to time, the value of assets associated with individual donor restricted endowment funds may fall below the value of the initial and subsequent donor contribution amounts. These deficits generally result from unfavorable market fluctuations that occurred after the investment of new donor restricted contributions or subsequent endowment additions. When such endowment deficits exist, they are classified as a reduction to donor restricted net assets.

The following presents the endowment net asset composition by type of fund as of September 30, 2020 and 2019 and the changes in endowment assets for the years ended September 30, 2020 and 2019:

	Unrestricted	Total		
Endowment net asset composition by type of fund as of September 30, 2020				
Donor restricted endowment funds Board designated endowment funds	\$ - 1,248,539	\$ 1,977,011 -	\$ 1,977,011 1,248,539	
Total funds	\$ 1,248,539	\$ 1,977,011	\$ 3,225,550	
	Unrestricted	Donor Restricted	Total	
Changes in endowment net assets				
Endowment net assets at September 30, 2019	\$ 1,171,631	\$ 1,839,545	\$ 3,011,176	
Investment return Investment income Net realized and unrealized	640	977	1,617	
appreciation	101,300	150,734	252,034	
Total investment return	101,940	151,711	253,651	
Contributions	6,450	63,130	69,580	
Appropriation of endowment assets for expenditure Other changes	(48,352) 16,870	(75,325) (2,050)	(123,677) 14,820	
Total changes	76,908	137,466	214,374	
Endowment net assets at September 30, 2020	\$ 1,248,539	\$ 1,977,011	\$ 3,225,550	

(in thousands of dollars)

	Unrestricted	Donor Restricted	Total	
Endowment net asset composition by type of fund as of September 30, 2019				
Donor restricted endowment funds Board-designated endowment funds	\$ - 1,171,631	\$ 1,839,545 	\$ 1,839,545 1,171,631	
Total funds	\$ 1,171,631	\$ 1,839,545	\$ 3,011,176	
	Unrestricted	Total		
Changes in endowment net assets				
Endowment net assets at September 30, 2018	\$ 1,264,410	\$ 1,365,096	\$ 2,629,506	
Investment return Investment income Net realized and unrealized	3,563	5,379	8,942	
appreciation	39,907	60,014	99,921	
Total investment return	43,470	65,393	108,863	
Contributions Appropriation of endowment assets	7,773	286,193	293,966	
for expenditure	(50,141)	(69,938)	(120,079)	
Other changes	(93,881)	192,801	98,920	
Total changes	(92,779)	474,449	381,670	
Endowment net assets at September 30, 2019	\$ 1,171,631	\$ 1,839,545	\$ 3,011,176	

19. Functional Expenses

Expenses by functional classification are allocated based on management's judgement, the nature of the expense and historical experience. Such classifications and allocations are as follows:

	Healthcare Services	Research and Academic	Ins	surance	_	eneral and ministrative	_	ear Ended ptember 30, 2020
Operating expenses								
Employee compensation and benefit expense	\$ 6,599,548	\$ -	\$	58,877	\$	1,019,788	\$	7,678,213
Supplies and other expenses	3,491,578	-		65,424		37,611		3,594,613
Medical claims and related expenses	-	-		610,310		-		610,310
Direct academic and research expenses	-	1,591,241		-		-		1,591,241
Depreciation and amortization expenses	654,612	-		-		87,575		742,187
Interest expense	113,807			-		78,769		192,576
Total operating expenses	\$ 10,859,545	\$ 1,591,241	\$	734,611	\$	1,223,743	\$	14,409,140

(in thousands of dollars)

Direct academic and research expenses include \$1,008,098 of employee compensation and benefit expense and \$583,143 of supplies and other expenses for the year ended September 30, 2020.

		lealthcare Services		earch and cademic	ı	nsurance	_	eneral and Iministrative	_	ear Ended eptember 30, 2020
Nonoperating expenses										
Employee compensation and benefit expense	\$	_	\$	_	\$	_	\$	69.202	\$	69,202
Supplies and other expenses	•	-	•	-	•	-	•	29,194	•	29,194
Interest expense		-		-		-		46,948		46,948
Non-service related pension income		(44,599)		(6,458)				(7,260)		(58,317)
Total nonoperating expenses	\$	(44,599)	\$	(6,458)	\$	-	\$	138,084	\$	87,027

	 ealthcare Services	Research and Academic	lr	nsurance	_	General and Iministrative	-	ear Ended ptember 30, 2019
Operating expenses								
Employee compensation and benefit expense	\$ 5,975,215	\$ -	\$	57,906	\$	1,179,567	\$	7,212,688
Supplies and other expenses	3,229,298	-		52,091		57,942		3,339,331
Medical claims and related expenses	-	-		556,110		-		556,110
Direct academic and research expenses	-	1,594,085		-		-		1,594,085
Depreciation and amortization expenses	603,794	-		-		82,580		686,374
Interest expense	128,900	 -	_	-		52,022		180,922
Total operating expenses	\$ 9,937,207	\$ 1,594,085	\$	666,107	\$	1,372,111	\$	13,569,510

Direct academic and research expenses include \$924,570 of employee compensation and benefit expense and \$669,515 of supplies and other expenses for the year ended September 30, 2019.

-				ı	Insurance	_		-	ear Ended ptember 30, 2019
\$	_	\$	_	\$	_	\$	61,256	\$	61,256
	-		-		-		45,074		45,074
	-		-		-		37,112		37,112
	(76,118)		(12,062)		-		(14,499)		(102,679)
\$	(76,118)	\$	(12,062)	\$	-	\$	128,943	\$	40,763
		(76,118)	Services A	\$ - \$ (76,118) (12,062)	\$ - \$ - \$ - \$ - (76,118) (12,062)	\$ - \$ - \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	Services Academic Insurance Administrative \$ - \$ - \$ - \$ 61,256 - 45,074 - 45,074 37,112 - (12,062) - (14,499)	Healthcare Services Research and Academic Insurance General and Administrative Services \$ - \$ - \$ - \$ - \$ 61,256 \$ 45,074 \$ 37,112 \$ (76,118) \$ (12,062) - (14,499) \$ (14,449) \$ (14,449) \$ (14,444) \$ (14,444) \$ (14,444) \$

20. Contingencies

We are subject to complaints, claims and litigation which arise in the normal course of business. In addition, we are subject to reviews and investigations by various federal and state government agencies to assure compliance with applicable laws, some of which are subject to different interpretations. Governmental review of compliance by healthcare organizations has increased.

(in thousands of dollars)

21. Subsequent Events

We have assessed the impact of subsequent events through December 11, 2020, the date the audited financial statements were issued. During this period, there were no subsequent events that require adjustment to the audited financial statements.



Geneva Foundation	Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Th Entity Identifying Num	-	Total Expenditures	Subrecipient Expenditures
Page-	Research and Development and Research Training					
Department of Agricultural Research Service Persistent of Agricultural Research Service Persistent and Februs of Favoral Chiege Community	•					
Department of Agriculus Agriculus Research Service Persoder and Fallows of Harmard College 19,400 19,40						
Department of Agricultural Research Service 1,001 1,001 1,001 1,001 1,000		93.RD7	Direct	\$		-
Persident and Fellowis of Harvard College				Subtotal	23,015	-
Popularment of AgricultureNational Institute of Food and Agriculture Community Outreach and Patient Empowerment Program		10.001	E0 0210 6 004		15 450	
Department of AgricultureNational Incolution 10.31 2019/10030-30407 17,648 17,648 2019/10030-30407 17,648 2019/10030-30407 17,648 2019/10030-30407 2019/100300-30407 2019/100300-30407 2019/100300-30407 2019/100300-30407 2019/100300-30407 2019/10030	President and Fellows of Harvard College	10.001	59-0210-0-004	Subtotal		
Department of Defense Subread 17,848	Department of AgricultureNational Institute of Food and Agriculture				13,430	
Page		10.331	2019-70030-30407		17,648	-
Arnal Medical Seath Israel Descones Medical Center SARDIO WB1NW-15-C-0160 S (6)	,			Subtotal		-
Berlis insend Deaconess Medical Center 93 RCB W31 NF-C-0050 (5 55 55 55 55 55 55	Department of Defense					
Bigham and Women's Hospital QARD10 WB1XWH-17-20088 CRES T7-2088 Colizione Uniford for Research in Epilepsy SARD10 WB1XWH-17-200931 S2-89 11-23 Colizione Transat Reduction Agency SARD10 WB1XWH-120-0031 S2-89 10-47 Colizione Transat Reduction Agency SARD10 WB1XWH-120-0031 S2-89 10-47 Colizione Transat Reduction Agency SARD10 WB1XWH-120-0031 S2-89 10-47 Colizione Transat Reduction Agency SARD10 WB1XWH-120-0003 S2-89 10-47 Colizione Transat Reduction Agency SARD10 WB1XWH-120-0004 S2-89 S						-
Colisement Colisement September Se						-
Coalesenz						112 37/
Delense Triester Reduction Agenery 93.RPb Delent 93.283 104.75					,	112,374
Geneva Foundation						104,796
Johns Hopkins University Johns Hopkins Unive						-
Luna Innovations 93.RD10 7000442543 34.444 Assachusetts Institute of Technology 93.RD10 7000442543 38.797 7000442543 70		93.RD6	N00024-13-D-6400		481,840	-
Massachusetts Institute of Technology	Lockheed Martin	93.RD8	FA8750-18-C-0026		339,998	-
Massachusetts Institute of Technology			W81XWH-18-C-0004		34,444	-
Massachusetts Institute of Technology 93 RD10 7000451740 66,828 Massachusetts Institute of Technology 33 RD10 V87A02-15-D-0001 21,833 Modical University of South Carolina 93 RD10 V81XWH-15-9-0001 21,833 National Trauma Institute 93 RD10 V61 KWH-180-003 307,903 Radiation Montong Devices 98 RD V81XWH-180-003 307,903 Radiation Montong Devices 98 RD V81XWH-180-003 307,903 Repents of the University of California, Los Angeles 93 RD10 V81XWH-16-9-0001 74,440 SimOuset International 93 RD10 V81XWH-16-9-0001 74,440 SimOuset International 93 RD10 V81XWH-16-9-0001 74,440 SimOuset International 93 RD10 V81XWH-16-9-0001 8,531 Tinto Systems 93 RD10 V81XWH-16-9-0015 8,531 Tinto Systems 93 RD10 V81XWH-16-9-0015 8,531 University of Prissoury Broad Institute 12 910 V81XWH-16-9-0015 8,531 Department of DefenseAdvanced Research Projects Agency 12 910 V81XWH-16-9-0015						-
Medical University of South Carolina 93,RD10 Move Walks 93,RD10 Move Wal						-
Moreion Walks 93.RD10 West Number 9-9001 21,688 Moreion Walks 93.RD10 West Published 9-9001 21,688 Mark Moreion Walks 93.RD10 West Published 9-9001 307,903 307,					,	-
Move Walks						-
National Trauma Institute						-
Regents of the University of California, Los Angeles 93.RD16 893.RD10						-
Regents of the University of California, Los Angeles 93.RD10 W9311NF-173-0003 37,959 Regents of the University of California, San Francisco 93.RD10 W931NK-17-0-0041 (5.33) Simuloust International 93.RD10 W930KK-17-C-0041 (5.33) Syvatica Biotech 93.RD10 W930KK-17-C-0041 (5.33) Syvatica Biotech 93.RD10 W81XWH-20-P-0012 8.531 Triton Systems 93.RD10 W91XWH-20-P-0015 13.335 U.S. Army Medical Research Acquisition Activity 93.RD10 W91XWH-20-P-0015 13.335 U.S. Army Medical Research Center 93.RD10 PA8750-18-C-0025 118.217 University of Pittsburgh Of the Commonwealth System of Higher Education 93.RD10 PA8750-18-C-0025 118.217 University Of Pittsburgh Of the Commonwealth System of Higher Education 12.910 DARPA-16-98-AFE-FP-010 25.015 Broad Institute 12.910 DARPA-16-98-AFE-FP-010 25.015 Broad Institute 12.910 DARPA-16-98-AFE-FP-010 25.015 Broad Institute 12.910 DARPA-16-98-AFE-FP-010 25.015						-
SimOuest International		93.RD10	W911NF-17-3-0003		37,959	-
Solution Henke Associates 93 RDB 14006318C0039 97,373 14006318C0039 161844 16184 16184 16184 16184 16184 16184 16184 161	Regents of the University of California, San Francisco	93.RD10	W81XWH-15-9-0001		74,440	-
Sylvatical Biotech 93,RD10 W81XWH-20-P-0012 8.531 717ton Systems 93,RD10 W81XWH-20-P-0015 13.33						-
Trition Systems 93,RD10 W81XWH-20P-0012 8,531 7 Trition Systems 93,RD20 Direct 4,168			140D6318C0039			-
Triton Systems			141041/1411 L 00 D 0040			-
U.S. Army Medical Research Acquisition Activity 93.RD2 Direct 4.168 118.217					,	-
Direct Pictornologies Research Center 93.RD10 FA8750-18-C-0025 118.217 780						-
University of Pittsburgh Of the Commonwealth System of Higher Education 93.RD10 W911QY-14-C-0070 259.043 217.171 20.045 20.059.043 217.171 20.045 20.059.043 217.171 20.045 20.059.043 217.171 20.045						_
Department of DefenseAdvanced Research Projects Agency 12.910 DARPA-16-59-SAFE-FP-010 25.015 25.007						-
Broad Institute				Subtotal	2,959,043	217,170
Broad Institute 12.910 DARPA-16-59-SAFE-FR-010 3.50.07 3.621.519 872.70 Defense Advanced Research Projects Agency 12.910 Time? 3.621.519 3.6						
Defense Advanced Research Projects Agency						-
Draper Laboratory				0		-
Draper Laboratory						872,702
Johns Hopkins University					,	-
Massachusetts Institute of Technology 12.910 HR0011-15-C-0155 (2.490) Massachusetts Institute of Technology 12.910 W911NF-17-2-0043 36.319 President and Fellows of Harvard College 12.910 W911NF1920018 215.608 Raytheon BBN Technologies 12.910 W911NF19C0008 85.681 Space and Naval Warfare Systems Command 12.910 Direct (650) Vanderbilt University Medical Center 12.910 Direct 202.662 80.00 Department of DefenseDefense Threat Reduction Agency 12.351 Direct 202.662 80.00 Department of DefenseDepartment of the Air Force, Material Command 12.800 Direct 35.505 80.00 Air Force Material Command 12.800 Direct 35.505 80.00 Massachusetts Institute of Technology 12.800 Direct 35.505 80.00 U.S. Air Force - Air Force Material Command 12.800 Direct 117.884 117.884 Homeland Security Advanced Research Projects Agency 12.300 Direct 159.710 159,710 Ohio State University					,	-
President and Fellows of Harvard College 12.910 W911NF1920018 215,608 Raytheon BBN Technologies 12.910 W911NF1920008 85,681 50,000 10.00					,	-
Raytheon BBN Technologies 12.910 W911NF19C0008 85,681 650 Force 12.910 Direct 12.910 Each 12.910 Each	Massachusetts Institute of Technology	12.910	W911NF-17-2-0043		36,319	-
Space and Naval Warfare Systems Command Vanderbilt University Medical Center 12.910 HR0011-18-2-0001 10.099 10.099 12.910 HR0011-18-2-0001 10.099 10.099 12.910 10.099 10.099 12.910 10.099 10.099 10.099 10.099 12.910 10.099 1	President and Fellows of Harvard College	12.910	W911NF1920018		215,608	-
Vanderbilt University Medical Center 12.910 HR0011-18-2-0001 10.099 Subtotal 4,271,231 872,70 Department of DefenseDefense Threat Reduction Agency 12.351 Direct 202,662 80,00 Department of DefenseDepartment of the Air Force, Materiel Command 12.800 Direct 35,505 80,00 Air Force Material Command 12.800 FA8702-15-D-0001 117,884 118,971 118,971 118,971 118,971 118,971 118,971 118,971 118,971 118,971 118,971 118,971 118,971 118,971 118,971 118,971 118,971 <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td>						-
Department of DefenseDefense Threat Reduction Agency 12.351 Direct 202,662 80,000						-
Department of DefenseDefense Threat Reduction Agency 12.351 Direct 202,662 80,000	Vanderbilt University Medical Center	12.910	HR0011-18-2-0001			-
Defense Threat Reduction Agency 12.351 Direct 202,662 80,000				Subtotal	4,271,231	872,702
Department of DefenseDepartment of the Air Force, Materiel Command		40.054	Direct.		000 000	00.000
Department of DefenseDepartment of the Air Force, Material Command	Defense Threat Reduction Agency	12.351	Direct	0		
Air Force Material Command	Department of DefenseDepartment of the Air Force Material Command			Subtotal	202,662	80,000
Massachusetts Institute of Technology 12.800 FA8702-15-D-0001 117,884 U.S. Air Force - Air Force Material Command 12.800 Direct (4,161) Subtotal 149,228 Department of DefenseDepartment of the Navy, Office of the Chief of Naval Research		12.800	Direct		35.505	-
U.S. Air Force - Air Force Material Command 12.800 Direct (4,161) Subtotal 149,228 Department of DefenseDepartment of the Navy, Office of the Chief of Naval Research Homeland Security Advanced Research Projects Agency Office of Naval Research Office of Naval Research 12.300 Direct 481,199 99,37 Ohio State University Regents of the University of California, San Diego 12.300 N00014-20-1-2163 51,738 Regents of the University of California, San Diego 12.300 N00014-16-1-2829, P00003 7,202 Subtotal 699,849 99,37 Department of DefenseU.S. Army Materiel Command Fred Hutchinson Cancer Research Center 12.431 W911NF-17-1-0360 P00011 116,804 Massachusetts General Hospital U.S. Army Materiel Command 12.431 Direct 98,428 60,08 University of Southern California					,	-
Department of DefenseDepartment of the Navy, Office of the Chief of Naval Research Homeland Security Advanced Research Projects Agency 12.300 Direct 159,710						-
Homeland Security Advanced Research Projects Agency 12.300 Direct 159,710 Office of Naval Research 12.300 Direct 481,199 99,37				Subtotal		-
Office of Naval Research 12.300 Direct 481,199 99,37 Ohio State University 12.300 N00014-20-1-2163 51,738 51,738 Regents of the University of California, San Diego 12.300 N00014-16-1-2829, P00003 7,202 Subtotal 699,849 99,37 Department of DefenseU.S. Army Materiel Command 12.431 W911NF-17-1-0360 P00011 116,804 Fred Hutchinson Cancer Research Center 12.431 W911NF-14-2-0045 162 U.S. Army Materiel Command 12.431 Direct 98,428 60,08 University of Southern California 12.431 W911NF1810434 160,114	Department of DefenseDepartment of the Navy, Office of the Chief of Naval Research					
Office of Naval Research 12.300 Direct 481,199 99,37 Ohio State University 12.300 N00014-20-1-2163 51,738 51,738 Regents of the University of California, San Diego 12.300 N00014-16-1-2829, P00003 7,202 Subtotal 699,849 99,37 Department of DefenseU.S. Army Materiel Command 12.431 W911NF-17-1-0360 P00011 116,804 Fred Hutchinson Cancer Research Center 12.431 W911NF-14-2-0045 162 U.S. Army Materiel Command 12.431 Direct 98,428 60,08 University of Southern California 12.431 W911NF1810434 160,114		12.300	Direct		159,710	-
Regents of the University of California, San Diego 12.30 N00014-16-1-2829, P00003 7,202 Subtotal 699,849 99,37 Department of DefenseU.S. Army Materiel Command Fred Hutchinson Cancer Research Center 12.431 W911NF-17-1-0360 P00011 116,804 Massachusetts General Hospital U.S. Army Materiel Command 12.431 W911NF-14-2-0045 162 U.S. Army Materiel Command University of Southern California 12.431 W911NF1810434 160,114	Office of Naval Research					99,375
Subtotal 699,849 99,37						-
Department of DefenseU.S. Army Materiel Command Fred Hutchinson Cancer Research Center 12.431 W911NF-17-1-0360 P00011 116,804 Massachusetts General Hospital 12.431 W911NF-14-2-0045 162 U.S. Army Materiel Command 12.431 Direct 98,428 60,08 160,114	Regents of the University of California, San Diego	12.300	N00014-16-1-2829, P00003			-
Fred Hutchinson Cancer Research Center 12.431 W911NF-17-1-0360 P00011 116,804 Massachusetts General Hospital 12.431 W911NF-14-2-0045 162 U.S. Army Materiel Command 12.431 Direct 98,428 60,08 University of Southern California 12.431 W911NF1810434 160,114				Subtotal	699,849	99,375
Massachusetts General Hospital 12.431 W911NF-14-2-0045 162 U.S. Army Materiel Command 12.431 Direct 98,428 60,08 University of Southern California 12.431 W911NF1810434 160,114		40.404	W044NE 47 4 0000 B0001		440.004	
U.S. Army Materiel Command 12.431 Direct 98,428 60,08 University of Southern California 12.431 W911NF1810434 160,114						-
University of Southern California 12.431 W911NF1810434 160,114						- 60 027
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375,508 60,08	SS.ory or Country of Country	12.701		_		60,087

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Thr Entity Identifying Num	-	Subrecipient Expenditures
Department of DefenseU.S. Army Medical Command Air Force Office of Scientific Research	12.420	Direct	5,885,203	_
American Burn Association	12.420	W81XWH-11-1-0835	93,388	-
American Burn Association	12.420	W81XWH-16-2-0048	6,824	-
Beth Israel Deaconess Medical Center	12.420	W81XWH-16-1-0464	359,004	_
Board of Trustees of the University of Alabama for the University of Alabama	12.420	W81XWH-15-1-0705	102,998	-
Boston VA Research Institute	12.420	W81XWH-15-1-0216	52,973	-
Boston VA Research Institute	12.420	W81XWH-15-1-0631	(20,145)	-
Boston VA Research Institute	12.420	W81XWH-17-1-0217	32,078	-
Boston VA Research Institute	12.420	W81XWH1910057	298,981	-
Brigham and Women's Hospital	12.420	W81XWH1910482	137,003	-
Brigham and Women's Hospital	12.420 12.420	W81XWH-19-1-0517	37,662	-
Case Western Reserve University Children's Hospital Corporation dba Boston Children's Hospital	12.420	W81XWH1910707 W81XWH-15-1-0621	48,791 16.184	-
Children's Hospital Corporation dba Boston Children's Hospital	12.420	W81XWH-17-2-0037	5,851	
Children's Hospital Corporation dba Boston Children's Hospital	12.420	W81XWH1910219	13,436	_
Children's Hospital Corporation dba Boston Children's Hospital	12.420	W81XWH1910560	5,009	_
Craig Hospital	12.420	W81XWH-15-2-0078	38,081	-
Dana Farber Cancer Institute	12.420	W81XWH-14-1-0240	(16)	-
Dana Farber Cancer Institute	12.420	W81XWH1910780	24,309	-
Department of Defense	12.420	Direct	60,140	13,557
Department of Defense-Congressionally Directed Medical Research Programs	12.420	Direct	1,586,631	4,523
Fred Hutchinson Cancer Research Center	12.420	W81XWH-19-1-0128	41,102	-
Gel-E	12.420	W81XWH-18-1-0006	163,025	-
Geneva Foundation	12.420	W81XWH-18-1-0507	28,413	-
German Cancer Research Center	12.420	W81XWH1910307	15,128	-
Joan & Sanford I. Weill Medical College of Cornell University	12.420	W81XWH1810667	885,627	-
Johns Hopkins School of Public Health	12.420	W81XWH-12-1-0588	(14,859)	-
Mass Eye And Ear Infirmary	12.420 12.420	W81XWH-17-1-0644 W81XWH-16-1-0652	(387)	-
Massachusetts General Hospital Massachusetts General Hospital	12.420	W81XWH2010293	(12,537) 11,799	-
Massachusetts Institute of Technology	12.420	W81XWH-18-2-0010	129,457	-
Mayo Clinic	12.420	W81XWH-15-1-0293	62,120	-
Metis Foundation	12.420	W81XWH-16-1-0784	(769)	_
Moberg Research	12.420	W81XWH1920013	400,816	_
National Trauma Institute	12.420	W81XWH-17-1-0673	13,988	-
Nationwide Children's Hospital	12.420	W81XWH1810547	63,117	-
President and Fellows of Harvard College	12.420	W81XWH-14-1-0131	23,369	-
President and Fellows of Harvard College	12.420	W81XWH1910696	40,981	-
President and Fellows of Harvard College	12.420	W81XWH1920011	130,364	-
President and Fellows of Harvard College	12.420	W81XWH-20-1-0303	1,060	-
Regents of the University of California	12.420	W81XWH-14-2-0176	133,083	-
Regents of the University of California, San Diego	12.420	W81XWH-15-2-0090	102,291	-
Regents of the University of California, San Diego	12.420	W81XWH-15-2-0090	68,736	-
Regents of the University of California, San Francisco Regents of the University of California, San Francisco	12.420 12.420	W81XWH-14-2-0176 W81XWH-18-2-0042	102,855 36,075	-
Roccor	12.420	W81XWH-17-C-0008	9,855	_
Schepens Eye Research Institute	12.420	W81XWH1910824	7,682	_
Trustees of Tufts College	12.420	W81XWH-17-1-0531	11,626	_
U.S. Army Medical Research Acquisition Activity	12.420	Direct	29,140,797	2,581,438
U.S. Army Medical Research and Materiel Command	12.420	Direct	612,500	(50,718)
U.S. Army RDECOM Acquisition Center	12.420	Direct	44	-
U.S. Army Research Institute of Environmental Medicine	12.420	Direct	175,045	-
U.S. Department of Defense	12.420	Direct	2	-
University of Alabama	12.420	W81XWH-12-1-0155	27,454	-
University of Cincinnati	12.420	W81XWH-16-2-0020	(11,147)	-
University of Delaware	12.420	W81XWH-17-1-0335	103,500	-
University of Southern California	12.420	W81XWH-12-2-0012	(38,941)	-
University of Southern California University of Southern California	12.420 12.420	W81XWH-13-1-0259 W81XWH-14-1-0462	21,772 14,056	-
University of Texas Health Science Center at Houston	12.420	W81XWH-1-1-0123	(3,383)	_
University of Texas, MD Anderson Cancer Center	12.420	W81XWH-14-1-0109	(4,082)	_
Wake Forest University Health Sciences	12.420	W81XWH-13-2-0054	(2,696)	_
Trans Total State of the State			Subtotal 41,273,323	2,548,800
		•	3ubiolai 41,273,323	2,340,000
Department of DefenseUniformed Services University of the Health Sciences	40.750	111100044000000	20.5	
Geneva Foundation	12.750	HU00011920009	66,262	-
Geneva Foundation	12.750	HU00012020011	271,432	-
Geneva Foundation Henry M. Jackson Foundation for the Advancement of Military Medicine	93.RD21	00011920056 HU0001-11-1-0023	801,662	-
Henry M Jackson Foundation for the Advancement of Military Medicine Henry M Jackson Foundation for the Advancement of Military Medicine	12.750 12.750	HU0001-11-1-0023 HU0001-15-2-0028	914,940 17,605	-
Henry M Jackson Foundation for the Advancement of Military Medicine	12.750	HU0001-15-2-0028 HU0001-17-2-0009	2,810,120	-
Henry M Jackson Foundation for the Advancement of Military Medicine	12.750	HU0001-17-2-0009	11,068	-
Henry M Jackson Foundation for the Advancement of Military Medicine	12.750	HU0001-17-2-0023	194,809	-
Henry M Jackson Foundation for the Advancement of Military Medicine	12.750	HU-0001-17-2-009	98,139	_
Henry M Jackson Foundation for the Advancement of Military Medicine	12.750	HU00011820015	47,213	-
Henry M Jackson Foundation for the Advancement of Military Medicine	12.750	HU0001-18-2-0018	474,094	-
Henry M Jackson Foundation for the Advancement of Military Medicine	12.750	HU001-17-2-009	48,000	-
Henry M Jackson Foundation for the Advancement of Military Medicine	12.750	HU-001-17-2-009	270,116	
		;	Subtotal 6,025,460	-

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Thro Entity Identifying Numb	-	Total Expenditures	Subrecipient Expenditures
Department of EducationOffice of Innovation and Improvement United Way of Massachusetts Bay	84.411	U411C170195		14,762	_
Officed Way of Massacriusetts Day	04.411		- Subtotal	14,762	-
Department of Energy			-	, -	
Battelle Memorial Institute	93.RD11	DE-AC05-76RL01830		67,127	-
Texas A&M University	81.135	DE-AR0000823	_ b.t.a.t.a.l	418,095 485,222	<u> </u>
Department of Health and Human Services		3	Subtotal	465,222	
Abt Associates	93.RD1	HHSP233201500013I		114,710	_
Agency for Healthcare Research and Quality	93.RD1	Direct		350	-
Arsenal Medical Atlantic Research Group	93.RD18 93.RD18	R44GM117849 HHSN268201400011C		8,545	-
Beth Israel Deaconess Medical Center	93.RD16	6NU2GGH001140-05-03		(1,219) 23,123	-
Broad Institute	93.RD18	HHSN2612015000031/16Q04	12	15,022	-
Centers for Disease Control and Prevention	93.RD4	Direct	101000	21,855	-
Charles River Analytics Charles River Analytics	93.RD18 93.RD18	HHSN261201800012C/75N91 HHSN27120180038C	1018C0	(8,392) 6,451	-
Children's Hospital Corporation dba Boston Children's Hospital	93.RD18	75N93019C00044		86,812	_
Children's Hospital Corporation dba Boston Children's Hospital	93.RD18	HHSN272201400052C		(701)	-
DHHS-IPA Agreement	93.RD18 93.RD18	Direct 75N01010C00027		61,076	-
Dimagi Duke University	93.RD18 93.RD18	75N91019C00027 75N93019C00050		66,692 257,131	-
Duke University	93.RD18	HHSN275201000003I		50,513	-
Emory University	93.RD18	HHNS272201300006C		104,158	-
ExQor Technologies Harvard Pilgrim Health Care	93.RD18 93.RD15	2R44MH108481-03 HHSF223201400030I		126,459 285,673	-
Harvard Pilgrim Health Care	93.RD13	2011-N-13526		19,017	-
ICF Macro	93.RD18	HHS261201400002B		111,281	-
Justice Resource Institute	93.RD18	90ZV012502		20,801	-
Leidos Biomedical Research Leidos Biomedical Research	93.RD18 93.RD18	HHSN2612015000031 75N91019D00024		(2,895) 354,517	-
Leidos Biomedical Research	93.RD18	HHSN261200800001E		1,734,522	805,137
Mayo Clinic	93.RD18	HHSN2612012000421		39,646	-
Mayo Clinic	93.RD18	HHSN261201200042I		(17,337)	-
Memorial Sloan Kettering Institute Cancer Center Mitre	93.RD1 93.RD5	HHSA2902015000071 75FCMC18D0047		56,654 24,113	-
National Opinion Research Center	93.RD5	75FCMC19F0079		8,178	-
NIH-National Institutes of Health	93.RD18	Direct		3,251,497	
NIH-NHLBI National Heart, Lung and Blood Institute NIH-NIAID National Institute of Allergy and Infectious Diseases	93.RD18 93.RD18	Direct Direct		1,092,621 44,928	4,021
NIH-NIDA National Institute of Allergy and Infectious Diseases NIH-NIDA National Institute on Drug Abuse	93.RD18	Direct		491,510	227,673
NIH-NIMH National Institute of Mental Health	93.RD18	Direct		60,754	
President and Fellows of Harvard College	93.RD15	HHSF223201610080C		(366)	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.RD18 93.RD18	75N93019C00071 HHSN27500001600003I		533,237 (21)	-
Regents of the University of California, San Francisco	93.RD18	HHSN268201700005C		(360)	_
Regents of the University of Michigan	93.RD1	21-312-0214643-65091L		10,946	-
Regents of the University of Michigan	93.RD18	HHSN268201100026C		(42)	-
Reveal Pharmaceuticals Robin Medical	93.RD18 93.RD18	1R44CA239935-01A1 75N91019C00009		50,461 3,690	-
Social and Scientific Systems	93.RD18	HHSN273201600003I/HHSN2	2730000	78,413	-
U.S. Food & Drug Administration	93.RD15	Direct		2,424,455	331,287
University of Buffalo	93.RD18	HHSN268201600001C		362,980	-
University of Georgia Research Foundation University of North Carolina at Chapel Hill	93.RD18 93.RD18	75N93019C00052 1OT3HL147154-01		211,745 29,219	-
University of North Carolina at Chapel Hill	93.RD18	3OT3HL142479-01S3		148,260	-
University of Texas, MD Anderson Cancer Center	93.RD18	HHSN261201200034I 02		6,929	-
Venturewell Volatdiy	93.RD18 93.RD18	RG 5.14.20 1R44AI141264		100,354	-
Volatylix Westat	93.RD18 93.RD18	GS00F009DA		308,029 53,952	-
Westat	93.RD4	HHSD2002013M53968B		24,641	18,418
Westat	93.RD4	HHSN261201800002B		57,418	-
		S	Subtotal_	12,912,005	1,386,536
Department of Health and Human ServicesAdministration for Children and Families	02.004	00770497 04 00		4.40.050	
Center for Victims of Torture Office of Refugee Resettlement	93.604 93.604	90ZT0187-01-00 Direct		142,250 (856)	-
	33.00		- Subtotal	141,394	-
Department of Health and Human ServicesAdministration for Community Living		•		711,004	
Craig Hospital	93.433	90DPTB0017-02-00		1,218	_
DHHS-National Institute on Disability, Independent Living and Rehabilitation	93.433	Direct		485,681	99,595
National Institute on Disability, Independent Living and Rehabilitation	93.433	Direct		821,122	83,289
Spaulding Rehabilitation Hospital Spaulding Rehabilitation Hospital	93.433 93.433	90DPBU0001-03-00 90DPTB0011-03-00		15,938 12,709	-
Spaulding Rehabilitation Hospital Spaulding Rehabilitation Hospital	93.433	90SI50210-02-00		48,742	-
TIRR Memorial Hermann	93.433	90DP0060		(660)	-
University of Pittsburgh Of the Commonwealth System of Higher Education	93.433	0041980 130453-2		(326)	-
		8	Subtotal_	1,384,424	182,884

	CFDA	Direct Award or Pass-TI	nrough	Total	Subrecipient
Cluster Title/Federal Program/Pass-Through Program	Number	Entity Identifying Nur	nber	Expenditures	Expenditures
Department of Health and Human ServicesAgency for Healthcare Research and Quality	02.220	Direct		2 500 202	735,047
Agency for Healthcare Research and Quality American College of Surgeons	93.226 93.226	5R18HS026189-02		3,599,263 125,176	735,047
Beth Israel Deaconess Medical Center	93.226	5R01HS025702-02		43,618	-
Brigham and Women's Hospital	93.226	1R01HS025375-03		19,053	-
Duke University	93.226	5P50HS023418-03		41,534	-
Duke University Johns Hopkins University	93.226 93.226	5P50HS023418-05 5R01HS024079-05		128,198 25,548	-
Massachusetts General Hospital	93.226	5R01HS025718-03		16,731	-
Northwestern University	93.226	5R01HS024930-04		61,607	-
President and Fellows of Harvard College	93.226	1R01HS026753-01A1		54,131	-
President and Fellows of Harvard College	93.226	1R18HS027282-01		32,651	-
President and Fellows of Harvard College	93.226	5P30HS024453-04		54,615	-
RAND Regents of the University of California, San Francisco	93.226 93.226	5R18HS026432-03 1R01HS027369-01		337,926 82,199	-
Trustees of Columbia University in the City of New York	93.226	5R01HS024538-04		17,397	_
Trustees of Columbia University in the City of New York	93.226	5R01HS024713-04		21,708	-
Yale University	93.226	2U18HS016978-13		177,778	-
Yale University School of Medicine	93.226	5R18HS023778-05	_	6,958	-
			Subtotal_	4,846,091	735,047
Department of Health and Human ServicesCenters for Disease Control and Prevention	00.400	EV2020 #470 204		0.400	
AdCare Educational Institute Apervita	93.426 93.424	FY2020 - #179-061 U38OT000216		3,400 1,409	-
Beth Israel Deaconess Medical Center	93.424	1NU2GGH002212-01-00		184,593	-
Centers for Disease Control and Prevention	93.084	Direct		2,067,162	309,042
Centers for Disease Control and Prevention	93.136	Direct		492,626	79,293
Centers for Disease Control and Prevention	93.262	Direct		606,426	-
Centers for Disease Control and Prevention	93.326	Direct		495,365	87,600
Centers for Disease Control and Prevention Children's Hospital Corporation dba Boston Children's Hospital	93.349 93.080	Direct 5NU27DD001155-05-00		515,749 26.597	196,874
Fenway Community Health Center	93.944	6NU62PS005074		37.802	-
Harvard Pilgrim Health Care	93.084	5U54CK000483-02		10,019	-
Harvard Pilgrim Health Care	93.084	6U54CK000483-04M002		75,918	-
Harvard Pilgrim Health Care	93.084	6U54CK000484-04M001		9,195	-
Harvard School of Public Health	93.067	6U2GGH001911-04-01		1,779	-
Icahn School of Medicine at Mount Sinai Johns Hopkins University	93.262 93.283	5U01OH011479-012-00 6U01DP005123-05-01		43,649 62,016	-
National Association of County and City Health Officials	93.391	1NU1ROT0000015-01-00		314,475	-
National Association of County and City Health Officials	93.421	6 NU38OT000306-02-01		130,128	-
National Association of County and City Health Officials	93.421	NU38OT000306-01-00		(33,895)	-
NIH-NIOSH National Institute for Occupational Safety and Health	93.262	Direct		(82,589)	(278,192)
Partners in Health	93.738	5NU58DP005874-03-00		1	-
Partners in Health	93.738 93.067	NU58DP006594-02-00		153,978	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.067	5U2GGH001911-04 6U2GGH001911-04-01		(1,360) (2,447)	-
President and Fellows of Harvard College	93.084	6NU38PS004644-05		(1,627)	_
President and Fellows of Harvard College	93.262	5R01OH002421-24		38,025	-
President and Fellows of Harvard College	93.262	5U19OH008861-13		103,676	-
Trustees of Columbia University in the City of New York	93.283	1U01DP006436-01-00		23,209	-
Trustees of Dartmouth College UCLA Education and Research Institute	93.135 93.860	6U48DP005018-05-01 U01CK000480-05		16,095 7,325	-
UCLA Education and Research Institute UCLA Education and Research Institute	93.860	5U01CK000480-05		(377)	-
Yale University	93.068	5R21DP006082-02		(39,093)	_
,			Subtotal	5,259,229	394,617
Department of Health and Human ServicesCenters for Medicare and Medicaid Services			_		
Centers for Medicare & Medicaid Services	93.986	Direct		2,020,247	183,192
Department of Health and Human ServicesFood and Drug Administration			Subtotal_	2,020,247	183,192
Massachusetts General Hospital	93.103	1U01FD006868-01		34,777	<u>-</u>
New England Pediatric Device Consortium	93.103	5P50FD004907-05		2	-
Perspectum Ltd	93.103	U01FD006880		389	-
U.S. Food & Drug Administration	93.103	Direct		1,934,239	154,846
University of Kansas Medical Center	93.103	5R01FD004809-04	_	2,245	
			Subtotal_	1,971,652	154,846
Department of Health and Human ServicesHealth Resources and Services Administration		ED200T24402.02		20.020	
Beth Israel Deaconess Medical Center Educational Development Center	93.134 93.110	5R39OT31102-03 UF4MC26525		20,038 52,210	-
Fenway Community Health Center	93.110	U30CS022742		73,586	-
Fenway Community Health Center	93.129	U30CS22742		37,118	-
Fenway Community Health Center	93.145	U10HA029294		2,640	-
Fenway Community Health Center	93.914	U69HA31067		52,822	-
Great Plains Tribal Chairmen's Health Board	93.211	1G25RH32431-01-00		(567)	4 005 000
Health Resources and Services Administration	93.110 93.505	Direct 5UD5MC30792-04-00		2,873,851	1,265,028
Johns Hopkins University Massachusetts General Hospital Institute of Health Professions	93.505 93.247	T94HP30909		36,168 3,310	-
Mount Sinai School of Medicine	93.110	5H30MC24048-09-00		3,403	-
University of Colorado at Denver	93.110	5UMA6MC31101-03-00		88,034	-
University of Massachusetts, Worcester	93.145	5U10HA29294-04-00	_	3,259	-
			Subtotal	3,245,872	1,265,028

uster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
partment of Health and Human ServicesNational Institutes of Health				
149 Medical	93.853	1R42NS110337-01A1	11,654	
Actualize Therapy	93.242	5R44MH114725-02	(1,955)	-
ADK Group	93.866	7R41AG062130-02	52,165	
Advanced Brain Monitoring Advanced Brain Monitoring	93.866 93.866	1R44AG050326-01A1 1R44AG054256-01A1	14,951 25,140	
Advanced MRI Technologies	93.242	1R44MH112210-01A1	(253)	
AdventHealth	93.847	7R01DK112700-02	99,100	
Aethlon Medical	93.396	1R43CA23297701	19,334	
AfaSci Research Laboratories	93.867	2R44EY025913-02	430,289	
Africa Health Research Institute Africa Health Research Institute	93.855 93.855	5R01Al138546-03 5R01Al145305-02	24,519 48,432	
ALA Scientific Instruments	93.279	4R44DA043277-02	28,692	
Albany Medical College	93.837	R01HL141127	44,382	
Albert Einstein College of Medicine	93.397	5P20CA210284-02	(62)	
Albert Einstein College of Medicine	93.847	5R01DK115577-05	254,212	
Albert Einstein College of Medicine	93.855	1U19Al142777-01	28,501	
Albert Einstein College of Medicine Albert Einstein College of Medicine of Yeshiva University	93.866 93.847	5R01AG062622-02 5R01DK102952-07	43,174 104,926	
American College of Surgeons	93.307	5R01MD011695-03	413,426	
Ann & Robert H Lurie Children's Hospital of Chicago	93.847	R01DK109881	39,422	
Arbor Research Collaborative for Health	93.847	5R01DK099165-03	(962)	
Astraea Therapeutics	93.279	1U01DA047791-01	89,799	
Augusta University	93.847	5R01DK121003-02	218,204	
Augusta University	93.847	5U24DK115255-04	3,350	
Augusta University Azevan Pharmaceuticals	93.855 93.853	5R01HL131674-04 5U44NS090616-04	151,154 (18,982)	
Banner Alzheimer's Institute	93.866	1R01AG058468-01	33,611	
Banner Alzheimer's Institute	93.866	5R01AG055444-03	37,978	
Barrett Technology	93.286	1R43EB027525-01	28,821	
Baylor College of Medicine	93.242	1R01MH115793-03	35,955	
Baylor College of Medicine	93.394	5R01CA181275-05	(12,456)	
Baylor College of Medicine	93.837	5R01HL148050-02	165,452	7,47
Baylor College of Medicine Baystate Medical Center	93.847 93.838	1R01DK104832-01A1 3U01HL123009-06S1	(288) 76,637	
Baystate Medical Center	93.838	5U01HL122989-06	(3,755)	
Baystate Medical Center	93.838	5U01HL123009-04	365	
Baystate Medical Center	93.838	5U01HL123009-05	(2,759)	
Beckman Research Institute of the City of Hope	93.393	5R01CA202712-04	88,203	
Beckman Research Institute of the City of Hope	93.837	R01HL150069-01	11,897	
Benaroya Research Institute at Virginia Mason	93.855	5UM1AI109565-06	1,096,055	
Benaroya Research Institute at Virginia Mason Beth Israel Deaconess Medical Center	93.855 93.113	5UM1AI109565-07 5R01ES028688-02	3,757,566 22,451	
Beth Israel Deaconess Medical Center	93.213	R34AT009354	13,003	
Beth Israel Deaconess Medical Center	93.233	1R01HL136310-01A1	(889)	
Beth Israel Deaconess Medical Center	93.233	5P01HL095491-10	265,886	
Beth Israel Deaconess Medical Center	93.233	5R01HL136310-03	12,280	
Beth Israel Deaconess Medical Center	93.242	5R01MH078113-09	13,605	
Beth Israel Deaconess Medical Center Beth Israel Deaconess Medical Center	93.242 93.242	5R01MH107579-04 5R01MH111448-04	468,744	
Beth Israel Deaconess Medical Center	93.242	5R01MH116170-02	99,081 40,424	
Beth Israel Deaconess Medical Center	93.242	5U01MH081928-09	20,946	
Beth Israel Deaconess Medical Center	93.242	5U01MH081928-10	7,190	
Beth Israel Deaconess Medical Center	93.310	5UG3HL147353-03	93,175	
Beth Israel Deaconess Medical Center	93.395	5R01CA183605-04	(17,214)	
Beth Israel Deaconess Medical Center	93.395	5U01CA236489-02	92,857	
Beth Israel Deaconess Medical Center Beth Israel Deaconess Medical Center	93.396 93.397	5U01CA199252-04 5P50CA101942-15	(6,859) 550,770	
Beth Israel Deaconess Medical Center Beth Israel Deaconess Medical Center	93.837	5R01HL125379-04	11,781	
Beth Israel Deaconess Medical Center	93.837	5U01HL126497-05	(973)	
Beth Israel Deaconess Medical Center	93.838	5U01HL123009-07	15,644	
Beth Israel Deaconess Medical Center	93.838	5U01HL123022-07	42,511	
Beth Israel Deaconess Medical Center	93.839	5R01HL136394-04	566,476	
Beth Israel Deaconess Medical Center Beth Israel Deaconess Medical Center	93.839	5R34HL135226-03	10,160	
Beth Israel Deaconess Medical Center Beth Israel Deaconess Medical Center	93.847 93.847	5R01DK088826-08 5R01DK095072-07	1 41,595	
Beth Israel Deaconess Medical Center	93.847	5R01DK103902-05	67,729	
Beth Israel Deaconess Medical Center	93.847	5R01DK108894-04	10,434	
Beth Israel Deaconess Medical Center	93.847	5U01DK082919-12	50,766	
Beth Israel Deaconess Medical Center	93.853	1U01NS096835-02	42,726	
Beth Israel Deaconess Medical Center	93.853	1U01NS102289-01	71,904	
Beth Israel Deaconess Medical Center	93.853	5R01NS105844-02	296,540	
Beth Israel Deaconess Medical Center Beth Israel Deaconess Medical Center	93.853	5U01NS096835-03	14,520 255	
Beth Israel Deaconess Medical Center Beth Israel Deaconess Medical Center	93.855 93.855	1R21Al137835-01A1 1U01Al145801-01	29,906	
Beth Israel Deaconess Medical Center	93.855	3UM1AI069412-14S1	113,857	
Beth Israel Deaconess Medical Center	93.855	5R01Al129797-04	113,934	
Beth Israel Deaconess Medical Center	93.855	5U19Al128751-03	210,412	
	93.855 93.855	5U19Al128751-03 5UM1Al069412-13	210,412 627,752	

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Beth Israel Deaconess Medical Center	93.855	5UM1AI124377-05	184,826	-
Beth Israel Deaconess Medical Center Beth Israel Deaconess Medical Center	93.855 93.855	5UM1Al126603-05 UM1Al069412-14S1	291,526 34,776	-
Beth Israel Deaconess Medical Center	93.866	1R01AG051658-04	8,400	-
Beth Israel Deaconess Medical Center	93.866	1R01AG065554-01	27,097	-
Beth Israel Deaconess Medical Center	93.866	5R01AG052282-05	123,723	-
Beth Israel Deaconess Medical Center	93.866	5R01AG055559-04	218,491	-
Beth Israel Deaconess Medical Center	93.866	5R01AG060981-02	392,344 306,428	-
BioSensics BioSensics	93.865 93.866	5R44HD084035-03 1R42AG059491-01	306,428 284,095	_
BioSensics	93.866	5R42AG059491	162,172	-
BioSensics	93.866	R44AG051374	491	_
Board of Regents of the University of Nebraska for the University of Nebraska	93.846	1R01AR073822-01	(11,795)	-
Board of Regents of the University of Wisconsin System	93.310	5UH3OD023282-04	450,693	-
Board of Regents of the University of Wisconsin System	93.855	5U01Al102456-09	6,475	-
Board of Regents of the University of Wisconsin System	93.865	5R01HD094759-03	36,161	-
Board of Trustees of the Leland Stanford Junior University Board of Trustees of the Leland Stanford Junior University	93.242 93.394	5R21MH116484-02 1U01CA242879-01	23,332 208.014	-
Board of Trustees of the Leland Stanford Junior University	93.837	5R01HL128135-04	232,627	-
Board of Trustees of the Leland Stanford Junior University	93.837	7R01HL128135-05	102,406	_
Board of Trustees of the Leland Stanford Junior University	93.855	5U19Al057229-17	58,679	-
Board of Trustees of the University of Alabama for the University of Alabama	93.121	5U19DE022516-07	120	-
Board of Trustees of the University of Alabama for the University of Alabama	93.242	1R34MH118044-01A1	21,371	-
Board of Trustees of the University of Alabama for the University of Alabama	93.279	5R01DA044112-02	140,872	-
Board of Trustees of the University of Alabama for the University of Alabama	93.837	5R35HL135816-04	260,380	-
Board of Trustees of the University of Alabama for the University of Alabama	93.838	5R01HL119960-06	13,624	-
Board of Trustees of the University of Alabama for the University of Alabama Board of Trustees of the University of Alabama for the University of Alabama	93.838 93.846	5U01HL133232-02 5P50AR060772-08	(51,098) 583,101	-
Board of Trustees of the University of Alabama for the University of Alabama	93.855	5U19Al090959-11	615,573	_
Board of Trustees of the University of Illinois	93.121	3R21DE026582-02S1	3,102	_
Board of Trustees of the University of Illinois	93.310	4UH3OD023272-03	28,934	-
Board of Trustees of the University of Illinois	93.847	5R01DK118736-02	33,748	-
Boston College	93.865	5R01HD098421-02	65,146	-
Boston Medical Center	93.279	1UM1DA049412-01	32,472	-
Boston Medical Center	93.279	5R01DA042685-03	29,492	-
Boston Medical Center Boston Medical Center	93.279 93.350	5UM1DA049412-02 5U01TR002070-03	151,796 258,093	-
Boston Medical Center Boston Medical Center	93.350	5U01TR002070-03	54,639	-
Boston Medical Center	93.847	1R21DK119751-01	4,786	-
Boston Medical Center	93.847	5P30DK046200-27	61,210	-
Boston University	93.143	5P42ES007381-23	76,075	-
Boston University	93.213	5R01AT007483-05	67,136	-
Boston University	93.866	4500003087	17,777	-
Boston University School of Medicine Boston VA Research Institute	93.866 93.837	1RF1AG061706-01 5U01HL130163-04	92,923 23,377	-
Brain Solutions	93.279	1R42DA043977-01	146,919	-
Brandeis University	93.395	5R01CA142746-10	118,851	_
Brandeis University	93.865	5R01HD090103-03	17,168	-
Brigham and Women's Hospital	93.121	5U01DE024443-05	(2,047)	-
Brigham and Women's Hospital	93.172	1U01HG008685-04	151,472	-
Brigham and Women's Hospital	93.172	5U01HG007690-07	334,914	-
Brigham and Women's Hospital	93.173	5R01DC015052-04	2,690	-
Brigham and Women's Hospital Brigham and Women's Hospital	93.242 93.242	5R01MH091448-10 5R01MH101244-08	128,922 240,578	-
Brigham and Women's Hospital	93.242	5R21MH115280-02	(1,799)	-
Brigham and Women's Hospital	93.242	5U01MH109977-04	170,859	-
Brigham and Women's Hospital	93.279	5R01DA044167-02	16,749	-
Brigham and Women's Hospital	93.286	5R21EB025270-02	7,876	-
Brigham and Women's Hospital	93.310	5U01HG007690-03	(187)	-
Brigham and Women's Hospital	93.350	5UH3TR002155-04	90,063	-
Brigham and Women's Hospital	93.394	1R21CA238053-01A1	20,338	-
Brigham and Women's Hospital Brigham and Women's Hospital	93.394 93.394	5R01CA120528-10 5R01CA120528-14	(11,531) 46,582	-
Brigham and Women's Hospital	93.394	5R01CA235589-02	201,462	-
Brigham and Women's Hospital	93.395	3U10CA180821-06S2	192,447	-
Brigham and Women's Hospital	93.395	5R01CA207982-03	31,115	-
Brigham and Women's Hospital	93.395	5U10CA031946-32	2,149	-
Brigham and Women's Hospital	93.396	5P01CA120964-12	15,066	-
Brigham and Women's Hospital	93.396	5R35CA197605-04	(8,511)	-
Brigham and Women's Hospital	93.396	5U01CA214411-03	17,344	-
Brigham and Women's Hospital Brigham and Women's Hospital	93.837 93.837	1R01HL150401-01 4U54HL119145-06	53,563 25	-
Brigham and Women's Hospital Brigham and Women's Hospital	93.837	5R01HL127118-05	25 10,942	-
Brigham and Women's Hospital	93.837	5U01HL107352-05	76,413	-
Brigham and Women's Hospital	93.837	5U01HL130163-04	58,530	-
Brigham and Women's Hospital	93.837	5U01HL134879-02	3,369	-
Brigham and Women's Hospital	93.837	5U54HL119145-05	(3,480)	-
Brigham and Women's Hospital	93.837	5U54HL119145-06	(472)	-
Brigham and Women's Hospital	93.837	5U54HL119145-07	248,512	-
Brigham and Women's Hospital	93.838	5P01HL108801-04	(28,728)	-

Big	Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Special part of Women's Hospital 93.646 88701/8005389-70	Brigham and Women's Hospital	93 846	2R01AR065807	170 493	_
Spigman and Women's Hospital					-
Bigipham and Women's Respiral					-
Brigham and Women's Hospital 93.566 50.0748707988-02 196.688 13.38 Following Norman's Hospital 196.689				,	-
Brighma and Women's Hospital 93.847 S901DK14777-05 10.775 1.879 1.979 1.					18,338
Brigham and Women's Hospital	Brigham and Women's Hospital	93.847		80,259	· -
Berjahm and Women's Hospital 93.855 1801.AHS00560 A1 151.072					-
Berjahm and Wimen's Hospital 93.855 10.01.41.458.06.01 12.985 1.01.41.458.06.01 12.985 1.01.41.41.458.06.01 12.985 1.01.41.41.458.06.01 12.985 1.01.41.41.458.06.01 12.985 1.01.41.41.458.06.01 12.985 1.01.41.41.458.06.01 12.985 1.01.41.41.458.06.01 12.985 1.01.41.41.458.06.01 12.985 1.01.41.41.458.06.01 12.985 1.01.458.06.01 12.985 1.01.458.06.01 12.985 1.01.458.06.01 12.985 1.01.458.06.01 12.985 1.01.458.06.01 12.985 12.985 1.01.458.06.01 12.985					-
Brighm and Women's Hospital 93.855 8701413800-02 22.186 -					-
Brigham and Women's Hospital 93.855 5801/4138800-02 22,186					
Brigham and Women's Hospital 93.855 \$6014138909-02 78.421 - - - - - - - -					-
Berjaham and Women's Hoopital 93.855 \$601 Al 183909-02 78, 421					-
Brigham and Women's Hospital 93.855 SJUNIA1068826-12 55.659 1					-
Brigham and Women's Hospital 93.859 16016M32825-01 72,473 19674 19					
Brigham and Women's Hospital 93.869 59P105W061594-153 39.222 1					-
Brigham and Women's Hospital 93.865 360H1D08372-40251 36.813					-
Brigham and Women's Hospital 93.866 1R01AG0R5898-91 108.807					-
Brigham and Women's Hospital 93.866 1RP1-MoG087597-01 13.696 1.692					
Brigham and Women's Hospital 93.866 RF1AG063381-01 22.527 2.					-
Brigham and Women's Hospital 93.866 2P01AG015379-21A1 595,389 1					-
Brigham and Women's Hospital 93.866 \$901.40(15379-22 778,124 9.866) \$601.40(15379-20 (22.29) 9.866) \$601.40(15379-20) \$701.40(
Brigham and Women's Hospital 93.866 SP01AG015379-20 (2,229) Serigham and Women's Hospital 93.866 SP01AG015379-2020S1 (27,822) Serigham and Women's Hospital 93.866 SR01AG015379-2020S1 (27,822) Serigham and Women's Hospital 93.866 SR01AG042512-05 (28) SR01AG045138-03 (29) SR01AG045138-03 (29) SR01AG045138-03 (29) SR01AG05138-03 SR01					-
Brigham and Women's Hospital 93.866 SP01.AG015379-20/20S1 (27.822) Seripham and Women's Hospital 93.866 SR01.AG012512-07 138.109 SR01.AG012512-07 33.0943 SR01.AG012512-07 34.177 SR01.AG012512-07 SR0					-
Brigham and Women's Hospital 93.886 SR01AG042512-05 (28)					-
Brigham and Women's Hospital 93.866 5R01AG058134-03 33.943	Brigham and Women's Hospital				-
Brigham and Women's Hospital 93.886 5801AGG54024-02 43,177					
Brigham and Women's Hospital 93,886 5801AGGS6436E-02 237,545 -				,	-
Brigham and Women's Hospital \$3,866 5R01 AG061083-02 206,743 5R01 England and Women's Hospital \$3,867 5R01 ENG2721-03 145,725 5R01 England and Women's Hospital \$3,867 5R01 ENG2767-01 370,588 5R01 England and Women's Hospital \$3,367 5R01 MD011865-02 155,523 5R01 England and Women's Hospital \$3,397 2F50CA165962-06A1 56,7008 5R01 MD011865-02 155,523 5R01 England Englan					-
Brigham and Women's Hospital 93.867 5R01EY027921-03 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,725 145,723 145,725 145,72			5R01AG058825-02		-
Brigham and Women's Hospital 93.867 5824EV028767-01 370,588 5876 58					
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Broad Institute 93.242 1U01MH121499-01 11,251 - Broad Institute 93.242 2R01-MH106595-04 3,983 - Broad Institute 93.242 3U01MH109539-04S1 6,596 - Broad Institute 93.242 5400000541 1,912 - Broad Institute 93.242 5400000758 / 1R01MH10642-01 36,877 - Broad Institute 93.242 5R01MH105500-05 1,383 - Broad Institute 93.242 5R01MH105500-05 18,903 - Broad Institute 93.242 5R01MH106903-04 1,921 - Broad Institute 93.242 5R01MH106903-04 1,921 - Broad Institute 93.242 5U01MH115727-02 9,634 - Broad Institute 93.242 5U01MH115727-03 53,305 - Broad Institute 93.242 5U19MH114821-02 40,074 - Broad Institute 93.242 R01MH107649 (590) - Broad Institute 93.342					-
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Broad Institute 93.242 5R01MH105500-05 1,383 - Broad Institute 93.242 5R01MH107649-05 18,903 - Broad Institute 93.242 5R01MH107649-05 18,903 - Broad Institute 93.242 5U01MH111660-03 52,882 - Broad Institute 93.242 5U01MH115727-02 9,634 - Broad Institute 93.242 5U19MH114821-02 40,074 - Broad Institute 93.242 5U19MH117649 (590) - Broad Institute 93.242 R01MH107649 (590) - Broad Institute 93.242 W01MH119689 19,105 - Broad Institute 93.310 5DP50D024582-03 120,285 - Broad Institute 93.310 5R01DK113597-04 304,197 - Broad Institute 93.368 30720D002750-011 7,849 - Broad Institute 93.368 30720D002750-0151 221,190 - Broad Institute 93.368					-
Broad Institute 93.242 5R01MH107649-05 18,903 - Broad Institute 93.242 5R01MH1109903-04 1,921 - Broad Institute 93.242 5U01MH111660-03 52,882 - Broad Institute 93.242 5U01MH115727-02 9,634 - Broad Institute 93.242 5U01MH115727-03 53,305 - Broad Institute 93.242 5U19MH114821-02 40,074 - Broad Institute 93.242 R01MH107649 (590) - Broad Institute 93.242 R01MH115957 30,788 - Broad Institute 93.310 5DP50D024582-03 19,105 - Broad Institute 93.310 5DP50D024582-03 120,285 - Broad Institute 93.310 5R01DK113597-04 304,197 - Broad Institute 93.368 10T20D002750-011 7,849 - Broad Institute 93.368 30T20D002750-0151 221,190 - Broad Institute 93.393					-
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Broad Institute 93.242 5001MH115727-03 53,305 - Broad Institute 93.242 5019MH114821-02 40,074 - Broad Institute 93.242 R01MH107649 (590) - Broad Institute 93.242 R01MH115957 30,788 - Broad Institute 93.242 U01MH119689 19,105 - Broad Institute 93.310 5DP50D024582-03 120,285 - Broad Institute 93.310 5R01DK113597-04 304,197 - Broad Institute 93.368 10T20D002750-01 7,849 - Broad Institute 93.368 30T20D002750-01S1 221,190 - Broad Institute 93.393 A20-0145-S002 P072683 U01CA2422 2,856 -					-
Broad Institute 93.242 5U19MH114821-02 40,074 - Broad Institute 93.242 R01MH107649 (590) - Broad Institute 93.242 R01MH115957 30,788 - Broad Institute 93.242 U01MH119689 19,105 - Broad Institute 93.310 5DP50D024582-03 120,285 - Broad Institute 93.310 5R01DK113597-04 304,197 - Broad Institute 93.368 1OT20D002750-01 7,849 - Broad Institute 93.368 30T20D002750-01S1 221,190 - Broad Institute 93.393 A20-0145-S002 P072683 U01CA242' 2,856 -					-
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Broad Institute 93.242 U01MH119689 19,105 - Broad Institute 93.310 5DP50D024582-03 120,285 - Broad Institute 93.310 5R01DK113597-04 304,197 - Broad Institute 93.368 1OT20D002750-01 7,849 - Broad Institute 93.388 3OT20D002750-01S1 221,190 - Broad Institute 93.393 A20-0145-S002 P072683 U01CA2422 2,856 -					-
Broad Institute 93.310 5DP50D024582-03 120,285 - Broad Institute 93.310 5R01DK113597-04 304,197 - Broad Institute 93.368 1OT20D002750-01 7,849 - Broad Institute 93.368 3OT20D002750-01S1 221,190 - Broad Institute 93.393 A20-0145-S002 P072683 U01CA242' 2,856 -					-
Broad Institute 93.310 5R01DK113597-04 304,197 - Broad Institute 93.368 10T20D002750-011 7,849 - Broad Institute 93.368 30T20D002750-01S1 221,190 - Broad Institute 93.393 A20-0145-S002 P072683 U01CA242: 2,856 -					-
Broad Institute 93.368 3OT2OD002750-01S1 221,190 - Broad Institute 93.393 A20-0145-S002 P072683 U01CA242 2,856 -		93.310			-
Broad Institute 93.393 A20-0145-S002 P072683 U01CA242: 2,856 -					-
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Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Broad Institute	93.394	227914	19,150	_
Broad Institute	93.394	5R01CA161026-07	10,416	-
Broad Institute	93.394	5R33CA202820-03	(194)	-
Broad Institute	93.394	U01CA214125	35,015	-
Broad Institute	93.394	U24CA210979	26,042	-
Broad Institute	93.394	U24CA210979-02	14,136	-
Broad Institute Broad Institute	93.394 93.394	U24CA210986 U24CA210999	114,089 57,298	-
Broad Institute	93.396	1UH3CA246632-01	19,268	-
Broad Institute	93.396	2R01CA155010	4,169	-
Broad Institute	93.837	1OT3HL142478-01	(1,370)	-
Broad Institute	93.837	1R01HL142711-01A1 / 234357	12,291	-
Broad Institute	93.837	1R01HL143295-01A1	457,583	-
Broad Institute Broad Institute	93.837 93.837	236185 1R01HL148050-01 5400000049	6,659	-
Broad Institute	93.837	5R01HL131015-03	(2,893) 649	
Broad Institute	93.837	5R01HL138737-02	(2,102)	-
Broad Institute	93.837	R01HL131015	(21,280)	-
Broad Institute	93.837	R01HL138737 / 1679-01	14,508	-
Broad Institute	93.837	R01HL143295	80,190	-
Broad Institute	93.839	0000996106	19,361	-
Broad Institute	93.839	R01HL48565	6,691	-
Broad Institute Broad Institute	93.846 93.846	1UH2AR06788-05 3UH2AR067694-05S2	27,987 2,843	-
Broad Institute	93.846	R01AR061445	3,550	-
Broad Institute	93.846		1,742	-
Broad Institute	93.847	1UC4DK116255-01	18,309	-
Broad Institute	93.847	233311 / 5R01DK120485-02	7,430	-
Broad Institute	93.847	5400000499	39,862	-
Broad Institute	93.847	5R01DK075787-13	13,363	-
Broad Institute Broad Institute	93.847 93.847	5R01DK099465-07	67,786 (69,865)	-
Broad Institute Broad Institute	93.847	5R01DK105154-05 5R24DK110499-04	13,185	-
Broad Institute	93.847	5RC2DK114784-04	128,450	-
Broad Institute	93.847	5U54DK105566-04	(63,966)	-
Broad Institute	93.847	RC2DK114784	6,390	-
Broad Institute	93.847	U01DK105554	108	-
Broad Institute	93.847	U01DK123717	11,880	-
Broad Institute	93.853	1R01NS102371-01A1	9,800	-
Broad Institute Broad Institute	93.853 93.853	5400000503 5400000625	13,419 33,950	
Broad Institute	93.855	112673	5,284	-
Broad Institute	93.855	1U19Al133524-01	(15,538)	-
Broad Institute	93.855	1U19AI142780-01	331,283	-
Broad Institute	93.855	1U19Al142784-01	10,017	-
Broad Institute	93.855	234408 / 2U19AI110495-06	5,958	-
Broad Institute Broad Institute	93.855 93.855	5P01AI129880-02 5R01AI117043-03	5,279 8,000	_
Broad Institute	93.855	5R01Al117043-05	12,784	-
Broad Institute	93.855	5R01Al132300-04	43,002	-
Broad Institute	93.855	5U19AI110818-07	86,194	-
Broad Institute	93.855	GR105105(CON-800016 5U19Al0899	4,264	-
Broad Institute	93.855	R56Al137244	11,619	-
Broad Institute Broad Institute	93.855 93.855	U19Al082630	5,686 6,028	-
Broad Institute	93.855	U19AI13324 U19AI142780 5000419	15,143	
Broad Institute	93.855	U19AI142780 5000429	3,028	-
Broad Institute	93.855	U19AI142780 5000657	15,143	-
Broad Institute	93.855	U24AI118668	28,431	-
Broad Institute	93.859	1R35GM122455-01	(2,172)	-
Broad Institute	93.865	R01HD081256	20,516	-
Broad Institute Broad Institute	93.865 93.866	U24HD090743/5400000133/5400000 1R21AG067585-01A1	9,693 10,547	-
Broad Institute	93.866	5DP2AG058486-02	48,168	-
Broad Institute	93.867	5R01EY027421-03	20,295	-
Broad Institute	93.867	R01EY027421	3,330	-
Brown University	93.173	1U01DC017844-01	36,010	-
Brown University	93.213	5UH2AT009145-05	56,713	-
Brown University Brown University	93.242	3R01MH105442-05S1 5R01MH106174-05	2,515 7 112	-
Brown University Brown University	93.242 93.286	5R01MH106174-05 5R01EB022889-03	7,112 88,305	- -
Brown University	93.398	5R01CA201262-04	163,825	-
Brown University	93.839	5U01HL114476-05	(6,209)	-
Brown University	93.853	1R01NS113141-01	149,354	-
Brown University	93.853	5R01NS079533-07	125,623	-
Brown University	93.866	5U54AG063546-02	53,727	-
Brown University Cambridge Hospital	93.866 93.393	5UH3AG049619-05 5R01CA229355-02	22,333 34,214	-
Cambridge Hospital	30.333	01.0 10/1229300-02	J4,Z 14	-

er Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipi Expenditu
Corplines Health Corp System	02.424	ED04DE00007E 0E	40.000	
Carolinas HealthCare System Carolinas HealthCare System	93.121 93.121	5R01DE023375-05 5U01DE022939-05	40,636 (17,356)	
Carolinas HealthCare System	93.121	5U01DE022939-05 5U01DE022939-07	54,946	
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Case Western Reserve University	93.279	5R01DA043263-05	34,969	
Case Western Reserve University	93.286	5U01EB020955-03	(4,145)	
Case Western Reserve University	93.838	5R01HL094585-08	22,327	
Case Western Reserve University	93.847	1DP3DK114812-01	9,251	
Case Western Reserve University	93.847	5U01DK094157-10	361,033	
Case Western Reserve University	93.855	5R01Al124348-05	202,541	
Case Western Reserve University	93.855	5U01Al1 31295-03	(727)	
Case Western Reserve University	93.867	5R01EY027134-02	42,738	
Cedar Sinai Medical Center	93.393	5R01CA211707-02	184,253	
Cedar Sinai Medical Center	93.394	5R01CA201709-03	27,441	
Cedar Sinai Medical Center	93.395	5U01CA232859-02	59.829	
Cedar Sinai Medical Center	93.837	5R01HL131532-05	318,582	
Cedar Sinai Medical Center	93.837	7R01HL131532-04	83,684	
Cedar Sinai Medical Center Cedar Sinai Medical Center	93.837	7R01HL134168-04	445,485	
Cedar-Sinai Medical Center	93.837	5R01HL126938-04	17,350	
Cedar-Sinai Medical Center	93.866	5R01AG058911-03	242,878	
Children's Hospital Corporation dba Boston Children's Hospital	93.172	1R01HG010004-02	27,730	
Children's Hospital Corporation dba Boston Children's Hospital	93.233	5R01HL137192-04	287,582	
Children's Hospital Corporation dba Boston Children's Hospital	93.242	1RF1MH122967-01	22,419	
Children's Hospital Corporation dba Boston Children's Hospital	93.242	2R01MH078829-20	(918)	
Children's Hospital Corporation dba Boston Children's Hospital	93.242	5R24MH109111-03	6,317	
Children's Hospital Corporation dba Boston Children's Hospital	93.286	5R01EB017337-05	(3,631)	
Children's Hospital Corporation dba Boston Children's Hospital	93.351	1R21OD029996-01	25,877	
Children's Hospital Corporation dba Boston Children's Hospital	93.394	5U24CA184407-06	(2)	
Children's Hospital Corporation dba Boston Children's Hospital	93.395	5R01CA222355-02	5,423	
Children's Hospital Corporation dba Boston Children's Hospital	93.837	1OT2HL152639-01	70,383	
Children's Hospital Corporation dba Boston Children's Hospital	93.837	5UM1HL098147-10	92,886	
Children's Hospital Corporation dba Boston Children's Hospital	93.839	5P01HL095489-09	44,766	
Children's Hospital Corporation dba Boston Children's Hospital	93.839	5P01HL095489-10	309,592	
Children's Hospital Corporation dba Boston Children's Hospital	93.846	5R34AR066631-02	(1,255)	
Children's Hospital Corporation dba Boston Children's Hospital	93.847	1R21DK118951-01	93,154	
Children's Hospital Corporation dba Boston Children's Hospital	93.847	5P30DK034854-32	68,199	
Children's Hospital Corporation dba Boston Children's Hospital	93.847	5P30DK034854-33	(2,543)	
Children's Hospital Corporation dba Boston Children's Hospital	93.847	5P30DK034854-35	319,158	
Children's Hospital Corporation dba Boston Children's Hospital	93.847	5R24DK099808-05	(290)	
Children's Hospital Corporation dba Boston Children's Hospital	93.853	1R21NS101373-01A1	(3,635)	
Children's Hospital Corporation dba Boston Children's Hospital	93.853	5R01NS080833-09	52,652	
Children's Hospital Corporation dba Boston Children's Hospital	93.853	5R01NS109475-02	17,512	
Children's Hospital Corporation dba Boston Children's Hospital	93.855	3R01Al065617-20S1	46,106	
Children's Hospital Corporation dba Boston Children's Hospital	93.855	3U19AI118608-04S2	94,732	
	93.855	5P01Al089618-07	(8,838)	
Children's Hospital Corporation dba Boston Children's Hospital				
Children's Hospital Corporation dba Boston Children's Hospital	93.855	5P01Al089618-09	275,595	
Children's Hospital Corporation dba Boston Children's Hospital	93.855	5R01Al108588-04	9,332	
Children's Hospital Corporation dba Boston Children's Hospital	93.855	5R01Al126915-04	78,618	
Children's Hospital Corporation dba Boston Children's Hospital	93.855	5R21Al119457-02	(14,097)	
Children's Hospital Corporation dba Boston Children's Hospital	93.855	5U01AI126614-05	45,434	
Children's Hospital Corporation dba Boston Children's Hospital	93.865	1R01HD100009-01	116,537	
Children's Hospital Corporation dba Boston Children's Hospital	93.865	1U01HD087211-01	(65)	
Children's Hospital Corporation dba Boston Children's Hospital	93.865	1U01HD087211-01	185,724	
Children's Hospital Corporation dba Boston Children's Hospital Children's Hospital Corporation dba Boston Children's Hospital		5R01HD065762-10	141,272	
	93.865		,	
Children's Hospital Corporation dba Boston Children's Hospital	93.865	5R01HD100009-02	53,480	
Children's Hospital Corporation dba Boston Children's Hospital	93.865	5R21HMD096355-02	3,365	
Children's Hospital Corporation dba Boston Children's Hospital	93.867	5R01EY025794-03	146,821	
Children's Hospital Corporation dba Boston Children's Hospital	93.867	5R01EY025794-05	132,802	
Children's Hospital Corporation dba Boston Children's Hospital	93.867	R01EY025794-02S1	181	
Children's Hospital Los Angeles	93.838	5R01HL141352-03	278,287	
Children's Hospital Los Angeles	93.838	5R01HL146541-02	197,411	
Children's Hospital Medical Center				
	93.837	4R01HL116906-04	(2,469)	
Children's Hospital Medical Center	93.838	1U01HL148856-01	14,170	
Children's Hospital of Philadelphia	93.233	1R61HL151253-01	48,512	
Children's Hospital of Philadelphia	93.853	1U01NS111671-01	16,709	
Children's Hospital of Philadelphia	93.853	1U54NS115052-01	146,225	
Cincinnati Children's Hospital Medical Center	93.396	1R01CA240317-01A1	1,627	
Cincinnati Children's Hospital Medical Center	93.846	5P30AR070549-05	8,430	
Cleveland Clinic Foundation Group Return	93.838	5U01HL125177-05	219,408	
Cleveland Clinic Foundation Group Return	93.846	5R01AR074131-02	21,438	
Cleveland Clinic Lerner College of Medicine	93.839	1UG3HL140097-01A1	8,455	
Clinitech	93.273	2R44AA026123-02	121,508	
Collagen Medical	93.286	1R43EB029773-01	40,936	
Collagen Medical	93.866	1R44AG059524-01	49,822	
Columbia University	93.837	5R01HL127464-04	143,240	
Columbia University	93.837	5R01HL132412-03	(8,129)	
Columbia University	93.847	5R01DK080099-09	(18,969)	
Columbia University	93.866	5U01AG051412-05	842,407	
Columbia University Medical Center	93.361	5R01NR016941-04	265,585	
		ED01 \ D00040E 04	43,617	
Columbia University Medical Center	93.846	5R01AR068425-04	40,017	
Columbia University Medical Center Columbia University Medical Center	93.846 93.866	5U01AG051412-05	575,714	

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Cook Children's Medical Center	93.865	7R21HD090549-03	4,925	
Cornell University	93.838	5P01HL114501-05	182,742	-
Cornell University	93.853	5R01NS093120-04	(395)	-
Cornell University	93.879	5R01LM012719-02	30,143	-
CorticoMetrics	93.394	2R42CA183150-02	35,461	-
CorticoMetrics	93.866	1R42AG062026-01A1	36,681	-
CREcare CUNY Graduate School of Public Health and Health Policy	93.865 93.393	1R41HD097844-01A1 1U01CA230551-01A1	50,248 110,975	-
Dana Farber Cancer Institute	93.113	5U01ES029520-02	40,937	_
Dana Farber Cancer Institute	93.121	5R01DE024403-05	(8,975)	-
Dana Farber Cancer Institute	93.121	5R01DE027736-03	121,262	-
Dana Farber Cancer Institute	93.310	3P30CA006516-54S8	86,692	-
Dana Farber Cancer Institute	93.353	1U01DE029188-01	56,592	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.353 93.353	1U01DE029188-01 REVISED 1U2CCA233195-01	1,951 8,381	-
Dana Farber Cancer Institute	93.353	1U2CCA233195-01	10,108	-
Dana Farber Cancer Institute	93.353	1U54CA231637-01	306,423	-
Dana Farber Cancer Institute	93.353	1UM1CA233080-01	17,282	-
Dana Farber Cancer Institute	93.353	3P30CA006516-55S1	17,632	-
Dana Farber Cancer Institute	93.353	3R01CA176745-07S1	(1,908)	-
Dana Farber Cancer Institute	93.353	5P01CA154303-08	12,936	-
Dana Farber Cancer Institute	93.353	5U2CCA233195-02	101,870	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.353 93.393	U24CA224331 5P01CA087969-19	33,014 (142)	-
Dana Farber Cancer Institute	93.393	5R01CA118553	2,019	-
Dana Farber Cancer Institute	93.393	5R01CA118553-10	5,990	-
Dana Farber Cancer Institute	93.393	5R01CA169141-07	763	-
Dana Farber Cancer Institute	93.393	5R01CA204954-04	199,979	-
Dana Farber Cancer Institute	93.393	5R21CA222940-02	1,665	-
Dana Farber Cancer Institute	93.393	5U01CA218651-02	4,987	-
Dana Farber Cancer Institute	93.393	R01CA227237	(3,461)	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.394 93.394	2R01CA161026-09 3R01CA188446-05S1	17,941 10,218	-
Dana Farber Cancer Institute	93.394	5R01CA188446-05	676	-
Dana Farber Cancer Institute	93.394	5R01CA208254-03	(1,858)	-
Dana Farber Cancer Institute	93.394	5R01CA214912-03	3,254	-
Dana Farber Cancer Institute	93.394	5R01CA221874-03	32,477	-
Dana Farber Cancer Institute	93.394	5R01CA239042-02	143,270	-
Dana Farber Cancer Institute	93.394	5U01CA190234-05	51,124	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.394 93.394	5U01CA210171-03	(70)	-
Dana Farber Cancer Institute	93.394	5U01CA210171-04 5U01CA210171-05	16,923 140,323	-
Dana Farber Cancer Institute	93.394	5U24CA194354-05	137,691	_
Dana Farber Cancer Institute	93.395	1P01CA229092-02	127,937	-
Dana Farber Cancer Institute	93.395	1U10CA180867-01	4,949	-
Dana Farber Cancer Institute	93.395	5P01CA142106-15	16,257	-
Dana Farber Cancer Institute	93.395	5R01CA178264-05	44	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.395 93.395	5R01CA200977-04 5R01CA205406-04	8,155 75,710	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.395	5U01CA190234-05	1,503	
Dana Farber Cancer Institute	93.395	5U10CA180867-05	(2,894)	-
Dana Farber Cancer Institute	93.395	5UM1CA186709-04	119,583	-
Dana Farber Cancer Institute	93.395	5UM1CA186709-05	160,521	-
Dana Farber Cancer Institute	93.396	1P01CA233412-01A1	537,656	-
Dana Farber Cancer Institute	93.396	2R01CA181217-06A1	17,520	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.396 93.396	5R01CA131945-10 5R01CA238039-02	(12) 18,900	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.396	5R21CA205094-02	9,809	-
Dana Farber Cancer Institute	93.396	5R35CA197632-04	7,647	_
Dana Farber Cancer Institute	93.396	5U01CA195469-05	5,076	-
Dana Farber Cancer Institute	93.396	5U01CA232161-02	207,009	-
Dana Farber Cancer Institute	93.397	2P50CA127003-11A1	762,601	-
Dana Farber Cancer Institute	93.397	2P50CA168504-06A1	254,150	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.397 93.397	2P50CA168504-7 3P30CA006516-51S4	28,680	(14.025)
Dana Farber Cancer Institute	93.397	3P30CA006516-5154 3P30CA006516-53S7	(17,331) 302,190	(14,935)
Dana Farber Cancer Institute	93.397	3P30CA006516-55S5	54,831	_
Dana Farber Cancer Institute	93.397	4P50CA127003-09	(9,750)	-
Dana Farber Cancer Institute	93.397	5P30CA006516-53	7,756	-
Dana Farber Cancer Institute	93.397	5P30CA006516-54	10,750	-
Dana Farber Cancer Institute	93.397	5P30CA006516-55	2,601,128	-
Dana Farber Cancer Institute	93.397	5P50CA090381-15	(10)	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.397 93.397	5P50CA127003-10 5P50CA206963-04	(13,842) 176,497	-
Dana Farber Cancer Institute Dana Farber Cancer Institute	93.397	5U54CA193461-04	30,727	-
Dana Farber Cancer Institute	93.397	5U54CA193461-05	93,531	-
Dana Farber Cancer Institute	93.397	5UM1CA186709-05	198,668	-
Dana Farber Cancer Institute	93.399	5UG1CA233180-02	13,886	-
Dana Farber Cancer Institute	93.399	5UG1CA233180-02	4,167	-
Dana Farber Cancer Institute	93.839	5UG1HL069249-20	12,898	-

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		1D01D1/10100101	40.077	
Dana Farber Cancer Institute	93.847	1R01DK124384-01	16,277	
Dana Farber Cancer Institute	93.853	5R01NS091620-05	27,991	
Dana Farber Cancer Institute	93.866	1UG3AG060626-01 5UH3AG060626-03	(40,164)	
Dana Farber Cancer Institute	93.866		588,901	
Dana Farber/Harvard Cancer Center	93.397	5P50CA090381-15	(5,008)	
Dartmouth Hitchcock Clinic	93.865	5R01HD067270-11	150,239	
Dartmouth Hitchcock Clinic	93.865	R01HD067270	100,287	
Day Zero Diagnostics	93.855	R43AI148172	22,578	
Dimagi Duke NUS Graduate Medical School	93.307	1R43MD014916-01	59,192	
Duke Nos Graduate Medicai Scriool Duke University	93.855	5R01Al139032-03	14,368	
· · · · · · · · ·	93.286	1R21EB025313-01	(271)	
Duke University	93.286	5R01EB028143-02	271,893	
Duke University	93.393	1R01CA235677-01A1	79,310	
Duke University	93.394	5R01CA200808-02	5,706	
Duke University	93.394	7R01CA182076-05	(813)	
Duke University	93.837	5R01HL146145-02	274,079	
Duke University	93.837	5U10HL084904-12	160,966	
Duke University	93.837	U01HL134679-02	6,850	
Duke University	93.855	1R01Al139425-01A1	21,563	
Duke University	93.855	1R56Al139425-01	5,440	
Duke University	93.855	5UM1AI104681-05	56,780	
Duke University	93.855	5UM1AI104681-07	1,134	
Duke University	93.855	5UM1AI104681-07	1,265	
Duke University	93.866	1R01AG062770-01	39,139	
Duke University	93.866	1RF1AG051550-01	117,510	
Ecog Acrin Cancer Research Group	93.395	5U10CA180820-05	(2)	
Ecog Acrin Medical Research Foundation	93.395	5UG1CA189828-05	310	
Ecog Acrin Medical Research Foundation	93.395	U10CA180820-07	371,702	
Ecog-Acrin Medical Research Foundation	93.394	5U24CA196172-05S1	8,835	
Ecog-Acrin Medical Research Foundation	93.399	2UG1CA189828-06	56,163	
ECOG-ACTIT Medical Research Foundation	93.847			
		1UC4DK114839-01	(35,868)	
Emory University	93.837	5R01HL119798-07	19,154	
Emory University	93.855	2P30Al050409-20	125,972	
Emory University	93.855	2U19Al110483-06	28,586	
Emory University	93.855	5R01Al051231-19	405,280	
Emory University	93.855	5U19Al110483-07	218,954	
Emory University	93.866	5R01AG058704-03	48,074	
Environment and Health Group	93.307	2R44MD009454-03	120,978	
Expesicor	93.853	1R43NS115294-01	22,879	
ExQor Technologies	93.279	1R43DA044050-01	1,143	
ExQor Technologies	93.866	4R44AG05834302	200,809	
Eyenexo	93.867	1R43EY028778-01	66,713	
EyePhone	93.867	5R44EY025902-03	16,455	
Feinstein Institute for Medical Research	93.846	5UH2AR067694-02	(36,476)	
Feinstein Institute for Medical Research	93.846	5UH2AR067694-05 REVISED	843,071	
Feinstein Institute for Medical Research	93.855	5UH2AR067688-04	(107,416)	
Feinstein Institute for Medical Research	93.855	5UH2AR067688-05	32,639	
Fenway Community Health Center	93.279	1R01DA047933-01	61	
Fenway Community Health Center	93.279	523DA044874-03	13,304	
Fenway Community Health Center	93.279	5R01DA044112-02	10,674	
Fenway Community Health Center	93.279	5R01DA047045-03	8,240	
Fenway Community Health Center	93.307	5R01MD013498-04	13,121	
Fenway Community Health Center	93.855	5P30Al060354-14	1,749	
FHC	93.242	1R41MH11980401	110,762	
FHC	93.242	3R41MH119804-01S1	5,930	
FHI 360	93.855	5UM1A1068619-12	59,799	
FHI 360	93.865	5R01HD077888-03	(146)	
FieldLine	93.853	1R41NS108898-01	(39)	
Florida Atlantic University	93.855	1R15Al127214-01	8,011	
Florida International University	93.279	5U01DA040381-04	19,160	
Florida International University	93.396	7U01CA225644-03	17,684	
Florida International University	93.855	1R21Al146368-01	40,189	
FluGen	93.855	R42AI120269-03	189,669	
Forsyth Institute	93.121	2R01DE025020-05	89,751	
Forsyth Institute	93.121	5R01DE024468-05	33,735	
Fox Chase Cancer Center	93.859	5R01GM097360-10	25,653	
Fred Hutchinson Cancer Research Center	93.393	1R01CA248857-01	33,908	
Fred Hutchinson Cancer Research Center	93.393	5R01CA176272-05	7,309	
Fred Hutchinson Cancer Research Center	93.393	5U01CA137088-09	53,071	
	93.394	5U01CA214114-04	53,518	
Fred Hutchinson Cancer Research Center		5U01CA214172-04	12,133	
			1,444,301	
Fred Hutchinson Cancer Research Center	93.394 93.855	3LIM1AI068614-14S1		
Fred Hutchinson Cancer Research Center Fred Hutchinson Cancer Research Center	93.855	3UM1AI068614-14S1		
Fred Hutchinson Cancer Research Center Fred Hutchinson Cancer Research Center Fred Hutchinson Cancer Research Center	93.855 93.855	5UM1AI068614-12	(215,823)	
Fred Hutchinson Cancer Research Center	93.855 93.855 93.855	5UM1AI068614-12 5UM1AI068614-13	(215,823) 187,329	
Fred Hutchinson Cancer Research Center	93.855 93.855 93.855 93.855	5UM1AI068614-12 5UM1AI068614-13 5UM1AI068614-14	(215,823) 187,329 112,832	
Fred Hutchinson Cancer Research Center	93.855 93.855 93.855 93.855 93.855	5UM1AI068614-12 5UM1AI068614-13 5UM1AI068614-14 5UM1AI068618-13	(215,823) 187,329 112,832 (3,419)	
Fred Hutchinson Cancer Research Center Fred Hutchinson Cancer Research Center Fred Hutchinson Cancer Research Center Fred Hutchinson Cancer Research Center Fred Hutchinson Cancer Research Center	93.855 93.855 93.855 93.855	5UM1AI068614-12 5UM1AI068614-13 5UM1AI068614-14	(215,823) 187,329 112,832	

er Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipier Expenditure
George Washington University	93.837	5R01HL140977-02	224,545	
George Washington University	93.847	5U01DK061230-16	136,073	
George Washington University	93.847	5U01DK098246-08	993,189	
George Washington University	93.847	R01DK104845	33.385	
Georgetown University	93.989	R21TW010789	34,889	
GHESKIO Centers	93.855	4UM1AI069421-14	55,492	
Giner	93.242	5R44MH090582-06	(1,768)	
Giner	93.865	1R43HD098994-01	15,064	
Hackensack University Medical Center	93.395	5R01CA212639-03	88,474	
Harvard Pilgrim Health Care	93.393	5R00CA201542-03	16,958	
Harvard Pilgrim Health Care	93.865	1R01HD094150-03	107,289	
Harvard Pilgrim Health Care	93.865	3R01HD034568-17S2	17,867	
Harvard Pilgrim Health Care	93.865	5R01HD085993-05	195,817	
Harvard Pilgrim Health Care	93.865	5R01HD090019-04	100,303	
Harvard Pilgrim Health Care	93.865	R01HD034568-18	236,177	
Harvard School of Public Health	93.855	5U01Al114235-03	(1,904)	
Harvard School of Public Health	93.855	5UM1AI069456-14	68,374	
Harvard University	93.837	5U19HL129903-05	73,225	
Hebrew Rehabilitation Center for Aged	93.853	3P01AG031720-07S1	105,934	
Hebrew Rehabilitation Center for Aged	93.866	1R01AG059089	20,470	
Hebrew Rehabilitation Center for Aged	93.866	5P01AG031720-07	276,293	
Hebrew Rehabilitation Center for Aged	93.866	5P01AG031720-08	143,853	
Hebrew Rehabilitation Center for Aged	93.866	5R01AG025037-13	20,052	
Hebrew Rehabilitation Center for Aged	93.866	90083	62,626	
Hebrew Rehabilitation Center for Aged	93.866	R01AG025037	25,807	
Hebrew Senior Life	93.846	1R01AR075346-01	11,891	
Hebrew Senior Life	93.866	5P01AG031720-07	15,904	
Hebrew Senior Life	93.866	5P01AG031720-08	93,707	
Hebrew Senior Life	93.866	5R21AG057955-02	(171)	
Hebrew Senior Life	93.866	5R21AG060227-02	32,381	
Hebrew Senior Life	93.866	90103	10,654	
Hebrew Senior Life	93.866	P01AG031720	12,231	
Hennepin Healthcare Research Institute	93.866	1U19AG062682-01	298,336	
Highland Instruments	93.213	5R44AT008637-03	201,575	
Highland Instruments	93.853	1R44NS110237-01	43,646	
Highland Instruments	93.866	1R44AG055 360-01	(6,703)	
Highland Instruments	93.866	1R44AG055360-01	77,915	
Huntington Medical Research Institute	93.242	7R01MH110438-05	4,007	
Icahn School of Medicine at Mount Sinai	93.242	5P50MH096890-09	79,410	
Icahn School of Medicine at Mount Sinai	93.393	5R01CA203193-05	59,180	
Icahn School of Medicine at Mount Sinai	93.393	5R01CA210806-04	73,466	
Icahn School of Medicine at Mount Sinai	93.837	5P01HL131478-04	840,595	
Icahn School of Medicine at Mount Sinai	93.837	5R01HL128056-04	(28)	
Icahn School of Medicine at Mount Sinai	93.837	5R01HL144072-03	93,762	
Icahn School of Medicine at Mount Sinai	93.837	5R01HL147328-02	15,995	
Icahn School of Medicine at Mount Sinai	93.837	5U01HL088942-13	94,210	
Icahn School of Medicine at Mount Sinai	93.853	1RF1NS115268-01	98,932	
Icahn School of Medicine at Mount Sinai	93.853	5U01NS107016-02	187,441	
Icahn School of Medicine at Mount Sinai	93.855	5U19AI118610-05	50,030	
Icahn School of Medicine at Mount Sinai	93.859	5R35GM124836-03	55,856	
Icahn School of Medicine at Mount Sinai	93.866	5R01AG052557-05	19,410	
Icahn School of Medicine at Mount Sinai	93.866	5R01AG053509-05	245,674	
Icahn School of Medicine at Mount Sinai	93.866	5U24AG059624-02	6,741	
Icahn School of Medicine at Mount Sinai	93.867	1UG1EY028096-01A1	(3,945)	
Icahn School of Medicine at Mount Sinai	93.867	2R01EY015473-14A1	22,628	
Icahn School of Medicine at Mount Sinai	93.867	5R01EY015473-16	240,863	
ICON Clinical Research	93.837	1U01HL117006-01A1	(131)	
Institute for Systems Biology	93.855	521AI133335-02	(5)	
Integrated BioTherapeutics	93.855	1R43Al136143	66,269	
Intelon Optics	93.867	1R41EY028820-01A1	36,076	
International Agency for Research on Cancer	93.273	5R01AA024770-04	31,461	
International Agency for Research on Cancer	93.310	7U19CA203654	27,301	
International Agency for Research on Cancer	93.394	1U01CA195603	5,468	
IQ Medical Imaging	93.394	2R42CA192600-02	281,630	
IQ Medical Imaging	93.394	5R42CA189637-03	284,804	
Jackson Laboratory	93.172	3U41HG007497-04S1	(1,484)	
Jackson Laboratory	93.172	5U24HG007497-06	148,594	
Jaeb Center for Health Research	93.867	2UG1EY014231-18	22,209	
Jaeb Center for Health Research	93.867	5U10EY014231-16	(17,663)	
Joan & Sanford I. Weill Medical College of Cornell University	93.837	7U01HL105561-08	10,305	
Joan & Sanford I. Welli Medical College of Cornell University	93.838	1R01HL133801-02	(15,530)	
Joan & Sanford I. Well Medical College of Cornell University	93.853	5UH3NS095554-04	59,606	
Joan & Sanford I. Well Medical College of Cornell University	93.855	3U19AI111143-06S1	9,838	
Johns Hopkins University	93.172	5U24HG010263-02	113,155	
Johns Hopkins University				
	93.173	5U01DC013778-05	31,523	
Johns Hopkins University	93.173	5U01DC013778-05	3,930	
Johns Hopkins University	93.242	5P50MH115842-02	20,637	
	93.242	5R01MH104553-05	16,593	
		ELIO4C A 0000004 CC	05.050	
Johns Hopkins University Johns Hopkins University	93.394	5U01CA230691-02	25,053	
		5U01CA230691-02 5UM1CA137443-09 1R01DK124782-01	25,053 17,008 104,068	

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Johns Hopkins University	93.847	5R24DK099803-05	(12,489)	
Johns Hopkins University	93.847	5U34DK120051-02	9,261	
Johns Hopkins University	93.855	3U24AI118633-05S1	5,031	
Johns Hopkins University	93.855	4UH3Al133669-03	50,501	
Johns Hopkins University	93.855	5U01AI125290-04	(7,906)	
Johns Hopkins University	93.855	5U01Al134591-04	4,120	
Johns Hopkins University Johns Hopkins University	93.855 93.855	5U24Al118633-05 5UM1Al068632-14	191,183 149,988	
Johns Hopkins University	93.855	5UM2AI130836-04	316,361	
Johns Hopkins University	93.866	5R01AG049872-05	12,240	
Johns Hopkins University	93.866	5R01AG053100-04	148,579	
Johns Hopkins University	93.867	5U10EY024527-04	18,667	
Johns Hopkins University	93.867	7UG1EY028096-02	27,063	
Johns Hopkins University School of Medicine	93.837	5R01HL112299-05 5R01AG050515-04	(2,322)	
Johns Hopkins University School of Medicine Joslin Diabetes Center	93.866 93.847	3R01DK077097-13S1	307,437 111,581	
Joslin Diabetes Center Joslin Diabetes Center	93.847	4P30DK036836-30	12,692	
Joslin Diabetes Center	93.847	5U01DK114156-03	34,077	
Joslin Diabetes Center	93.847	5U01DK116102-04	1,843	
Joslin Diabetes Center	93.847	R01DK121995	14,957	
Joslin Diabetes Center	93.847	R01DK122808	101,897	
Joslin Diabetes Center	93.847	U01DK114156	4,835	
Kaiser Foundation Research Institute	93.393	R01CA241623	36,853	
Kaiser Foundation Research Institute	93.847	2R01DK085070	34,846	
King's College London	93.242	1R01MH114708-02	194,901	
Kitware	93.286	2R01EB014955-05	10,009	
Kitware	93.286 93.855	5R01EB021396-04	15,563	
La Jolla Institute for Immunology La Jolla Institute for Immunology	93.855	5U19Al142790-02	10,351 136,343	
Lumicell	93.394	5U19Al142790-02 5R44CA211013-02	116,324	
Lumicell	93.394	5R44CA211013-2	8,193	
Maine Medical Center	93.847	5R24DK092759-09	308,671	
Masonic Medical Research Institute	93.837	R01HL102368-08	142,082	
Mass Eye And Ear Infirmary	93.173	5R01DC011805-10	76,467	
Mass Eye And Ear Infirmary	93.173	5R01DC014924-06	29,221	
Mass Eye And Ear Infirmary	93.173	5R21DC014909-02	19,991	
Mass Eye And Ear Infirmary	93.853	5R01NS088160-04	15,959	
Mass Eye And Ear Infirmary	93.855	5P01Al083214-12	944,977	
Mass Eye And Ear Infirmary	93.867 93.867	1R01EY031300-01	5,972 40,459	
Mass Eye And Ear Infirmary Mass Eye And Ear Infirmary	93.867	2R01EY022305-08 5R01EY020928-08	77,245	
Mass Eye And Ear Infirmary	93.867	5R01EY029269-02	236,951	
Massachusetts General Hospital	93.172	5R01HG009174-04	150,010	
Massachusetts General Hospital	93.242	5R01MH102279-05	172,825	
Massachusetts General Hospital	93.242	5R01MH108427-04	22,557	
Massachusetts General Hospital	93.242	5R01MH113930-04	3,124	
Massachusetts General Hospital	93.242	5R01MH116173-03	280,383	
Massachusetts General Hospital	93.242	5R01MH116205-02	178,711	
Massachusetts General Hospital	93.273	5R21AA025192-02	(500)	
Massachusetts General Hospital	93.273	5R33AA025192-05	89,626	
Massachusetts General Hospital	93.279	5R61DA047034-03	363,211	
Massachusetts General Hospital	93.286	7R01EB017722-05	70,772 101 308	
Massachusetts General Hospital Massachusetts General Hospital	93.286 93.310	8U01DK127587-02 3OT2OD026553-01S2	101,308 3,751,330	
Massachusetts General Hospital	93.310	5UH3TR000901-05	3,751,330	
Massachusetts General Hospital	93.361	1R01NR017399-01A1	(1,323)	
Massachusetts General Hospital	93.393	5R01CA137178-10	9,233	
Massachusetts General Hospital	93.393	5R01CA218123-03	48,259	
Massachusetts General Hospital	93.393	5U01CA225451-02	111,782	
Massachusetts General Hospital	93.394	5R01CA203873-05	21,409	
Massachusetts General Hospital	93.394	5R01CA215431-04	134,745	
Massachusetts General Hospital	93.394	5R01CA227156-03	38,856	
Massachusetts General Hospital	93.394	5U01CA182367-05	91,528	
Massachusetts General Hospital Massachusetts General Hospital	93.394 93.395	5U01CA233360-03	196,822 10,876	
Massachusetts General Hospital	93.395 93.395	1P01CA240239-01 1R01CA227821-02	10,876 62,471	
Massachusetts General Hospital	93.395	5P01CA069246-23	358,869	
Massachusetts General Hospital	93.396	5U19CA179563-05	(66)	
Massachusetts General Hospital	93.837	5R01HL125869-05	39,246	
Massachusetts General Hospital	93.837	5R01HL128099-04	29,190	
Massachusetts General Hospital	93.837	5R01HL130539-05	29,393	
Massachusetts General Hospital	93.837	5R01HL133149-04	37,005	
Massachusetts General Hospital	93.837	5R01HL137562-04	(8,316)	
Massachusetts General Hospital	93.837	5R01HL140498-03	45,068	
Massachusetts General Hospital	93.837	5R01HL141053-03	88,245	
Massachusetts General Hospital	93.837	5R01HL141917-03	317,676	
Massachusetts General Hospital Massachusetts General Hospital	93.837 93.837	5R01HL142809-03 5R01HL146267-02	67,763 44,226	

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Massachusetts General Hospital	93.837	5U01HL123336-06	3,675	_
Massachusetts General Hospital	93.837	5U01HL123339-06	38,337	-
Massachusetts General Hospital	93.837	5U10HL110337-07	(6,840)	-
Massachusetts General Hospital	93.838	1UG3HL140177-01A1	2,975	-
Massachusetts General Hospital	93.838	3U01HL123009-06S2	9,712	-
Massachusetts General Hospital	93.839	5R01HL137913-04	33,159	-
Massachusetts General Hospital	93.846	1R01AR077023-01	6,187	-
Massachusetts General Hospital Massachusetts General Hospital	93.847 93.847	1R01DK124145-01 1R01DK124145-01	16,952 14,535	-
Massachusetts General Hospital	93.847	5P30DK040561-23	20,605	_
Massachusetts General Hospital	93.847	5P30DK057521-19	8,875	-
Massachusetts General Hospital	93.847	5P30DK057521-20	8,966	-
Massachusetts General Hospital	93.847	5R01DK049302-23	233,660	-
Massachusetts General Hospital	93.847	5R01DK101495-06	126,321	-
Massachusetts General Hospital	93.847	5R01DK105072-05	52,314	-
Massachusetts General Hospital	93.847	5R01DK107972-05	68,177	-
Massachusetts General Hospital Massachusetts General Hospital	93.853 93.853	1R01NS110575-01 1U24NS107243-01	20,346 6,189	-
Massachusetts General Hospital	93.853	5R01NS062092-08	33,860	_
Massachusetts General Hospital	93.853	5R01NS102574-03	17,685	_
Massachusetts General Hospital	93.853	5U01NS090259-05	5,550	_
Massachusetts General Hospital	93.853	5U01NS098968-03	83,787	-
Massachusetts General Hospital	93.853	5U24NS107154-03	48,674	-
Massachusetts General Hospital	93.853	5U24NS107243-02	13,610	-
Massachusetts General Hospital	93.853	5U24NS113850-02	208,349	-
Massachusetts General Hospital	93.853	5UH3NS100548-02	9,817	-
Massachusetts General Hospital	93.855	5R01Al042006-23	105,968	-
Massachusetts General Hospital	93.855	5R01Al123001-05	535	-
Massachusetts General Hospital	93.855	5R37Al058736-16	47,432	-
Massachusetts General Hospital	93.855	5U01Al136816-03 5R01HD091067-03	98,178	-
Massachusetts General Hospital Massachusetts General Hospital	93.865 93.866	1R01AG062667-01A1	427,566 32,442	-
Massachusetts General Hospital	93.866	1R01AG067019-01	27,576	_
Massachusetts General Hospital	93.866	1R56AG057454-01	21	_
Massachusetts General Hospital	93.866	5R01AG054081-04	140,123	_
Massachusetts General Hospital	93.867	1R01EY029544-01	74,009	-
Massachusetts General Hospital	93.867	5R01EY025454-04	3,030	-
Massachusetts General Hospital	93.867	5R01EY028234-02	3,297	-
Massachusetts General Hospital Institute of Health Professions	93.866	5R21AG055149-02	11,597	-
Massachusetts Institute of Technology	93.172	3R01HG008754-03S1	(1,812)	-
Massachusetts Institute of Technology	93.172	5R01HG008754-04	228,898	-
Massachusetts Institute of Technology	93.242	3U01MH108168-04S1	46,682	-
Massachusetts Institute of Technology Massachusetts Institute of Technology	93.242 93.242	5U01MH108168-04 5U01MH108168-04S1	(6,741) 76,048	-
Massachusetts Institute of Technology	93.242	5-U01-MH117072-02	120,898	_
Massachusetts Institute of Technology	93.242	5U01MH117072-03	46,393	_
Massachusetts Institute of Technology	93.286	5P41EB015871-34	155,189	-
Massachusetts Institute of Technology	93.286	5R01EB000244-41	356,199	-
Massachusetts Institute of Technology	93.286	5R01EB022062-04	36,049	-
Massachusetts Institute of Technology	93.394	1R21CA236685-01	63,190	-
Massachusetts Institute of Technology	93.394	5R33CA223904-03	191,090	-
Massachusetts Institute of Technology	93.396	5U01CA215798-04	345,996	-
Massachusetts Institute of Technology	93.397	5P30CA014051-47	(5,530)	-
Massachusetts Institute of Technology Massachusetts Institute of Technology	93.397 93.397	5U54CA210180-03 5U54CA210180-04	20,780	-
**	00.050	1001110105007.0111	336,367 25 402	-
Massachusetts Institute of Technology Massachusetts Institute of Technology	93.853 93.866	1R21NS105027-01A1 5R01AG058002-04	25,402 233,099	_
Mayo Clinic	93.395	2UG1CA189823-06	291,029	_
Mayo Clinic	93.395	5UG1CA189823-04	(11,270)	-
Mayo Clinic	93.395	5UG1CA189823-05	(905)	-
Mayo Clinic	93.399	1UG1CA189823-01	(3,516)	-
Mayo Clinic	93.399	5UG1CA189823-05	(12,472)	-
Mayo Clinic	93.853	5UG3NS103870-03	15,267	-
Mayo Clinic	93.866	1RF1AG057547-01	341,388	-
Mayo Clinic	93.866	1U19AG063911-01	29,380	-
Mayo Clinic	93.866	5U01AG045390-05	(48,450)	-
Mayo Clinic	93.866	U19AG063911-01	260,832	-
Mayo Clinic Jacksonville	93.853	2P01NS084974-06A1	50,528 13,515	-
Mayo Clinic Jacksonville McLean Hospital	93.853 93.242	5U01NS080168-06 1P50MH115846-01A1	13,515 107,233	-
McLean Hospital	93.242	1P50MH119467-01A1	46,395	-
McLean Hospital	93.242	1R01MH122427-01	1,167	-
McLean Hospital	93.242	3R01MH104488-04S1	31,704	-
McLean Hospital	93.242	5P50MH115846-02	170,925	-
McLean Hospital				
	93.242	5R01MH108602-05	82,881	_
McLean Hospital	93.242 93.242	5R01MH110438-04	12,937	-
				-

er Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
	00.070	0D04D4044000 0004	400.004	
McLean Hospital McLean Hospital	93.279 93.279	3R01DA041866-02S1	120,964 179,006	
McLean Hospital	93.279	3UG1DA015831-18S1 3UG1DA015831-18S5	432,475	
McLean Hospital	93.279	5R01DA045632-02	9,632	
McLean Hospital	93.279	5R33DA042847-04	166,469	
McLean Hospital	93.279	5UG1DA015831-18S6	47,499	
McLean Hospital	93.853	5R01NS100808-03	10,241	
MD Anderson Cancer Center	93.396	5P01CA117969-15	197,726	
Medical University of South Carolina Memorial Sloan Kettering Institute Cancer Center	93.847 93.393	1U01DK104833-03 1R21CA239784-01	8,304 14,383	
Memorial Sloan Kettering Institute Cancer Center Memorial Sloan Kettering Institute Cancer Center	93.395	3P01CA190174-05S1	157,750	
Memorial Sloan Kettering Institute Cancer Center	93.395	5P01CA190174-05	375,797	
Memorial Sloan Kettering Institute Cancer Center	93.396	5U24CA213274-04	85,130	
Methodist Hospital Research Institute	93.397	5U54CA210181-04	132,208	
Michigan State University	93.310	5UH3OD023285-05	70,432	
Michigan State University	93.394	7R01CA135650-09	2,520	
Michigan State University	93.837	5R01HL130624-04	(3,631)	
Michigan State University	93.865 93.865	5R01HD094842-03	134,281 16,076	
Michigan State University Michigan State University	93.865	5R01HD096033-02 5R21HD096358-02	80,715	
MindLight	93.279	1R43DA050358-02	80,134	
Minnesota HealthSolutions	93.866	R44AG058515	62,245	
Miriam Hospital	93.865	5R01HD078515-05	(1,019)	
Montreal Heart Institute	93.847	5U01DK062432-19	204,220	
Mount Sinai Medical Center	93.213	1UG3AT009149-02	(28,527)	
Mount Sinai Medical Center	93.393	5R01CA202956-04	167,501	
Mount Sinai Medical Center	93.867	5U10EY024526-03	325	
Mount Sinai School of Medicine	93.837	2U01HL088942-12	283,482	
Mount Sinai School of Medicine	93.837	5P01HL131478-04	304,889	
Mount Sinai School of Medicine	93.837	5U01HL088942-11	(20,391)	
Mount Sinai School of Medicine Mount Sinai School of Medicine	93.853 93.859	5U01NS086625-04 5P01GM114472.05	17,379 11,507	
National Bureau of Economic Research	93.866	5R01GM114472-05 2P01AG005842-30	(248)	
National Bureau of Economic Research	93.866	5P01AG005842-31	80,708	
National Jewish Health	93.838	5U01HL089897-14	144,779	
National Jewish Health	93.855	4U01Al097073-04	277,403	
National Marrow Donor Program	93.839	5U01HL069249	15,381	
Natural Pharmacia International	93.273	4R42AA022577-02	25,894	
Natural Pharmacia International	93.351	SBIR	40,378	
New England Research Institute	93.837	5U01HL107407-02	10,630	
New England Research Institute	93.837	5U01HL107407-05	48,410	
New England Research Institute	93.847	5U01DK110377-03	(6,885)	
New York Genome Center New York University Medical Center	93.859 93.213	5R01GM122924-02 7R01AT007258-06	1,675 (188)	
New York University Medical Center	93.395	5U01CA213333-04	1,619	
New York University School of Medicine	93.213	4UG3AT009844-03	49,717	
New York University School of Medicine	93.837	1U34HL147347-01	11,198	
New York University School of Medicine	93.837	5U01HL105907-07	1,727	
New York University School of Medicine	93.837	R01HL119153	16	
New York University School of Medicine	93.867	5U10EY026869-03	29,318	
NIH-FIC Fogarty International Center	93.989	Direct	490,053	137,9
NIH-National Institutes of Health	93.865	Direct	1,341,082	716,3
NIH-NCATS National Center for Advancing Translational Sciences	93.310	Direct	409,213	200,7
NIH-NCATS National Center for Advancing Translational Sciences	93.350	Direct	1,339,743	244,2
NIH-NCCAM National Center for Complementary and Alternative Medicine	93.213	Direct	5,015,514	248,6
NIH-NCCIH National Center for Complementary and Integrative Health NIH-NCI National Cancer Institute	93.213 93.310	Direct Direct	53,967 693,888	
NIH-NCI National Cancer Institute	93.353	Direct	2,587,128	25,8
NIH-NCI National Cancer Institute	93.393	Direct	20,450,918	2,646,9
NIH-NCI National Cancer Institute	93.394	Direct	16,979,642	3,445,8
NIH-NCI National Cancer Institute	93.395	Direct	40,713,483	16,020,1
NIH-NCI National Cancer Institute	93.396	Direct	16,088,305	2,507,
NIH-NCI National Cancer Institute	93.397	Direct	1,665,832	770,3
	93.398	Direct	183,403	
NIH-NCI National Cancer Institute	93.361	Direct	1,663,806	353,9
NIH-NCNR National Center for Nursing Research		Direct	24,534,471	2,655,8
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute	93.867			
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute	93.172	Direct	9,772,681	5,194,2
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute	93.172 93.310	Direct	240,594	
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute NIH-NHLBI National Heart Lung, and Blood Institute	93.172 93.310 93.233	Direct Direct	240,594 6,415,916	211,8
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute NIH-NHLBI National Heart Lung, and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute	93.172 93.310 93.233 93.077	Direct Direct Direct	240,594 6,415,916 252,194	211,8 34,0
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute NIH-NHLBI National Heart Lung, and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute	93.172 93.310 93.233 93.077 93.837	Direct Direct Direct Direct	240,594 6,415,916 252,194 61,001,500	211,8 34,0 10,446,3
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute NIH-NHLBI National Heart Lung, and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute	93.172 93.310 93.233 93.077	Direct Direct Direct Direct Direct	240,594 6,415,916 252,194 61,001,500 29,868,400	211,8 34,0 10,446,3 4,546,3
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute NIH-NHLBI National Heart Lung, and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute	93.172 93.310 93.233 93.077 93.837 93.838	Direct Direct Direct Direct	240,594 6,415,916 252,194 61,001,500	211,8 34,0 10,446,3 4,546,3 1,531,8
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute NIH-NHLBI National Heart Lung, and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute	93.172 93.310 93.233 93.077 93.837 93.838 93.839	Direct Direct Direct Direct Direct Direct	240,594 6,415,916 252,194 61,001,500 29,868,400 6,931,898	211,8 34,0 10,446,3 4,546,3 1,531,8
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute NIH-NHLBI National Heart Lung, and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute	93.172 93.310 93.233 93.077 93.837 93.838 93.839 93.840	Direct Direct Direct Direct Direct Direct Direct Direct	240,594 6,415,916 252,194 61,001,500 29,868,400 6,931,898 582,963	5,194,2 211,8 34,0 10,446,3 4,546,3 1,531,8 128,0
NIH-NCNR National Center for Nursing Research NIH-NEI National Eye Institute NIH-NHGRI National Human Genome Research Institute NIH-NHGRI National Human Genome Research Institute NIH-NHLBI National Heart Lung, and Blood Institute NIH-NHLBI National Heart, Lung and Blood Institute NIH-NIA National Institute on Aging	93.172 93.310 93.233 93.077 93.837 93.838 93.839 93.840 93.310	Direct	240,594 6,415,916 252,194 61,001,500 29,868,400 6,931,898 582,963 24,891	211,8 34,0 10,446,3 4,546,3 1,531,8 128,0

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
NIII NIAMO Nedico de la citata de Arthrida con de Marco de Arthrida Citica Disco	00.040	Discort	07.577.000	0.704.040
NIH-NIAMS National Institute of Arthritis and Musculoskeletal and Skin Disease NIH-NIBIB National Institute of Biomedical Imaging and Bioengineering	93.846 93.286	Direct Direct	27,577,206 25,830,863	3,761,842 3,425,916
NIH-NIBIB National Institute of Biomedical Imaging and Bioengineering	93.310	Direct	1,711,889	-
NIH-NIBIB National Institute of Biomedical Imaging and Bioengineering	93.866	Direct	27,307	-
NIH-NICHD National Institute of Child Health and Human Development	93.310	Direct	374,609	-
NIH-NICHD National Institute of Child Health and Human Development	93.865	Direct	20,380,462	4,384,419
NIH-NIDA National Institute on Drug Abuse NIH-NIDCD National Institute on Deafness and Other Communication Disorders	93.279 93.173	Direct Direct	24,427,541	8,695,869
NIH-NIDCD National Institute on Deafness and Other Communication Disorders	93.173	Direct	19,429,422 847,477	2,217,971 433,614
NIH-NIDCR National Institute of Dental and Craniofacial Research	93.121	Direct	2,613,412	323,310
NIH-NIDDK National Institute of Diabetes and Digestive and Kidney Diseases	93.286	Direct	351,744	59,412
NIH-NIDDK National Institute of Diabetes and Digestive and Kidney Diseases	93.310	Direct	631,146	250,123
NIH-NIDDK National Institute of Diabetes and Digestive and Kidney Diseases	93.847	Direct	45,729,539	5,910,171
NIH-NIEHS National Institute of Environmental Health Sciences	93.113	Direct	2,460,794	518,577
NIH-NIEHS National Institute of Environmental Health Sciences	93.310	Direct	394,119	-
NIH-NIGMS National Institute of General Medical Sciences NIH-NIGMS National Institute of General Medical Sciences	93.310 93.859	Direct Direct	500,100 20,496,960	1,441,485
NIH-NIMH National Institute of Mental Health	93.242	Direct	49,460,739	10,260,606
NIH-NIMHD National Center on Minority Health and Health Disparities	93.307	Direct	2,057,482	523,518
NIH-NIMHD National Center on Minority Health and Health Disparities	93.310	Direct	251,605	107,029
NIH-NINDS National Institute of Neurological Disorders and Stroke	93.310	Direct	438,460	-
NIH-NINDS National Institute of Neurological Disorders and Stroke	93.853	Direct	71,092,925	9,849,554
NIH-NINR National Institute of Nursing Research	93.361	Direct	1,636,258	603,219
NIH-NLM National Library of Medicine	93.879	Direct	1,153,512	210,433
NIH-OD Office of the Director	93.310	Direct	16,556,451	7,460,148
NIH-OD Office of the Director North Carolina State University	93.351 93.286	Direct 5R01EB025205-02	4,781,122 23,141	793,207
North Carolina State University North Carolina State University	93.286	7R21EB025313-02	46,328	-
Northeastern University	93.242	5R01MH113234-03	398,940	_
Northeastern University	93.279	5R01DA047130-03	299,869	_
Northeastern University	93.393	5U01CA193632-05	197,755	-
Northeastern University	93.394	5R01CA204443-05	87,800	-
Northeastern University	93.837	1R21HL148747-01	13,612	-
Northeastern University	93.839	2R01HL143020-02	236,913	-
Northeastern University	93.839	5R01HL124315-03	(1,631)	-
Northeastern University Northeastern University	93.847 93.847	1R21DK118449-01A1 5R01DK109316-04	3,099 2,001	-
Northeastern University	93.853	1UF1NS107694-01	153,875	-
Northeastern University	93.866	1R21AG061743-01	26,871	_
Northern Arizona University	93.307	5R01MD013352-05	38,241	-
Northern California Institute for Research and Education	93.847	5R01DK120387-02	344,388	-
Northern California Institute for Research and Education	93.866	5R01AG027002-11	32,847	-
Northern California Institute for Research and Education	93.866	5U19AG024904-15	46,263	-
Northwestern University	93.838	5U01HL146408-02	379,631	-
Northwestern University	93.847 93.853	5R01DK102815-04	(9,034)	-
Northwestern University Northwestern University	93.865	2R01NS85770-06 5R21HD098498-02	17,443 72,302	-
Northwestern University	93.866	1RF1AG064006-01	68,145	_
Northwestern University	93.866	5U2CAG057441-03S1	62,219	-
Northwestern University	93.866	5U2CAG060426-02	27,275	-
Ohio State University	93.173	5R01DC014924-06	80,474	44,901
Ohio State University	93.394	5R01CA134451-08	(20,542)	-
Ohio State University	93.837	4UH3HL140144-02	526	-
Ohio State University	93.837 93.837	5R01HL128857-03	(3,947) 19,620	-
Ohio State University Ohio State University	93.866	5R01HL133665-04 1R01AG050801-02	16,776	
Ohio State University	93.866	5R01AG058822-02	18,144	-
Ohio State University	93.866	5U01AG054444-03	105,808	_
Ohio State University	93.866	7R21AG056921-02	4,536	-
Oregon Health & Science University	93.846	5R01AR073186-02	52,135	-
Oregon Health & Science University	93.395	5U10CA180888-04	(2,945)	-
Oregon Health & Science University	93.867	5R01EY019474-08	44,510	-
Origent Data Sciences	93.350	5R44TR002047-02	4,104	-
Palo Alto Veterans Institute for Research Palo Alto Veterans Institute for Research	93.242 93.307	R01MH112628 R01MD012273	31,060 40,795	-
Pendar Technology	93.847	1R43DK120127-01	(1,726)	-
Penn State University	93.173	5R01DC005642-14	10,533	_
Pennsylvania State University	93.286	7R01EB025205-03	36,094	_
Pennsylvania State University	93.837	5U10HL098115-07	6,110	-
Pennsylvania State University	93.838	3U10HL109086-06S1	1,772	-
Pennsylvania State University	93.866	5U2CAG060408-03	371,861	-
Phoenix Biosystems	93.865	1R44HD09904001	70,028	-
Phoenix Children's Hospital	93.865	R01HD088528	111,583	-
Physical Sciences	93.173	1R43DC017404-01	45,000	-
Physical Sciences Physical Sciences	93.173 93.173	1R43DC017407-01 2R44DC015414-02A1	9 43,842	-
Physical Sciences Physical Sciences	93.173	4R44CA224853-02	43,842 102,951	-
Physical Sciences	93.867	W81XWH-16-C-0163	81,750	-
President and Fellows of Harvard College	93.113	1R21ES029637-01A1	25,485	-
President and Fellows of Harvard College	93.113	2P30ES000002-56	45,453	-

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Described and Callege of Harvard Callege	02.442	20205020002 57	20.240	
President and Fellows of Harvard College President and Fellows of Harvard College	93.113 93.113	2P30ES000002-57 2R01ES022981-05A1	20,318 11,194	-
President and Fellows of Harvard College	93.113	5P30ES000002-54	114	-
President and Fellows of Harvard College	93.113	5R01ES013307-15	20,794	-
President and Fellows of Harvard College	93.113	5R01ES014370-14	54,007	-
President and Fellows of Harvard College	93.113	5R01ES026166-05	141,459	-
President and Fellows of Harvard College	93.113	5R01ES028033-03	172,168	-
President and Fellows of Harvard College	93.113	5R24ES028521-03	119,788	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.142 93.143	UH4ES027055 1P42ES030990-01	5,154 35,454	-
President and Fellows of Harvard College	93.172	2U01HG007530-06	17,753	-
President and Fellows of Harvard College	93.172	3U01HG009088-04	148,127	-
President and Fellows of Harvard College	93.172	3U01HG009088-04S1	136,991	-
President and Fellows of Harvard College	93.172	3U01HG009088-04S2	65,155	-
President and Fellows of Harvard College	93.172	5R01HG010372-03	33,618	-
President and Fellows of Harvard College	93.172	5R35HG010706-02	26,073	-
President and Fellows of Harvard College	93.172	5U01HG009088-04	99,132	-
President and Fellows of Harvard College	93.172	5U01HG009379-04	251,882	-
President and Fellows of Harvard College	93.173	1R01DC017717-01A1	67,284	-
President and Fellows of Harvard College	93.173	5R01DC016932-02	30,916	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.213 93.242	5R01AT009708-04 1R01MH112829-02	248,628 32,378	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.242	1R01MH12829-02 1R01MH121191-01A1	32,378 904	-
President and Fellows of Harvard College	93.242	1R21MH121704-01	76,791	-
President and Fellows of Harvard College	93.242	3P50MH106933-02S1	296	_
President and Fellows of Harvard College	93.242	5P50MH106933-05	(58,349)	_
President and Fellows of Harvard College	93.242	5R01MH101269-07	281,602	-
President and Fellows of Harvard College	93.242	5R01MH116858-03	212,051	-
President and Fellows of Harvard College	93.242	5R21MH109819-02	2,211	-
President and Fellows of Harvard College	93.242	5R61MH113751-02	128,530	-
President and Fellows of Harvard College	93.242	5U01MH116928-03	83,108	-
President and Fellows of Harvard College	93.242	5U19MH113211-04	23,109	-
President and Fellows of Harvard College	93.279	1R01DA048533-02	39,752	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.279 93.279	5P30DA035772-05 5R01DA044201-03	26,541 26,146	-
President and Fellows of Harvard College	93.279	HU00011920025	12,103	_
President and Fellows of Harvard College	93.286	1R01EB021857-01A1	(80,578)	-
President and Fellows of Harvard College	93.286	5R01EB023287-03	(80,651)	_
President and Fellows of Harvard College	93.307	5R01MD012793-02	26,918	_
President and Fellows of Harvard College	93.307	5R01MD014304-02	151,012	-
President and Fellows of Harvard College	93.310	5U01CA242098-02	52,569	-
President and Fellows of Harvard College	93.350	027270.387217.44012	(2,259)	-
President and Fellows of Harvard College	93.350	3UL1TR002541-02S1	104,092	-
President and Fellows of Harvard College	93.350	5UL1TR001102-05	(13,338)	-
President and Fellows of Harvard College	93.350	5UL1TR002541-02	23,232	-
President and Fellows of Harvard College	93.350	5UL1TR002541-03	4,471,403	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.350 93.353	5ULTR002541-03	76,977 109,591	-
President and Fellows of Harvard College	93.353	1P50CA244433-01 1U2CCA233262-01	520,629	-
President and Fellows of Harvard College	93.353	5U2CCA233280-02	28,073	-
President and Fellows of Harvard College	93.353	P50CA244433-01	292,859	_
President and Fellows of Harvard College	93.393	2U01CA176726-07	1,385,748	-
President and Fellows of Harvard College	93.393	5R00CA215314-04	47,911	-
President and Fellows of Harvard College	93.393	5R01CA050385-30	200,446	-
President and Fellows of Harvard College	93.393	5R21CA222940-02	(6,296)	-
President and Fellows of Harvard College	93.393	5R21CA230873-02	59,781	-
President and Fellows of Harvard College	93.393	5U01CA167552-09	93,327	-
President and Fellows of Harvard College	93.393	5U01CA209414-03	370,928	14,179
President and Fellows of Harvard College	93.396	5R01CA218579-02	213,995	-
President and Fellows of Harvard College	93.396	5R35CA220523-02	71,022	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.397 93.837	5U54CA225088-03 2R01HL060712-18	248,059 100,818	-
President and Fellows of Harvard College	93.837	5R01HL035464-29	71,585	_
President and Fellows of Harvard College	93.837	5R01HL119230-04	(544)	-
President and Fellows of Harvard College	93.837	5R01HL126896-03	6,081	_
President and Fellows of Harvard College	93.837	5R01HL130143-04	328,354	-
President and Fellows of Harvard College	93.837	5R01HL137710-02	19,912	-
President and Fellows of Harvard College	93.837	5U01HL145386-02	930,251	-
President and Fellows of Harvard College	93.837	5U19HL129903-05	650,226	-
President and Fellows of Harvard College	93.838	1R01HL150520-01	21,726	-
President and Fellows of Harvard College	93.838	5P01HL120839-05	(269)	-
President and Fellows of Harvard College	93.838	5R01HL139496-03	149,961	-
President and Fellows of Harvard College	93.847	1R56DK122380-01	193,157	-
President and Fellows of Harvard College	93.847	1UC4DK104165-01S1	(13,947)	-
President and Fellows of Harvard College	93.847	5P30DK046200-27	23,991	-
President and Fellows of Harvard College	93.847	5R01DK108200-04	121	-
President and Fellows of Harvard College President and Fellows of Harvard College President and Fellows of Harvard College	93.847 93.847 93.847	5R01DK108200-04 5R01DK114098-02 5R01DK120560-02	121 181,517 7,528	-

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
President and Fellows of Harvard College	93.847	5R24DK103074-03	(144)	
President and Fellows of Harvard College President and Fellows of Harvard College	93.853	5R01NS086882-05	14,342	-
President and Fellows of Harvard College	93.853	5R01NS089619-05	102,384	-
President and Fellows of Harvard College	93.853	5R01NS104143-03	127,912	-
President and Fellows of Harvard College	93.853	5R01NS111952-02	123,297	-
President and Fellows of Harvard College	93.855	1R01Al143723-01A1	148,747	-
President and Fellows of Harvard College	93.855	2P01Al056299-16	643,932	-
President and Fellows of Harvard College	93.855	2P30Al060354-16	1,575,510	-
President and Fellows of Harvard College	93.855	5P01Al056299-15	(29,721)	-
President and Fellows of Harvard College	93.855	5P01Al112521-05	(4,162)	-
President and Fellows of Harvard College	93.855	5P30Al060354-13	561	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.855	5P30Al060354-14	(1,153)	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.855 93.855	5P30Al060354-15 5P30Al060354-16	(38,830) 11,144	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.855	5PO1Al112521-05	120	-
President and Fellows of Harvard College	93.855	5R01Al114617-05	(10,806)	_
President and Fellows of Harvard College	93.855	5R21AI143365-02	19,484	_
President and Fellows of Harvard College	93.855	5U01AI114235-05	(6,625)	_
President and Fellows of Harvard College	93.855	5U01Al135940-03	761,896	_
President and Fellows of Harvard College	93.855	5U19AI109740-05	(900)	_
President and Fellows of Harvard College	93.855	5U19AI109755-05	(13,280)	-
President and Fellows of Harvard College	93.855	5U19Al133524-02	(8,136)	-
President and Fellows of Harvard College	93.855	5U19Al133524-03	168,106	-
President and Fellows of Harvard College	93.855	5U19Al133524-04	244,499	-
President and Fellows of Harvard College	93.855	5U19AI142793-02	174,355	-
President and Fellows of Harvard College	93.855	5UM1AI069456-14	39,036	-
President and Fellows of Harvard College	93.855	R01Al037581	16,200	-
President and Fellows of Harvard College	93.859	5P01GM047467-25	1	-
President and Fellows of Harvard College	93.859	5P01GM099117-07	(4,944)	-
President and Fellows of Harvard College	93.859	5P50GM107618-05	(339)	-
President and Fellows of Harvard College	93.859	5R01GM116525-03	(81)	-
President and Fellows of Harvard College	93.859	5R01GM131401-02	305,585	-
President and Fellows of Harvard College	93.859	R01GM129026	24,300	-
President and Fellows of Harvard College	93.865	5R01HD080471-05	(2)	-
President and Fellows of Harvard College	93.865	5R01HD088619-04	20,341	-
President and Fellows of Harvard College	93.865	5R01HD091797-05	76,693	-
President and Fellows of Harvard College	93.865	5R01HD093761-03	114,945	-
President and Fellows of Harvard College	93.865	5R01HD094725-02	137,057	-
President and Fellows of Harvard College	93.865	5R01HD095766-03	46,978	-
President and Fellows of Harvard College	93.865	5R01HD097778-02	281,601	-
President and Fellows of Harvard College	93.865	5R21HD092879-02	(4,247)	-
President and Fellows of Harvard College	93.866	1R01AG066793-01	28,345	-
President and Fellows of Harvard College	93.866	1R56AG059620-01A1	102,296	-
President and Fellows of Harvard College	93.866	1RF1AG061774-01	574,057	-
President and Fellows of Harvard College	93.866 93.866	3P01AG032952-09S1	97,026 30,347	-
President and Fellows of Harvard College President and Fellows of Harvard College	93.866	3R01AG048917-05 3U54CA225088-02S1	34,166	-
President and Fellows of Harvard College	93.866	5P01AG032952-07	16,973	-
President and Fellows of Harvard College	93.866	5P01AG041710-06	5,839	_
President and Fellows of Harvard College	93.866	5P01AG041710-07	121,112	_
President and Fellows of Harvard College	93.866	5R01AG041710-07 5R01AG011085-27	261,303	-
President and Fellows of Harvard College	93.866	5R01AG053273-04	141,082	_
President and Fellows of Harvard College	93.866	5R01AG054066-02	5,324	_
President and Fellows of Harvard College	93.866	5R01AG060935-02	118.000	-
President and Fellows of Harvard College	93.866	5R03AG060247-02	14,058	-
President and Fellows of Harvard College	93.989	5D43TW009610-08	1,807	-
President and Fellows of Harvard College	93.989	5R21TW011229-02	36,306	-
Rector and Visitors of the University of Virginia	93.837	5R21HL140432-02	(211)	-
Rector and Visitors of the University of Virginia	93.837	5U01HL117006-05	241,298	-
Rector and Visitors of the University of Virginia	93.847	3P50DK096373-08S1	13,719	-
Rector and Visitors of the University of Virginia	93.865	5R01HD087413-02	2,505	-
Regents of the University of California	93.113	5R01ES023316-07	374,966	-
Regents of the University of California	93.286	5U01EB025162-03	699,594	-
Regents of the University of California	93.361	5R01NR015591-04	72,360	-
Regents of the University of California	93.846	5R01AR073135-02	266,741	-
Regents of the University of California	93.853	5U01NS086090-05	(2,342)	-
Regents of the University of California	93.855	5UM1AI110498-05	18,681	-
Regents of the University of California	93.865	5R01HD078748-05	27,335	-
Regents of the University of California	93.867	5R01EY024608-04	4,171	-
Regents of the University of California, Irvine	93.113	5R01ES020454-09	201,425	-
Regents of the University of California, Los Angeles	93.242	5R01MH085953-08	182,570	-
Regents of the University of California, Los Angeles	93.847	1RC2DK118640-01A1	28,000	-
Regents of the University of California, Los Angeles	93.855	5UM1AI068636-14	249,010	-
Regents of the University of California, Los Angeles	93.855	5UM1AI068636-14R	36,757	-
Regents of the University of California, Los Angeles	93.855	5UM1AI106701-07	306,119	-
Regents of the University of California, Los Angeles	93.855	7UM1AI068636-13	370,010	-
Departs of the University of Colifornia Lee Appeles	93.855	7UM1AI068636-13 REVISED	2,486	_
Regents of the University of California, Los Angeles	93.033	7 OWN TAIOUUUUU- 13 TKL VIOLD	2,400	
Regents of the University of California, Los Angeles Regents of the University of California, Los Angeles	93.855	7UM1Al068636-14	680,501	-

luster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Decrete of the Heisenstee of Oelffersia Lee Appele	00.055	LIMA ALOGOGOGO A A	40.007	
Regents of the University of California, Los Angeles Regents of the University of California, Los Angeles	93.855 93.859	UM1Al068636-14	49,387 628,709	-
Regents of the University of California, Los Angeles	93.865	5P01GM099134-09 5R01HD090138-03	82,022	-
Regents of the University of California, Los Angeles	93.866	5R01AG054366-03	1,010	_
Regents of the University of California, Los Angeles	93.866	R01AG054366-04	168	-
Regents of the University of California, San Diego	93.242	1RF1MH117155-01	68,811	-
Regents of the University of California, San Diego	93.242	2R01MH106595-04	96,813	-
Regents of the University of California, San Diego	93.242 93.242	5R01MH106595-03	(284)	-
Regents of the University of California, San Diego Regents of the University of California, San Diego	93.242	5R01MH111359-04 5R01MH111438-05	106,494 464,613	-
Regents of the University of California, San Diego	93.242	5R21MH117518-02	42,014	_
Regents of the University of California, San Diego	93.279	5U24DA041123-05	99,837	_
Regents of the University of California, San Diego	93.310	1UG3CA241687-01	48,835	-
Regents of the University of California, San Diego	93.855	5U19AI070535-14	40,069	-
Regents of the University of California, San Diego	93.866	5R01AG047922-02	73,289	-
Regents of the University of California, San Diego	93.866	5R01AG048642-05	127,005	
Regents of the University of California, San Diego	93.866	5U19AG010483-26	602,717	612,031
Regents of the University of California, San Francisco	93.394	1U01CA225427-01	(34)	-
Regents of the University of California, San Francisco	93.837	5R33HL141047-03	145,773	-
Regents of the University of California, San Francisco Regents of the University of California, San Francisco	93.838 93.838	5R35HL140026-03 5U01HL134766-04	14,033 15,316	-
Regents of the University of California, San Francisco	93.847	R01DK114014	10,227	-
Regents of the University of California, San Francisco	93.853	1R01NS111166-01A1	11,658	_
Regents of the University of California, San Francisco	93.853	5UH3NS105557-03	12,794	_
Regents of the University of California, San Francisco	93.855	5U01Al131296-04	6,452	-
Regents of the University of California, San Francisco	93.855	5UM1AI110498-05	(6,607)	-
Regents of the University of California, San Francisco	93.859	1R01GM130900-01A1	18,747	-
Regents of the University of California, San Francisco	93.865	5R01HD089511-05	51,346	-
Regents of the University of California, San Francisco	93.865	5R01HD098978-02	143,046	-
Regents of the University of California, San Francisco	93.866	2P30AG015272-21	(45)	-
Regents of the University of California, San Francisco	93.866	5R01AG066137-02	22,341	-
Regents of the University of Colorado	93.233 93.286	5R21HL145421-02	83,021	-
Regents of the University of Colorado Regents of the University of Colorado	93.846	1R01EB019440-01A1 1R01AR069060-01A1	82,754 26,028	-
Regents of the University of Colorado	93.846	5R01AR065441-05	20,028	-
Regents of the University of Michigan	93.077	1U54CA229974-02	47,645	_
Regents of the University of Michigan	93.173	5R01DC004820-16	7,241	-
Regents of the University of Michigan	93.213	3R01AT007550-05S1	10,286	-
Regents of the University of Michigan	93.242	5R01MH110872-04	112,062	-
Regents of the University of Michigan	93.393	5U01CA199284-05	215,953	-
Regents of the University of Michigan	93.395	1R21CA234760-01	21,376	-
Regents of the University of Michigan	93.853	1U01NS088034	72,225	-
Regents of the University of Michigan	93.853	1U01NS099046-01A1	3,921	-
Regents of the University of Michigan	93.853	U01NS069498	(30)	-
Regents of the University of Michigan	93.855 93.866	5R01Al138347-02	5,671 8,460	-
Regents of the University of Michigan Regents of the University of Minnesota	93.279	5U1AG017719-20 1R01DA047287-01A1	21,487	-
Regents of the University of Minnesota	93.286	5U01EB025153-03	17,828	-
Regents of the University of Minnesota	93.837	5R01HL131049-04	60,977	_
Regents of the University of Minnesota	93.837	5R01HL141288-03	113,110	-
Regents of the University of Minnesota	93.853	5R01NS080816-04	282	-
Regents of the University of New Mexico	93.279	5R01DA016017-05	3,236	-
Rensselaer Polytechnic Institute	93.855	R01Al132580	208,549	-
Research Foundation for Mental Hygiene	93.242	5R01AG047146-05	8,144	-
Research Foundation for Mental Hygiene	93.242	5R61MH116089-02	34,144	-
Research Foundation for SUNY on behalf of University of Buffalo	93.867	1R01EY028553-01	77,002	-
Research Foundation for the State University Of New York, SUNY, Albany	93.865	1R01HD097331-01	29,991	-
Research Triangle Institute International	93.279	5UM1DA049394-02	488,923	-
Research Triangle Institute International Research Triangle Institute International	93.837 93.840	1R01HL149352-01 1OT2HL156812-01	50,453 109,618	-
Reveal Pharmaceuticals	93.847	5R44DK113906-03	174,213	-
Rhode Island Hospital	93.361	5R01NR014782-05	19,277	-
Rhode Island Hospital	93.837	5R01HL134706-04	94,277	-
Rhode Island Hospital	93.859	1P20GM125507-01	(1,881)	-
Rhode Island Hospital	93.866	5R03AG056349-02	(98)	-
Riparian Pharmaceuticals	93.837	5R44HL118826-04	(1,296)	-
Robin Medical	93.394	R44CA203276	34,743	-
Rockefeller University	93.855	5U01AI129825-04	12,904	-
Roswell Park Cancer Institute	93.393	2U24CA180996-07	126,855	-
RPCI Oncology	93.172	5U41HG004059-16	118,538	-
RPCI Oncology	93.393	5U24CA180996-06	(1,786)	-
Rush University	93.847	5R01DK107984-04	66,378	-
Rush University Medical Center	93.847	R01DK084195-08	56,341	-
	93.853	5R01NS084965-05 5U01NS096767-04	(1) 1,558,786	- 164,873
Rush University Medical Center				164 873
Rush University Medical Center	93.853			.0.,0.0
Rush University Medical Center Rush University Medical Center	93.866	1RF1AG059621-01	73,118	-
Rush University Medical Center				

ter Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Rutgers, State University of New Jersey	93.242	5R34MH113757-03	65,990	_
Rutgers, State University of New Jersey	93.242	5R01EB020036-04	108,014	-
Schepens Eye Research Institute	93.853	1RF1NS110048-01	42,467	-
Schepens Eye Research Institute	93.867	1R21EY029847-01A1	33,775	-
Scripps Research Institute	93.855	1R56Al134418-01A1	(19,120)	-
Scripps Research Institute	93.855	5R01Al147826-02	347,304	-
Scripps Research Institute	93.855	5U19Al135995-02	40,342	-
Scripps Research Institute	93.855	5U19AI135995-03	128,072	-
Scripps Research Institute	93.855	5UM1A1100663-07	(3,299)	-
Scripps Research Institute	93.855	5UM1AI100663-07	(15,500)	-
Scripps Research Institute Scripps Research Institute	93.855 93.867	5UM1Al144462-02 5R01EY026202-05	1,321,312 128,993	_
Seattle Institute for Biomedical and Clinical Research	93.393	1R01CA239208-01	192,958	6,747
Seattle Institute for Biomedical and Clinical Research	93.866	1R01AG061558-01A1	36,169	0,747
SFC Fluidics	93.279	2R44DA041173-02	37,050	
SingletO2 Therapeutics	93.121	2R44DE026083-03	184,821	
Sloan Kettering Institute for Cancer Research	93.393	5U01CA199335-05	188,484	_
Society of Thoracic Surgeons	93.837	5R01HL122261-05	8,024	_
Spaulding Rehabilitation Hospital	93.865	5R01HD082302-03	(2,499)	_
Stanford University	93.121	5R01DE024971-05	133,336	
Stanford University	93.173	5R01DC014034-05	123,525	_
Stanford University	93.393	5R01CA193694-04	67,925	_
Stanford University Medical Center	93.173	5R01DC005960-13	(4,607)	
Stanford University Medical Center	93.853	2U01NS038455-18	108,502	
Stanford University Medical Center	93.853	5U01NS038455-18	401,088	
State University of New York Upstate Medical University	93.847	5R01DK11045603	3,088	
Sunnybrook Research Institute	93.173	1R01DC017291-03	259,360	
Sunnybrook Research Institute	93.279	5R01DA042299-02	20,945	
Swedish Medical Center	93.395	5R01CA184283-04	44,590	
Sylvatica Biotech	93.286	1R21EB023021-01	(6)	
Sylvatica Biotech	93.855	2R44Al124835-02	70,306	
The California Medical Innovations Institute	93.310	3OT2OD025308-01S2	61,425	
The Medical College of Wisconsin	93.310	5U24HG010423-02	54,509	
The Methodist Hospital Research Institute	93.853	5U01NS104326-03	13,832	
The Methodist Hospital Research Institute	93.866	R01AG057635	302,962	
The University of Texas Health Science Center at Houston	93.837	5R01HL141824-03	102,634	
Theranano	93.279	1R41DA043974-01	(4,153)	
Third Pole	93.350	5R44TR001704-02	(900)	
Thomas Jefferson University	93.837	5R01HL136209-04	123,618	
Trace Ability	93.242	1R44MH119110-01A1	40,894	-
Translational Genomics Research Institute	93.866	1UH2AG064706-01	94,934	-
Tristan Technologies	93.286	2R44EB02314702	26,271	
Tristan Technologies	93.853	5R44NS090894-04	7,016	
Trustees of Boston College	93.847	7R01DK108200-06	51,099	
Trustees of Boston University	93.173	4500003214	221,515	
Trustees of Boston University	93.173	5R01DC015570-05	22,283	
Trustees of Boston University	93.273	5R01AA007112-30	90,979	-
Trustees of Boston University	93.273	5R01AA015923-08	43,282	-
Trustees of Boston University	93.286	5R21EB027506-02	69,256	-
Trustees of Boston University	93.393	5R01CA226805-03	32,283	-
Trustees of Boston University	93.394	5R01CA232056-02	256,688	-
Trustees of Boston University	93.395	1R01CA227433-01	(161)	-
Trustees of Boston University	93.395	5R01CA227433-03	134,563	-
Trustees of Boston University	93.395	5R01CA232708-02	201,971	
Trustees of Boston University	93.837	5R01HL098028-06	16,852	
Trustees of Boston University	93.837	5R01HL128914-04	126,553	
Trustees of Boston University	93.837	5R01HL141406-03	90,236	
Trustees of Boston University	93.838	5R33HL137081-04	137,821	
Trustees of Boston University	93.847	3UC4DK108612-01S1	10,230	
Trustees of Boston University	93.853	5R01NS110669-02	93,292	
Trustees of Boston University	93.853	5U01NS093334-05	534,943	
Trustees of Boston University	93.859	5R01GM121457-03	121,400	
Trustees of Boston University	93.866	1R01AG066010-01	55,107	
Trustees of Boston University	93.866	1RF1AG056032-01A1	277,441	
Trustees of Boston University	93.866	5R01AG067394-02	23,403	
Trustees of Columbia University in the City of New York	93.393	5U01CA199336-05	54,410	
Trustees of Columbia University in the City of New York	93.393	7R01CA140574-10	(1,682)	
Trustees of Columbia University in the City of New York	93.395	5R01CA212086-04	117,841	
Trustees of Columbia University in the City of New York	93.838	5R01HL137234-03	85,990	
Trustees of Columbia University in the City of New York	93.853	2U54NS078059-09	59,876	
Trustees of Columbia University in the City of New York	93.853	5R01NS084142-07	84,676	
Trustees of Columbia University in the City of New York	93.855	5P01AI045897-20	27,436	
Trustees of Columbia University in the City of New York	93.855	5U54Al138370-03	63,181	
Trustees of Columbia University in the City of New York	93.865	5R01HD094793-03	35,908	
Trustees of Columbia University in the City of New York Trustees of Columbia University in the City of New York	93.866	1RF1AG057473-01	28,773	
Trustees of Columbia University in the City of New York Trustees of Columbia University in the City of New York	93.866	3U01AG046152-05S1	(409)	
		0001/10070102-0001	(409)	
		5U01AG061356-02	112 100	
Trustees of Columbia University in the City of New York Trustees of Columbia University in the City of New York	93.866 93.866	5U01AG061356-02 7U01AG046152-05	113,189 (19,529)	

ter Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipien Expenditure
Tructoce of Indiana University	93.839	1R01HL140961-01A1	12.422	
Trustees of Indiana University Trustees of Indiana University	93.839 93.847	R01DK112293-04	131,259	
Trustees of Indiana University	93.853	4R33NS095139-02	(1,436)	
Trustees of Indiana University	93.859	5R01GM120156-03	18,353	
Trustees of Indiana University	93.866	1R56AG057195-01	4,997	
Trustees of Indiana University	93.866	3U01AG057195-02S1	4,424	
Trustees of Indiana University	93.866	5U01AG057195-02	179,519	
Trustees of Indiana University	93.866	5U01AG057195-03	157,818	
Trustees of the University of Pennsylvania	93.286	5R21EB027397-02	59,712	
Trustees of the University of Pennsylvania	93.286	5U24EB028941-02	111,412	
Trustees of the University of Pennsylvania	93.350	2-U54-AR-057319-17	18,879	
Trustees of the University of Pennsylvania	93.350	3U54AR057319-16S1	(10,972)	
Trustees of the University of Pennsylvania	93.394	5R01CA229502-03	35,117	
Trustees of the University of Pennsylvania	93.395	1R01CA197332-02	(890)	
Trustees of the University of Pennsylvania	93.837	5P01HL094307-09	50,585	
Trustees of the University of Pennsylvania	93.837	5R01HL103723-08	256,208	
Trustees of the University of Pennsylvania	93.837	5R01HL131613-04	13,252	
Trustees of the University of Pennsylvania	93.846	5-U54-AR-057319-16	34,681	
Trustees of the University of Pennsylvania	93.847	5U01DK103225-05	573	
Trustees of the University of Pennsylvania	93.853	1U54NS115322-01	39,172	
Trustees of the University of Pennsylvania	93.853	5R01NS093120-02	(3,498)	
Trustees of the University of Pennsylvania	93.866	2U01AG032984-11	9,589	
Trustees of the University of Pennsylvania	93.866	5U01AG032984-10	11,652	
Trustees of the University of Pennsylvania	93.866	5U01AG052943-04	74,930	
Trustees of Tufts College	93.393	5R01CA207110-03	26,991	
Trustees of Tufts College	93.837	5R01HL130735-04	143,390	
Trustees of Tufts College	93.853	5R01NS092847	73,572	
Trustees of Tufts College	93.867	5R01EY029870-02	42,635	
Tufts Medical Center	93.839	5R01HL135160-03	22,734	
Tufts Medical Center	93.846	5R01AR065977-04	1	
Tufts Medical Center	93.847	5U01DK098245-07	26,490	
Tufts Medical Center	93.865	1R01HD097081-02	180,234	
Tufts Medical Center	93.867	5R01EY029602-02	6,615	
Tufts University	93.866	5R01AG059011-02	199,074	
Tufts University School of Medicine	93.350	5UL1TR002544-03	30,681	
Tulane University School of Medicine	93.865	5U01HD052104-15	21,806	
University of Alabama, Birmingham	93.847	5R01DK115473-03	229,499	
University of Alabama, Birmingham	93.853	1U01NS093663-01A1	6,022	
University of Alabama, Birmingham	93.853	5U01NS093663-02	554	
University of Alabama, Birmingham	93.855	5U19AI142737-02	106,289	
University of Arizona	93.837	5U01HL133362-03	161,941	
University of Arizona	93.846	5R01AR071409-04	200,974	
University of Arizona	93.866	3RF1AG057457-02S1	62,255	
University of Arizona	93.989	1R21TW011222-01	4,768	
University of Arkansas for Medical Sciences	93.865	8U24OD024957	83,537	
University of California at Berkeley	93.172	5RM1HG009490-03	6,948	
University of California at Berkeley	93.172	5RM1HG009490-04	470,722	
University of California at Davis	93.853	7R01NS058949-10	10,752	
University of California at Davis	93.853	R01NS058949	118,159	
University of California at Davis	93.866	1RF1AG054548-01	220,994	
University of California at Irvine	93.242	1RF1MH120021-01	30,713	
University of California at Irvine	93.361	5R01NR015591-05	25,054	
University of California at Irvine	93.396	5R01CA190964-04	67,243	
University of California at San Francisco	93.837	5R01HL125034-03	83,587	
University of California at San Francisco	93.853	5U01NS086090-05	184	
University of California at San Francisco	93.853	5U54NS092089-05	7,817	
University of California at San Francisco	93.855	5UM1AI110498-05	(1,448)	
University of California at San Francisco	93.859	5R01GM117163-04	(23,302)	
University of California at San Francisco	93.866	5R01AG038791-10	181,525	
University of California at San Francisco, Cardiovascular Research Institute	93.395	5U24CA215123-03	346,482	
University of Chicago	93.847	1R01DK118266-02	36,172	
University of Chicago	93.847	5U54DK118612-03	87,981	
University of Cincinnati	93.838	5U01HL131755-04	17,012	
University of Cincinnati	93.853	1U01NS099043-01A1	55	
University of Cincinnati	93.853	1U01NS100699-01A1	222	
University of Cincinnati	93.853	5R01NS100417-03	54,650	
University of Cincinnati	93.853	5U01NS036695-18	38,556	
University of Cincinnati	93.853	5U01NS036695-19	229,832	
University of Cincinnati	93.853	5U01NS092076-02	2,990	
University of Cincinnati	93.853	5U01NS095869-02	7,708	
University of Colorado at Denver	93.361	2U2CNR014637-06	5,801	
University of Colorado at Denver	93.361	3U2CNR014637-07S1	65,381	
University of Colorado at Denver	93.361	5U2CNR014637-07	155,209	
University of Colorado at Denver	93.837	5R01HL125734-05	145,371	
University of Colorado at Denver	93.838	1R01HL152735-01	17,925	
University of Colorado at Denver	93.846	3UH2AR067681-05S1	19,165	
University of Colorado at Denver	93.846	5R01AR075033-02	56,363	
Chivelony of Colorado at Benver				
University of Colorado at Denver	93.865	5R03HD094560-02	7,744	

ter Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipie Expenditure
University of Colorado at Denver	93,866	5R01AG054366-05	31,013	
University of Connecticut	93.242	5R01MH106506	21,649	
University of Connecticut Health Center	93.837	R01 HL131862	167,484	
University of Connecticut Health Center	93.866	4R01AG022092-10	28,037	
University of Florida Board of Trustees	93.242	R01MH117114	(21,546)	
University of Florida Board of Trustees	93.279	5R01DA039044-05	187,331	
University of Florida Board of Trustees	93.393	1R01CA240341-01A1	48,740	
University of Florida Board of Trustees	93.865	5R01HD089939-03	275,249	
University of Hawaii	93.279	4R01DA019912-09	(25,902)	
University of Hawaii	93.393	4P01CA168530-05	1,450	
University of Houston	93.286	5R21EB026175-02	35,429	
University of Illinois	93.242	5R56MH112642-02	96,834	
University of Illinois at Urbana Champaign	93.113	5R21ES027878-02	4,296	
University of Illinois at Urbana Champaign	93.121	1R01DE027989	220,643	
University of Iowa	93.847	5U01DK108328-05	1,675	
University of Iowa	93.853	5U01NS093663-05	117,084	
University of Iowa	93.853	7U01NS093663-04	5,517	
University of Iowa	93.855	5UH2AI144434-02	5,781	
University of Kansas Medical Center Research Institute	93.847	5R01DK115727-02	30,266	
University of Kentucky	93.213	1R34AT010370-01A1	7,215	
University of Louisville	93.837	1PO1HL078825-13	1,746	
University of Maryland	93.847	52P30DK090868-09	(7,000)	
University of Maryland	93.853	5R01NS100178-02	204,480	
University of Maryland	93.855	1R21Al124776-02	(3,478)	
University of Maryland	93.855	5R01Al120008	118,045	
University of Maryland, Baltimore	93.855	1R01Al144983-02	134,061	
University of Maryland, Baltimore	93.855	5U19Al082655	(194)	
University of Maryland, Baltimore	93.859	R01GM118837	17,520	
University of Massachusetts Amherst	93.242	1R01MH122371-01	46,578	
University of Massachusetts Amherst	93.393	5R01CA207369-04	168,317	
University of Massachusetts Amherst	93.865	5R01HD078517-05	43,863	
University of Massachusetts Amherst	93.866	5R01AG051600-04	114,802	
University of Massachusetts at Lowell	93.853	5R01NS097723-03	32,003	
University of Massachusetts Medical Center	93.855	5R01Al123286-04	55,436	
University of Massachusetts Medical School	93.310	5UH3TR000888-05	(951)	
University of Massachusetts Medical School	93.853	5R01NS098747-05	108,908	
University of Massachusetts Medical School	93.866	5R33AG057806-03	772	
University of Massachusetts, Worcester	93.213	5R61AT009337-02	(2,834)	
University of Massachusetts, Worcester	93.279	5R21DA046734-02	45,826	
University of Massachusetts, Worcester	93.837	5R01HL131624-04	451,903	
University of Massachusetts, Worcester	93.837	5R01HL137734-03	22,914	
University of Massachusetts, Worcester	93.837	5R01HL137794-03	6,540	
University of Massachusetts, Worcester	93.837	5R01HL145721-02	20,333	
University of Massachusetts, Worcester	93.853	1U01NS114098-01	181,428	
University of Massachusetts, Worcester	93.853	5R01NS091552-04	97	
University of Massachusetts, Worcester	93.853	5R01NS108769-02	432,739	
University of Massachusetts, Worcester	93.879	1UG4LM012347-01	10,000	
University of Miami	93.242	5R01MH103770-05	40,506	
University of Miami	93.242	5R01MH110441-04	99,530	
University of Miami	93.839	5R01HL131013-04	50,194	
University of Miami	93.853	2U54NS092091-06	6,373	
University of Miami	93.853	5R01NS098740-04	36,011	
University of Michigan	93.213	5R01AT007550-05	33,484	(5.
University of Michigan	93.837	5R01HL127564-04	(6,113)	(5,
University of Michigan Medical School	93.837	1R01HL146619-01A1	19,276	
University of Michigan Medical School	93.839	R01HL144550	66,375	
University of Minnesota	93.839	5R01HL132906-03	69,852	
University of New South Wales	93.279	5R01DA040506-03	535	
University of North Carolina at Chapel Hill	93.172	5U41HG009650-04	48,936	
University of North Carolina at Chapel Hill	93.242	3U01MH109528-04S1	21,433	
University of North Carolina at Chapel Hill	93.242	5R34MH111852-02	5,586	
University of North Carolina at Chapel Hill	93.242	5U01MH110925-03	(97)	
University of North Carolina at Chapel Hill	93.242	5U01MH110925-04	532,125	
University of North Carolina at Chapel Hill	93.286	5R01EB025024-03	25,883	
University of North Carolina at Chapel Hill	93.393	1R01CA227122-01A1	104,281	
University of North Carolina at Chapel Hill	93.865	5R01HD092374-04	82,591	
University of North Carolina at Chapel Hill	93.865	5U19HD089881-05	34,794	05.
University of North Carolina at Chapel Hill	93.865	5U24HD089880-05	508,292	85,0
University of Pittsburgh Of the Commonwealth System of Higher Education	93.121	5R01DE026155-02	72,694	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.242	5R01MH107797-05	46,388	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.307	5R01MD009118-04	(49)	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.350	1R21TH002639-01A1	21,035	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.350	5UL1TR001857-05	199,989	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.361	5R01NR014831-05	4,905	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.396	7R21CA208618-02	(720)	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.838	180007-03	38,335	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.838	5R01HL113178-07	28,366	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.838	5U01HL128954-04	36,382	

ster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
University of Pittsburgh Of the Commonwealth System of Higher Education	93.846	1UG3AR076568-01	43.615	
University of Pittsburgh Of the Commonwealth System of Higher Education	93.846	5P50AR060780-08	46,846	-
University of Pittsburgh Of the Commonwealth System of Higher Education	93.846	5R21AR069285-03	1,917	-
University of Pittsburgh Of the Commonwealth System of Higher Education	93.853	1U24NS115708-01	23,229	-
University of Pittsburgh Of the Commonwealth System of Higher Education	93.853	5R01NS096755-05	185,688	-
University of Pittsburgh Of the Commonwealth System of Higher Education	93.853	5R01NS098023-05	31,077	-
University of Pittsburgh Of the Commonwealth System of Higher Education University of Pittsburgh Of the Commonwealth System of Higher Education	93.855 93.855	5P01Al108545-05 5P01Al129880-03	55,713 457,377	_
University of Pittsburgh Of the Commonwealth System of Higher Education	93.865	4U10HD036801-21 / S-MFM1819-JB	134,913	_
University of Pittsburgh Of the Commonwealth System of Higher Education	93.866	5R01AG056331-03	4,640	-
University of Pittsburgh Of the Commonwealth System of Higher Education	93.866	7R01AG056279-03	13,124	-
University of Rochester	93.242	2R01MH045573-29A1	177,594	-
University of Rochester	93.242	5P50MH106435-05	26,219	-
University of Rochester University of Rochester	93.242	5R01MH045573-28	(53,298)	-
University of Rochester	93.242 93.837	5R01MH107371-05 R01 HL 140588-03	9,813 20	-
University of Rochester	93.866	2P01AG047200-07	598,754	-
University of Rochester	93.866	5P01AG047200-04	(3,230)	_
University of Rochester Medical Center	93.853	5R21NS104878-02	38,043	-
University of South Carolina	93.173	1R01DC017156-01	(1,006)	-
University of Southern California	93.847	5U01DK107350-05	90,571	-
University of Southern California	93.847	5U24DK110814-05	226,170	-
University of Southern California	93.853	3UH3NS100614-04S1	13,715	-
University of Southern California	93.853	5U54NS100064-03	43,317	-
University of Southern California	93.866	1R01AG053798-01A1	45,214	-
University of Southern California	93.866	1R01AG061848-01	240,347	-
University of Southern California	93.866 93.866	2U19AG024904-11	5,027 428.922	-
University of Southern California University of Southern California	93.866	4U19AG010483-25 5R01AG053798-02	428,922 25,925	-
University of Southern California	93.866	5U19AG010483-26	38,718	_
University of Southern California	93.866	5U19AG024904-14	20,164	_
University of Southern California	93.866	5U24AG057437-02	486,707	_
University of Southern California	93.866	5U24AG057437-03	477,575	-
University of Southern California	93.866	7RF1AG041845-02	204	-
University of Tennessee Health Science Center	93.867	1R21EY030142-01	123,039	-
University of Texas at San Antonio	93.853	1R01NS113516-02	376,285	-
University of Texas Health Science Center at Houston	93.399	51R01CA232888-02	81,660	-
University of Texas Health Science Center at Houston	93.837	5UM1HL087318-12	17,972	-
University of Texas Health Science Center at Houston University of Texas Health Science Center at Houston	93.838 93.865	5R01HL145025-02 1R01HD099543-01	258,010 80,116	-
University of Texas Health Science Center at Houston	93.213	5R01AT008422-05	1,480	_
University of Texas Health Science Center at San Antonio	93.242	5R01MH107499-03	74,145	_
University of Texas Health Science Center at San Antonio	93.853	5R01NS017950-36	239,674	_
University of Texas Health Science Center at San Antonio	93.866	7R01AG049607-04	400,259	-
University of Texas Health Science Center at San Antonio	93.866	7R01AG054076-04	681,723	-
University of Texas Medical Branch at Galveston	93.865	19-84725-10	15,941	-
University of Texas Medical Branch at Galveston	93.865	5P2CHD065702-09	(6)	-
University of Texas Medical Branch at Galveston	93.865	5P2CHD065702-10	13,049	-
University of Texas Southwestern Medical Center	93.393	5R01CA233794-02	43,993	-
University of Texas Southwestern Medical Center	93.396	1UM1CA221940-03	724,233	-
University of Texas Southwestern Medical Center University of Texas Southwestern Medical Center	93.396 93.853	5UM1CA221940-03 5R01NS108115-03	61,447 528,293	-
University of Texas Southwestern Medical Center	93.855	1R34Al134569-01A1	1,943	
University of Texas Southwestern Medical Center	93.855	5U19AI142784-02	982,758	_
University of Texas Southwestern Medical Center	93.866	5R01AG056426-03	296,772	-
University of Texas, MD Anderson Cancer Center	93.394	5U01CA200462-04	88,078	-
University of Texas, MD Anderson Cancer Center	93.394	5U01CA200462-05	54,995	-
University of Texas, MD Anderson Cancer Center	93.396	5P01CA117969-15	56,051	-
University of Texas, MD Anderson Cancer Center	93.859	5R01GM116024-04	4,462	-
University of Utah	93.121	5R01DE027255-03	36,337	-
University of Utah	93.173	5U01DC014706-03	3,247	-
University of Utah	93.393	1R01CA242729-01	41,199	-
University of Utah University of Utah	93.395 93.855	1R01CA227225-02 5R33Al122377-05	199,017 115,853	-
University of Utah	93.859	1R01GM134069-01	106,246	_
University of Washington	93.113	5R01ES027696-04	112,760	_
University of Washington	93.837	1R01HL142834-02	72,201	_
University of Washington	93.837	5R01HL130770-02	506	-
University of Washington	93.838	5R01HL132232-04	12,199	-
University of Washington	93.855	1R01Al136648-03	412,040	-
University of Washington	93.866	3U01AG016976-20SA	64,027	-
University of Washington	93.866	3U01AG016976-20SA	57,928	-
University of Washington - Seattle	93.393	2R01CA194393-05A1	11,813	-
University of Washington - Seattle	93.847	5R01DK088762-09	(94,417)	-
University of Wisconsin, Madison	93.865	1P01HD076892-01A1	201,931	-
Vanderbilt University	93.286	5R01EB016695-07	167,883	-
Vanderbilt University Medical Center	93.242 93.242	1R01MH120736-01 5R01MH111776-04	31,307 19,858	-
Vanderbilt University Medical Center				

ter Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-T Entity Identifying Nu	-	Subrecipien Expenditures
Vanderbilt University Medical Center	93.394	5R01CA231840-03	52,001	
Vanderbilt University Medical Center	93.837	5R01HL131977-05	36,419	
Vanderbilt University Medical Center	93.838	1R56HL141567-01A1 5R01HL146588-02	(7,469)	
Vanderbilt University Medical Center Vanderbilt University Medical Center	93.838 93.855	1R21Al139012-02	26,461 56,114	
Vanderbilt University Medical Center Vanderbilt University Medical Center	93.855	5R01Al077505-11	11,573	
Vanderbilt University Medical Center	93.866	7R01AG062499-02	14,798	
Vanderbilt University Medical Center	93.867	U24EY029893-02	523,133	
Vascular BioSciences	93.838	1R42HL132742-01A1	346,802	
Veralase	93.855	R42Al114012	(6,504)	
Veristride	93.879	1R43LM013104-01	5,636	
Virginia Commonwealth University	93.393	5R01CA215610-03	52,930	
Virginia Commonwealth University	93.847	5R01DK094818-05	(1,158)	
Virginia Commonwealth University	93.853	5R01NS070715-10	(1,500)	
Virginia Commonwealth University	93.853	5U01NS095388-03	1,255,184	125,56
Virginia Commonwealth University	93.853	7U01NS095388-02	7,334	
Virtici	93.847	2R44DK101197-02	184	
Vox Biomedical	93.279	6R42DA049655-02	63,781	
Wake Forest University	93.846	1R34AR077361-01	6,610	
Wake Forest University	93.846	5U01AR068658-04	63,418	
Wake Forest University	93.853	5R01NS058949-09	(910)	
Wake Forest University	93.853	R01NS058949	(45,633)	
Wake Forest University Health Sciences	93.233	5R01HL133684-04	193,933	
Wake Forest University Health Sciences	93.837	5R01HL104199-07	(43,278)	
Wake Forest University Health Sciences	93.853	R01NS058949	(1,496)	
Wake Forest University Health Sciences	93.859	P01GM113852	100,767	
Wake Forest University Health Sciences	93.866	5R01AG050657-05	100,515 24,620	
Wake Forest University Health Sciences	93.866	5R01AG064440-02	,	
Wake Forest University Health Sciences Washington University	93.866	R01AG058571	62,138	
Washington University Washington University	93.273 93.393	1R21AA027608-01A1	5,171 94,186	
Washington University Washington University	93.393	1R01CA248526-01 1R37CA246175-01A1	2,167	
Washington University Washington University	93.394	5U24CA196171-05	79,898	
Washington University Washington University	93.397	5P50CA171963-07	177,336	
Washington University Washington University	93.837	5R01HL143421-02	66,528	
Washington University	93.839	4UH3HL138325-03	4,177	
Washington University	93.839	5UH3HL138325-03	26,408	
Washington University	93.853	5R01NS097816-03	2,982	
Washington University	93.855	5U19Al109725-05	6,947	
Washington University	93.866	1U19AG063893-01	102,807	
Washington University	93.866	2R01AG047644-06	313,167	
Washington University	93.866	2UF1AG032438-07	16,727	
Washington University	93.866	3U01AG052564-02S2	(114)	
Washington University	93.866	3U01AG052564-03S2	(245)	
Washington University	93.866	5R01AG047644-05	(92)	
Washington University	93.866	5R01AG047644-06	12,139	
Washington University	93.866	5R34AG056639-02	30,507	
Washington University	93.866	5U01AG052564-04	637,070	
Weill Cornell Medical College	93.837	5R01HL128278-05	76,253	
Whitehead Institute for Biomedical Research	93.855	5R21Al134365-02	4,390	
Wyss Institute at Harvard University	93.353	1U54CA244726-01	186,920	
Yale University	93.173	1R21DC018098-01	40,382	
Yale University	93.242	1R56MH114833-01A1	4,606	
Yale University	93.242	5R01MH105203-05	109,995	
Yale University	93.242	5R01MH120080-02	143,656	
Yale University	93.279	5P30DA018343-15	12,296	
Yale University	93.393	5R03CA219603-02	14,235	
Yale University	93.394	5U01CA233364-02	49,084	
Yale University	93.396	1R01CA230275-01A1	18,434	
Yale University	93.837	1R01HL141852-01A1	93,610	
Yale University	93.837	5R01HL148819-02	90,927	
Yale University	93.838	1U01HL145567-01	42,647	
Yale University	93.853	5R01NS110721-01A1	5,735	
Yale University	93.853	5U01NS106513-02	16,662	
Yale University	93.855	5P01Al039671-23	738,857	
Yale University	93.855	5R01AI104824-07	14,307	
Yale University School of Medicine	93.361	5R01NR018335-02	68,411	
Zata Pharmaceuticals	93.859	2R44GM109517-02	(1,673)	
			Subtotal 886,782,331	141,933,9
			000,102,331	171,300,8
rtment of Health and Human ServicesOffice of Minority Health				
Northwestern University	93.137	1CPIMP171141-01-00	55	
Northwestern University	93.137	5CPIMP181168-02-00	58,477	
			Subtotal 58,532	
artment of Health and Human ServicesOffice of the Secretary				
	03 3EU	4500002209	(2.201)	
Broad Institute	93.360 93.RD3	4500002209 HHSQ100201900015C	(2,281) 54 601	
artment of Health and Human ServicesOffice of the Secretary Broad Institute Emory University Mapp Biopharmaceutical	93.360 93.RD3 93.RD3	4500002209 HHSO100201900015C HHSO100201600021C	(2,281) 54,601 72,993	

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Th Entity Identifying Nur	-	Total Expenditures	Subrecipient Expenditures
Department of Health and Human ServicesSubstance Abuse and Mental Health Services Great Plains Tribal Chairmen's Health Board	Administratior 93.788	า 1H79Tl081826-01		2,471	_
Substance Abuse and Mental Health Services Administration	93.243	Direct		639,571	-
			Subtotal	642,042	-
Department of JusticeDrug Enforcement Administration					
US Department of Justice Office of Justice Programs	93.RD13	Direct	-	13,933	<u> </u>
			Subtotal	13,933	
Department of State	00 DD40			000 504	
Global Health Service	93.RD19		Cubtatal	222,501	<u>-</u>
Department of TransportationFederal Aviation Administration (FAA)			Subtotal_	222,501	
Boston University School of Public Health	93.RD2	13-C-AJFE-BU-16		154.316	_
Federal Aviation Administration	93.RD2	Direct	_	740,861	
			Subtotal	895,177	<u>-</u>
Department of Veterans Affairs					
Department of Veterans Affairs	93.RD12	Direct		1,016,707	-
VA Boston Healthcare System VA Tennessee Valley Healthcare System - Nashville Campus	93.RD22 93.RD12	Direct Direct		214,973 34,961	-
VA Formosoco vancy frommone Cystem Traditino Campus	00.IND 12	Biroot	Subtotal	1,266,641	
Federal Communications Commission				.,,	
Federal Communications Commission	93.RD14	Direct		100,716	
			Subtotal	100,716	-
National Aeronautics and Space Administration					
Baylor College of Medicine	43.003	NNX16A069A		538,671	-
Baylor College of Medicine Emerald Innovations	43.003	NNX17AE04G NNX16A069A		4,994 23	-
KBRWyle	43.003 93.RD17	NNJ15HK11B		125,906	97,194
Massachusetts Institute of Technology	43.001	80NSSC19K1028		22,959	-
Massachusetts Institute of Technology	43.001	NNX15AF85G		5,415	-
Massachusetts Institute of Technology National Aeronautics and Space Administration	43.003 43.001	7000000324/NNX16A069A Direct		284,736 95,994	-
National Aeronautics and Space Administration	43.003	Direct		976,390	9,782
Thomas Jefferson University	43.003	NNX15AC14G		123,351	-
Trustees of Dartmouth College Trustees of the University of Pennsylvania	43.003 43.003	80NSSC19K1632 NNX15AK76GA		5,203 41,360	-
University of California at Irvine	43.003	NNX15AK76GA NNX15AI22G		1,977	-
			Subtotal	2,226,979	106,976
National Science Foundation			_		
Claremont McKenna College	47.075	2027694		12,120	-
George Washington University	47.041	1830941		118,533	-
Massachusetts Institute of Technology Massachusetts Institute of Technology	47.070 47.076	IIS-1404494 5710004209		16,741 73,301	-
National Science Foundation	47.041	Direct		71,899	-
National Science Foundation	47.049	Direct		215,801	23,008
National Science Foundation National Science Foundation	47.070 47.074	Direct Direct		533,581 2,744	-
National Science Foundation	47.075	Direct		328,643	-
National Science Foundation	47.076	Direct		71,619	-
Regents of the University of California, San Diego Research Foundation for The SUNY Stony Brook University	47.075 47.070	1932619 #IIS1926781		39,839 19,389	-
Trustees of Boston University	47.075	BCS-2027553		17,985	-
Trustees of Columbia University in the City of New York	47.070	IIS 1636832		4,856	-
Trustees of the University of Pennsylvania	47.049	PHY-1545935		(7,747)	-
University of Massachusetts Amherst University of Nevada Las Vegas	47.070 47.074	1915481 1921742		2,888 39,480	-
University of Nevada Las Vegas	47.074	1929592		56,374	-
Veristride	47.041	NSF-IIP-1331108		91,307	-
Woods Hole Research Center Woods Hole Research Center	47.050 47.076	1915307 WHRC-MG0932-01		20,189 (256)	-
***OOGS FIDIT INTERESTING COLLECT	41.010	VV1 11/0-1VIGUS3Z-U1	Subtotal	1,729,286	23,008
Social Security Administration			Ju210101	.,. 20,200	20,000
Westat	96.001	SS001660014	_	18,710	
			Subtotal	18,710	-
		Total Research and Develop	oment	\$ 982,375,476	\$ 150,244,197

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Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass- Entity Identifying N	-	Total Expenditures	Subrecipient Expenditures
		, , ,		•	•
Research Training					
Department of Defense					
Naval Postgraduate School	93.RD10	Direct	<u> </u>	\$ 198,796 \$	-
			Subtotal	198,796	-
Department of DefenseU.S. Army Medical Command					
U.S. Army Medical Research Acquisition Activity	12.420	Direct		208,543	-
			Subtotal	208,543	_
Department of Health and Human ServicesAgency for Healthcare Research and Qu	ıality		-		
Agency for Healthcare Research and Quality	93.226	Direct		418,018	230
Children's Hospital Corporation dba Boston Children's Hospital	93.226	5K12HS022986-05		(6,729)	-
Children's Hospital Corporation dba Boston Children's Hospital	93.226	5T32HS000063-27	_	14,895	
			Subtotal	426,184	230
Department of Health and Human ServicesHealth Resources and Services Adminis	tration		_		
Health Resources and Services Administration	93.186	Direct		472,470	_
Health Resources and Services Administration	93.247	Direct		12,988	12,765
Health Resources and Services Administration	93.732	Direct		3,257	-
President and Fellows of Harvard College	93.110	6 T76MC000016501		3,430	-
President and Fellows of Harvard College	93.884	5T0BHP29997-04-00		9,640	-
President and Fellows of Harvard College	93.884	6T0BHP29997-03-01	_	5,400	
			Subtotal_	507,185	12,765
Department of Health and Human ServicesNational Institutes of Health					
American Academy of Child and Adolescent Psychiatry	93.279	5K12DA000357-17		31,243	-
Beth Israel Deaconess Medical Center	93.213	5T32 AT000051-20		60,030	-
Beth Israel Deaconess Medical Center	93.213	5T32AT000051-19		5,402	-
Beth Israel Deaconess Medical Center Beth Israel Deaconess Medical Center	93.213 93.837	5T32AT000051-20 2T32HL007734-26		9,525 45,981	-
Beth Israel Deaconess Medical Center	93.837	5K24HL127101-04		(11,148)	-
Beth Israel Deaconess Medical Center	93.837	5T32HL007734-23		4,163	-
Beth Israel Deaconess Medical Center	93.859	5T32GM103702-05		(3,417)	-
Boston Medical Center	93.242	5T32MH116140-03		108,879	-
Brigham and Women's Hospital	93.242	5K24MH110807-04		20,408	-
Brigham and Women's Hospital	93.839	5K12HL141953-03		138,295	-
Children's Hospital Corporation dba Boston Children's Hospital	93.837	5T32HL007572-35		30,654	-
Children's Hospital Corporation dba Boston Children's Hospital Children's Hospital Corporation dba Boston Children's Hospital	93.839 93.839	5T32HL066987-17 5T32HL066987-18		14,245 56,178	-
Children's Hospital Corporation dba Boston Children's Hospital	93.839	5T32HL066987-19		23,679	-
Children's Hospital Corporation dba Boston Children's Hospital	93.847	5F32DK122766-02		66,642	_
Children's Hospital Corporation dba Boston Children's Hospital	93.847	5K23DK102600-03		550	-
Children's Hospital Corporation dba Boston Children's Hospital	93.847	5T32DK007477-37		13,269	-
Children's Hospital Corporation dba Boston Children's Hospital	93.855	5T32AI007512-32		44,802	-
Children's Hospital Corporation dba Boston Children's Hospital	93.865	5K12HD052896-13		3,701	-
Children's Hospital Corporation dba Boston Children's Hospital	93.865 93.865	5T32HD040128-15		10,694 92,038	-
Children's Hospital Corporation dba Boston Children's Hospital Dana Farber Cancer Institute	93.393	5T32HD098061-02 1UE5CA246746-01		24,619	-
Dana Farber Cancer Institute	93.398	2R25CA181000-06		80,368	_
Dana Farber Cancer Institute	93.398	5K08CA208008-04		116,701	-
Dana Farber Cancer Institute	93.398	5K08CA219504-04		115,916	-
Dana Farber Cancer Institute	93.398	5T32CA207021-03		13,827	-
Dana Farber Cancer Institute	93.398	T32CA092203		49,576	-
Fred Hutchinson Cancer Research Center	93.855	5UM1AI068614-13		27,031	-
Hebrew Rehabilitation Center for Aged	93.866	5T32AG023480-15		96,040	-
Hebrew Senior Life Judge Baker Children's Center	93.866 93.242	5T32AG023480-14 2T32MH016259-39A1		42,742 62,508	-
Judge Baker Children's Center	93.242	5T32MH016259-37		720	-
Judge Baker Children's Center	93.242	5T32MH016259-39		147,673	-
Judge Baker Children's Center	93.242	5T32MH016259-40		69,953	-
Kennedy Krieger Institute	93.853	5K12NS098482-04		169,253	-
Mass Eye and Ear Infirmary	93.867	5K12EY016335-13		(3,158)	-
Massachusetts General Hospital	93.242	5K01MH111802-04		28,874	-
Massachusetts General Hospital	93.866	5K23AG061276-02		6,471	- E0 11E
NIH-FIC Fogarty International Center NIH-NCCAM National Center for Complementary and Alternative Medicine	93.989 93.213	Direct Direct		210,094 631,434	58,115
NIH-NCI National Cancer Institute	93.393	Direct		(8,777)	-
NIH-NCI National Cancer Institute	93.398	Direct		5,895,934	382,344
NIH-NEI National Eye Institute	93.867	Direct		1,660,246	47,971
NIH-NHGRI National Human Genome Research Institute	93.172	Direct		394,164	-
NIH-NHLBI National Heart, Lung and Blood Institute	93.233	Direct		1,305,678	-
NIH-NHLBI National Heart, Lung and Blood Institute	93.837	Direct		8,324,110	38,933
NIH-NHLBI National Heart, Lung and Blood Institute	93.838	Direct		7,304,108	8,139
NIH-NHLBI National Heart, Lung and Blood Institute NIH-NIA National Institute on Aging	93.839 93.866	Direct Direct		1,496,412 3,337,426	431,000 55,339
NIH-NIAAA National Institute on Alcohol Abuse and Alcoholism	93.273	Direct		782,738	-
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Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
NIH-NIAID National Institute of Allergy and Infectious Diseases	93.855	Direct	5,947,571	135,412
NIH-NIAMS National Institute of Arthritis and Musculoskeletal and Skin Disease		Direct	3,927,847	67,673
NIH-NIBIB National Institute of Biomedical Imaging and Bioengineering	93.286	Direct	1,680,097	-
NIH-NICHD National Institute of Child Health and Human Development	93.865	Direct	2,050,501	27,060
NIH-NIDA National Institute on Drug Abuse	93.279	Direct	3,115,861	59,903
NIH-NIDCD National Institute on Deafness and Other Communication Disorders		Direct	682,363	-
NIH-NIDCR National Institute of Dental and Craniofacial Research	93.121	Direct	49,860	-
NIH-NIDDK National Institute of Diabetes and Digestive and Kidney Diseases	93.847	Direct	9,076,523	9,440
NIH-NIEHS National Institute of Environmental Health Sciences	93.113	Direct	194,441	3,478
NIH-NIGMS National Institute of General Medical Sciences	93.859	Direct	1,614,801	-
NIH-NIMH National Institute of Mental Health	93.242	Direct	6,661,508	149,498
NIH-NINDS National Institute of Neurological Disorders and Stroke	93.853	Direct	5,315,080	31,840
NIH-NLM National Library of Medicine	93.879	Direct	74,129	-
President and Fellows of Harvard College	93.113	5T32ES7069-40	51,195	-
President and Fellows of Harvard College	93.242	5T32MH017119-33	14,282	-
President and Fellows of Harvard College	93.242	T32MH017119	38,070	-
President and Fellows of Harvard College	93.350	1KL2TR002542-01	1	-
President and Fellows of Harvard College	93.350	5KL2TR002542-02	305,715	-
President and Fellows of Harvard College	93.350	5KL2TR002542-03	684,783	-
President and Fellows of Harvard College	93.398	2T32CA009001-44	76,423	-
President and Fellows of Harvard College	93.398	2T32CA9001-44	53,709	-
President and Fellows of Harvard College	93.398	5T32CA9001-44	49,358	-
President and Fellows of Harvard College	93.398	5T32ES007069-39	32,792	-
President and Fellows of Harvard College	93.398	T32CA009001	18,627	-
President and Fellows of Harvard College	93.837	5T32HL098048-10	1	-
President and Fellows of Harvard College	93.855	4T32AI007433-25	(155)	-
President and Fellows of Harvard College	93.855	5T32AI007245-35	12,108	-
President and Fellows of Harvard College	93.866	5T32AG000222-27	25,662	-
President and Fellows of Harvard College	93.866	5T32AG000222-28	118,020	-
President and Fellows of Harvard College	93.866	5T32AG000222-28	24,402	-
President and Fellows of Harvard College	93.866	5T32AI007245-36	25,002	-
President and Fellows of Harvard College	93.879	5T15LM007092-28	104,303	-
President and Fellows of Harvard College	93.879	5T15LM007092-29	99,414	-
Rhode Island Hospital	93.866	1K76AG059983-01A1	9,412	-
Trustees of Boston University	93.837	5T32HL125232	14.895	-
Trustees of Tufts College	93.121	K23DE026804	34,093	_
Vanderbilt University Medical Center	93.855	7K23AI106406-05	1,296	_
Virginia Commonwealth University	93.865	3K08HD092610-01A1S1	3,929	_
riigiina commoniicanii cinvolony	00.000	Subtotal	75,336,413	1,506,145
Department of Health and Human ServicesSubstance Abuse and Mental Health Service	oe Admini		. 0,000, . 10	.,000,.10
American Academy of Addiction Psychiatry	93.243	5H79TI081358-02	26.730	_
Massachusetts General Hospital Institute of Health Professions		5H79TI081356-02	-,	-
Substance Abuse and Mental Health Services Administration	93.243 93.243	Direct	38,114	26 1 42
Substance Aduse and Mental Realth Services Administration	93.243	•	87,440	36,143
		Subtotal _	152,284	36,143
		Total Research Training		1,555,283
Total Rese	earch and [Development and Research Training	\$ 1,059,204,881 \$	151,799,480

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Thro Entity Identifying Number	•	Total Expenditures	Subrecipient Expenditures
Student Financial Aid					
Department of EducationOffice of Federal Student Aid					
U.S. Department of Education	84.268	Direct	\$	37,530,272	\$ -
		Sub	otal_	37,530,272	-
Department of Health and Human ServicesHealth Resources and Services	rices Administ	ration			
U.S. Department of Health and Human Services	93.264	Direct	_	101,403	-
		Sub	otal_	101,403	
ARRA Nurse Faculty Loan Program FY20 Beginning Balance					
U.S. Department of Health and Human Services	93.408	Direct		20,201	<u>-</u>
		Sub	otal_	20,201	
Nurse Faculty Loan Program (NFLP) FY20 Beginning Balance					
U.S. Department of Health and Human Services	93.264	Direct	_	108,916	<u>-</u>
		Sub	otal	108,916	_
		Total Student Financia	Aid \$	37,760,792	\$ -

Department of Health and Human ServicesHealth Resources and Services Administration 93.914 H89HA00011 236,031 - Dimock Community Health Center 93.153 2H12HA24846-06-00 68,896 - Health Resources and Services Administration 93.211 6 P13RH31680102 160,549 - Health Resources and Services Administration 93.266 6 UH6HA30738-04-03 2,380,354 2,224,871 Health Resources and Services Administration 93.501 6 C12CS32615-01-01 28,671 - Icahn School of Medicine at Mount Sinai 93.110 5H30MC24048-09 31,456 - Maniilaq Association 93.527 HRSA-18-118 35,493 - Massachusetts Department of Public Health 93.110 INTF3121M04W16082022 76,706 25,125 Massachusetts Department of Public Health 93.870 INTF3617M0317101900 189,966 - Massachusetts Department of Public Health 93.870 INTF3617M03171019100 224,072 - Massachusetts Department of Public Health 93.870 INTF3617M03210621190 61,122 - Massachusetts Department of Public Health 93.870 INTF3617M03210621190 61,122 - Massachusetts Department of Public Health 93.870 INTF3617M03210621190 61,122 - Massachusetts Department of Public Health 93.870 INTF3617M03210621190 61,122 - Massachusetts Department of Public Health 93.870 INTF3617M03210621190 61,122 - Massachusetts Department of Public Health 93.870 INTF3617M03210621190 61,122 - Massachusetts Department of Public Health 93.870 INTF3617M03210621190 61,122 - Massachusetts Department of Public Health 93.870 INTF3617M03210621190 61,122 - Massachusetts Department of Public Health 93.870 INTF3617M03210621190 61,122 - Massachusetts Department of Public Health 93.914 Number Not Available 18,468 Massachusetts Department of Public Health 93.917 INTF4944MM3181926016 383,413 - Massachusetts Department of Public Health 93.917 INTF4944MM3181926016 383,413 - Massachusetts Department of Public Health 93.910 Number Not Available 81,788	Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Agency for International Development	Other Programs				
Eastern Virginia Medical School					
Ferror Community Health Center 98,001 72038919CA00001 15,988 1-		98.001	AID-OAA-A-14-00010	\$ (232) \$	_
Last Mie Heath President and Fellows of Harvard College President and Fellows		98.001	72038619CA0001		-
President and Fellows of Harvard College 98.01 7200A419APS00002 7.643 - 1.65	Invisible Children	98.001	7260518CA00001	25,728	-
President and Fellows of Harvard College	Last Mile Health	98.001	Number Not Available	30,951	-
President and Fellows of Harvard College 98.001 AID-OFDA-A17-00004 17.55 1.55					-
SSG Advisors chiral Resconance				,	-
U.S. Agency for Infernational Development 98.001 7.00AA/16-000002 17.89,040 1.223,221 U.S. Agency for International Development 98.001 AID-AAA-16-00002 17.89,040 1.223,221 U.S. Agency for International Development 98.001 AID-AAA-16-00034 25.685 1.773 1.773 1.775 1.7	•				-
U.S. Agency for International Development 98.001 AID-44A-16-000002 1,788,0440 1,223,221 U.S. Agency for International Development 98.001 AID-0AAA-1400016 1,173 1,173 1,173 University of Washington 98.001 AID-0AAA-15-0034 25,695 3,158 2,612,809 3,6158 2,612,809 3,6158 2,612,809 3,6158 2,612,809 3,6158 3,158 2,612,809 3,6158 3,158 3,158 3,158 3,159 3				,	-
U.S. Agency for International Development 98.001 AIDCAAA-14-00016 25,895 3-17-8				,	
University of Washington 98.001 AID-OAA-A-16-0034 25.6955 36.158					
Department of AgricultureFood and Nutrition Service 1,0580 1,367,183 1					(1,173)
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Department of Agriculture-Food and Nutrition Service Greater Boston Food Bank 10.589 SNAP 145.811 382.938 383.83	Oniversity Research	30.001	-		
Greater Boston Food Bank 10.569 SNAP 44.811			Subtotal_	2,612,809	1,367,183
Massachusetts Department of Public Health 10.557 INTF3502M03162726128 8319,420					
Massachusetts Department of Public Health 10.557 INTES00M03162726128 819,420				,	-
Massachusetts Department of Public Health University of Massachusetts Medical Center					-
University of Massachusetts Medical Center 10.561 Outreach Partner Amendment 1-4 12,848	·				-
Department of Education				, ,	-
Department of Education	University of Massachusetts Medical Center	10.561	Outreach Partner Amendment 1-4_		-
U.S. Department of Education 84.425E P425E2022049 250.397 - U.S. Department of Education 84.425E P425E202849 250.397 - Subtotal 475,613 - Department of Health and Human Services DHHS-Indian Health Service 93.RD16 HHSI285201500016P (11,872) 571,769 - Great Plains Area IHS 93.RD16 HHSI2412016000231 571,769 - HRSA COVID Testing for Uninsured 93.461 Number Not Available 7,5551,664 - Department of Health and Human ServicesAdministration for Children and Families Massachusetts Department of Public Health 93.092 Number Not Available 59,740 - Department of Health and Human ServicesAdministration for Children and Families Massachusetts Department of Public Health 93.092 Number Not Available 59,740 - Department of Health and Human ServicesAgency for Toxic Substances and Disease Registry Boston Medical Center 93.241 Number Not Available 5,050 - Department of Health and Human ServicesCenters for Disease Control and Prevention Massachusetts Department of Public Health 93.073 INTF312HT8500224039 (886) - Massachusetts Department of Public Health 93.073 INTF312HT8500224039 (886) - Massachusetts Department of Public Health 93.9340 INTF434HMM3181926038 587,675 - Massachusetts Department of Public Health 93.9340 INTF348HM24019011 28.898 - Massachusetts Department of Public Health 93.9340 INTF348HM24019011 28.898 587,675 - Massachusetts Department of Public Health 93.9340 INTF348HM24019011 28.898 587,675 - Massachusetts Department of Public Health 93.9340 INTF348HM24019011 28.898 587,675 - Massachusetts Department of Public Health 93.9340 INTF348HM24019011 28.898 587,675 - Massachusetts Department of Public Health 93.9340 INTF348HM24019011 28.898 587,675 - Massachusetts Department of Public Health 93.9340 INTF348HM24019011 28.898 587,675 - Department of Health and Human Services Administration 93.914 H89HA00011 28.6936 587,675 - Department of Health Administration 93.914 H89HA00011 28.6936 587,675 - Massachusetts Department of Public Health 93.915 114HM24446-06-00 68.896 - Health Resources and Services Adm			Subtotal_	4,915,340	-
U.S. Department of Health and Human Services DHPS-Inclain Health Service Great Planis Area IHS HRSA COVID Testing for Uninsured Department of Health and Human Services DHMS-Inclain Health Service Great Planis Area IHS HRSA COVID Testing for Uninsured DEpartment of Health and Human ServicesAdministration for Children and Families Massachusetts Department of Public Health Boston Medical Center Boston		0.4.40==	B.405500004	005.040	
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Deht Straight St	Department of Health and Human Services		Gubiolai_	470,010	
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HRSA COVID Testing for Uninsured 93.461 Number Not Available Number Not Available Subtotal Number Not Available Number Not Not Available Number Not Not Available Number Not					-
Department of Health and Human ServicesAdministration for Children and Families					
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New Hampshire Department of Health and Human Services 93.575 Number Not Available Subtotal 80.971 -	Department of Health and Human ServicesAdministration for Children	and Families	3		
Department of Health and Human ServicesAgency for Toxic Substances and Disease Registry Boston Medical Center 93.241 Number Not Available 5,050 Subtotal 5,050	Massachusetts Department of Public Health	93.092	INTF3211MM3W19020007	21,231	-
Department of Health and Human ServicesAgency for Toxic Substances and Disease Registry Boston Medical Center 93.241 Number Not Available 5,050 Subtotal 5,050	New Hampshire Department of Health and Human Services	93.575	Number Not Available	59,740	
Boston Medical Center			Subtotal_	80,971	-
Department of Health and Human ServicesCenters for Disease Control and Prevention Massachusetts Department of Public Health 93.073 SU01DD001224-02-00 5,302 -					
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SHIP COVID NCH 93.301 Number Not Available 81,788					-
			Subtotal	4,069,198	2,249,996

Cluster Title/Federal Program/Pass-Through Program	CFDA Number	Direct Award or Pass-Through Entity Identifying Number	Total Expenditures	Subrecipient Expenditures
Department of Health and Human ServicesNational Institutes of Health		1D011T010001	40.000	
Texas Woman's University	93.213 93.847	1R34AT010081	46,328	-
University of Nebraska Medical Center	93.847	5R01DK103658-05 Subtotal	49,399 95,727	-
Department of Health and Human ServicesOffice of Population Affairs		_		_
Action For Boston Community Development	93.217	1FPHPA006419-01-00	90,950	-
Action For Boston Community Development	93.217	FPHPA16204-01-00	(133,977)	<u>-</u>
		Subtotal	(43,027)	
Department of Health and Human ServicesOffice of the Secretary	00.000	INTERROPPENA 04000444	00	
Boston Public Health Commission Commonwealth of Massachusetts	93.889 93.889	INTF6208PP1161326144 INTF6207PP1W16028699	80 (720)	-
Emory University	93.825	6 U3REP170552-04-01	71,916	_
Massachusetts Department of Public Health	93.817	INTF6207PP1W16005812	218,837	_
Massachusetts Department of Public Health	93.817	INTF6207PP1W16052809	214,763	_
Massachusetts Department of Public Health	93.817	INTF6208PP1W20166284	98,932	-
Massachusetts Department of Public Health	93.889	INTF6207PP1204215507-1	1,309	-
Massachusetts General Hospital	93.817	1HITEP180042-01-00	18,078	-
Massachusetts General Hospital	93.817	6HITEP180042-01-05	36,513	-
Massachusetts Hospital Association	93.889	U3REP200664	204,750	
Massachusetts League of Community Health Centers	93.889	FY2018	2,074	-
Massachusetts League of Community Health Centers	93.889	Number Not Available	2,003	- 0.40.000
U.S. Department of Health and Human Services, Assistant Secreta	a 93.817	6HITEP180042-01-09	1,867,993	648,893
		Subtotal	2,736,528	648,893
Department of Health and Human ServicesSubstance Abuse and Menta City of Chelsea	Il Health Se 93.959	rvices Administration 4512-9069	11 240	
Massachusetts Department of Mental Health	93.959	SCDMH651001663334BRIG	11,340 298,013	260,096
Massachusetts Department of Public Health	93.959	INTF2351M03183626051	183,814	200,030
Massachusetts Department of Public Health	93.959	INTF2351M03183626053	85,085	_
Massachusetts Department of Public Health	93.959	INTF2351M03183626061	192,928	-
New Hampshire Department of Health and Human Services	93.788	05-95-92-7040-500731	1,243,821	-
Substance Abuse and Mental Health Services Administration	93.276	5H79SP080131-03	120,589	-
		Subtotal	2,135,590	260,096
Department of Housing and Urban DevelopmentOffice of Community Plants	anning and	Development		
Community Action of Pioneer Valley	14.267	MA0401L1T071908	17,780	-
HOWPA	14.241	20200024	209,845	-
HOWPA	14.241	20210144	50,753	-
Hud-McKinney	14.267	INTF4944MM3181926016	28,609	-
Hud-McKinney	14.267	MA0401L1T071807	101,497	- -
		Subtotal	408,484	-
Department of JusticeOffice for Victims of Crime Commonwealth of Massachusetts	16 E7E	VOCA2019BRIGPASS0000	70.010	
Commonwealth of Massachusetts	16.575 16.575	VOCA2019BRIGPASS0000 VOCA2019BRIGVRP00000	70,818 164,571	-
Commonwealth of Massachusetts	16.575	VOCA2019BRIGVRF00000 VOCA2019MGHI00000000	134,671	-
Commonwealth of Massachusetts	16.575	VOCA2021BRIGPASS0000	34,006	_
Commonwealth of Massachusetts	16.575	VOCA2021BRIGVRP00000	8,563	_
US Department of Justice Office of Justice Programs	16.582	2018-V3-GX-K036	444,000	64,880
		Subtotal	856,629	64,880
Department of JusticeOffice of Juvenile Justice and Delinquency Prever	ntion	_		
City of Chelsea	16.123	2016-MU-MU-K099	494	-
·		Subtotal_	494	-
Department of the Treasury				
Governor's Office for Emergency Relief and Recovery	21.019	Number Not Available	1,800,000	
		Subtotal	1,800,000	
Department of TransportationNational Highway Traffic Safety Administra	ation (NHTS	SA)		
KEA Technologies	20.614	DTNH22-13-H-00433	179,759	-
		Subtotal	179,759	-
Department of Veterans Affairs		_		
Department of Veterans Affairs	93.RD12	VA241-17-D-0108	2,450	-
		Subtotal	2,450	
Health Resources & Services Administration				
Boston Public Health Commission	93.194	H89HA00011	226,755	
		Subtotal	226,755	
		Total Other Programs \$	29,401,273 \$	4,598,860
		Total Federal Expenditures \$		156,398,340
		Total Fodoral Experionales o	1,120,000,040 Φ	100,000,040

1. Organization

Mass General Brigham Incorporated (the Company) (formerly known as Partners HealthCare System, Inc.) is the parent organization and sole corporate member of numerous organizations whose financial condition and operations are described in these consolidated financial statements. The terms Mass General Brigham, We, Our or Us as used herein, unless otherwise stated or indicated by context, refer collectively to the Company and its affiliated organizations.

Mass General Brigham operates academic medical centers, community acute care hospitals, inpatient and outpatient mental health services facilities, urgent care centers, facilities that provide rehabilitation medicine and long-term care services, physician organizations, home health services, nursing homes and a graduate level program for health professions. Our mission is to provide world class health care services to the local communities in which we operate as well as to patients across the United States and the world. In addition, we are a nonuniversity-based non-profit private medical research enterprise and a principal teaching affiliate of the medical and dental schools of Harvard University. Our licensed, not-for-profit managed care organization and licensed, for-profit insurance company (collectively referred to as AllWays Health) provide health insurance products and administrative services to the Massachusetts Medicaid program (MassHealth), ConnectorCare (a state subsidized program for adults who meet income and immigration guidelines) and commercial populations.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying Schedule of Expenditures of Federal Awards (the Schedule) includes the grant activity of Mass General Brigham and is recorded on the accrual basis of accounting.

The information in the Schedule is presented in accordance with 2 CFR 200 Uniform Guidance requirements. Therefore, some amounts presented in the Schedule may differ from amounts presented in or used in the preparation of the basic consolidated financial statements. Negative amounts represent adjustments to amounts reported as expenditures in prior years. Catalog of Federal Domestic Assistance (CFDA), pass-through award numbers and expenditures are provided where available. The Schedule combines expenditures of The Brigham and Women's Hospital, Inc. (BWH), The General Hospital Corporation (GHC) d/b/a MGH, Foundation of the Massachusetts Eye and Ear Infirmary, Inc. (MEEI) including Schepens Eye Research Institute (SERI), The McLean Hospital Corporation (McLean), MGH Institute of Health Professions (IHP), Spaulding Rehabilitation Hospital Corporation (SRH), Cooley Dickinson Hospital (CDH), North Shore Medical Center, Inc. (NSMC), Newton-Wellesley Hospital (NWH), Brigham and Women's Faulkner Hospital, Inc. (BWFH), Martha's Vineyard Hospital (MVH), Nantucket Cottage Hospital (NCH), Partners Community Physicians Organization (PCPO), Wentworth-Douglass Hospital (WDH), and Mass General Brigham. These entities are all affiliates of Mass General Brigham.

3. Federal Student Loan Programs

The amounts reported in the Student Financial Aid Cluster of the Schedule represent the beginning balances and newly issued loans in fiscal year 2020. As of September 30, 2020, IHP had loans outstanding of \$203.954 for loans issued as part of the Nurse Faculty Loan Program and ARRA - Nurse Faculty Loan Program. The ARRA loans (CFDA number 93.408) were \$20,201 and the NonARRA loans (CFDA number 93.264) were \$183,753.

4. Facilities and Administrative and Fringe Benefit Costs

Federal expenditures for Research and Development and Research and Development Training for BWH, MGH, McLean, MEEI, SERI, SRH and IHP include facilities and administrative cost recoveries and fringe benefit cost recoveries in the amounts reported in the Schedule based on rates negotiated and awarded with the DHHS Division of Cost Allocation. These rates are based on financial information submitted utilizing the methods prescribed in Principles for Determining Costs Applicable to Research and Development Under Grants and Contracts with Hospitals, contained in the Code of Federal Regulation, Title 45, Part 74, Appendix E (OASC-3). The predetermined facilities and administrative cost rates for IHP are based on financial information submitted utilizing the simplified method for small institutions prescribed in Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs), contained in the Code of Federal Regulation, Title 2, Part 200, Appendix III. Expenditures reported in Training and Other include the maximum facilities and administrative recoveries approved by the sponsor. The 10% de-minimis rate is not utilized on Research and Development or Research and Development Training by Mass General Brigham because they have approved negotiated rate agreements. The 10% de-minimis rate is used for Other awards where allowed.

5. COVID-19 Strategic National Stockpile Distribution (Unaudited)

During fiscal year 2020, Mass General Brigham received donated personal protective equipment (PPE) from the Department of Health and Human Services Office of the Assistant Secretary for Preparedness and Response strategic national stockpile related to the COVID-19 pandemic response efforts. Mass General Brigham received 106 ventilators with an estimated fair market value at the time of receipt of \$1,420,258.

Part II
Reports on Compliance and Internal Control



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 Directors of Mass General Brigham

We have audited, in accordance with the 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 Mass General Brigham which comprise the consolidated balance sheet as of September 30, 2020, and the related consolidated statements of operations, changes in net assets and cash flows for the years then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated December 11, 2020, which included an emphasis of matter paragraph related to Mass General Brigham changing the manner in which it accounts for lease and net periodic pension and postretirement benefit costs in 2020 as discussed in Note 2.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered Mass General Brigham internal control over financial reporting ("internal control") as a basis for designing the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion5 on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Mass General Brigham internal control. Accordingly, we do not express an opinion on the effectiveness of Mass General Brigham 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 Mass General Brigham financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Boston, Massachusetts

Priewaterhouse Coopers IIP

May 25, 2021



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 Directors of Mass General Brigham

Report on Compliance for Each Major Federal Program

We have audited Mass General Brigham's compliance with the types of compliance requirements described in the OMB Compliance Supplement that could have a direct and material effect on each of Mass General Brigham's major federal programs for the year ended September 30, 2020. Mass General Brigham's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with 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 Mass General Brigham'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 Mass General Brigham'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 Mass General Brigham compliance.

Opinion on Each Major Federal Program

In our opinion, Mass General Brigham 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 September 30, 2020.

Report on Internal Control Over Compliance

Management of Mass General Brigham 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 Mass General Brigham 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 Mass General Brigham 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 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.

Boston, Massachusetts

Priewaterhouse Coopers IIP

May 25, 2021

Part III
Federal Award Findings and Questioned Cost

Mass General Brigham Schedule of Findings and Questioned Costs For the Fiscal Year Ended September 30, 2020

1. Summary of Auditor's Results

2.

3.

Financial Statements	
Type of auditor's report issued	Unmodified
Internal control over financial reporting	
Material weakness(es) identified?	yesXno
Significant deficiency(ies) identified that are not considered to be material weaknesses?	yesX none reported
Noncompliance material to financial statements noted?	yesX no
Federal Awards	
Internal control over major programs	
Material weakness(es) identified?	yesXno
Significant deficiency(ies) identified that are not	
considered to be material weaknesses?	yesX_ none reported
Type of auditor's report issued on compliance for major programs	Unmodified
Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200, 516(a)	yesXno
Identification of Major Programs	Name of Federal Program or Cluster Research and Development,
Various CFDA numbers	Research Training Cluster
10.557	WIC Special Supplemental Nutrition Program for Women, Infants, and Children
93.461	COVID-19 Testing for the Uninsured
Dollar threshold used to distinguish between Type A	
and Type B programs	\$3,379,101
Auditee qualified as low-risk auditee?	X yesno
Financial Statement Findings	
No findings to report.	
Federal Findings and Questioned Costs	
No findings to report.	
. to initiality to report.	

Mass General Brigham Management's View and Corrective Action Plan For the Fiscal Year Ended September 30, 2020

Summary of Status of Prior Year Finding 2019-001 Equipment

Due to the COVID-19 Pandemic, the start date of the full equipment inventory for the Research and Development cluster was postponed to FY21. The inventory is underway and is expected to be completed by 7/31/2021 contingent on access to Research Labs as directed by Public Health standards.

Current Status of the Prior Year Findings Listed Above 2019-001 Research and Development Cluster Equipment

Management agrees with the finding recommendations. Mass General Brigham will perform a full inventory of in service assets for those institutions which perform periodic statistical sampling and update items previously retired to ensure inventory records appropriately reflect in service and disposed of assets. Communication of the importance of maintaining accurate inventory records as well as full inventories are expected to begin in January 2020 and be completed by September 30, 2020. To address education, Mass General Brigham will develop a standard operating procedure (SOP) outlining roles and responsibilities throughout the equipment life cycle. The new SOP will be completed by June 30, 2020 and will address review frequency of fully depreciated and disposed assets.

Rhonda Lowe

Research Controller rlowe2@partners.org
Phone: 857 /282-0711

May 25, 2021

Date