



**NORTHWESTERN UNIVERSITY**

Single Audit Report

Year ended August 31, 2020

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Year ended August 31, 2020

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## Independent Auditors' Report

The Board of Trustees  
Northwestern University:

### *Report on the Consolidated Financial Statements*

We have audited the accompanying consolidated financial statements of Northwestern University (the University), which comprise the consolidated statements of financial position as of August 31, 2020 and 2019, the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the consolidated financial statements.

### *Management's Responsibility for the Consolidated Financial Statements*

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with U.S. generally accepted accounting principles; 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 these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. 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 the auditors' 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, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### *Opinion*

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Northwestern University as of August 31, 2020 and 2019, and the changes in its net assets and its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.



*Other Matter*

Our audits were conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying supplementary schedule of financial responsibility data, as of and for the year ended August 31, 2020, is presented for purposes of additional analysis as required by the U.S. Department of Education, and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary schedule of financial responsibility data is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

*Other Reporting Required by Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 18, 2020, on our consideration of the University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.

*KPMG LLP*

Chicago, Illinois  
December 18, 2020

# Consolidated Statements of Financial Position

As of August 31, 2020 and 2019

<i>(in thousands of dollars)</i>	2020	2019
<b>Assets</b>		
Cash and cash equivalents	\$381,442	\$155,469
Accounts receivable, <i>net</i>	210,085	199,535
Contributions receivable, <i>net</i>	277,871	293,705
Notes receivable, <i>net</i>	146,657	143,976
Investments	11,576,232	11,079,424
Land, buildings, and equipment, <i>net</i>	3,258,694	3,320,363
Other assets	4,702	11,703
<b>Total assets</b>	<b>15,855,683</b>	<b>15,204,175</b>
<b>Liabilities</b>		
Accounts payable and accrued liabilities	214,582	206,020
Deferred revenue	137,757	231,456
Deposits payable and actuarial liability of annuities payable	200,602	168,564
Government advances for student loans	9,125	19,064
Bonds, notes, and other debt payable, <i>net</i>	2,832,036	2,551,564
<b>Total liabilities</b>	<b>3,394,102</b>	<b>3,176,668</b>
<b>Net assets</b>		
Without donor restrictions	7,782,322	7,470,942
With donor restrictions	4,679,259	4,556,565
<b>Total net assets</b>	<b>12,461,581</b>	<b>12,027,507</b>
<b>Total liabilities and net assets</b>	<b>\$15,855,683</b>	<b>\$15,204,175</b>

See Notes to the Consolidated Financial Statements, beginning on page 7.

# Consolidated Statements of Activities

For the fiscal years ended August 31, 2020 and 2019

(in thousands of dollars)

2020

2019

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## Net assets without donor restrictions

### Operating revenues

Tuition and fees (net of aid, \$512,945 in 2020 and \$472,537 in 2019)	\$661,099	\$651,678
Auxiliary services	69,658	92,131
Grants and contracts	719,122	696,552
Private gifts	233,671	236,308
Investment return designated for operations	402,815	446,447
Sales and services	195,736	215,629
Professional fees	45,969	41,795
Net assets released from restrictions	214,713	199,383
<b>Total operating revenues</b>	<b>2,542,783</b>	<b>2,579,923</b>

### Operating expenses

Salaries, wages, and benefits	1,455,808	1,439,159
Services, supplies, maintenance, and other	728,002	820,166
Depreciation	181,647	165,142
Interest on indebtedness	93,894	86,724
<b>Total operating expenses</b>	<b>2,459,351</b>	<b>2,511,191</b>
<b>Excess of operating revenues over expenses</b>	<b>\$83,432</b>	<b>\$68,732</b>

Consolidated Statements of Activities continued on next page.  
See Notes to the Consolidated Financial Statements, beginning on page 7.

# Consolidated Statements of Activities (continued)

For the fiscal years ended August 31, 2020 and 2019

<i>(in thousands of dollars)</i>	2020	2019
<b>Nonoperating revenues and expenses</b>		
Private gifts and grants for buildings and equipment	\$40	\$4,430
Investment return, reduced by operating distribution	238,794	(263,655)
Change in value of derivative instruments	(465)	(3,072)
Other (expenses) revenues, <i>net</i>	(10,421)	9,794
<b>Excess (deficit) of nonoperating revenues over expenses</b>	<b>227,948</b>	<b>(252,503)</b>
<b>Change in net assets without donor restrictions</b>	<b>311,380</b>	<b>(183,771)</b>
<b>Net assets with donor restrictions</b>		
Private gifts and grants for buildings and equipment	—	1,800
Restricted private gifts	94,570	82,535
Net gain (loss) on annuity obligation	2,112	(2,993)
Investment return	240,725	85,435
Net assets released from restrictions	(214,713)	(199,383)
<b>Change in net assets with donor restrictions</b>	<b>122,694</b>	<b>(32,606)</b>
<b>Change in total net assets</b>	<b>434,074</b>	<b>(216,377)</b>
<b>Beginning net assets</b>	<b>12,027,507</b>	<b>12,243,884</b>
<b>Ending net assets</b>	<b>\$12,461,581</b>	<b>\$12,027,507</b>

See Notes to the Consolidated Financial Statements, beginning on page 7.

# Consolidated Statements of Cash Flows

For the fiscal years ended August 31, 2020 and 2019

<i>(in thousands of dollars)</i>	2020	2019
<b>Cash flows from operating activities</b>		
Change in net assets	\$434,074	(\$216,377)
<b>Adjustments to reconcile change in net assets to net cash used in operating activities</b>		
Depreciation	181,647	165,142
Losses on disposals, retirements, and sales of buildings and equipment, <i>net</i>	2,133	11,411
Amortization (accretion) of issuance costs, premiums, and discounts, <i>net</i>	33	(637)
Change in allowance for student accounts receivable	(452)	—
Change in allowance for student loans receivable and bad debt expense	3,320	11,107
Realized and unrealized gains on investments, <i>net</i>	(866,020)	(233,130)
Gifts of contributed securities	(20,352)	(21,836)
Proceeds from sale of unrestricted contributed securities	11,006	16,421
Change in value of derivative instruments	465	3,072
Restricted contributions received for long-term investment and capital projects	(82,093)	(41,601)
<i>Changes in assets and liabilities</i>		
Accounts receivable	(9,787)	74,431
Contributions receivable	18,015	6,224
Other assets	7,001	348
Accounts payable and accrued liabilities	29,795	18,565
Deposits payable and actuarial liability of annuities payable	18,021	13,821
Deferred revenue	(93,699)	(71,253)
Government advances for student loans	(9,939)	(13)
<b>Net cash used in operating activities</b>	<b>(376,832)</b>	<b>(264,305)</b>
<b>Cash flows from investing activities</b>		
Purchases of investments	(1,630,446)	(1,570,009)
Proceeds from sales of investments	2,013,364	2,021,288
Acquisitions of land, buildings, and equipment	(145,496)	(264,256)
Proceeds from sale of buildings or equipment	1,687	521
Student loans disbursed	(29,409)	(29,006)
Principal collected on student loans	23,796	23,109
Other	(388)	(3,018)
<b>Net cash provided by investing activities</b>	<b>233,108</b>	<b>178,629</b>
<b>Cash flows from financing activities</b>		
Proceeds from issuance of notes, bonds, and other debt payable	595,000	40,000
Payments for debt issuance costs	(1,476)	—
Principal payments on notes, bonds, and other debt payable	(313,085)	(42,935)
Proceeds from sale of restricted contributed securities	9,346	5,415
Restricted contributions received for long-term investment and capital projects	79,912	53,130
<b>Net cash provided by financing activities</b>	<b>369,697</b>	<b>55,610</b>
<b>Increase (decrease) in cash and cash equivalents</b>	<b>225,973</b>	<b>(30,066)</b>
<b>Cash and cash equivalents at beginning of year</b>	<b>155,469</b>	<b>185,535</b>
<b>Cash and cash equivalents at end of year</b>	<b>\$381,442</b>	<b>\$155,469</b>
<b>Supplemental disclosure of cash flow information</b>		
Change in accrued liabilities for construction in progress	(\$22,043)	(\$24,854)
Capitalized interest	41	7,035
Cash paid for interest	90,798	93,757

See Notes to the Consolidated Financial Statements, beginning on page 7.



# Notes to the Consolidated Financial Statements

For the fiscal years ended August 31, 2020 and 2019

## 1. Summary of Significant Accounting Policies

### University Activities

Northwestern University (Northwestern or the University) is a major private research university with more than 22,000 students enrolled in 12 academic divisions on two lakefront campuses in Evanston and Chicago and an international campus in Doha, Qatar.

Northwestern's mission is to provide the highest-quality education for its students, to develop innovative programs in research, and to sustain an academic community that embraces these enterprises.

### Basis of Accounting

#### General

The University maintains its accounts and prepares its consolidated financial statements on the accrual basis of accounting in conformity with US generally accepted accounting principles (GAAP). The Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) is the source of authoritative GAAP. The University prepares its consolidated financial statements in accordance with the Not-for-Profit Entities Topic of the FASB ASC. The accompanying consolidated financial statements include all wholly owned subsidiaries. All significant interentity transactions and accounts have been eliminated in consolidation.

#### Net Asset Classifications

Net assets and related changes therein are classified into two categories based on the existence or absence of donor-imposed restrictions.

The category *Net Assets without Donor Restrictions* describes funds that have no donor-imposed

restrictions. All revenues, expenses, gains, and losses that are not restricted by donors are included in this classification. Certain net assets without donor restrictions are institution-designated for specific uses under the internal operating budget.

The category *Net Assets with Donor Restrictions* describes funds within subject to donor-imposed restrictions that will be met either by actions of the University, the passage of time, or may be perpetual in nature. These net assets include gifts for which donor-imposed restrictions have not been met in the year of receipt (these may include future capital projects), as well as trust activity and pledges receivable. Net assets with perpetual restrictions consist of donor-restricted endowment funds, contributions receivable for such funds, and certain trusts. For further discussion of the classification of donor-restricted endowment funds and disclosures about both donor-restricted and institution-designated endowment funds, see notes 4 and 9, respectively.

Revenue from donor-restricted sources is reclassified as an increase to net assets without donor restrictions when the circumstances of the restrictions have been fulfilled or the restrictions expire. Donor-restricted contributions whose restrictions are met within the same fiscal year in which they are received are reported as revenue without donor restrictions. All expenses are reported in net assets without donor restrictions. Absent explicit donor stipulations indicating otherwise, the University reports expiration of donor restrictions on long-lived assets as net assets without donor restrictions when the assets are placed in service.

Net assets as of August 31 are as follows:

	2020		
	Without donor restrictions	With donor restrictions	Total net assets
<i>(in thousands of dollars)</i>			
<b>Nature of specific net assets</b>			
Teaching, research, and program support	\$2,429,304	\$2,876,248	\$5,305,552
Student financial aid	672,551	844,035	1,516,586
Capital and operations	1,115,034	547,534	1,662,568
<b>Endowment net assets subtotal</b>	<b>4,216,889</b>	<b>4,267,817</b>	<b>8,484,706</b>
Pledges	—	277,871	277,871
Unexpended gifts	—	31,027	31,027
Annuity and other split-interest agreements	—	61,818	61,818
Student loan funds	65,861	40,726	106,587
Operating and plant	3,499,572	—	3,499,572
<b>Total</b>	<b>7,782,322</b>	<b>4,679,259</b>	<b>12,461,581</b>

(in thousands of dollars)

2019

Nature of specific net assets	Without donor restrictions	With donor restrictions	Total net assets
Teaching, research, and program support	\$2,368,537	\$2,771,527	\$5,140,064
Student financial aid	659,387	808,523	1,467,910
Capital and operations	1,097,581	539,263	1,636,844
<b>Endowment net assets subtotal</b>	<b>4,125,505</b>	<b>4,119,313</b>	<b>8,244,818</b>
Pledges	—	293,705	293,705
Unexpended gifts	—	46,665	46,665
Annuity and other split-interest agreements	—	61,718	61,718
Student loan funds	89,216	35,164	124,380
Operating and plant	3,256,221	—	3,256,221
<b>Total</b>	<b>\$7,470,942</b>	<b>\$4,556,565</b>	<b>\$12,027,507</b>

#### *Operating Activities*

Operating activities in the consolidated statements of activities reflect all transactions increasing or decreasing net assets without donor restrictions, and excludes private gifts and grants for buildings and equipment; restricted private gifts; investment return net of operating distributions; gains (losses) from annuity obligations and derivative instruments; and certain other nonrecurring items.

#### **Fair Value Measurements**

The University makes fair value measurements and related disclosures thereon as required by the Fair Value Measurements and Disclosures Topic of the FASB ASC. For further discussion, see note 4.

#### **Cash and Cash Equivalents**

*Cash* reflects currency and deposits or other accounts with financial institutions that may be deposited or withdrawn without restriction or penalty. *Cash equivalents* represent short-term and highly liquid investments with original maturities of three months or less. Cash and cash equivalents that are held for investment purposes are classified as investments on the consolidated statements of financial position and excluded from cash and cash equivalents on the consolidated statements of cash flows, as these funds are not used for operating needs. For further discussion, see note 4.

#### **Contributions**

Contributions received, including unconditional promises to give (contributions receivable), are recognized by the University as revenues at their fair values at the date of gift. Private gifts, including unconditional promises to give, are recognized as revenues

in the period received. Conditional promises to give are not recognized until all barriers to entitlement of the assets are overcome and the promisor's rights of return or release have elapsed.

#### **Investments**

Investments in financial instruments are recorded at fair value. The University values its investments using a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the reporting entity, whereas unobservable inputs reflect the entity's own assumptions about how market participants would value an asset or a liability based on the best information available. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs.

The following describes the fair value hierarchy and the primary valuation methodologies used by the University for assets and liabilities measured at fair value on a recurring basis:

*Level 1:* Quoted prices in active markets for identical assets or liabilities. Market-price data are generally obtained from relevant exchanges or dealer markets.

*Level 2:* Inputs other than Level 1 that are observable either directly or indirectly, such as quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially all of the same terms of the assets or liabilities. Inputs may be obtained from various sources, including market participants, dealers, and brokers.

*Level 3:* Unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities.

An investment's categorization within the valuation hierarchy is based on the lowest level of input significant to the fair value measurement. The categorization of an investment is based on its pricing transparency and liquidity and does not necessarily correspond to the University's perceived risk of that investment. As a practical expedient as permitted under GAAP, the reported net asset value (NAV) of investments with external managers is used to estimate their fair value. Such investments, for which NAV is used as a practical expedient, are not categorized in and are shown separately from the valuation hierarchy. For further discussion, see note 4.

Equity securities with readily determinable fair values are valued at the last sale price (if quotations are readily available) or at the closing bid price in the principal market in which such securities are normally traded (if no sale price is available). The fair values for these securities are primarily classified as Level 1 because the securities have observable market inputs. Most fixed income securities and debt securities are valued based on dealer-supplied valuations; since these securities have significant other observable inputs, they are classified as Level 2.

The estimated fair values of equity securities without readily determinable fair values and of other generally less liquid investments are based on valuation information received on the relevant entities and may include last sale information or independent appraisals of value. In addition, standard valuation techniques, including discounted cash flow models or valuation multiples based on comparable investments, may be used. Because the fair values for these assets are based predominantly on unobservable inputs, they are classified as Level 3.

Investments in certain real assets and other investments are recorded at acquisition or construction cost or, if received as a contribution, at fair value as of donation date. The University periodically assesses these assets for impairment by comparing their expected future cash flows with their carrying values. An impairment loss is recognized for the difference between estimated fair value and carrying value. In management's opinion, no impairment of investments

held at cost existed as of August 31, 2020 and 2019. For further discussion of such investments, see note 4.

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

Investment income is recorded on the accrual basis, and purchases and sales of investment securities are reflected on a trade-date basis.

### **Derivative Financial Instruments**

The University uses various financial instruments to obtain equity market exposure (e.g., equity price risk) of an underlying investment strategy; if applicable, these have a reference index (e.g., S&P 500) that is the same as, or highly correlated with, the reference index of the investment strategy. Such instruments are not designated as hedges for accounting purposes and are recorded at fair value.

The University enters into swap agreements to hedge future interest-rate movements. It may also add various interest-rate options to hedge the overall portfolio and use interest-rate swap agreements to hedge variable interest-rate exposures. Interest-rate swaps are valued using observable inputs, such as quotations received from the counterparty, dealers, or brokers, whenever they are available and considered reliable. If and when models are used, the value of interest-rate swaps depends on the contractual terms of and specific risks inherent in the instrument, as well as the availability and reliability of observable inputs. Such inputs include market prices for reference securities, yield curves, credit curves, measures of volatility, and prepayment rates as well as correlations of such inputs. Due to significant other observable inputs, interest-rate swaps are classified as Level 2. For further discussion, see note 4.

### **Accounts and Notes Receivable**

Accounts receivable are recorded at net realizable value. Those generally expected to be collected within one year are carried without an allowance. Accounts receivable deemed to be uncollectible are written off at that time.

Notes receivable are recorded at net realizable value and are predominantly student loans with varying maturities. Notes receivable deemed to be uncollectible are written off.

### **Contributions Receivable**

Contributions receivable that represent unconditional promises to give are recognized at fair value as contributions with donor restrictions in the period such promises are made by donors. Contributions are discounted at a risk-adjusted rate commensurate with the duration of the donor's payment plan. Amortization of the discounts is recorded as additional contribution revenue. Allowance is made for uncollectible contributions based on management's expectations regarding collection of outstanding promises to give and past collection experience. There were no significant conditional promises to give as of August 31, 2020 and 2019.

### **Land, Buildings, and Equipment**

Land, buildings, and equipment are recorded at cost or, if received as gifts, at fair value at the date of gift. Significant renewals and replacements are capitalized. The cost of repairs and maintenance is expensed as incurred. Purchases of library books and works of art are also expensed.

Depreciation is calculated using the straight-line method over the useful lives of equipment, which are estimated to be 3 to 20 years; of buildings, building improvements, and land improvements, which are estimated to be 10 to 40 years; and of leasehold improvements, which are estimated to be the shorter of the useful life or the lease term.

The University reviews long-lived assets for impairment by comparing the future cash flows expected from the asset to the carrying value of the asset. If the carrying value of an asset exceeds the sum of estimated undiscounted future cash flows, an impairment loss is recognized for the difference between estimated fair value and carrying value. There were no impairment charges recognized in 2020 or 2019.

### **Charitable Remainder Trusts**

Charitable remainder trusts are classified as net assets with donor restrictions and recognized at fair value.

### **Annuities Payable**

Annuities payable consist of annuity payments currently due and the actuarial amount of annuities

payable. The actuarial amount of annuities payable is the present value of the aggregate liability for annuity payments over the expected lives of the beneficiaries.

### **Self-Insurance Reserves**

The University maintains a self-insurance program for general liability, professional liability, automobile liability, property damage, educators' liability, cyber liability, and certain employee and student insurance coverages. This program is supplemented with commercial excess insurance above the University's self-insurance retention. The reserves for self-insurance, postemployment benefits, and postretirement medical and life insurance benefits are based on actuarial studies and management estimates. See notes 10 and 12 for additional discussion.

### **Revenue Recognition**

Revenues from tuition and fees are reflected net of reductions from institutional student aid and are recognized as the services are provided over the academic year, including pro-rata adjustments for educational programs crossing over fiscal years. Institutional student aid includes amounts funded by endowment earnings, gifts, and other sources and reduces the published price of tuition for students receiving such aid. Fiscal year 2021 noncancelable fall-quarter tuition and fees, billed and received in fiscal year 2020, are reported as deferred revenue in fiscal year 2020. Fiscal year 2020 fall-quarter tuition and fees, billed but not earned in fiscal year 2019, are reported as deferred revenue in fiscal year 2019. (For further discussion of deferred revenues, see note 6.) Of the \$661.1 million and \$651.7 million in revenue recognized for the years ended August 31, 2020 and 2019, respectively, \$630.4 million and \$600.9 million, respectively, was from academic credit programs, and \$30.7 million and \$50.8 million, respectively, was from nonacademic credit programs.

Revenues from auxiliary services, such as residence and food services, represent fees for goods and services furnished to University students, faculty, and staff; these revenues are recognized in the fiscal year in which the goods and services are provided. Of the \$69.7 million and \$92.1 million in revenue recognized for the years ended August 31, 2020 and 2019, respectively, \$64.3 million and \$82.6 million, respectively, was from room and board, while the remaining

revenue was from other miscellaneous residence and food services.

Grants and contracts revenue is received from federal and other sponsors. It may represent either an exchange transaction for an equivalent benefit in return or a nonexchange transaction in which the resources provided are for the benefit of the University, the funding organization's mission, or the public at large. Revenues from exchange transactions are recognized as performance obligations are satisfied, which in most cases are as related costs are incurred. Revenues from nonexchange transactions are recognized as revenue when qualifying expenditures are incurred and applicable conditions and restrictions under the agreements are met. Conditional awards from federal sponsors outstanding as of August 31, 2020 and 2019, were \$660 million and \$552.4 million, respectively.

Sales and services revenues represent fees for services and goods provided to external parties in the course of educational activities, revenues from the provision of physical plant services and goods to external institutions contiguous to the University campuses, and trademark and royalty revenues arising from licensing of innovative technologies, copyrights, and other intellectual property. These revenues are recognized in the fiscal year in which goods and services are provided.

Professional fees arise from faculty and department services provided to external institutions such as hospitals. Revenues are recognized in the fiscal year in which the services are provided.

### **Income Taxes**

The Internal Revenue Service has determined that the University is exempt from income taxes under Section 501(c)(3) of the US Internal Revenue Code, except with regard to unrelated business taxable income (UBTI), which is taxed at corporate income tax rates. The University files federal and various state and local tax returns. The statute of limitations on the University's federal tax returns remains open for fiscal years 2017 through 2019.

The University makes an assessment of individual tax positions and follows a process for recognition and measurement of uncertain tax positions. Tax positions are evaluated on whether they meet the

"more likely than not" standard for sustainability on examination by tax authorities.

The Tax Cuts and Jobs Act (the Act) was enacted on December 22, 2017. The Act's impact on the University includes excise taxes on executive compensation and net investment income, as well as new rules for calculating UBTI. For the years ended August 31, 2020 and 2019, the University is subject to the federal excise tax of 1.4 percent on net investment income, which includes interest, dividends, and net realized gains on investments.

### **Uses of Estimates in the Preparation of the Consolidated Financial Statements**

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities; the disclosure of contingent assets and liabilities at the date of the consolidated financial statements; and the reported amounts of revenues and expenses during the relevant period. Actual results could differ from those estimates.

### **Newly Adopted Accounting Pronouncements**

In August 2018, the FASB issued Accounting Standards Update (ASU) 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*. These guidelines remove, modify, and add certain disclosure requirements related to transfers between levels of the fair value hierarchy and information about inputs used to develop fair value measurements. This standard was effective for the University in fiscal year 2021. The University early adopted this standard in fiscal year 2020; adoption of the ASU did not have a material effect on the University's consolidated financial statements.

In November 2016, the FASB issued clarifying guidance in ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*. The amendments in the update require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when

reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The amendments in the update do not provide a definition of restricted cash or restricted cash equivalents. The University's retrospective adoption of the ASU did not have a material effect on its consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. This ASU provides guidance on the classification of a variety of activities on the statement of cash flows. The University's adoption of the ASU did not have a material effect on its consolidated financial statements.

### **Recent Accounting Pronouncements**

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses*, which amends the Board's guidance on impairment of financial instruments. This standard is effective for the University in fiscal year 2021.

In February 2016, the FASB issued ASU 2016-02, *Leases*, as amended, which includes new guidance to increase the transparency and comparability of lease reporting by recognizing lease assets and liabilities on the consolidated statements of financial position and disclosing key information about leasing activities.

In June 2020, the FASB issued ASU 2020-05, which deferred the effective date of ASU 2016-02 by one year. The standard is effective for the University in fiscal year 2021.

The University is currently evaluating the impact of the aforementioned standards.

### **Current Environment**

In March 2020, the World Health Organization declared the novel coronavirus (COVID-19) a pandemic. The disease outbreak disrupted social interaction, travel, commerce, economies, and financial markets globally, including in the United States. The University's operations and financial condition were not immune to the pandemic's adverse effects.

Commencing March 20, 2020, undergraduate and graduate course instruction was conducted remotely, and most students vacated campus. The University granted refunds in fiscal year 2020 for spring-quarter housing and dining services not provided after March 20; these refunds drove an increase in deposits

payable for student tuition and room and board (\$32.7 million and \$3.2 million as of August 31, 2020 and 2019, respectively) and a corresponding reduction in revenues from auxiliary services attributed to room and board (\$64.3 million and \$82.6 million in 2020 and 2019, respectively). Students continued to meet their academic requirements through the end of the 2019–20 academic year. While some faculty and staff worked on campus to maintain essential operations, most faculty and staff transitioned to remote work.

The University experienced other fluctuations in certain balances and activity in fiscal year 2020. Billing for undergraduate and other programs in the 2020–21 academic year was deferred from August 2020 to September 2020, affecting cash collections and thereby reducing deferred revenue for tuition and housing (\$15.2 million and \$121.4 million as of August 31, 2020 and 2019, respectively). Sales and services revenue also decreased due to the pandemic's impact on athletics revenues and fees for services and goods to external parties.

University cost-containment measures included pausing retirement contributions (the University contributed \$64.2 million and \$82.5 million to the two contributory retirement plans in 2020 and 2019, respectively), which offset modest salary, wage, and benefit increases. Spending freezes—coupled with the University's inability to conduct certain aspects of normal operations—further decreased operating expenses from services, supplies, maintenance, and other (\$728 million and \$820.2 million in fiscal years 2020 and 2019, respectively).

On March 27, 2020, the US Congress passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act, which provided economic assistance for certain business and individuals. The University did not request or draw down funding under CARES Act provisions.

The University continues to monitor the course of the pandemic and is prepared to take additional measures to protect the health of the University community and promote the continuity of its academic mission.

### **Reclassifications**

Certain prior-year amounts have been reclassified to conform to the current-year presentation.

## 2. Accounts Receivable and Notes Receivable

Accounts receivable as of August 31 are summarized on the consolidated statements of financial position as follows:

<i>(in thousands of dollars)</i>	2020	2019
Research and other sponsored programs support	\$120,539	\$98,545
Student receivables	25,513	15,811
Other receivables	64,237	85,835
<b>Accounts receivable subtotal</b>	<b>210,289</b>	<b>200,191</b>
Less allowances for student uncollectible amounts	(204)	(656)
<b>Total accounts receivable, net</b>	<b>\$210,085</b>	<b>\$199,535</b>

Notes receivable as of August 31 are summarized on the consolidated statements of financial position as follows:

<i>(in thousands of dollars)</i>	2020	2019
Notes receivable	\$149,090	\$145,373
Less allowances for student uncollectible amounts	(2,433)	(1,397)
<b>Total notes receivable, net</b>	<b>\$146,657</b>	<b>\$143,976</b>

## 3. Contributions Receivable

Contributions receivable as of August 31 consisted of the following:

<i>(in thousands of dollars)</i>	2020	2019
Unconditional promises expected to be collected in		
Less than one year	\$88,633	\$57,392
One to five years	128,248	173,712
More than five years	91,979	98,503
<b>Contributions receivable subtotal</b>	<b>308,860</b>	<b>329,607</b>
Less unamortized discounts	(30,140)	(35,148)
Less allowances for uncollectible amounts	(849)	(754)
<b>Total contributions receivable, net</b>	<b>\$277,871</b>	<b>\$293,705</b>

Contributions receivable are discounted at rates ranging from 0.28 to 3.5 percent.

## 4. Investments

The University's investments are overseen by the Investments Committee of the Board of Trustees. Guided by the policies established by the Investments Committee, the University's Investment Office or external equity investment managers, external and internal fixed income and cash managers, and various limited partnership managers direct the investment of endowment and trust assets, certain working capital,

expendable funds with donor restrictions temporarily invested, and commercial real estate.

Substantially all of these assets are merged into an internally managed long-term investment pool on a market value basis. Each holder of units in the investment pool subscribes to or disposes of units on the basis of the market value per unit at the beginning of each month.

## Fair Value Disclosures

The following tables show the estimated fair value of investments, charitable trusts, and derivatives, grouped by the valuation hierarchy as defined in note 1, as of August 31:

(in thousands of dollars)

2020

	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	NAV as Practical Expedient (NAV)	Total fair value
Cash and cash equivalents	\$170,039	—	—	—	\$170,039
US equity	432,635	\$71	—	\$1,169,744	1,602,450
International equity	300,049	—	\$67	1,600,073	1,900,189
Fixed income	92,929	664,540	—	108,983	866,452
High-yield credit	—	—	—	244,668	244,668
Absolute return	—	—	—	1,810,817	1,810,817
Private investments	25,788	173	6,495	3,258,980	3,291,435
Real assets	151,782	13,948	2,440	1,445,670	1,613,840
Other investments	37,891	331	25,644	—	63,866
<b>Subtotal investment assets at fair value</b>	<b>1,211,113</b>	<b>679,063</b>	<b>34,646</b>	<b>9,638,935</b>	<b>11,563,756<sup>(a)</sup></b>
Interest-rate swaps	—	(16,018)	—	—	(16,018)
<b>Total</b>	<b>\$1,211,113</b>	<b>\$663,045</b>	<b>\$34,646</b>	<b>\$9,638,935</b>	<b>\$11,547,738</b>

<sup>(a)</sup> Investments held at cost totaling \$25,548 thousand should be added to the subtotal investment assets at fair value, and beneficial interest in charitable remainder trusts totaling \$13,072 thousand should be subtracted from the subtotal investment assets at fair value to reconcile to total investment assets of \$11,576,232 thousand as of August 31, 2020.

(in thousands of dollars)

2019

	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	NAV as Practical Expedient (NAV)	Total fair value
Cash and cash equivalents	\$79,213	—	—	—	\$79,213
US equity	442,952	\$71	—	\$1,009,592	1,452,615
International equity	318,103	—	\$64	1,428,147	1,746,314
Fixed income	91,753	518,758	—	276,963	887,474
High-yield credit	—	—	—	266,648	266,648
Absolute return	—	—	—	1,939,874	1,939,874
Private investments	34,597	321	10,403	2,842,382	2,887,703
Real assets	189,907	11,582	51,087	1,496,073	1,748,649
Other investments	30,835	590	25,411	—	56,836
Interest-rate derivatives	736	(370)	—	—	366
<b>Subtotal investment assets at fair value</b>	<b>1,188,096</b>	<b>530,952</b>	<b>86,965</b>	<b>9,259,679</b>	<b>11,065,692<sup>(a)</sup></b>
Interest-rate swaps	—	(16,482)	—	—	(16,482)
<b>Total</b>	<b>\$1,188,096</b>	<b>\$514,470</b>	<b>\$86,965</b>	<b>\$9,259,679</b>	<b>\$11,049,210</b>

<sup>(a)</sup> Investments held at cost totaling \$26,493 thousand should be added to the subtotal investment assets at fair value, and beneficial interest in charitable remainder trusts totaling \$12,761 thousand should be subtracted from the subtotal investment assets at fair value to reconcile to total investment assets of \$11,079,424 thousand as of August 31, 2019.



Investments reported as NAV as Practical Expedient consist primarily of the University's ownership in partnership investments (principally limited partnership interests in long-only equity and credit, hedge funds, private equity, real estate, and other similar funds). As a practical expedient, when quoted market prices are not available, the estimated fair values of these investments are generally based on reported partners' capital or NAV provided by the associated

external investment managers. In cases where the practical expedient threshold is not met, such as an investment report not being in compliance with GAAP, or where a statement of partners' capital is not provided, the investment is reported as Level 3. Since a range of possible values exists for these partnership investments, the estimated values may be materially different from the values that would have been used had a ready market for these partnerships existed.

The following tables summarize changes in the investments and derivatives classified by the University in Level 3 of the fair value hierarchy for the fiscal years ended August 31, 2020 and 2019:

<i>(in thousands of dollars)</i>	2019					2020
	Fair value	Purchases	Sales and settlements	Realized and unrealized gains (losses)	Transfers into and out of Level 3	Fair value
International equity	\$64	—	—	\$3	—	\$67
Private investments	10,403	\$160	—	(303)	(\$3,765)	6,495
Real assets	51,087	—	—	—	(48,647)	2,440
Other investments	25,411	—	—	233	—	25,644
<b>Total investments</b>	<b>\$86,965</b>	<b>\$160</b>	<b>—</b>	<b>(\$67)</b>	<b>(\$52,412)</b>	<b>\$34,646</b>

<i>(in thousands of dollars)</i>	2018					2019
	Fair value	Purchases	Sales and settlements	Realized and unrealized gains (losses)	Transfers into and out of Level 3	Fair value
International equity	\$66	—	—	(\$2)	—	\$64
Private investments	17,633	\$830	(\$211)	(1,468)	(\$6,381)	10,403
Real assets	91,052	62	(9,165)	(6,562)	(24,300)	51,087
Other investments	25,799	—	—	(388)	—	25,411
<b>Total investments</b>	<b>\$134,550</b>	<b>\$892</b>	<b>(\$9,376)</b>	<b>(\$8,420)</b>	<b>(\$30,681)</b>	<b>\$86,965</b>

In fiscal year 2020, there were ten transfers out of Level 3 into investments reported as NAV as Practical Expedient, as these partnership investments had estimated fair values based on reported partners' capital provided by the associated external managers.

In fiscal year 2019, there were two transfers out of Level 3 into Level 1. One occurred as a subordinated equity security converted to publicly traded common shares, while the other was reclassified since the underlying securities have readily determinable market prices.

As of August 31, 2020 and 2019, investments held at cost included real estate totaling \$19.4 million. Investments held at cost also included property co-ownerships, mortgages, and other investments

totaling \$6.2 million and \$7.1 million as of August 31, 2020 and 2019, respectively.

The next table presents funding obligations and redemption terms of investments by asset class. The University is required under certain partnership agreements to advance additional funding up to specified levels over a period of several years. These uncalled commitments have fixed expiration dates and other termination clauses. At August 31, 2020, the University was committed to making future capital contributions in the amount of \$2 billion, primarily in the next five years, as detailed in the table. Certain agreements also contain notice periods, lock-ups, and gates that limit the University's ability to initiate redemptions.

(in thousands of dollars)

	Fair value	Remaining life	Uncalled commitments	Redemption terms	Redemption restrictions
US equity	\$1,602,450	No limit	\$12,000	Daily to annually, with 1- to 90-day notice periods	Lock-up provisions ranging from none to 3 years
International equity	\$1,900,189	No limit	\$29,100	Daily to annually, with 1- to 180-day notice periods	Lock-up provisions ranging from none to 3 years
Fixed income	\$866,452	No limit	—	Daily to monthly, with 1- to 10-day notice periods	No lock-up provisions
High-yield credit	\$244,668	No limit to 12 years	\$118,659	Certain partnerships ineligible for redemption; other funds semiannually to annually, with 90-day notice periods	Certain partnerships not redeemable; other partnerships include side pockets subject to general partner discretion
Absolute return	\$1,810,817	No limit	\$75,250	Daily to greater than annually, with 1- to 120-day notice periods; private partnership ineligible for redemption	Lock-up provisions ranging from none to 3 years; side pockets on many funds; one partnership not redeemable
Private investments	\$3,291,435	No limit to 12 years	\$944,697	Partnerships ineligible for redemption; equity securities daily, with 1-day notice	Private partnerships not redeemable; equity securities have no lock-up provisions
Real assets	\$1,613,840	No limit to 14 years	\$795,514	Partnerships ineligible for redemption; commodity and equity funds are weekly, with 1- to 3-day notice periods	Drawdown partnerships not redeemable; no restriction on commodity and equity funds

Cash and cash equivalents for investment purposes include bank accounts holding cash and money market funds consisting of short-term US Treasury securities. Cash equivalents are highly liquid and are carried at amortized cost, which approximates fair value.

The University's marketable securities categories include investments in US equity, international equity, and fixed income strategies via separately managed accounts, partnerships, and commingled funds. US equity strategies include large-, mid-, and small-cap public equities. Two investments in this category currently may not be redeemed over the next year.

International equities include developed market (ex-US public equities) and emerging market strategies. One investment in this category may not be redeemed over the next year.

Fixed income strategies include US government securities, agency securities, inflation-linked bonds (TIPS), corporate bonds, global bonds, and short-term cash investments.

The high-yield credit portfolio includes investments in distressed debt and other credit instruments with fixed income characteristics, but more specific risk tied to the securities and their underlying cash flows.

The absolute return portfolio is weighted toward long-short equity managers, uncorrelated strategies, and diversifying event-driven or hedged tactical credit strategies. One investment in this portfolio may not be redeemed over the next year due to lock-up provisions. As of August 31, 2020, the remaining investments have either full or partial liquidity over the next year, with the exception of those having side pockets. As of August 31, 2020 and 2019, the University posted \$149 million and \$137.9 million, respectively, of public equity as a source of collateral for an alternative investment strategy.

The private investments portfolio includes investments in global buyout and venture capital funds. The real assets portfolio includes the University's investments in energy, timber, real estate, and public investments in certain commodity and equity funds.

Lives of the specific funds could vary significantly, depending on the investment decisions of the external fund managers, changes in the University's portfolio, and other circumstances. Furthermore, the University's obligation to fund these commitments may be waived by the fund managers for a variety of reasons, including changes in the market environment and/or investment strategy.

#### **Investment Return**

Investment return designated for operations is defined as the investment payout, according to the spending guideline for the Long-Term Balanced Pool and the actual investment income for all other investments. In 2019, an additional amount of \$50 million was authorized in excess of the spending rule to support strategic investment and is included in the investment return designated for operations line of the consolidated statements of activities. Gross investment income from specific investments held at cost totaled \$13.1 million and \$15.4 million for the fiscal years ended August 31, 2020 and 2019, respectively. Investment expenses related to specific investments held at cost totaled \$4.7 million and \$4.8 million for the fiscal years ended August 31, 2020 and 2019, respectively. All other investment returns are categorized as nonoperating.

Certain direct expenses paid by the University for investment management and custody services have been netted against investment earnings.

#### **Derivative Financial Instruments**

The University has entered into hedging transactions via various interest-rate swaps and swaptions

and has maintained those positions since fiscal year 2010. These instruments are presented net in the fixed income asset class of investments within Level 2.

Credit exposure represents the University's potential loss if counterparties fail to perform under the terms of the contracts, or collateral, if any, does not fully support amounts obligated. This exposure is measured by the fair value of the cash collateral held at the counterparties at the reporting date. The University manages its exposure to credit risk by using highly rated counterparties, establishing risk-control limits, and obtaining collateral where appropriate, and on a net basis had obligations to counterparties as of August 31, 2020 and 2019, as disclosed in the tables on the next page. As a result, the University has limited credit risk. The University has entered into margin collateral agreements with major investment banks that impose a \$1 million threshold on both parties. As of August 31, 2020 and 2019, the University posted collateral of \$0 and \$0.7 million, respectively, to one counterparty. To date, the University has not incurred any losses on derivative financial instruments due to counterparty nonperformance.

The University regularly reviews the use of derivative financial instruments by each of the managers of alternative investment funds in which it participates. While these outside managers generally use such instruments for hedging purposes, derivative financial instruments are employed for trading purposes by numerous independent asset managers of the University.

The tables below summarize the derivative financial instruments held by the University as of August 31:

<i>(in thousands of dollars)</i>		2020				
	Notional amount	Assets	Liabilities	Fiscal year net gain (loss)	Interest rates	Maturity date
<b>Investment-related derivatives</b>						
Interest-rate swaptions	\$200,000	—	—	(\$740)	5%	12/02/19
<b>Total investment-related</b>	<b>200,000</b>	<b>—</b>	<b>—</b>	<b>(740)</b>	<b>5%</b>	<b>12/02/19</b>
<b>Credit-related derivatives</b>						
Interest-rate swaps	125,002	—	(\$16,018)	(465)	4.12–4.38%	08/31/23
<b>Total credit-related</b>	<b>125,002</b>	<b>—</b>	<b>(16,018)</b>	<b>(465)</b>	<b>4.12–4.38%</b>	<b>08/31/23</b>
<b>Total derivative financial instruments</b>	<b>\$325,002</b>	<b>—</b>	<b>(\$16,018)</b>	<b>(\$1,205)</b>	<b>4.12–5%</b>	<b>08/31/23</b>

<i>(in thousands of dollars)</i>		2019				
	Notional amount	Assets	Liabilities	Fiscal year net gain (loss)	Interest rates	Maturity date
<b>Investment-related derivatives</b>						
Interest-rate swaptions	\$200,000	\$736	(\$368)	(\$106)	5%	12/02/19
<b>Total investment-related</b>	<b>200,000</b>	<b>736</b>	<b>(368)</b>	<b>(106)</b>	<b>5%</b>	<b>12/02/19</b>
<b>Credit-related derivatives</b>						
Interest-rate swaps	125,000	—	(16,482)	(3,072)	4.12–4.38%	08/31/23
<b>Total credit-related</b>	<b>125,000</b>	<b>—</b>	<b>(16,482)</b>	<b>(3,072)</b>	<b>4.12–4.38%</b>	<b>08/31/23</b>
<b>Total derivative financial instruments</b>	<b>\$325,000</b>	<b>\$736</b>	<b>(\$16,850)</b>	<b>(\$3,178)</b>		

## 5. Land, Buildings, and Equipment

Land, buildings, and equipment as of August 31 consisted of the following:

<i>(in thousands of dollars)</i>		2020	2019
Land		\$31,036	\$31,036
Construction-in-progress		45,983	117,474
Buildings and leasehold improvements		4,594,774	4,455,482
Equipment		703,454	663,544
Accumulated depreciation		(2,116,553)	(1,947,173)
<b>Total land, buildings, and equipment, net</b>		<b>\$3,258,694</b>	<b>\$3,320,363</b>

Included in construction-in-progress costs are building and leasehold improvement capitalizations. Building costs are funded by bonds, gifts (received or pledged), grants, and funds without donor restrictions.

Under the University's interest capitalization policy, actual interest costs incurred during the period of construction of an asset for University use are capitalized until that asset is substantially completed and ready for use. The capitalized cost is reflected in the asset's total cost and depreciated over the asset's useful life. Assets qualifying for interest capitalization may include buildings and major equipment.

In fiscal year 2019, the Simpson Querrey Biomedical Research Center was completed and placed into service. The sale of four floors to Ann & Robert H. Lurie Children's Hospital of Chicago was consummated upon completion of the building.

## Lease Obligations

The University is obligated as lessee under numerous operating leases to pay base rent through the lease expiration dates. Operating leases consist primarily of leases for the use of real property and have terms expiring through fiscal year 2031. Real estate lease expenses totaled \$23.2 million and \$15.9 million for the fiscal years ended August 31, 2020 and 2019, respectively. Sublease rental income totaled \$2.5 million and \$3 million for the fiscal years ended August 31, 2020 and 2019, respectively. The future minimum lease payments under noncancelable operating leases through August 31 of each period are shown at right.

*(in thousands of dollars)*

2021	\$21,842
2022	18,893
2023	16,405
2024	15,838
2025	14,686
2026 and thereafter	51,558
<b>Total</b>	<b>\$139,222</b>

## Rentals under Leases

The University is entitled as lessor under numerous operating leases to receive rental payments. Operating leases consist primarily of leases for the use of real property and have terms expiring through fiscal year 2041. The future minimum rental payments under noncancelable operating leases through August 31 of each period are shown at right.

*(in thousands of dollars)*

2021	\$2,775
2022	2,283
2023	2,329
2024	2,380
2025	2,059
2026 and thereafter	8,974
<b>Total</b>	<b>\$20,800</b>

## 6. Deferred Revenue

Deferred revenue as of August 31 is summarized on the consolidated statements of financial position as follows:

<i>(in thousands of dollars)</i>	2020	2019
Tuition and housing	\$15,225	\$121,359
Sponsored contracts (exchange)	86,886	68,899
Conditional contributions and grants	22,826	22,360
Other deferred revenue	12,820	18,838
<b>Total deferred revenue</b>	<b>\$137,757</b>	<b>\$231,456</b>

## 7. Deposits Payable and Actuarial Liability of Annuities Payable

Deposits payable and actuarial liability of annuities payable as of August 31 are summarized on the consolidated statements of financial position as follows:

<i>(in thousands of dollars)</i>	2020	2019
Agency deposits	\$142,287	\$133,591
Actuarial liability of annuities	21,782	20,689
Student loans	—	4,823
Student tuition and room and board	32,728	3,207
Other deposits payable	3,805	6,254
<b>Total deposits payable and actuarial liability of annuities payable</b>	<b>\$200,602</b>	<b>\$168,564</b>

## 8. Bonds, Notes, and Other Debt Payable

Bonds, notes, and other debt payable as of August 31 are as follows:

<i>(in thousands of dollars)</i>	Interest-rate mode	Fiscal year maturity	Interest rate	2020	2019
Illinois Finance Authority (IFA)–Series 2004	Variable	2034	0.08% <sup>(a)</sup>	\$135,800	\$135,800
IFA–Series 2008	Variable	2046	0.07% <sup>(a)(b)</sup>	125,000	125,000
Taxable–Series 2012	Fixed	2039–2047	4.20%	200,000	200,000
Taxable–Series 2013	Fixed	2015–2044	4.61% <sup>(b)</sup>	558,155	563,240
Taxable–Series 2015	Fixed	2038–2048	3.78% <sup>(b)</sup>	500,000	500,000
IFA–Series 2015	Fixed	2022–2028	4.24% <sup>(b)</sup>	128,545	128,545
Taxable–Series 2017	Fixed	2047–2057	3.72% <sup>(b)</sup>	500,000	500,000
Taxable–Series 2020	Fixed	2049–2050	2.64%	300,000	—
Commercial paper (\$300,000 available)	Variable	NA	NA	—	300,000
Promissory note	Fixed	2021	1.72% <sup>(c)</sup>	8,000	16,000
Lines of credit (\$765,000 available)	Variable	2020	0.76% <sup>(b)</sup>	380,000	85,000
<b>Bonds, notes, and other debt payable subtotal</b>				<b>2,835,500</b>	<b>2,553,585</b>
Unamortized issuance costs, premiums, and discounts, <i>net</i>				(3,464)	(2,021)
<b>Total bonds, notes, and other debt payable, <i>net</i></b>				<b>\$2,832,036</b>	<b>\$2,551,564</b>

<sup>(a)</sup> Interest rate reset weekly

<sup>(b)</sup> Weighted average interest rate at August 31, 2020

<sup>(c)</sup> Imputed rate on non-interest-bearing note

Total obligations including bonds, notes, and other debt payable at August 31, 2020, are scheduled to mature through August 31 of each period as noted in the table below. The schedule has been prepared based on the contractual maturities of the debt outstanding at August 31, 2020. Accordingly, if remarketings of variable rate debt offerings fail in future periods, debt repayments may become more accelerated than presented here. The potential failed remarketings coincide with the interest rate reset dates and amounts noted above.

During the year ended August 31, 2020, the Taxable-Series 2020 Fixed Rate Bonds were issued to refinance \$300 million of commercial paper. During the year ended August 31, 2019, the University did not enter into the sale of any additional long-term municipal bonds or increase its long-term debt position.

<i>(in thousands of dollars)</i>	
2021	\$393,450
2022	4,790
2023	6,660
2024	7,710
2025	10,240
2026 and thereafter	2,412,650
<b>Total</b>	<b>\$2,835,500</b>

## 9. Endowments

Donor-restricted endowment funds are subject to Illinois's enacted version of the Uniform Prudent Management of Institutional Funds Act (UPMIFA). The University interprets UPMIFA as requiring that the fair value of the original donor-restricted endowment gift be preserved as of the gift date unless there are explicit donor stipulations to the contrary. Therefore, the University classifies the following as part of net assets with donor restrictions: the original value of gifts donated to the permanent endowment, the original value of subsequent gifts, and accumulations to the permanent endowment made in accordance with the applicable donor gift instrument at the time the accumulation was added to the fund. The remaining portion of the donor-restricted endowment fund is classified as net assets with donor restrictions until those amounts are appropriated for University expenditure in a manner consistent with UPMIFA's standard of prudence. In accordance with UPMIFA, the University considers the following factors in determining whether to appropriate or accumulate donor-restricted endowment funds:

- The duration and preservation of the endowment fund
- The purposes of the institution and of the endowment fund
- General economic conditions
- Possible effects of inflation or deflation
- Expected total return from income and appreciation of investments
- Other resources of the institution
- The institutional investment policy

The University's endowment consists of about 2,800 individual donor-restricted endowment funds and about 1,000 funds it designates to function as endowments. The net assets associated with endowment funds, including funds designated by the University to function as endowments, are classified and reported based on whether there are donor-imposed restrictions. Institution-designated endowment funds include quasi-endowments established by specific Board of Trustees approval as well as endowments created by management under general guidelines and policies approved by the Board of Trustees.

The following tables present the endowment net asset composition by type of fund at fair value as of August 31:

<i>(in thousands of dollars)</i>	With donor restrictions				2020
	Without donor restrictions	Funds held in perpetuity	Accumulated gains (losses)	Total	
Institution-designated endowment funds	\$4,216,889				\$4,216,889
With donor restrictions					
Underwater funds		\$47,401	(\$579)	\$46,822	46,822
All other funds		1,691,042	2,529,953	4,220,995	4,220,995
<b>Endowment assets at end of year</b>	<b>\$4,216,889</b>	<b>\$1,738,443</b>	<b>\$2,529,374</b>	<b>\$4,267,817</b>	<b>\$8,484,706</b>

<i>(in thousands of dollars)</i>	With donor restrictions				2019
	Without donor restrictions	Funds held in perpetuity	Accumulated gains (losses)	Total	
Institution-designated endowment funds	\$4,125,505				\$4,125,505
With donor restrictions					
Underwater funds		\$91,626	(\$2,891)	\$88,735	88,735
All other funds		1,587,979	2,442,599	4,030,578	4,030,578
<b>Endowment assets at end of year</b>	<b>\$4,125,505</b>	<b>\$1,679,605</b>	<b>\$2,439,708</b>	<b>\$4,119,313</b>	<b>\$8,244,818</b>

### Underwater Endowment Funds

The University monitors endowment funds to identify those for which historical cost was more than fair value. Associated unrealized losses of \$0.6 million and \$2.9 million as of August 31, 2020 and 2019, respectively, are recorded in the net assets with donor restrictions classification; subsequent gains increase net assets with donor restrictions.

### Investment and Spending Policies

The University's endowment is primarily invested in the Long-Term Balanced Pool. The Investments Committee of the Board of Trustees annually reviews the asset allocation policy for the pool.

The principal objective for the Long-Term Balanced Pool is to preserve purchasing power and to provide a growing stream of income to fund University programs. On average, the pool seeks to achieve an annual total rate of return (i.e., actual income plus appreciation) equal to inflation plus actual spending. This objective of preserving purchasing power emphasizes the need for a long-term perspective in formulating both spending and investment policies.

The Board of Trustees has adopted a guideline for the annual spending rate from the University's Long-Term Balanced Pool. The calculation blends market and spending elements for the total annual spending rate.

The market element is an amount equal to 4.35 percent of the market value of a unit in the pool, averaged for the 12 months ended October 31 of the prior fiscal year. It is weighted at 30 percent in determining the total. The spending element is an amount equal to the current fiscal year's spending amount increased by 1.5 percent plus the actual rate of inflation. It is weighted at 70 percent in determining the total.

If investment income received is not sufficient to support the total-return objective, the balance is provided from realized and unrealized gains. If the income received is in excess of the objective, the balance is reinvested in the Long-Term Balanced Pool on behalf of the unit holders.

The University's policy is to reinvest the current income of all other investment pools.



## Changes in Endowment Net Assets

The following tables represent changes in endowment net assets for the fiscal years ended August 31:

*(in thousands of dollars)* 2020

	Without donor restrictions	With donor restrictions	Total
Endowment net assets, beginning of year	\$4,125,505	\$4,119,313	\$8,244,818
Interest and dividends, net of expenses	4,436	4,549	8,985
Net appreciation, realized and unrealized	229,864	235,734	465,598
<b>Total investment return</b>	<b>234,300</b>	<b>240,283</b>	<b>474,583</b>
Contributions		76,589	76,589
Appropriation of endowment assets for expenditure	(181,170)	(184,425)	(365,595)
Other changes			
Transfers to create institutional funds	60,654	—	60,654
Transfers of institutional funds per donor requirement	—	16,476	16,476
Spending of institution-designated endowment fund	(21,123)	—	(21,123)
Other reclassifications	(1,277)	(419)	(1,696)
<b>Endowment net assets, end of year</b>	<b>\$4,216,889</b>	<b>\$4,267,817</b>	<b>\$8,484,706</b>

*(in thousands of dollars)* 2019

	Without donor restrictions	With donor restrictions	Total
Endowment net assets, beginning of year	\$4,229,710	\$4,157,208	\$8,386,918
Interest and dividends, net of expenses	(1,726)	(2,467)	(4,193)
Net appreciation, realized and unrealized	61,129	87,396	148,525
<b>Total investment return</b>	<b>59,403</b>	<b>84,929</b>	<b>144,332</b>
Contributions	—	46,705	46,705
Appropriation of endowment assets for expenditure	(173,127)	(173,387)	(346,514)
Other changes			
Transfers to create institutional funds	34,589	—	34,589
Transfers of institutional funds per donor requirement	—	4,046	4,046
Spending of institution-designated endowment fund	(21,801)	—	(21,801)
Other reclassifications	(3,269)	(188)	(3,457)
<b>Endowment net assets, end of year</b>	<b>\$4,125,505</b>	<b>\$4,119,313</b>	<b>\$8,244,818</b>

## 10. Postretirement and Postemployment Benefit Plans

The University maintains two contributory retirement plans for its eligible faculty and staff. The plans offer employees two investment company options, Teachers Insurance and Annuity Association (TIAA) and College Retirement Equities Fund (CREF), and certain mutual funds offered by Fidelity Investments. Participating employee and University contributions are immediately vested. The University contributed \$64.2 million and \$82.5 million to the two plans in 2020 and 2019, respectively.

The University currently sponsors a healthcare plan permitting retirees to continue participation on a “pay-all” basis; it has no liability for participants past age 65. The retiree contribution is based on the average per-capita cost of coverage for the plan’s entire group of active employees and retirees rather than the per-capita cost for retirees only. Retirees are also eligible to participate in certain tuition reimbursement plans and may receive a payment for sick days accumulated at retirement. Certain postemployment benefit plans are also sponsored.

The University recognizes an asset or a liability in the consolidated statements of financial position for

the plans’ overfunded or underfunded status. The asset or liability is the difference between the fair value of plan assets and the related benefit obligation, defined as the projected benefit obligation for post-employment benefit programs and the accumulated postretirement benefit obligation (APBO) for post-retirement benefit programs, such as a retiree health-care plan. In the consolidated statements of activities, the University recognizes actuarial gains or losses and prior service costs or credits that arise during the period but are not components of net periodic benefit cost. The University measures plan assets and obligations as of the date of its fiscal year end and makes specified disclosures for the upcoming fiscal year.

The accrued cost for postemployment benefits was \$8.8 million and \$8.5 million at August 31, 2020 and 2019, respectively, and is included in accounts payable and accrued liabilities on the consolidated statements of financial position.

The University funds the plan on a pay-as-you-go basis. The following table sets forth key amounts for the postretirement plan for the fiscal years ended August 31:

<i>(in thousands of dollars)</i>	2020	2019
Benefit obligation	\$21,001	\$13,663
Benefits paid	2,064	1,742
Employer contributions	1,321	1,059
Contributions from participants	743	683
Net periodic postretirement benefit cost	796	1,307
Fair value of plan assets	—	—

Service costs included in net periodic postretirement benefit cost above totaled \$688 thousand and \$806 thousand as of August 31, 2020 and 2019, respectively.

The changes in other than periodic benefit cost included in net assets without donor restrictions on the consolidated statements of activities totaled net losses of \$4.1 million and net gains of \$3.7 million as of August 31, 2020 and 2019, respectively, for a decrease of \$7.8 million due to net losses during the fiscal year.

The APBO was \$21 million and \$13.7 million at August 31, 2020 and 2019, respectively, and is included in accounts payable and accrued liabilities on the consolidated statements of financial position.

The following tables present key actuarial assumptions used in determining APBO as of August 31, 2020 and 2019. For both fiscal years 2020 and 2019, the ultimate healthcare cost trend rate was 5 percent, and the year when the trend rate will reach the ultimate trend rate was 2025.

Additional assumptions used to determine benefit obligations for the fiscal years ended August 31 were as follows:

	2020	2019
Weighted average settlement (discount) rate	1.9 %	2.6%
Weighted average rate of increase in future compensation levels	2.0%	2.5%
Healthcare cost trend rate	6.25%	6.5%

Next, the assumptions used to determine net periodic benefit cost for the fiscal years ended August 31:

	2020	2019
Discount rate	2.6%	3.8%
Weighted average rate of increase in future compensation levels	2.5%	2.5%
Healthcare cost trend rate	6.5%	6.75%

A one-percentage-point change in assumed healthcare cost trend rates would have had these effects in fiscal year 2020:

<i>(in thousands of dollars)</i>	1% point decrease	1% point increase
(Decrease) increase in total of service and interest cost	(\$69)	\$80
(Decrease) increase in postretirement benefit obligation	(\$740)	\$837

Estimated future benefit payments reflecting anticipated service, as appropriate, are expected to be paid as shown below for the fiscal years ended August 31:

<i>(in thousands of dollars)</i>	
2021	\$984
2022	964
2023	1,010
2024	1,041
2025	1,123
2026–2030	6,277
<b>Total</b>	<b>\$11,399</b>

The University offers a deferred compensation plan under Internal Revenue Code 457(b) to a select group of management and highly compensated employees. The University does not contribute to this deferred compensation plan. The University has recorded both an asset and a liability related to the deferred compensation plan that totaled \$108.8 million and \$94.8 million as of August 31, 2020 and 2019, respectively; these are included in investments and deposits payable and actuarial liability of annuities payable on the consolidated statements of financial position.

## 11. Related Parties

Members of the University's Board of Trustees, senior management, and faculty may on occasion be associated either directly or indirectly with entities doing business with the University. The University bylaws and conflict of interest policies establish guidelines for disclosure and regulation of such activities as circumstances warrant. When such associations exist, measures are taken, in the best interests of the University, to mitigate any actual or perceived conflict. Transactions with related parties may include investment management, common membership in investment partnerships or other investment vehicles, and the purchase of goods or services.

Northwestern Medical Group (NMG) is a not-for-profit, multispecialty physician organization committed to providing clinical care to patients and to supporting the research and academic endeavors of Northwestern's Feinberg School of Medicine (Feinberg). NMG is governed by a board of directors, and its physicians are full-time faculty members or researchers at Feinberg. It is a subsidiary of Northwestern Memorial Healthcare Corporation (NMHC), the not-for-profit parent corporation of Northwestern Memorial Hospital (NMH), which is the primary teaching hospital of Feinberg. As such, NMHC and NMG are related parties of the University. Under terms of agreements effective in fiscal year 2014 between the University, NMG, and NMHC, the University receives recurring contributions from NMHC to support the Feinberg research and education programs, basic and applied biomedical research facilities and programs, and research and educational support services.

As of August 31, 2020 and 2019, accounts receivable arising from support and operational activities with NMHC totaled \$17.7 million and \$15.7 million, respectively, and are included in accounts receivable on the consolidated statements of financial position. For the fiscal years ended August 31, 2020 and 2019, contributions totaling \$124 million and \$116 million, respectively, have been made from NMHC to the University and are included in private gifts on the consolidated statements of activities. For the fiscal years ended August 31, 2020 and 2019, revenues arising from operational activities with NMHC totaled \$35.6 million and \$32.4 million, respectively, and are

included in professional fees and sales and services on the consolidated statements of activities.

## 12. Self-Insurance Reserves and Other Contingencies

Reserves for losses under the University's self-insurance program, aggregating \$9.9 million and \$11.5 million at August 31, 2020 and 2019, respectively, include reserves for probable known losses and for losses incurred but not yet reported. The reserves are presented on a discounted basis. The discount rate was 6.55 percent and 7.5 percent in fiscal years 2020 and 2019. Self-insurance reserves are based on estimates of historical loss experience, and while management believes that the reserves are adequate, the ultimate liabilities may be more or less than the amounts provided. These reserves are included in accounts payable and accrued liabilities on the consolidated statements of financial position.

Under an agreement in effect through fiscal year 2013 between the University and NMG, a proportionate share of primary medical professional liability costs that arise out of events prior to November 1, 2004, was borne by NMG. As a part of the clinical integration agreement between NMG, NMHC, and the University, signed September 1, 2013, any remaining liabilities related to the period prior to November 1, 2004, are the obligations of the University and included in the reserves, beginning in fiscal year 2014, for losses noted above.

In August 2009, the University, as originating lender, began participation in a student loan securitization program. It sold student loans to a school trust totaling \$65 million in 2009, \$19.8 million in 2010, and \$22.5 million in 2012; the University issued University-guaranteed notes, which were purchased by a funding trust that procures financing to support the lending program. The programs are managed to break even and generate no servicing assets or liabilities.

In February 2020, the University purchased a \$2.9 million portfolio of student loans from the trust. This purchase represented total remaining loans and effectively ends the securitization program. The University will service the repurchased loans. Prior to the repurchase, guaranteed notes under these programs totaled \$8.3 million as of August 31, 2019. In fiscal year

2019, these loans, net of reserves, are included in notes receivable and deposits payable on the consolidated statements of financial position.

In October 2013, the University purchased a \$61 million portfolio of private education loans from a lending agency; these loans were purchased by the lending agency from the University prior to 2009 and were serviced by the University. As of August 31, 2020 and 2019, these loans totaled \$5.8 million and \$11.7 million, respectively, and are included in notes receivable, net of reserves, on the consolidated statements of financial position. The University continues to service the repurchased loans.

From time to time, various claims and suits generally incidental to the conduct of normal business are

pending or may arise against the University. It is the opinion of management of the University, after taking into account insurance coverage, that any losses from the resolution of pending litigation should not have a material effect on the University's financial position or results of operations.

All funds expended in connection with government grants and contracts are subject to audit by government agencies. While any ultimate liability from audits of government grants and contracts by government agencies cannot be determined at present, management believes that it should not have a material effect on the University's consolidated financial position or results of operations.

### 13. Grants and Contracts

Grants and contracts for the fiscal years ended August 31 are summarized on the consolidated statements of activities as follows:

<i>(in thousands of dollars)</i>	2020	2019
Federal grants	\$550,005	\$518,244
Private grants and contracts	164,951	174,477
State grants	4,166	3,831
<b>Total grants and contracts</b>	<b>\$719,122</b>	<b>\$696,552</b>

Indirect cost recovery on federal grants and contracts is based on an institutional rate negotiated with its cognizant federal agency, the United States Department of Health and Human Services.

### 14. Liquidity and Availability

Financial assets and resources available within one year of August 31 for general expenditure are as follows:

<i>(in thousands of dollars)</i>	2020	2019
Financial assets		
Cash and cash equivalents	\$381,442	\$155,469
Accounts receivable, net	197,013	199,535
Notes receivable	23,796	23,109
Contributions receivable	88,633	57,392
Investment return for operations	495,710	471,000
<b>Financial assets available within one year</b>	<b>1,186,594</b>	<b>906,505</b>
Liquidity resources		
Commercial paper	300,000	—
Bank lines of credit	385,000	665,000
<b>Total financial assets and liquidity resources available within one year for general expenditure</b>	<b>\$1,871,594</b>	<b>\$1,571,505</b>

The University manages liquidity by structuring its financial assets to be available as its operating expenses, liabilities, and other obligations come due. Working capital funds, which are generated through the temporary differences between operating receipts and disbursements, are held in a variety of money market instruments or are invested in the Long-Term Balanced Pool. The income from investing them is used for general operating purposes.

In addition, the University may place commercial paper under a \$300 million Taxable Commercial Paper Note. Under this agreement, no outstanding borrowings existed as of August 31, 2020. Outstanding borrowings of \$300 million existed as of August 31, 2019. The University also may draw \$765 million in

standby lines of credit to supplement working capital requirements. As of August 31, 2020 and 2019, there were outstanding borrowings of \$380 million and \$85 million, respectively, under this agreement.

Lastly, the University holds institution-designated endowments of \$4,217 million and \$4,126 million as of August 31, 2020 and 2019, respectively. Although the University does not intend to spend from its institution-designated endowment funds—other than amounts appropriated for spending through its annual budget approval and appropriation process—amounts from its institution-designated endowment could be made available if necessary, subject to liquidity of the underlying investments.

## 15. Functional Classification of Expenses

Expenses by functional categories reflect salaries, wages, benefits, goods, and services used for those specific purposes. The University has allocated functional expenses for depreciation and interest on indebtedness to other functional categories based on the functional use of space on the University's campuses.

Operating expenses incurred in the fiscal years ended August 31 were as follows:

*(in thousands of dollars)* 2020

	Academic	Research	Support	Total
Salaries, wages, and benefits	\$923,409	\$298,256	\$234,143	\$1,455,808
Services, supplies, maintenance, and other	517,945	196,006	14,051	728,002
Depreciation	113,167	55,374	13,106	181,647
Interest on indebtedness	58,496	28,623	6,775	93,894
<b>Total</b>	<b>\$1,613,017</b>	<b>\$578,259</b>	<b>\$268,075</b>	<b>\$2,459,351</b>

*(in thousands of dollars)* 2019

	Academic	Research	Support	Total
Salaries, wages, and benefits	\$914,581	\$278,335	\$246,243	\$1,439,159
Services, supplies, maintenance, and other	566,670	193,503	59,993	820,166
Depreciation	111,854	40,342	12,946	165,142
Interest on indebtedness	58,740	21,185	6,799	86,724
<b>Total</b>	<b>\$1,651,845</b>	<b>\$533,365</b>	<b>\$325,981</b>	<b>\$2,511,191</b>

## 16. Subsequent Events

The University has evaluated subsequent events in accordance with the FASB ASC Subsequent Event Topic through December 18, 2020, the date when the consolidated financial statements were issued. The University did not identify any events to be disclosed.

## 17. Financial Responsibility Standards

The University participates in federal Title IV student financial assistance programs that require it to meet fiscal responsibility standards based on criteria the US Department of Education (ED) has set forth in 34 CFR 668.171. The criteria include the ED's annual calculation of a financial responsibility composite score, as

further outlined in 34 CFR 668.172, using audited consolidated financial statements submitted via the ED's eZ-Audit system. The composite score has been and will continue to be based on three ratios: primary reserve, equity, and net income. These ratios use the following University financial data, which are not otherwise presented in the consolidated financial statements or other notes to the consolidated financial statements, as of and for the year ended August 31, 2020.

(in thousands of dollars)

Required input per standards	Ratio(s) uses	Input amount	Related consolidated financial statement amount not used as input on supplementary schedule
Land, buildings, and equipment, net—pre-implementation	Primary reserve	\$3,181,536	
Land, buildings, and equipment, net—post-implementation without outstanding debt for original purchase	Primary reserve	31,175	
Construction-in-progress	Primary reserve	45,983	
Total land, buildings, and equipment, net			\$3,258,694
Long-term debt, net—for long-term purposes—pre-implementation	Primary reserve	2,153,512	
Debt, net—not used for purchase of land, buildings, and equipment			678,524
Total bonds, notes, and other debt payable, net			2,832,036
Net periodic postretirement benefit cost			796
Less: service costs			(688)
Net periodic benefit cost other than service cost (nonoperating)	Primary reserve	108	
Annuity and other split-interest agreements with donor restrictions	Primary reserve	25,501	
Annuity and other split-interest agreements with donor restrictions: restricted in perpetuity			36,317
Total annuity and other split-interest agreements			61,818
Endowment funds held in perpetuity			1,738,443
Endowment pledges			91,973
Annuity and other split-interest agreements			36,317
Student loan funds			40,726
Total net assets with donor restrictions: restricted in perpetuity	Primary reserve	1,907,459	
<i>Inputs directly from the consolidated statement of activities:</i>			
Total operating revenues			\$2,542,783
Plus: private gifts and grants for buildings and equipment (nonoperating)			40
Less: investment return designated for operations			(402,815)
Total revenues and gains without donor restrictions, excluding net investment return	Net income	\$2,140,008	
Investment return designated for operations			402,815
Less: investment return, reduced by operating distribution			(238,794)
Net investment return	Net income	164,021	
Loss on sale of fixed assets in other nonoperating	Primary reserve	\$3,565	
Loss on postretirement obligations			6,856
Total other nonoperating expenses, net			\$10,421

Total long-term debt consists of (1) pre-implementation debt, defined as the amounts reported in the last consolidated financial statements the University submitted to the ED prior to July 1, 2020 (the University's consolidated financial statements for the fiscal year ended August 31, 2019), less any payments or other reductions after August 31, 2019, and not to exceed land, buildings, and equipment, net; and (2) post-implementation debt, defined as debt used to obtain land, buildings, and equipment, net, after the fiscal year ended August 31, 2019, less any payments or other reductions. Pre-implementation debt as of August 31, 2019, includes all debt described in note 8 to the fiscal year 2020 consolidated financial statements except for commercial paper of \$300,000 and lines of credit of \$85,000. Post-implementation debt can also include debt associated with construction-in-progress. Required disclosures for post-implementation debt include issue date, term, nature of capitalized amounts, and amounts capitalized. The University did not have any post-implementation debt as of August 31, 2020.



# Supplementary Schedule of Financial Responsibility Data

As of and for the year ended August 31, 2020

(in thousands of dollars)

Financial element	Location in consolidated financial statements or related notes	Amount used as ratio input
<i>Primary reserve ratio</i>		
<i>Numerator: expendable net assets</i>		
Net assets without donor restrictions	Consolidated statement of financial position	\$7,782,322
Net assets with donor restrictions	Consolidated statement of financial position	4,679,259
Unsecured related party receivable	Note 11, Related Parties	17,700
Land, buildings, and equipment, net—pre-implementation	Note 17, Financial Responsibility Standards	3,181,536
Land, buildings, and equipment, net—post-implementation without outstanding debt for original purchase	Note 17, Financial Responsibility Standards	31,175
Construction-in-progress	Note 5, Land, Buildings, and Equipment	45,983
Accrued cost for postemployment benefits	Note 10, Postretirement and Postemployment Benefit Plans	8,800
Long-term debt, net—for long-term purposes—pre-implementation	Note 17, Financial Responsibility Standards	2,153,512
Annuity and other split-interest agreements	Note 17, Financial Responsibility Standards	25,501
Net assets with donor restrictions: restricted in perpetuity	Note 17, Financial Responsibility Standards	1,907,459
<i>Denominator: total expenses and losses without donor restrictions</i>		
Total expenses without donor restrictions (operating)	Consolidated statement of activities	2,459,351
Net periodic benefit cost other than service cost (nonoperating)	Note 17, Financial Responsibility Standards	108
Loss on value of derivative instruments	Consolidated statement of activities	465
Loss on sale of fixed assets in nonoperating	Note 17, Financial Responsibility Standards	3,565
<i>Equity ratio</i>		
<i>Numerator: modified net assets</i>		
Net assets without donor restrictions	Consolidated statement of financial position	7,782,322
Net assets with donor restrictions	Consolidated statement of financial position	4,679,259
Unsecured related party receivable	Note 11, Related Parties	17,700
<i>Denominator: modified assets</i>		
Total assets	Consolidated statement of financial position	15,855,683
Unsecured related party receivable	Note 11, Related Parties	17,700
<i>Net income ratio</i>		
<i>Numerator: change in net assets without donor restrictions</i>		
Change in net assets without donor restrictions	Consolidated statement of activities	311,380
<i>Denominator: total revenues and gains without donor restrictions</i>		
Total revenues and gains without donor restrictions, excluding net investment return	Note 17, Financial Responsibility Standards	2,140,008
Net investment return	Note 17, Financial Responsibility Standards	\$164,021

See accompanying independent auditors' report.

**NORTHWESTERN UNIVERSITY**  
 Supplementary Schedule of Expenditures of Federal Awards  
 Year ended August 31, 2020

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
<b>Research and Development Cluster:</b>					
<b>Department of Agriculture:</b>					
Molecular characterization of interferon-resistant HIV-1 using novel imaging techniques	205	10.001	DAA2-17-62986-1/59-0210-2-160	\$ 673	—
The Effect of the Opioid Crisis on the Farm Sector: Implications from the Rural Economy	228	10.310	SUB00001814//2019-67023-29347	79,480	—
<b>National Institute of Food and Agriculture:</b>					
The Family Check-Up 4 Health: A Family Centered Health Maintenance Approach to Improve Nutrition and Prevent Obesity in Early Childhood	15	10.310	ASUB22//2018-68001-27550	55,773	—
A defensible, next generation approach to quantifying and characterizing land use change		10.312	2018-10008-28530	311,928	166,634
<b>Department of Agriculture Total</b>				<b>447,854</b>	<b>166,634</b>
<b>Department of Commerce:</b>					
<b>National Institute of Standards and Technology:</b>					
Development of Levitated, Macroscopically Delocalized Atom Interferometers for a New Measurement of Newton's Constant G		11.609	60NANB19D168	50,030	—
Advanced Materials Center for Excellence: Center for Hierarchical Materials Design (ChIMaD)		11.609	70NANB14H012 Amd 6	(15,973)	—
Advanced Materials Center for Excellence: Center for Hierarchical Materials Design (ChIMaD)		11.609	70NANB14H012 Amd 6	(1,348)	(1,348)
High-fidelity and reduced order models to investigate the thermal history and residual stress for powder bed fusion processes		11.609	70NANB17H283	75,749	—
Advanced Materials Center for Excellence: Center for Hierarchical Materials Design (ChIMaD)		11.609	70NANB19H005	5,250,826	1,783,316
<b>Department of Commerce Total</b>				<b>5,359,284</b>	<b>1,781,968</b>
<b>Department of Defense:</b>					
Enhancing Quality of Orthotic Services with Process and Outcome Information	165	12.420	Agmt 12/19/16//W81XWH-16-1-0788	12,629	—
Scientific Autonomous Reasoning Agent (SARA) Integrating Materials Theory, Experiment and Computation	53	12.800	80776-11044//FA9550-18-1-0136	217,517	—
*Rational design and implementation of novel polymer adsorbents for selective uptake of per- and polyfluoroalkyl substances from groundwater*	53	12.RD	82296-11070//W312HQ18C052	59,031	—
A Fast-Light Enhanced Ring Laser Vibrometer for Detection of Extremely Small Vibrations	86	12.RD	PO No. 4441028735	27,647	—
Drinking Water Treatment Residuals as Material for in-situ Capping of Metal Contaminated Sediments	228	12.RD	UFDSP00012338//W912HQ18C0039	54,069	—
iGRAB: Innovative Glove for Rehabilitation and Assistance using Biomimicry	122	12.RD	W81XWH-16-C-0012	40	—
<b>Air Force Office of Scientific Research:</b>					
MURI: Unraveling the Biology, Chemistry and Nanoscience of Natural and Synthetic Melanins	218	12.800	104170196//FA9550-18-1-0142	180,529	—
The Production and Study of Antiprotons and Cold Antihydrogen	89	12.800	134078-5111564//FA9550-15-1-0275	247,685	—
MURI Center for Dynamic Magneto-optics	245	12.800	23003023213 // FA9550-14-1-0040 05	(19,940)	—
Stochastic Self-Consistent Clustering Theory for Composite Performance Prediction: from extreme value microstructure attributes to design of interphase for toughness	62	12.800	313-0866-02//FA9550-18-1-0381	130,960	—
Biomimetic Lipid Nanoparticles: Bio-Sensing and Bio-Functional Applications		12.800	FA9550-13-1-0192	(11,147)	—
Electrochemical Imaging and Mechanistic Studies on the Nanometer Scale		12.800	FA9550-14-1-0003-P00006	340,086	213,238
Novel Materials for Transverse Peltier Refrigeration		12.800	FA9550-15-1-0377 P00005	224,043	—
Towards Software Apprentices that Learn in Dynamic Domains		12.800	FA9550-16-1-0138-P00004	528,248	—
A 4D Nanoprinter for Making and Manipulating Macroscopic Materials		12.800	FA9550-16-1-0150-P00006	1,681,613	444,783
PECASE: Multi-dimensional Vibrational-Electronic Spectroscopy to Probe Electronic-to-Vibrational Energy Transfer in Hybrid Nanomaterials		12.800	FA9550-16-1-0379-P00003	3,479	—
Modeling and Predicting Individual Scientific Impact		12.800	FA9550-17-1-0089 P00002	73,355	—
Soft Chemical Approaches to the Synthesis of Metastable Materials		12.800	FA9550-17-1-0247-P00003	127,339	—
Colloidal Metal Chalcogenide Quantum Dots as Photo-Redox Catalysts for Model Reactions Relevant to the Formation of Liquid Fuels		12.800	FA9550-17-1-0271-P00002	77,826	—
Reconfigurable Matter from Programmable Atom Equivalents		12.800	FA9550-17-1-0348-P00003	1,206,110	—
Molecular Ion Quantum Control		12.800	FA9550-17-1-0352-P00003	128,903	—
Merging reactivity and properties: photocontrolled synthesis of $\pi$ -conjugated polymers		12.800	FA9550-18-1-0159 P00002	90,503	—
Electronic Structure Theory for Spin-Forbidden Reaction Dynamics		12.800	FA9550-18-1-0252	32,389	—
Soft Materials for Flexible, Stretchable Hybrid Electronics		12.800	FA9550-18-1-0320-P00002	442,920	—
Rotation, Shift and Scale Invariant Ultrafast Automatic Image Recognition Using an Opto-Electronic Correlator		12.800	FA9550-18-1-0359-P00002	182,465	—
Investigation of Experimental and Theoretical Challenges for Developing Superluminal Sensors		12.800	FA9550-18-1-0401 P00002	145,121	—
Composite Soft Materials with Decentralized and Distributed Actuation		12.800	FA9550-18-1-0493	522,959	233,787
A Biophysical Approach to Uncover the Role of Cell Membrane Mechanics in Sensing Mechanical Force		12.800	FA9550-19-1-0039 P00001	53,200	—
Low-dimensional materials for high-efficiency/high-power nonlinear optical applications at infrared		12.800	FA9550-19-1-0243-P00001	172,642	8,081
Fundamental Dynamics, Predictability, and Uncertainty of Scientific Discovery & Advance		12.800	FA9550-19-1-0354 P0001	807,186	212,395
Fundamental Study of p-Type Doping in MOCVD-Grown Ga2O3		12.800	FA9550-19-1-0410	221,577	—
Reasoning for Social Autonomous Agents		12.800	FA9550-20-1-0091	57,074	—

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Department of Defense (continued):					
Convergent Evolution to Engineering: Multiscale Structures and Mechanics in Damage Tolerant Functional Bio-composite and Biomimetic Materials	217	12.800	S-000700 Amd 07 // USAF FA9550-15-1-0009	\$ 127,680	—
The Molecular Mechanisms Responsible for the Assembly of Spider Silk Fibers	176	12.800	SA0000677//FA-9550-17-1-0282	70,067	—
Hierarchical Assembly of Spider Silk Proteins: Exploring Structural Biology of Biomaterials from the Atomic to the Mesoscale	176	12.800	SA0000752 // FA9550-20-1-0103	5,616	—
				<u>7,850,488</u>	<u>1,112,284</u>
Enhanced High-Speed Sensing Capabilities based on Two-Wave Mixing	106	12.RD	FA864920P0538	20,000	—
Air Force Research Laboratory:					
Development of a Targeted Intravascular Therapy to Stop Non-Compressible Torso Hemorrhage	223	12.800	010635-005//FA8650-17-2-6G19 Mod 3	9,818	—
Center of Excellence for Advanced Bioprogrammable Nanomaterials (C-ABN)		12.800	FA8650-15-2-5518 P00014/P00015/P00016	1,382,063	16,135
				<u>1,391,881</u>	<u>16,135</u>
VeriGOOD-ML: Verilog Generator (Open-source), Optimized for Designs for Machine Learning	246	12.910	A008043202//FA8650-20-2-7009	45,362	—
High-speed Low-noise Short-wavelength Infrared Type-II Superlattice Heterojunction Phototransistor		12.910	FA8650-18-1-7810 P00002	547,250	—
				<u>592,612</u>	—
Enterprise APT Detection and Forensics with Provenance Graphs	108	12.RD	PO 5005278420 00001 // FA8650-15-C-7561	405	—
Detector Design and Fabrication of Lithography Masks for Thermal TES Calorimeters	126	12.RD	PO 7000479355//FA8702-15-D-0001	14,680	—
High-Definition 3D Liver-on-a-Chip with Real-Time Biosensing Enabled by Beam Pen Lithography	198	12.RD	STTRFA8650-SB45K//FA8650-19-P-6085	49,767	—
Army:					
Beta-Blockers for the Prevention of Acute Exacerbations of COPD	209	12.420	000507860-008//W81XWH-15-1-0705	144,914	—
Investigating Long Noncoding RNAs as Biomarkers and Mediators of Prostate Cancer Progression in African American Men	219	12.420	10358sc/W81XWH-17-1-0302	30,821	—
A pilot clinical trial to assess the effect of transfemoral socket design on hip muscle function	232	12.420	17748//W81XWH1910507	28,497	—
Why does acute post whiplash injury pain transform into chronic pain? Multi-modal assessment of risk factors and predictors of pain chronification	195	12.420	2018883-NW//W81XWH-15-1-0603	335	—
Targeting Balance Confidence as a Strategy to Increase Integration and Improve Outcomes in Users of Lower-limb Prosthesis	171	12.420	322801NWU//W81XWH-17-1-0697	54,033	—
Peer-led Suicide Prevention: Promoting Healthy Family Role Transitions for Military Personnel	257	12.420	416496-G//W81XWH-14-1-0322	56,358	—
Women's-Specific Footwear with Prosthetic Feet	92	12.420	4182//W81XWH-17-2-0072 / PO 930293	25,376	—
Personalized Mobility Interventions Using Smart Sensor Resources for Lower-Limb Prosthesis Users	165	12.420	7197 cc82196//W81XWH1820057	17,099	—
Targeting Ovarian Cancer Stem Cells Interactions with the Niche	102	12.420	8260-NW//W81XWH-19-1-0008	16,029	—
Flexible Epidermal Electrodes for Intuitive Control of Powered Arm and Leg Prosthesis	165	12.420	cc81990 // W81XWH1810668	120,562	—
rTMS: A Treatment to Restore Function after Severe TBI	38	12.420	Pape-0020 Amnd 5//W81XWH-14-1-0568	38,945	—
Neuromodulation and Neurorehabilitation for Treatment of Functional Deficits after mTBI + PTSD	38	12.420	Pape-0024//W81XWH-15-1-0516	39,811	—
Restoration of the Functional Aesthetic Craniofacial Envelope and Extremities	135	12.420	S3-W81XWH-19-2-0038// W81XWH1920038	232,434	—
Connecting Mechanical to Biomechanical Performance of Prosthetic Feet to Design Customized, Passive Devices that Provide Improved Mobility	125	12.420	S4496-PO123775 Amnd 4//W81XWH-17-1-0427	29,046	4,755
Effect of a Novel Intervention using Daily Intermittent Hypoxia and High-Intensity Training on Upper Limb Function in Individual with Spinal Cord Injury	165	12.420	SC160072//W81XWH-17-1-0340	34,417	—
Localizing and Assessing Amputee Pain with Intense Focused Ultrasound	271	12.420	UWSC11774//W81XWH-15-1-0291 P004	19,143	—
Targeted reinnervation as a means to treat neuromas associated with major limb amputation		12.420	W81XWH-13-2-0100	27,978	—
Prevention of Bone Loss after Acute SCI by Zoledronic Acid: Durability, Effect on Bone Strength and Use of Biomarkers to Guide Therapy		12.420	W81XWH-14-2-0193 P00003	377,870	29,874
Macrophage Responses to Epithelial Dysfunction Promote Lung Fibrosis in Aging		12.420	W81XWH-15-1-0214	(14,131)	—
Macrophage Responses to Epithelial Dysfunction Promote Lung Fibrosis in Aging		12.420	W81XWH-15-1-0215	(8,847)	—
Enhancing Anti-CTLA4 Immunology Therapy for Prostate Cancer with Cotargeting Soluble NKG2D Ligand		12.420	W81XWH-15-1-0406	325,896	—
The Impact of a Gene Expression Profile on Treatment Choice and Outcome Among Minority Men Newly Diagnosed with Prostate Cancer: A Randomized Trial		12.420	W81XWH-15-1-0534	(174)	—
Functional Performance Evaluation of the Northwestern University Flexible Sub-Ischial Vacuum (NU-FlexSIV) Socket for Persons with Transfemoral Amputation		12.420	W81XWH-15-1-0708	147,877	38,974
Characterization of clustered CTCs to eliminate breast cancer metastasis		12.420	W81XWH-16-1-0021	695,004	—
SERS Nanosensors for in vivo Glucose Sensing		12.420	W81XWH-16-1-0375	219,105	—
SERS Nanosensors for in vivo Glucose Sensing		12.420	W81XWH-16-1-0376	(7,661)	—
No Longer Smooth: Introducing Striations into Prosthetic Socket Construction to Improve Suspension, Rotation, Fit and Comfort		12.420	W81XWH-16-1-0485	77,397	9,675
Patient-Centered Treatment Decision-Making in Advanced Prostate Cancer		12.420	W81XWH-16-1-0554	140,845	—
Longitudinal Observation of Myoelectric Upper Limb Orthosis Use among Veterans with Upper Limb Impairment		12.420	W81XWH-16-1-0733	44,283	34,402
Ubiquitin pathway activation: A new strategy for treating ALS		12.420	W81XWH-17-1-0086	22,440	—
Epigenomic Priming as an Immunotherapy Enhancer in Ovarian Cancer		12.420	W81XWH-17-1-0141	243,799	—
Hyperexcitability in Sensory Circuits in Fragile X Syndrome		12.420	W81XWH-17-1-0230	359,994	—
Combinational Targeting EZH2 and PARP1 in Prostate Cancer		12.420	W81XWH-17-1-0357 P00001	392,023	—
Loss of ZDHHC-mediated Scribble palmitoylation disrupts cell polarity and promotes prostate cancer progression		12.420	W81XWH-17-1-0362 P00001	130,954	—
Targeting EZH2 in castration-resistant prostate cancer		12.420	W81XWH-17-1-0405	162,944	—
Targeting EZH2 in castration-resistant prostate cancer		12.420	W81XWH-17-1-0406	227,501	—

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Department of Defense (continued):					
Combination of IL13Rα2 CAR T cell therapy with PD-1 immune checkpoint blockade for treatment of glioblastoma		12.420	W81XWH-17-1-0411	\$ (1,609)	—
D-Cycloserine for the Treatment of Chronic, Refractory Low Back Pain		12.420	W81XWH-17-1-0426	952,622	—
Role of C10orf112 in Prostate Cancer		12.420	W81XWH-17-1-0578	206,131	—
Creation and validation of a pre-biopsy nomogram for predicting high-risk prostate cancer in African American men		12.420	W81XWH-17-1-0608	360,122	107,104
A novel serum and tissue immunoglycomic biomarker panel to distinguish progressive Prostate Cancer		12.420	W81XWH-17-1-0642-P00001	142,557	—
T Cell Receptor Repertoire Analysis as a Biomarker for Predicting Graft Rejection in Transplant Recipients		12.420	W81XWH-17-1-0679	316,272	—
Harnessing Druggable Synthetic Lethal Interactions in Triple-Negative Breast Cancer with Elevated MYC Expression		12.420	W81XWH1810053	387,684	—
Capturing Antibiotic-Resistant Ribosomes		12.420	W81XWH-18-1-0122	146,016	—
Assessing high affinity anti-latent TGFβ binding protein-4 antibodies in combination with steroid treatment for DM1		12.420	W81XWH1810244	202,745	—
Investigation of Genetic and Immune Mechanisms of Response to BCG for Non-Muscle Invasive Bladder Cancer: a Translational Study of S1602		12.420	W81XWH1810257	116,710	27,458
TOWARDS CHIMERIC ANTIGEN RECEPTOR TRANSGENIC T CELL THERAPY FOR TUBEROUS SCLEROSIS COMPLEX		12.420	W81XWH1810479-P00001	410,140	—
Discovery of Novel Therapeutics for Disordered Sleep in Fragile X Syndrome		12.420	W81XWH1810594	165,220	—
Uncovering the circulating factor in FSGS		12.420	W81XWH1810748	99,847	7,074
Stem Cell Regeneration of Human Spiral Ganglion Neurons toward Hearing Restoration		12.420	W81XWH1810752	492,345	39,192
Autism-Associated Mutations in L-Type Ca2+ Channels		12.420	W81XWH1810777	113,952	—
Autism-Associated Mutations in L-Type Ca2+ Channels		12.420	W81XWH1810778	56,448	—
Understanding and Supporting Public Information Needs about VCA Donation		12.420	W81XWH1810780	148,767	—
Immune control of triple negative breast cancer by WEE1 inhibition		12.420	W81XWH1910106	339,710	—
Formulations and anti-scar-efficacy testing of topical statins in preclinical and clinical models		12.420	W81XWH1910121	160,856	—
The role of bone marrow inflammation in the progression of clonal hematopoiesis to blood cancers		12.420	W81XWH1910228	315,609	—
Restoring pancreatic endocrine function via autologous islet transplantation to the omentum		12.420	W81XWH1910230	377,116	226,409
Optimal Selection of Prosthetic Knee and Foot Combination for Improving Walking and Standing Performance in Transfemoral Prosthesis Users		12.420	W81XWH1910447	146,303	—
Investigation of the Tumor Microenvironment as a Protective Niche that Supports Treatment Resistance of Bladder Cancer		12.420	W81XWH1910477	89,336	—
The role of A-to-I RNA editing in advanced prostate cancer		12.420	W81XWH1910563	243,187	—
Modulating the Cochlear Proteostasis Network to Prevent Hidden Hearing Loss		12.420	W81XWH1910827	432,857	—
Comparative Effectiveness of Socket Casting Methods: Improving Form and Fit		12.420	W81XWH1910835	274,943	55,499
Ethical Factors Impacting Patients' Decisions to Pursue VCA		12.420	W81XWH1920033	157,458	—
Targeting CysLTR1 in triple negative breast cancer		12.420	W81XWH-20-1-0024	13,597	—
Uncovering New Therapeutics and Neuroprotective Mechanisms for TBI		12.420	W81XWH2010211	119,131	—
In-vivo functional muscle regeneration utilizing an implantable modular bioreactor	282	12.420	WFUHS 441082 CF-12//W81XWH-14-2-0004	15,127	—
Transient implantable nerve stimulator for enhancing regeneration across long segmental peripheral nerve defects	283	12.420	WU-19-170-MOD-2//W81XWH1810170	109,537	—
Prostate Cancer Research Program: Idea Development Award	283	12.420	WU-20-307//W81XWH1910795	23,823	—
				<b>11,586,476</b>	<b>580,416</b>
Precision Chemical Dynamics and Quantum Control of Ultracold Molecular Ion Reactions					
Dynamics of Nanoscale Self-Assembled Porous Materials	216	12.431	1000 G SA978 Amd 4 // W911NF-14-1-0378	—	—
Specifically Triggerable Multi-Scale Responses in Organized Assemblies	218	12.431	109714421 (S9002254)/W911NF1810359	22,053	—
Center for Advanced 2D Organic Networks	240	12.431	16 008956 E 00//W911NF-15-1-0568-P00008	241,430	—
7.4 Reactive Chemical Systems: New Principles for Targeting and Triggering based on Molecular Self-Assembly in Topological Defects of Liquid Crystals	53	12.431	76091-11011//W911NF-15-1-0447	89,370	—
Plasma Driven Solution Electrochemistry	53	12.431	88469-11208//W911NF190071	126,594	—
Forecasting Emergent Phenomena with Human Computer Collaboration	246	12.431	A008178002//W911NF-20-1-0105	20,186	—
Formal Foundations of Algorithmic Matter and Emergent Computation	166	12.431	A12789 001 // W911NF-16-1-0524	13,835	—
New Theoretical and Experimental Methods for Predicting Fundamental Mechanisms of Complex Chemical Processes	83	12.431	AWD-000084-G2//W911NF1910233	96,322	—
COVID-19: Improving Veterans Referrals by Optimizing Network Design in Response to COVID-19	247	12.431	C00045065-5//W911NF-14-1-0359	13,983	—
Sea Urchin Spicules: Assembly of a Fracture-Toughened Material at the Nano- and Mesoscales	146	12.431	COVID-19: W911NF2010202	67,997	—
QUANTA: Quantitative Network-based Models of Adaptive Team Behavior	220	12.431	F8595-01-03//W911NF-16-1-0262	6,178	—
3D Printing SBIR Ph II	70	12.431	KK1623 //W911NF-15-1-0577 09	146,347	—
Predicting and Controlling the Response of Particulate Systems through Grain-Scale Engineering	30	12.431	PO 12909//W912HZ17C0028	2,301	—
Realizing High-Fidelity Gates in Protected Qubits	162	12.431	S428657-02//W911NF1910245	125,953	—
Stabilization of Reactive Chemical Species and Fundamental Studies of Small-Molecule Reactivity in Metal-Organic Frameworks		12.431	SUB0000298//W911NF1910016	203,511	—
Ab initio design of noncentrosymmetric metals: crystal engineering in oxide heterostructures. f. Research Area 6: Physics		12.431	W911NF-14-1-0168/P00010	11,195	—
Physically based tempered fractional-order operators for efficient multiscale simulations		12.431	W911NF-15-1-0017 P00008	149,568	—
Handling Adverse Visual Conditions for Target Tracking and Recognition		12.431	W911NF-15-1-0669 P00002	77,430	—
Engineering the translation apparatus for the synthesis of electronically active sequence-defined polymers		12.431	W911NF-16-1-0138 P00006	289	—
Quantum Disc-based Focal Plane Arrays for Low-cost High-performance Uncooled LWIR Imaging		12.431	W911NF-16-1-0372 P00013	1,048,113	802,210
Collective impact and common goals: Planned vs. emergent networks as tools for leveraging community outcomes		12.431	W911NF-16-1-0410 P00005	180,602	—
Multisensory Integration by Circadian Clocks – Area 3 Mathematics (Biomathematics) and Area 8 Life Sciences (Neurophysiology)		12.431	W911NF-16-1-0464-P00005	25,040	—
7.4 Reactive Chemical Systems: Assembly and Dynamics of Soft Matter Observed by Liquid Cell TEM		12.431	W911NF-16-1-0584 P000010	86,264	—
II.A.1.b.i.2: Engineering Nanocellulose Materials for High Ballistic Impact Performance		12.431	W911NF-17-1-0326-P00006	99,857	34,854
		12.431	W911NF-17-1-0430 P00005	81,634	—

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Department of Defense (continued):					
Directed Rational Synthesis of Kagome Lattices for the Discovery of Emergent Materials9.3 Physical Properties of Materials		12.431	W911NF-18-1-0006 P00004	\$ 168,933	—
Bridging Dynamic Particle Fracture and High-Strain Rate Comminution of Granular Continua		12.431	W911NF-18-1-0035 P00004	78,785	—
Selective Laser Melting of Ni-based superalloys with combined precipitation- and oxide-dispersion-strengthening		12.431	W911NF-18-1-0129/P00003	278,257	126,747
Stimuli-Responsive Control of Protein-Based Molecular Structure		12.431	W911NF-18-1-0200-P00002	1,343,586	540,017
Wireless, bioresorbable neural stimulators for discovery in neuroscience		12.431	W911NF1810394-P00003	15,730	—
MOCVD growth of LWIR InAs/InAsSb Type-II superlattices for focal plane array applications		12.431	W911NF1810402	132,585	—
Ultra-low Energy Receivers based on Electron-Injection Detectors on a CMOS Unified Photonic Integration Platform		12.431	W911NF1810429 P00005	217,332	—
Failure Probability and Safety Gain of Super-Strong Biomimetic Nacreous Materials		12.431	W911NF1910039 P00003	198,906	—
Mechanisms of Extracellular Matrix-Mediated Electrochemical Signaling		12.431	W911NF-19-1-0136-P00002	118,470	—
i11 : Interfacial synthesis of 2D copolymers directed by noncovalent interactions		12.431	W911NF1910154 Modification P00002	115,290	—
The impact of organizational strategy on performance of in vitro biosynthesis reactions		12.431	W911NF-19-1-0298	178,515	—
II.A.1.b.iii.3: Coupling Magnetic and Ferroelectric Phenomena in Designed 2D Thio- and Selenophosphate Crystals		12.431	W911NF1910335	138,716	—
II.A.1.a.i.4: Towards Design Rules for the Synthesis of Functional Metal-Organic Frameworks in Aqueous Media at Ambient Temperature for Targeted Applications		12.431	W911NF1910340/P00001	148,147	—
Energy Conversion from Flowing Salinity Gradients over Nanoscale Metal Layers		12.431	W911NF1910361	344,464	67,034
Sensitivity and Non-Normality in Network Control and Failure Propagation		12.431	W911NF1910383	246,116	—
Wearable Devices for Monitoring Social Networks		12.431	W911NF1920088	359,782	—
Tribological and Manufacturing Technologies for Unmanned Aerial Systems		12.431	W911NF1920092	250,958	—
3D Mesosstructures as Active Interfaces to Individual Neurons in 3D Neural Networks		12.431	W911NF-19-2-0169	123,421	—
SR SEQUESTRATION AND MINERALIZATION IN ACANTHAREA		12.431	W911NF2010137	28,568	—
Exploiting Complexity to Stabilize the Dynamics of Mechanical Systems		12.431	W911NF2010173	48,586	—
				<u>7,469,199</u>	<u>1,570,862</u>
Coevolution of Dynamic Multi-genre Networks and Information Streams	21	12.630	9500012803/Job 13765353/W911NF-09-2-0053 Mod. 16	28,552	—
Rate Effects in the Deformation of Microscale Metallic Samples – Experiments and Simulations	114	12.630	PO #2004091092/W911NF1220022	110,317	—
The Signatures of Success in Human-Agent Teams		12.630	W911NF1920140 P00001	177,781	25,746
				<u>316,650</u>	<u>25,746</u>
Syntaurus: An intelligent machine for chemical synthetic planning	88	12.910	W911NF-16-1-0384	(118,497)	—
Scaling & Supramolecular Engineering of Metal-Organic Frameworks (MOFs)	154	12.RD	A15A-T014/W911SR18C0031	170,455	—
RFQ for Silver Bullet Program	150	12.RD	PO 8200206547 // W911NF-17-C-0024	60,575	—
Response to RFP for the US Army Research Laboratory Assessing Human Variability in Real-World Environments in support of the DCS Prime Contract W911NF-10-D-0002-0028, Task 28		12.RD		(541)	—
Network Sciences Collaborative Technology Alliance	57	12.RD	PO# 190035 APX03-S026 // W911NF-10-D-0002	14,072	—
Modeling of Concrete Failure Under Blast and Fragment Loading – SBIR Phase II Enhancement	21	12.RD	PO# LBN9510212-0034 // W911NF-09-2-005	137,509	—
AlGaN for Solar-Blind Avalanche Photo Detectors	70	12.RD	PO. No. 16085	54,699	—
Novel Low Cost Planar III-V SLS Infrared Detector Focal Plane Arrays	152	12.RD	ST18C-003/W912CG-20-C-0009	32,399	—
Assistant Secretary of Defense for Health Affairs: Top Down Proteomics of Laser Capture Microdissected Samples for the Cancer Moonshot	92	12.750	4834/HU00011820032	309,087	—
Defense Advanced Research Projects Agency:					
Information Storage and Processing Using Time-Ordered Strings of Molybdes, and Molecular Processes	89	12.910	130368-5111189/W911NF-18-2-0030	78,333	—
TRAUMAS: Treatment and recovery augmented with electrical and ultrasound- mediated actuation and sensing	49	12.910	2(GG015670)/D20AC00004	89,023	—
Programmable Multiplexed Droplets and Arrays Containing Reaction Networks	272	12.910	798K081/W911NF-18-2-0036	467,047	—
REPAIR: Regenerative Electronic Patch through Advanced Intelligent Regulation	256	12.910	AWD00001593(416052-2)/D20AC00002	110,082	—
Flexible Asynchronous Space-Time (FAST) Imaging		12.910	HR0011-17-2-0044-P00004	173,418	—
Complete Fog of Force Control Using Swarms		12.910	HR00112020035	145,129	—
				<u>1,063,032</u>	<u>—</u>
Stable neural interfaces through artificial intelligence-based manifold discovery	69	12.RD	A263642/HR00111990045	140,009	—
AlGaN for Solar-Blind Avalanche Photo Detectors	152	12.RD	Agmt 6/18/19/W911NF-19-C-0025	64,216	—
Obtaining Multipath & Non-line-of-sight Information by Sensing Coherence & Intensity with Emerging Novel Techniques	187	12.RD	G001534-7505 // HR0011-16-C-0028	93,161	—
SHIELD: A Statistical Machine Learning Framework for Diversity Enabled Ensemble Robustness		12.RD	HR00111990074	160,221	—
The MIT-Broad Foundry: TA-2 (Phase III)	125	12.RD	P.O. # 203522 S4600-001/HR0011-15-C-0084	110,343	—
ACCESS – Agent-based Causal simulator with Cognitive, Environmental, and Social System factors	21	12.RD	PO#4201766990 14811 // HR001118C0022	106,640	—
SCHNEIDER – System for Counterfactual Human Network Evaluation of Individual Differences, Errors, and Residuals	183	12.RD	SCHNEIDER-Northwestern-01/HR00111990062	224,903	—
Defense Logistics Agency:					
Digital Innovation Design (DID)	194	12.RD	2017-109/SP4701-17-D-1161	167,726	—
Integration of ICME Tools in Casting Design and Process Optimization for Intelligent Manufacturing	10	12.RD	AGMT 1/31/19/SP4701-17-D-1134	15,661	—

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Department of Defense (continued):					
Defense Threat Reduction Agency:					
A novel toolbox for rapid, on demand, in vitro glycoprotein synthesis		12.351	HDTRA1-15-1-0052	\$ 710,810	110,811
Highly Stable and Bifunctional Bio-inspired Catalytic MOFs for Destruction of Chemical Threats		12.351	HDTRA11810003	759,476	25,163
Topology-Enhanced Diffusion of Chemical Warfare Agents in Metal-Organic Frameworks for Detoxification		12.351	HDTRA11910007 P00003	526,395	—
Novel Reactive, Porous, and Processable Polymers for Chem-Bio Defense		12.351	HDTRA1-19-1-0010 Amnd P00001	651,194	—
				2,647,875	135,974
National Reconnaissance Office:					
DOMInATE (Deployable Optical Membrane Telescope)		12.RD	NRO000-18-C-0098 – P00008	33,178	536
Navy:					
A CyberOctopus that Learns, Evolves, and Adapts	233	12.300	095643-17467//N00014-19-1-2373	70,814	—
The microbiome and responsiveness to stress: Countermeasure strategies for improving resilience to sleep and circadian disruption.	224	12.300	1553361 Amnd 7//N000014-15-1-2809	343,951	—
From Percolation to Passivation (P2P): Multiscale Prediction and Interrogation of Surface and Oxidation Phenomena in Multi-Principal Element Alloys (MPEAs)	114	12.300	2004734071//N00014-20-1-2368	73,499	—
Mesoscopic quantum science and metrology with levitated mechanical systems	257	12.300	417315//N00014-18-1-2370	34,379	—
High power, multispectral, phased arrays based on quantum cascade lasers	213	12.300	A18-0471-S001//N00014-17-1-2836-1 Amd. 3	50,504	—
Dynamic Allocation of Autonomy for Limited-Bandwidth Human-Robot Teams Based on Measures of Trust in the Human	165	12.300	Agmt 05/13/19 // N00014-16-1-2247	104,920	5,014
Understanding The Incentives For Small Businesses To Participate In The Acquisition Process For R&D-Intensive Products		12.300	HQ00341810012	17,375	—
A Materials Genome Approach to Understanding Biofilm Mechanics		12.300	N00014-15-1-2701-P00005	(271)	—
Understanding Atomic Scale Structure in Four Dimensions to Design and Control Mesoscale Morphologies for Oxidation Resistant Alloys		12.300	N00014-16-1-2280-P00009	701,147	347,952
Cyberalloys 2020: Naval Materials by Design		12.300	N00014-16-1-2400 P00003	136,153	—
An Analogical Approach to Autonomy and Social Inference in a Cognitive Architecture		12.300	N00014-16-1-2613-P00002/N00014-13-1-0470	7,878	—
Ultrasensitive Multi-Octave and Multi-dimensional Spectral Sensing by Single Element Detection and Compressive Sensing		12.300	N00014-16-1-2715 P00003	(69)	—
Bulk Nanostructured Materials with Two-Dimensional Building Blocks		12.300	N00014-16-1-2838 P00003	29,074	—
Mesoscale Integrated Photonic Systems for Structural Health Monitoring		12.300	N00014-16-1-3021-p0003	(141)	—
Multi-Dimensional Control in Laterally Confined Atomically Thin Nanostructures		12.300	N00014-16-1-3055	51,135	—
Functional Crystals Through Encodable Hard and Soft Matter		12.300	N00014-16-1-3117-P00001//N00014-15-1-0043	(22,900)	—
Nanomaterials Inspired from the Bacterial Adhesome and Mechanome		12.300	N00014-16-1-3175 P00003	155,292	—
Towards Intelligent Agents that Learn to Reason and Communicate		12.300	N00014-17-1-2092 P00004	94,737	—
Design of stable solar cells with >15% efficiency based on 2D perovskites		12.300	N00014-17-1-2231 P00005	68,848	—
Blackbody Thermometry with Quantum-State-Prepared Molecular Ions		12.300	N00014-17-1-2258 P00004	19,885	—
Integrated Optics for Single-Photon Nonlinear Interactions		12.300	N00014-17-1-2409 P00005	182,686	22,436
Active Nanophotonics in the Flatland with Novel Hybrid Metasurfaces		12.300	N00014-17-1-2425 P00006	51,349	—
Designing Hierarchical Three-dimensional Surfaces by Controlling Strain		12.300	N00014-17-1-2482 P00004	252,773	—
Three-dimensional tomographic studies supporting physically based modeling of Li-ion batteries		12.300	N00014-17-1-2688	(89)	—
Cutset Sampling Topologies for Intelligence, Surveillance, and Reconnaissance		12.300	N00014-17-1-2707 P00002	(1)	—
Cutset Sampling Topologies for Intelligence, Surveillance, and Reconnaissance		12.300	N00014-17-1-2707 P00002	6,160	6,160
Surface and Interface Engineering of van der Waals Nanoelectronic Heterostructures		12.300	N00014-17-1-2993 P00004	134,514	—
Hierarchical Nanoscale Metamaterials		12.300	N00014-17-1-3023 P00004	742,165	—
Plasmonic-Dielectric Metamaterials for Enhanced Spectroscopy and Controlled Chemistry		12.300	N00014-17-1-3024 P00004	110,024	—
Properties and Methods for Distributionally Robust Optimization with Decision Dependent Uncertainty		12.300	N00014-18-1-2097 P00004	161,012	—
Methods for High-Dimensional Nonlinear Optimization		12.300	N00014-18-1-2098/P00003	133,616	—
Cognitive Expertise by Repetition Enhanced Simulation-based (CERES) Training		12.300	N00014-18-1-2316 P00004	431,887	—
Screening For and Preclinical Evaluation of Drugs for Hearing Loss		12.300	N00014-18-1-2508	438,359	—
Optimizing Nanoscale Coherent Precipitates in Aluminum Alloys by Microalloying with Tungsten		12.300	N00014-18-1-2550 P00003	183,207	—
High-Strength High-Toughness 10%Ni Naval Steels		12.300	N00014-18-1-2594 P00002	210,682	—
Multiscale Fabrication via Multiphoton Direct Laser Writing		12.300	N00014-18-1-2651 P00002	83,878	—
The Phase Field Method: Towards a Tool for Materials Design		12.300	N00014-18-1-2787 P00003	157,001	—
Three-dimensional tomographic and electrochemical characterization of Li-ion battery performance and safety		12.300	N00014-19-1-2135 P00001	158,086	—
A New Method for Compact, High-Performance Atom Interferometric Sensors		12.300	N00014-19-1-2181 P00001	184,668	—
Instrumentation for Surface Engineered van der Waals Nanoelectronic Heterostructures		12.300	N00014-19-1-2287	652,129	—
Theoretical Foundations and Scalable Algorithms for Mixed-Integer Convex Optimization with System Choice		12.300	N00014-19-1-2321	52,827	27,371
Building Adaptive, Dependable, and Secure Systems with a Cross-Layer Weakly Hard Paradigm		12.300	N00014-19-1-2496 P00001	114,555	52,635
Manufacturing Process Compiler – A Foundation for New Process Generation		12.300	N00014-19-1-2642-P00001	417,875	—
Development of Lightweight, Power-Efficient, Soft Electronic Sensor Systems for Next-Generation Oceanographic Measurements	247	12.300	N00014-19-1-2688 // C00066003-2	45,412	—
Disruptive Durable All-Polymer Solar Cells (FY2019-000119-AS)		12.300	N00014-20-1-2116	58,600	—

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Department of Defense (continued):					
Hard Isotropic Solids from Soft Two-Dimensional Sheets		12.300	N00014-20-1-2190	\$ 99,631	—
Towards Intelligent Agents that Learn by Multimodal Communication		12.300	N00014-20-1-2447	34,355	—
Integrated Harvesting and Storage of Oxygen from Seawater Using Efficient Bipolar Membrane Electrolysis, Impurity Tolerant Electrocatalysts, and Desig	254	12.300	N00014-20-1-2517	5,464	—
Design of 1D/2D/3D perovskite composites for enhancing the stability of high efficiency solar cells		12.300	N00014-20-1-2725	48,789	—
3D assembly of bidirectional bioelectronic scaffolds towards accelerated tissue repair		12.300	N00014-20-1-2777	14,245	—
Gradient Based Criteria for Sequential Experiment Design		12.300	N00244-18-2-0003	8,123	—
				<u>7,110,192</u>	<u>461,568</u>
Novel Methods for Stochastic Data-Driven Nonconvex Optimization		12.910	N660011824026-P00004	134,211	97,913
Interaction and Perception: Multi-Source Spectral Framework for Human-Swarm Collaboration		12.910	N660011924024-P00003	368,405	199,112
Multi-Modal Sensing Enabled Closed-Loop Transcutaneous Vagal Nerve Stimulation for Musculoskeletal Injury and Disorders	83	12.910	RK641-G1/N660011924002	222,251	—
				<u>724,867</u>	<u>297,025</u>
Improved Infrared Imaging with Variable Resolution Achieved via Post-Processing	157	12.RD	18110801-01/N6833519C0027	202,850	—
BISC: Bioelectronic Interfacing to Sensory Cortex with massive, fully implanted, flexible, wireless CMOS surface recording and stimulating arrays		49	5(GG012664) // N66001-17-C-4002	62,160	—
PMMA based Holographic Optical Elements for Free Space Optical Communication Systems on Mobile Platforms		60	Agmt 11-12-19 // N68335-19-C-0874	64,017	—
Widely Tunable Surface Emitting Quantum Cascade Lasers	152	12.RD	Agmt 3/7/2018 // N68936-17-C-0063	16,855	—
Machine Learning Tools to Optimize Metal Additive Manufacturing Process Parameters to Enhance Fatigue Performance		85	Agmt 7/8/2020 // N68335-20-C-0468	25,605	—
Aircraft Components		12.RD	agreement 8/13/18	56,803	—
Gerbasi IPA Agreement		152	Award 07/18/2019/N00014-19-C-1049	128,727	—
Efficiency Optimization of MWIR and LWIR Quantum Cascade Lasers	281	12.RD	N6893619C0041 P00002	41,424	—
Catastrophic Optical Damage Mitigation in Quantum Cascade Lasers by Facet Disorder		85	N68936-20-C-0021/No. N19B-T034	30,578	—
Phase I: Model for Surface Finish Prediction and Optimization of Metal Additively Manufactured Parts		12.RD		<u>43,593,892</u>	<u>4,200,546</u>
Department of Defense Total					
Department of Education:					
Proposal for Funding a Comprehensive National Resource Center and Foreign Language and Area Studies Fellowships under Title VI Higher Education Act of 1965	233	84.015	076415-15459 03 // P015A140048	(20)	—
Fulbright-Hays Doctoral Dissertation Research Abroad – Andrea Rosegarten		84.022	P022A180043	20,645	—
Fulbright-Hays Doctoral Dissertation Research Abroad		84.022	P022A190047	100	—
				<u>20,745</u>	—
Institute of Education Sciences:					
Enhancing Middle School Mathematics Achievement through Spatial Skills Instruction	223	84.305	011275-004/R305A170640-18	56,457	—
Center for Interactive Knowledge Utilization	224	84.305	1551539 Mod 2/R305C140008	51,630	—
Meta-analysis Training Institute	121	84.305	518325-NW/R305B170019	23,473	—
Contexts Inside and Outside of School Walls as Predictors of Differential Effectiveness in Preschool Professional Development		84.305	R305A160013 – 18	54,662	29,173
Sense-Making in the Disciplines: Supporting Reading and Argumentation in Literature and History		84.305	R305A180463-20	247,183	93,779
Multidisciplinary Program in Educational Sciences		84.305	R305B140042 – 17 Mod 4	236,736	—
An RCT Institute for Established Researchers		84.305	R305B170016	26,748	—
Further Development of Effect Size Estimators for Single-Case Designs: Extensions to Trend and Diverse Outcome Metrics		84.305	R305D170041 – 19	184,817	—
A User-Friendly Tool for Designing Cluster Randomized Trials with Power and Relevance		84.305	R305D180002	276,572	152,787
Exploring the Spatial Alignment Hypothesis in STEM Learning Environments	287	84.305	S-00014999 // R305A170165	109,764	—
				<u>1,268,042</u>	<u>275,739</u>
NCSER-EIEL Goal 3: An Efficacy trial of J-EMT: Enhanced Millieu Teaching Language Intervention plus Joint Attention, Engagement and Regulation Intervention for Toddlers with Autism	276	84.324	3403-019297 // R324A150094-18 Amd 3	21,997	—
Training-Induced Language and Literacy Improvement in Children with Cochlear Implants	73	84.324	R01834 // R324A160193	172,102	—
				<u>194,099</u>	—
Department of Education Total					
				<u>1,482,866</u>	<u>275,739</u>
Department of Energy:					
Center for Geologic Storage of CO2	233	81.049	074974-16734// DE-SC0012504	(1,005)	—
Quantum Materials for Energy Efficient Neuromorphic Computing (Q-MEEN-C)	218	81.049	112383860/DE-SC0019273	107,788	—
Ultrafast Creation and Manipulation of Emergent Phenomena and Novel Phases in Complex Oxides	161	81.049	5709-NIJ-DOE-2375 // DE-SC0012375	90,130	—
Solid State Solar-Thermal Energy Conversion Center (S3TEC Center)	125	81.049	5710003775 Amd 3 // DE-SC0001299	1,628	—
Nanoporous Materials Genome: Methods and Software to Optimize Gas Storage, Separations, and Catalysis	246	81.049	A003127002 Amd 7//DE-SC0008688	171,461	—
EFR/UMN: Inorganometallic Catalysts	246	81.049	A004527502/DE-SC0012702	702,708	—
New Methods for Atomic Structure Determination of Nanoscale Materials		81.049	DE-FG02-01ER45945 0020	87,719	—

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Department of Energy (continued):					
Institute for Environmental Catalysis		81.049	DE-FG02-03ER15457-0018	\$ 1,313,459	—
Antiferromagnetism and Superconductivity		81.049	DE-FG02-05ER46248-0016	172,140	—
Epitaxial Multifunctional Oxide Heterostructures		81.049	DE-FG02-06ER46346 0014	226,905	—
Coordination-Chemistry-Derived Materials Featuring Nanoscale Porosity and Selective Chemical Separation Capabilities		81.049	DE-FG02-08ER15967/0013	279,136	—
Electrostatic Driven Self-Assembly Design of Functional Nanostructures		81.049	DE-FG02-08ER46539-0011	274,201	—
Fundamental Studies of Light-Induced Charge Transfer, Energy Transfer, and Energy Conversion with Supramolecular Systems		81.049	DE-FG02-87ER13808 0037	191,308	—
Strong Interaction Studies with Medium Energy Probes		81.049	DE-FG02-87ER40344	22,627	—
Approaches to Integrated Photochemical Systems for Solar Energy Conversion		81.049	DE-FG02-99ER14999-0019	307,492	—
The Evolution of Topologically Complex Structures: Coarsening of Dendritic Mixtures		81.049	DE-FG02-99ER45782-0022	45,562	—
Center for Bio-Inspired Energy Science (CBES)		81.049	DE-SC0000989 0009	3,023,097	940,444
CENTER FOR LIGHT ENERGY ACTIVATED REDOX PROCESSES (LEAP) (Formerly ANSER)		81.049	DE-SC0001059/0009	1,598,939	479,101
Surface Plasmon Enhanced Chemistry		81.049	DE-SC0004752-0010	120,388	—
Electronic Structure Theories of Singlet Fission and Multiple Exciton Generation		81.049	DE-SC0010265 0004	—	—
Probing Coherent States of Light and Matter in Two-Dimensional Semiconductors		81.049	DE-SC0012130-0004	55,648	—
A Scintillating Xenon Bubble Chamber for Dark Matter Detection		81.049	DE-SC0012161 0004	486	—
Scalable, In-situ Data Clustering Data Analysis for Extreme Scale Scientific Computing		81.049	DE-SC0014330 0002	411,337	—
Bose-Einstein Condensation of Magnons and Potential Device Applications		81.049	DE-SC0014424-0005	154,611	—
Design of Next Generation Thermoelectrics		81.049	DE-SC0014520-0004	501,928	—
Research in the Energy, Cosmic and Intensity Frontiers and Theoretical Physics at Northwestern University		81.049	DE-SC0015910 0003	846,343	—
Dark Matter and Track Triggering with the CMS Experiment		81.049	DE-SC0015973-0004	82,129	—
Missing links in biological methane and ammonia oxidation		81.049	DE-SC0016284 0004	172,446	—
Properties, Electrochemical Activity, and Stability of Solid Oxide Cell Materials Under Extreme Conditions		81.049	DE-SC0016965-0003	141,841	—
Geophysical Feedbacks between Fluid-Assisted Sediment Fracture, Compaction and Faulting		81.049	DE-SC0017615	108,319	—
Electrolyte-Mediated Assembly of Like-Charged Colloids		81.049	DE-SC0018093	275,272	—
Establishing a Clostridia foundry for biosystems design by integrating computational modeling, systems-level analyses, and cell-free engineering technologies		81.049	DE-SC0018249-P0003	1,438,386	821,520
Employing bacterial microcompartments to create privileged redox pools for biofuel production		81.049	DE-SC0019337 0002	300,297	—
Biosynthesis of bioprivileged, linear molecules via novel carboxylase reactions		81.049	DE-SC0019339/0002	270,043	—
Towards the Mechanism of N <sub>2</sub> Fixation by Nitrogenase		81.049	DE-SC0019342/0002	254,505	—
Creating and Interfacing Designer Chemical Qubits		81.049	DE-SC0019356-0002	1,064,352	920
PROTEUS: Machine Learning Driven Resilience for Extreme-scale Systems		81.049	DE-SC0019358/18SC603797	179,711	—
Systems for Transducing Entanglement between Photons and Electron Spins		81.049	DE-SC0020168 0001	314,001	64,664
Permanent Magnets Featuring Heavy Main Group Elements for Magnetic Anisotropy		81.049	DE-SC0020176	87,432	—
Supramolecular Dynamics in Self-Assembling Materials		81.049	DE-SC0020884	98,561	—
Understanding functional dynamics on the nano scale through an integrated experimental-computational framework		81.049	DE-SC0020885	33,711	—
Hybrid Metal Halides: Advancing Optoelectronic Materials	220	81.049	KK1804 // DE-SC0012541	148,494	—
				<u>15,675,536</u>	<u>2,306,649</u>
Theory-Guided Design and Discovery of Materials for Reversible Methane and Hydrogen Storage					
		81.086	DE-EE0008816	215,445	—
Identifying Performance Advantaged Biobased Chemicals Utilizing Bioprivileged Molecules					
	110	81.087	401-20-25A//DE-EE0008492	132,557	—
C6-C14 Alcohol Production as a Pathway to Hydrocarbon Fuels	61	81.087	619-2 // DE-EE0007728	(37)	—
CHARACTERIZATION AND ACCELERATED LIFE TESTING OF A NEW SOLID OXIDE ELECTROLYSIS CELL		81.087	DE-EE0008079-0004	228,294	—
Transformative Materials for High-Efficiency Thermochemical Production of Solar Fuels		81.087	DE-EE0008089-0004	335,324	—
Engineered reversal of the β-oxidation cycle in clostridia for the synthesis of fuels and chemicals		81.087	DE-EE0008354	803,799	498,093
Efficient Reversible Operation and Stability of Novel Solid Oxide Cells		81.087	DE-EE0008437-0002	329,029	156,701
ResIn: Responsible Innovation for Highly Recyclable Plastics		81.087	DE-EE0008928	97,951	—
				<u>1,926,917</u>	<u>654,794</u>
Transformational SOFC Architecture (TSA)					
High-performance nanostructured thermoelectric materials and generators for in-pile power harvesting		81.089	F720161001s1 // DE-FE0027584	16,761	—
Development of Heavy Element Wide Band Gap Semiconductors		81.121	203464N//DE-NE0008812	72,912	—
Hobbes: OS and Runtime Support for Application Composition		206	107BJ-30009-0002C	27,199	—
Accelerated Discovery of Compositionally Complex Alloys for Direct Thermal Energy Conversion		177	1403164/9 // DE-AC04-94AL85000	(3,458)	—
Study of electrode microstructural evolution on solid oxide electrolysis cells at high temperatures for HydroGEN SuperNode		191	197455//DE-AC02-76SF00515-MOD01	289,808	—
Hierarchical Design Strategy and Demonstration for NMDQI		20	219484//DE-AC07-05ID14517	38,143	—
Joint Center for Energy Storage Research		20	224891//DE-AC07-05ID14517	25,000	—
Small Worlds Project Development of algorithms and models for 3D Snapshot Holographic Interferometric Microscopy (3D-SIHM)		206	3F-31142 Mod. 12 // DE-AC02-06CH11357	(992)	—
Subproject					
ML/DL and I/O Research, Development, and Deployment for RAPIDS		206	3J-30081 // 3J-30081-0050A Rev. No. 0050E	23,389	—
Nanolaminate Coatings for Improved Nuclear Fuel Cladding Performance		206	3J-30081 Rev 0069C // 3J-30081-0069A	156,062	—
MICCoM Water Electrode Studies		206	3J-30081-0049A 0049E	1,385	—
Midwest Integrated Center for Computational Materials		206	3J-30081-0054A // Rev No. 0054C	(3)	—
		206	3J-30081-0056A//3J-30081-0056B	—	—



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Department of Energy (continued):					
Support for Daikang Yan	206	81.RD	3J-30081-0062A Rev. 0062E // 3J-30081	\$ (279)	—
Oxide Dispersion Strengthened (ODS) Alloys	206	81.RD	3J-30081-0070A	—	—
Bridging neutron total scattering and atom-probe tomography for resolving amorphous and nanocrystalline structures	275	81.RD	4000164554//DE-AC05-00OR22725	—	—
Structure and Properties of Al-Ce-based eutectic alloys created by Laser Powder-Bed fusion	275	81.RD	4000179340//DE-AC05-00OR22725	1,547	—
Center for Electrochemical Energy Science – II	206	81.RD	4F-32002 M0007 // DE-AC02-06CH11357	(5,415)	—
Automatic Differentiation Ptychography for Integrated Chip Imaging	120	81.RD	519824//DE-AC52-06NA25396	62,985	—
Rational Design and Development of Nanoscale Crystalline and Amorphous Materials for Sequestration of Radioactive Pertechonate from Tank Waste					
CMS LPC Distinguished Researcher 2019	111	81.RD	634D35-NWU//TOA 0000456322//DE-AC09-	17,079	—
Illinois-Express Quantum Network (IEQNET)	71	81.RD	652513//DE-AC02-07CH11359	49,173	—
Activities related to Microstructural Studies of Nb3Sn Coatings for SRF Cavities	71	81.RD	664603//DE-AC02-07CH11359	63,611	—
QuantISED research at Fermilab	71	81.RD	665882//DE-AC02-07CH11359	92,232	—
Effects of Ultrafast and Coherent Electronic and Nuclear Motions in Photochemical Processes	71	81.RD	667512//DE-AC02-07CH11359	31,660	—
Joint Center for Energy Storage Research	206	81.RD	8F-30078 M0003// DE-AC02-06CH11357	157,250	—
Midwest Integrated Center for Computational Materials	206	81.RD	8F-30158 // DE-AC02-06CHI 1357 M0003	253,443	—
MICCoM Water Electrode Studies	206	81.RD	8J-300009-0001A//8J-300009	(2,654)	—
Student Support for Matt Kirschner	206	81.RD	8J-300009-0014A	10,804	—
Center for Electrolyte-Electrode Interface Science (CEEIS)	206	81.RD	8J-30009//8J-30009-0004A	1,275	—
Synchrotron X-ray Studies of Nanostructured Polymer Films, Fibers and Composites	206	81.RD	8J-30009//8J-30009-0009A-0009E	350,954	—
Support for Pufan Liu	206	81.RD	8J-30009//8J-30009-0012A-0012B	6,679	—
Support for Saugat Kandel	206	81.RD	8J-30009-0005A//8J-30009	48,312	—
Advanced Semiconductors for Radiation Detector	206	81.RD	8J-30009-0006A-0006D //8J-30009	6,961	—
Oxide Dispersion Strengthened (ODS) Alloys	206	81.RD	8J-30009-0010C	12,722	—
MaterialEyes: A reverse image search tool for materials images	206	81.RD	8J-30009-0011A	3,026	—
Image Analysis for Materials Characterization	206	81.RD	8J-30009-0013A Rev. 0013D	46,531	—
Support for Sajid Ali & Ming Du	206	81.RD	8J-30009-0016A Rev. 0016C	47,851	—
Support for Saugat Kandel	206	81.RD	8J-30009-0017A/0017B	4,437	—
Biofuels for enhanced fuel economy	206	81.RD	8J-30009-0018A	48,273	—
High-performance I/O Research, Development, and Deployment for DataLib	206	81.RD	8J-30009-0019A	57,412	—
Tunable, Robust, Foul-resistant, Hybrid Hydrophobic-Hydrophilic (TuRF) Metasurfaces for High Temperature Heat Exchange Operations	206	81.RD	8J-30009-0020A	7,384	—
Creation and exploration of artificial skyrmions in thin films	206	81.RD	8J-30009-0021A	60,497	—
libEnsemble library Exascale Computing Project's (ECP's) PETSc project	206	81.RD	8J-30009-0022A-0022B	43,446	—
Kinetic Modeling of the Catalytic Upgrading of Vapors from Biomass Pyrolysis	6	81.RD	8J-30009-0023A	35,941	—
Argonne joint appointment funding for Joseph Swantek	206	81.RD	AEV-6-62063-01//DE-AC36-08GO28308	—	—
Advanced Materials for Energy-Water Systems (AMEWS)	206	81.RD	Agmt 8/19/20	15,577	—
Advanced Materials for Energy-Water Systems (AMEWS)	206	81.RD	Agmt 03/14/19 // 8J-30009-0008C	159,761	—
Argonne Joint Appointment – Low	206	81.RD	Agmt 03/14/19//8J-30009-0007A	23,949	—
Irene Crisologo joint appointment funding-Argonne	206	81.RD	Agmt 09/19/18	126,960	—
Joint appointment funding for Michael Mara	206	81.RD	Agmt 1/27/20	6,825	—
Argonne Joint Appointment – Poepfelmeier	206	81.RD	Agmt 12/18/19	202,133	—
Joint appointment-Argonne funding for Gasper Kokot	206	81.RD	Agmt 12/6/19	81,042	—
ANL joint appointment funding for Wei-Keng Liao	206	81.RD	Agmt 2/1/19	23,965	—
ANL joint appointment funding-Alok Choudhary-data libraries	206	81.RD	Agmt 2/5/20	120,485	—
Joint appointment-funding for Hacksung Kim	206	81.RD	Agmt 2/5/2020	18,210	—
Jennifer Dunn joint appointment/NAISE-funding for DRINC	206	81.RD	Agmt 4/10/19	28,478	—
Aaron Packman joint appointment	206	81.RD	Agmt 4/13/18	—	—
Matthew Plumlee-Argonne joint appointment funding summer 2020	206	81.RD	Agmt 5/8/19	5,329	—
Wei-Keng Liao-Joint NU/Argonne Appointment	206	81.RD	AGMT 8/12/20	21,903	—
Argonne Joint Appointment – Kanatzidis	206	81.RD	Agmt 9/13/2017	—	—
Joint Appointment Agreement – Petriello	206	81.RD	Agmt. 08/20/14	235,879	—
Emine Begum Gulsoy-Joint NU/Argonne appointment second project	206	81.RD	Agmt. 09/11/18	131,713	—
Joint Argonne Appointment – Pyosang Kim	206	81.RD	Agreement 06/25/2018	(603)	—
Support for Daniel Wiegand	206	81.RD	Agreement 4/17/2018	(50,354)	—
Joint appointment-Pyosang Kim Argonne funding	206	81.RD	Agreement 9/14/18	51,017	—
Joint appointment-funding for Hacksung Kim	206	81.RD	ANL-JA-7681	151,780	—
Argonne Joint Appointment – Waselewski	206	81.RD	AwrD 03/25/2020	43,350	—
Development of Heavy Element Wide Band Gap Semiconductors	206	81.RD	AwrD 9/23/2019	62,249	—
Argonne Joint appointment funding for Florent Fournel	206	81.RD	BOA 3J-30081 // 3J-30081-0066B	(8,711)	—
Argonne joint appointment funding for Eric Isaacs	206	81.RD	EDSR 2/1/20	12,462	—
James Dombrowski-Joint NU/Argonne Appointment	206	81.RD	EDSR 4/1/2020	24,968	—
Jennifer Dunn – Joint NU/Argonne Appointment	206	81.RD	EDSR 5/1/18	94	—
	206	81.RD	EDSR Agmt 2/27/2017	8,501	—

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Department of Energy (continued):					
Cross-linked Polyhydroxyurethanes with Faster Stress Relaxation and Reprocessability	94	81.RD	N000266389 // DE-NA0002839	\$ 11,731	—
Cross-linked Polyhydroxyurethanes with Faster Stress Relaxation and Reprocessability – 2018	94	81.RD	N000298099//DE-NA0002839	1,214	—
Two-Dimensional Electronic Materials	94	81.RD	N000298887-02//DE-NA0002839	92,113	—
Two-Dimensional Electronic Materials	94	81.RD	N000345394//DE-NA0002839	100,316	—
CHiMaD Materials Design Workshop	94	81.RD	N000365610//DE-NA0002839	10,804	—
Support for Ivan Martinez-Soler	71	81.RD	NO. 651257	49,328	—
Support for Yuber Perez-Gonzalez	71	81.RD	NO. 651835	56,567	—
SuperCDMS SNOLAB Research and Development	71	81.RD	PO 646776//DEAC02-07CH11359	59,110	—
Liquid Argon Bubble Chamber Support	71	81.RD	PO 651762	5,105	—
Microstructural Studies of Nb3Sn Coatings for SRF Cavities	71	81.RD	PO No. 631010 Rev 1 // DE-AC02-07CH11359	40,648	—
Firm-fixed price proposal for the reimbursement of funds to Northwestern University for the services of Postdoctoral Research Associate; Wave Ngampruetkorn	71	81.RD	PO No. 636083 // DE-AC02-07CH11359	(12,440)	—
Nb3Sn for accelerator magnets	71	81.RD	PO No. 652592	755	—
Testing and Characterization for Pattern Recognition ASIC Development	71	81.RD	PO# 640728 // E9935-5264-02 Rev#2	680	—
CHiMaD Materials Design Training	94	81.RD	PON000304217 Agmt 2/21/19//DE-NA0002839	18,081	10,599
High-Luminosity LHC U.S. CMS Detector Upgrade Project Trigger DAQ – Correlator Trigger	71	81.RD	DE-AC02-07CH11359	18,196	—
REMADE: Material Characterizations and Sorting Specifications That Can Allow the Development of Advanced Tire Constructions with High Incorporation of Recovered Rubber Materials	136	81.RD	REMADE-18-02//DE-EE0007897	22,734	—
US CMS Common Operations	71	81.RD	Subcontract No. 663737//DE-AC02-07CH11359	56,958	—
Pre-optimized cell free lysates for rapid prototyping of genes and pathways	262	81.RD	UTA18-000419//7399340//DE-AC02-05CH11231	141,933	—
CSP Real-time Operations Optimization Software	6	81.RD	XCE-9-92207-01//DE-AC36-08GO28308	102,704	—
Solar for Industrial Process Heat	6	81.RD	XEJ-9-82324-01//DE-AC36-08GO28308	76,981	—
Advanced Research Projects Agency-Energy:					
Micro-scale Ultra-high Efficiency CPV/Diffuse Hybrid Arrays Using Transfer Printing	81	81.135	17-S32//DE-AR0000882	12,085	—
Hybrid Interior-Point/Active-Set PSCOPF Algorithms Exploiting Power System Characteristics	117	81.135	543891-78001//DE-AR0001073	57,001	—
Distributed Electrochemical Production and Conversion of Carbon-neutral Ammonia	174	81.135	C2017.0013-01//DE-AR0000813	111,185	—
A Novel Hierarchical Frequency-Based Load Control Architecture		81.135	DE-AR0000702	116,946	102,835
An Iterative Approach for Solving the SCOPF Problem Applying LP, SOCP and NLP Subproblems		81.135	DE-AR0001077	210,963	159,740
Adaptive Discovery and Mixed-Variable Optimization of Next Generation Synthesizable Microelectronic Materials		81.135	DE-AR0001209	162,529	—
Regrowth and Selective Area Growth of GaN for Vertical Power Electronics	288	81.135	GR101471 CON-8000 1218//DE-AR000087 Mod 0003	144,421	—
				<u>815,130</u>	<u>262,575</u>
National Nuclear Security Administration:					
Capital-DOE Alliance Center: A Center of Excellence for High Pressure Science and Technology	81	81.112	18-S19//DE-NA0003858	81,496	—
Actinide Center for Excellence	253	81.112	203186NU // DE-NA0003763	147,261	—
				<u>228,757</u>	<u>—</u>
Department of Energy Total				<u>23,371,608</u>	<u>3,234,617</u>
Department of Health and Human Services:					
Administration for Children and Families:					
The Northwestern University Two-Generation Study (NU2Gen) of Parent and Child Human Capital Advancement		93.093	90HG1002-03-00	49,281	30,624
The Northwestern University Two-Generation Study (NU2Gen) of Parent and Child Human Capital Advancement		93.093	90HG1002-04-00	246,550	60,713
The Northwestern University Two-Generation Child and Family Outcomes Study of CAP Tulsa's CareerAdvance® Program	50	93.093	Agmt 1/6/2020	324,326	—
				<u>620,157</u>	<u>91,337</u>
The effect of targeted public pre-K on the broader child care landscape in Illinois		93.575	90YE0214-01-01	19,541	—
Expanding the Cycle of Opportunity: Simultaneously Educating Parents and Children in Head Start		93.600	90YR0073-05-03 Amd 3	59,984	47,671
Illinois DCFS Implementation of Trauma Affect Regulation: Guide for Education and Therapy (TARGET) for Post Adoption and Guardianship Families	189	93.652	Agmt Signed 10/12/16 // 90CO1122-04	1,806	—
Evidence-informed Practices in Early Childhood Home Visiting: Prevention, Identification and Treatment of Substance Abuse in Families	127	93.RD	HHSP233201500035I//50525S05679	15,549	—
Administration for Community Living:					
Improving Electronic Written Communication in Aphasia	165	93.433	6317//90IFRE0007-03-00	9,227	—
Timing of transcranial direct current stimulation (tDCS) combined with speech and language therapy (SLT): An Intervention Development study for Aphasia	165	93.433	7267//90IFRE00200-01-00	9,355	—
Field Initiated Project Programs Motivational Interviewing and Physical Activity Change in Parkinson's Disease	165	93.433	81421//901F0093-01-00	10,856	—
Collaborative Machines Enhancing Therapies (COMET)	165	93.433	82258//90REGE0005	71,113	—
Interventions for Neurologic Communication Disorders		93.433	90AR5015-02-00	(85)	—

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Department of Health and Human Services (continued):					
Interventions for Neurologic Communication Disorders		93.433	90AR5015-02-00	\$ 6,147	6,147
Advanced Rehabilitation Research and Training (ARRT) Program: Northwestern University Advanced Rehabilitation Research Training Application		93.433	90AR5019-04-03	13,314	—
Rehabilitation Science for Basic Scientists and Engineers: An Advanced Training Program		93.433	90AR5031-03-00	(10,509)	—
Rehabilitation Science for Basic Scientists and Engineers: An Advanced Training Program		93.433	90AR5031-03-00	8,720	3,258
Rehabilitation Science for Basic Scientists and Engineers: An Advanced Training Program		93.433	90AR5031-05-00	121,943	—
Advanced Rehabilitation Research and Training (ARRT) Program: Northwestern University Advanced Rehabilitation Research Training Application		93.433	90ARHF0003-01-00	574	—
Advanced Rehabilitation Research and Training (ARRT) Program: Northwestern University Advanced Rehabilitation Research Training Application		93.433	90ARHF0003-02-00	37,325	—
Northwestern University Policy Research Fellowship		93.433	90ARPO0001-02-00	(6)	—
Northwestern University Policy Research Fellowship		93.433	90ARPO0001-02-00	19,890	—
Northwestern University Policy Research Fellowship		93.433	90ARPO0001-03-00	218,078	—
Rehabilitation Research Training Center (RRTC) on employment for people with Physical Disabilities	165	93.433	90RTEM0001-01-00/7260	32,237	—
Rehabilitation Strategies, Techniques, and Interventions	165	93.433	CC#81353 3037//90RE5013-01-00	105,838	—
Multi-site Clinical Trial of Hypoxia in Incomplete SCI	165	93.433	cc81478 6323//90SIMS0001-01-00	75,323	—
Sensor Technology Applied to Rehabilitation in Stroke	165	93.433	cc82288 8161//90REGE0010 -01-01	40,602	—
				<u>769,942</u>	<u>9,405</u>
Developing Optimal Strategies in Exercise and Survival Skills to Increase Health and Function	165	93.443	CL3802, CC81038//90RT5027-01-00	43,493	10,328
Agency for Healthcare Research and Quality:					
Northwestern University-University of Chicago HSR Postdoctoral Training Program		93.225	3T32HS000078-20S1	97,189	46,895
The University of Chicago and Northwestern University Predoctoral Health Services Research Program	221	93.225	FP037911-03//5T32HS000084-22	139,581	—
				<u>236,770</u>	<u>46,895</u>
Influence of an expanded bundled payment program on patient-reported outcomes, episode-of-care costs, procedure volume, and safety	242	93.226	/OSP23842-00//10045701-02//5R01HS024714-03	7,900	—
Promoting safe care transitions: Simulation-based mastery learning to improve communication in times of diagnostic uncertainty	202	93.226	080-31050-S27501//5R18HS025651-02	128,961	—
Improving Safe Antibiotic Prescribing in Telehealth: A Randomized Trial	259	93.226	110597268//5R01HS026506-02	42,808	—
Dental prescribing of antibiotics and opioids: high use in the absence of evidence	232	93.226	16659//5R01HS025177-02	4,316	—
NIH NRSA Postdoc Fellowship for BONA KO: An Alternative Approach to Understanding the Drivers of High-Performance End-of-life Care Delivery in the Intensive Care Unit		93.226	1F32HS027724-01 REVISED	7,235	—
Intervention in Small Primary care practices to Implement Reduction in unhealthy alcohol use (INSPIRE)		93.226	1R18HS027088-01	666,410	254,668
Preventing Opioid Misuse through Safe Opioid Use Agreements between Patients and Surgical Providers (PROMISE ME)		93.226	1R18HS027331-01	137,055	—
Using Location-Based Smartphone Alerts within a System of Care Coordination		93.226	1R21HS025000-02	(304)	—
Develop and Validate Health IT Safety Measures to Capture Violations of the 5 Rights of Medication Safety	49	93.226	4(GG012713-04)//5R01HS024538-04	16,589	—
Northwestern University – Patient-centered Intervention and Engagement Training		93.226	5K12HS023011-05	44,646	44,646
A Chicago Center of Excellence in Learning Health Systems Research Training (ACCELERAT)		93.226	5K12HS026385-02	773,915	357,104
Evaluating the Implementation of a Multi-Component Quality Collaborative		93.226	5R01HS024516-05	206,807	4,731
The Value of Children's Hospitals-Are Increased Costs Justified by Improved Outcomes or Driven by Internal and External Economic Forces?		93.226	5R01HS024712-05	193,497	179,280
Examining Non-Visit-Based Antibiotic Use to Improve Safety and Limit Resistance		93.226	5R01HS024930-04 REVISED	126,369	74,120
Preventing Wrong-Drug and Wrong-Patient Errors with Indication Alerts in CPOE Systems		93.226	5R01HS024945-02	618,159	427,020
A Randomized Controlled Trial of Geriatric Emergency Department Innovations		93.226	5R01HS026489-02	294,691	—
Reducing the risk of preventable postpartum lower extremity nerve injuries		93.226	5R03HS025267-02	3,180	—
Midwest Small Practice Care Transformation Research Alliance		93.226	5R18HS023921-03 REVISED	823,499	148,330
In Situ Simulation for Adoption of New Technology to Enhance Safety in Rural EDs		93.226	5R18HS024027-03	70,040	63,780
Enhancing Stroke Prehospital and Emergency Evaluation and Delivery (E-SPEED)		93.226	5R18HS025359-02 REVISED	(2,453)	—
Redesigning Systems to Improve Quality for Hospitalized Patients		93.226	5R18HS025649-04	336,142	52,846
Implementation and Testing of a Diabetes Discharge Intervention to Improve Safety During Transitions of Care		93.226	5R18HS026143-02	340,629	33,983
Expansion, Implementation & Evaluation of Electronic Health Record-Integrated Patient-Reported Symptom Screening in a Comprehensive Cancer Center		93.226	5R18HS026170-03	424,761	28,174
Prevent Diabetes Mellitus (PreDM) Clinical Decision Support Intervention in Community Health Centers		93.226	5R18HS026172-03	474,914	212,797
Dental prescribing of antibiotics and opioids: high use in the absence of evidence	258	93.226	AWD00002325 (134464-1)//7R01HS025177-04	23,083	—
Targeted Healthcare Engineering for Systems Interventions in Stroke (THESIS)	221	93.226	AWD100490 (SUB00000216)//1R18H027264-01	64,494	—
Enhancing Stroke Prehospital and Emergency Evaluation and Delivery (E-SPEED) study	221	93.226	AWD100573 (SUB00000238)//5R18HS025359-04	89,208	—
Safely Improving Emergency Diagnostic Testing through Clinical Safe Harbors	277	93.226	VUMC73418//5R18HS025931-02	13,453	—
				<u>5,930,004</u>	<u>1,881,479</u>

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Department of Health and Human Services (continued):					
The Comprehensive Unit-based Safety Program (CUSP) for Antibiotic Stewardship	114	93.RD	2003757786//HHSP2332015000201	\$ 90,487	—
Centers for Disease Control and Prevention:					
A novel innate immunity risk factor for amyotrophic lateral sclerosis		93.061	5R01TS000294-02-00	154,468	—
Developing and Disseminating Programs to Build Sustainable Lupus Awareness, Knowledge, Skills, and Partnerships	9	93.068	6NU58DP006138	17,770	—
Community Counts: Public Health Surveillance for Bleeding Disorders (Region #V-West, HTC #553)	87	93.080	ATHN2015001-VW-3//5NU27DD001155-05-00	17,631	—
Development and Evaluation of Sports Concussion Prevention Strategies	181	93.136	11679SUB//SU01CE002880-02-00	17,916	—
Chicago Center for Youth Violence Prevention	221	93.136	FP061138 (5201068601-5)//SU01CE002712-05-00	146,736	—
				<u>164,652</u>	<u>—</u>
An Individually Tailored, Family Centered Intervention for Childhood Obesity: Connecting Services in Pediatric Primary Healthcare, the Home, and the Community					
Evaluation Center Extension to Evaluate PrEP Implementation and Data to Care Services	15	93.535	18-277//U18P006255	(2,468)	—
Effect of ACA Medicaid Expansion on Diabetes: Diagnosis, Treatment, Patient Compliance, and Health Outcomes	40	93.940	CONTRACT PO #42045/236320/50105385//U62PS005021	—	—
Intergovernmental Personnel Act Agreement for Theresa Rowe		93.945	6 U18DP006120-04-02	476,815	182,099
Development of reproducible, quantitative methods based on shotgun metagenome sequencing for assessment of risk of microbial transmission		93.RD	17IPA1708457 Mod 4	104,511	—
Group A Streptococcus Molecular Epidemiology and Ecology	13	93.RD	75D30118C02915	138,761	28,132
Centers for Medicare & Medicaid Services:			A20-0013-S001//75D30119C06841	62,211	—
Development and Maintenance of Post-Acute Care Cross-Setting Standardized Patient Assessment Data	164	93.RD	9920170059//HHSM-500-2013-130141	(2,154)	—
Patient Reported Outcome-based Performance Measure for Primary Care Practices Participating in the Comprehensive Primary Care	164	93.RD	9920190082//No. 75FCMC18FD0036	207,162	—
Food and Drug Administration:					
Final Qualification Package for DDT COA #000079: PROMIS Physical Function in Oncology		93.103	1U01FD006875-01	173,061	—
Development of a context of use and PROMIS Physical Function outcome assessment for patients with sarcopenia		93.103	1U01FD006887-01	143,377	—
Northwestern University Clinical Outcome Assessment Team (NUCOAT)		93.103	1UG3FD006794-01	512,520	48,091
Increasing the Quality and Efficiency of Clinical Trials	62	93.103	203-7911//5R18FD005292-05	—	—
Increasing the Quality and Efficiency of Clinical Trials	62	93.103	5R18FD005292-02 ADDENDUM	57,380	—
Phase 2 Study of Esophageal String Test in Diagnosing Eosinophilic Esophagitis	232	93.103	7046-06//5R01FD004086-04	1,884	—
Qualification Plan Preparation to Support DDT COA #000069 PROMIS Fatigue Short Form for Individuals with Multiple Sclerosis	54	93.103	agmt 2/28/20//1U01FD006876-01,	97,435	—
A double blind, randomized, vehicle controlled, crossover study with an open-label long-term extension, to evaluate the safety and efficacy of topical naloxone hydrochloride lotion, 0.5%, for the relief of pruritus in patients with the mycosis fungoides	67	93.103	No.EL-1007-01-01//R01FD005396	1,392	—
				<u>987,049</u>	<u>48,091</u>
Health Resources and Services Administration:					
Hemophilia Treatment Center (HRSA Award)	87	93.110	Agmt signed 07/17/20 // H30MC24052	28,201	—
Implementation of the Live Donor Champion Program	114	93.134	2003709195 Mod 3//4R39OT31103-01	35,190	—
Social Behavioral Interventions to Increase Solid Organ and Tissue Donation	197	93.134	258461-00-01//5R39OT29878-03-00	—	—
				<u>35,190</u>	<u>—</u>
Health Resources and Services Administration:					
Ryan White HIV/AIDS Program Implementation Center for HIV Clinical Quality Improvement	90	93.145	5740-03//6U28HA30791-02-01	9,430	—
Affordable Care Act Teaching Health Center (THC) Graduate Medical Education (GME) Payment Program		93.530	2T91HP21542-07-00	123,559	97,108
Affordable Care Act Teaching Health Center (THC) Graduate Medical Education (GME) Payment Program		93.530	6T91HP21542-08-03	2,934,145	1,161,402
				<u>3,057,704</u>	<u>1,258,510</u>
Health Resources and Services Administration:					
A Pilot Study of a Sequential Multiple Assignment Randomized Trial Aimed at Reducing Depressive Symptoms among Home Visiting Clients	114	93.870	2004733906//UD5MC30792	3,139	—
Academic Units for Primary Care Training and Enhancement		93.884	5UH1HP299630500	722,392	103,686
Geriatrics Workforce Enhancement Program: Collaborative Action Team training for Community Health — Older adult Network (CATCH-ON)	172	93.969	15012901-Sub13//2 U1QHP28715-04-00	2,500	—
Better Health through Education and Transformation of Older Adult care in Illinois	172	93.969	com4UQHP28715-02//6U1QHP287150101	(4,764)	—
				<u>(2,264)</u>	<u>—</u>
National Institutes of Health:					
Exploring Cardiovascular and Other Health Associations of Electronic Cigarette Use in US Persons of Hispanic Heritage. The Hispanic Community Health Study / Study of Latinos (HCHS/SOL)		93.077	5R03HL144902-02	92,190	—

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Department of Health and Human Services (continued):					
Effects of Flame Retardants on brain function and attentional deficits in school-age children – brain imaging, neurobehavioral, and gut microbiome studies in a longitudinal birth cohort	49	93.113	1(GG013015-01)/5R01ES027845-03	\$ 22,375	—
Environmental Obesogens and Weight Change in the POUNDS LOST Trial	89	93.113	1113085113944//2R01ES022981-05A1	5,558	—
Particulate Air Pollutants and Autism Risk: Exposure Characteristics, Indicators of Susceptibility, and Mechanistic Pathways	116	93.113	1R01ES022963	3,334	—
PCOS and androgen-related disease modeling and drug testing in Multi-organ Integrated Microfluidic Reproductive Platform	93.113	93.113	3UG3ES029073-02S1	(133,717)	—
PCOS and androgen-related disease modeling and drug testing in Multi-organ Integrated Microfluidic Reproductive Platform	93.113	93.113	3UG3ES029073-02S1	31,928	31,928
PCOS and androgen-related disease modeling and drug testing in Multi-organ Integrated Microfluidic Reproductive Platform	93.113	93.113	4UH3ES029073-03	1,088,405	137,075
Mechanisms of Cadmium Induced Dysglycemia and Type 2 Diabetes Mellitus	93.113	93.113	5R01ES027011-04	407,391	—
Discovery of conserved molecular mechanisms underlying population-wide variation in toxin responses	93.113	93.113	5R01ES029930-02	626,345	263,867
Protein Adducts as Measures of Exposure Throughout Childhood Development	93.113	93.113	5R21ES026776-02	27,476	—
Environmental Arsenic in the Subtype Specification of Breast Cancer	93.113	93.113	7R01ES028149-03	46,783	—
Role of alveolar macrophages in particulate matter-induced cardiopulmonary disease	221	93.113	FP058473-03-PR//5R01ES015024-12	42,071	—
Effects of air pollution and gestational diabetes on autism	116	93.113	OOS030239NUCS113726//1R56ES028121-0	30,817	—
				<u>2,198,766</u>	<u>432,870</u>
Enamel atlas: systems-level amelogenesis tools at multiple scales	219	93.121	11549sc//1UG3DE028872-01	204,924	—
Impacting The Oral HPV Continuum: Prevention, Screening, and Early Detection	114	93.121	2003348761//5R35DE026631-04	9,823	—
Evolution of Chemical, Structural, and Mechanical Properties of the Surface Zone in Caries Lesions: A Multimodal, Correlative Imaging Approach		93.121	5F31DE026952-02 REVISED	13,820	—
Identifying Sox family transcription factor partners and targets essential for neural crest formation		93.121	5F32DE029113-02	57,060	—
The role of amorphous intergranular phases in the development of caries lesions		93.121	5R01DE025702-05 REVISED	361,405	—
Enamel matrix 3D organization and maturation stage ion flow	74	93.121	NWU025865-2565//5R01DE025865-04	41,887	—
				<u>688,919</u>	<u>—</u>
Creating Comprehensive Maps of Worm and Fly Transcription Factor Binding Site	271	93.172	11524//5U41HG007355-07	330,254	—
Maximizing Quantitative Structural Information from High-Throughput RNA Structure Probing		93.172	1R03HG011113-01	13,805	—
Northwestern Genomic Risk Assessment and Management Program		93.172	1U01HG011169-01	133,261	—
Genomic Medicine at Northwestern: Discovery and Implementation	251	93.172	3U01HG008673-04S1	476,240	—
NORTH CAROLINA CLINICAL GENOMIC EVALUATION BY NEXT-GEN EXOME SEQUENCING 2	190	93.172	5115120//5U01HG006487-07	121,207	—
Production Center for Mapping Regulatory Regions of the Human Genome		93.172	62295506-124217//5UM1HG009442-03	378,076	—
Visualization, modeling and validation of chromatin interaction data		93.172	7R01HG009906-03 REVISED	381,380	—
Health Care Provider responses to receiving unsolicited genomic results	42	93.172	GENFD001649709//5R01HG010004-02	24,641	—
Exome Sequencing in Diverse Populations in Colorado & Oregon	116	93.172	OOS030229-NWU-84069//3U01HG007292-07S1	26,501	—
Mapping the 3D architecture of native human replisomes	73	93.172	R02196//5R01HG010658-02	77,796	—
VGER, the Vanderbilt Genome-Electronic Records Project	277	93.172	VUMC66624//2U01HG008672-04S1	64,335	—
				<u>2,027,496</u>	<u>—</u>
PROMIS-Deaf Profile: Inclusion of Deaf Patients in Disability and Outcomes Research	79	93.173	0000025075//7R01DC014463-02	10,233	—
Impaired sensorimotor integration for prosodic production in Ataxic Dysarthria		93.173	1F31DC017877-01A1 REVISED	30,388	—
The impact of prior knowledge on spoken lexical access in children with hearing loss		93.173	1F31DC017878-01A1	35,565	—
Investigating the relationship between directional microphones, compression, and working memory in realistic spatial conditions		93.173	1K01DC018324-01	53,009	—
Mechanisms of Trace Amine-associated Receptor Gene Choice		93.173	1R01DC018738-01	9,140	—
Novel Computational Analysis of Prosody in ASD and the Broad Autism Phenotype		93.173	1R03DC018644-01	17,778	—
Spoken Language Processing as an Early Marker of Language Impairment in Bilingual Children		93.173	1R21DC018357-01	47,012	—
Mechanisms of Naturally occurring Odor Valence Modulation		93.173	1R21DC18905-01	9,323	—
Effects of hearing experience on audiovisual speech perception in children		93.173	1R56DC015492-01A1	(3,762)	—
Effects of hearing experience on audiovisual speech perception in children		93.173	1R56DC015492-01A1	775	775
Understanding the Benefits of Optical Nerve Stimulators for Neural Interfaces		93.173	1R56DC017492-01A1	116,674	—
Data Science Applications in Communication and Swallowing Disorders		93.173	2K24DC012801-07	118,713	—
Dynamic interaction among proteins in hair cells		93.173	2R56DC011813-06	(216)	—
Characterizing Variability in Hearing Aid Outcomes Among Older Adults		93.173	4R01DC012289-05	(1,108)	(1,108)
Spatiotemporal Mechanisms of Olfactory Processing in the Human Brain	255	93.173	579297//1-R01-DC-018075-01A1	3,417	—
Auditory selective attention and its relation to speech recognition in school-age children		93.173	5F31DC017055-02	35,171	—
NRSA F31 for Daria Agnieszka Boratyn in support of: Neural and behavioral mechanisms of olfactory generalization in the human brain		93.173	5F31DC017062-03	45,420	—
Underlying Psycholinguistic Skills in Late Talkers: Distinct Profiles and Differences from Typically Developing Children		93.173	5F31DC017631-02 REVISED	42,439	—
Regulation of singular expression in Trace Amine-Associated Receptors		93.173	5F32DC015962-02 REVISED	30,128	—
Assessing the Human Cochlea using Stimulus Frequency Otoacoustic Emissions (SFOAEs)		93.173	5F32DC017352-03	72,601	—
Nanotechnological Regeneration of Spiral Ganglion Neurons with Human Stem Cells		93.173	5K08DC013829-05	4,388	—
Atrophy and resting state connectivity in primary progressive aphasia		93.173	5K23DC014303-05	154,544	—
Research and Mentoring on Swallowing Impairment and Respiratory-Swallow Coordination		93.173	5K24DC012801-06 REVISED	(205)	—
Neurolinguistic Investigations of Aphasia and Recovery		93.173	5R01DC001948-23 REVISED	544,505	—
The Roles of Espins in Hair Cell Stereocilia		93.173	5R01DC004314-18	240,760	—

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Department of Health and Human Services (continued):					
Acoustic and Perceptual Effects of WDRG Amplification		93.173	5R01DC006014-16	\$ 294,638	63,156
Language in Primary Progressive Aphasia		93.173	5R01DC008552-14	587,253	8,620
A Family Genetic Study of Language in Autism		93.173	5R01DC010191-11	666,409	128,225
Characterizing Variability in Hearing Aid Outcomes Among Older Adults		93.173	5R01DC012289-09	514,740	160,336
Trace Amine-Associated Receptors and Olfactory Behavior in Mammals		93.173	5R01DC013576-05	(138,818)	—
Mapping and function of odorant receptors in the human olfactory system		93.173	5R01DC014426-05	612,291	284,661
The role of parent phenotype in parent-mediated language interventions for autism		93.173	5R01DC014709-05	578,656	—
CRCNS US-French Research Proposal Plastic Neural Circuits in Olfactory Learning		93.173	5R01DC015137-03	53,551	—
Principles of olfactory reward processing in the human brain		93.173	5R01DC015426-05	343,237	44,601
Outer and Inner Hair Cell Development		93.173	5R01DC015903-04	540,522	—
The When to Worry about Language Study (W2W-L): Joint consideration of developmental patterning and neural substrates for enhancing early identification of language impairment		93.173	5R01DC016273-03	564,909	64,074
The function of respiratory-linked local field potential oscillations in human olfactory and limbic brain regions		93.173	5R01DC016364-03	525,643	19,844
Type-2 inflammation mediates olfactory loss in Chronic Rhinosinusitis: mechanisms and therapeutic opportunities		93.173	5R01DC016645-03	433,782	—
Early Communication Intervention for Toddlers with Hearing Loss		93.173	5R01DC016877-02 REVISED	544,649	42,534
Molecular Mechanisms of Tonotopy Development in the Brain Stem		93.173	5R01DC017167-02	156,013	8,466
Defining the pathological mechanisms of hereditary hearing loss		93.173	5R01DC017482-02 – REVISED	329,567	—
Mechanisms Regulating Synaptic Function in the Developing Auditory System		93.173	5R03DC013841-03	—	—
Connectome-guided high-definition IDCS for the treatment of tinnitus		93.173	5R21DC015880-04	111,499	—
Auditory input to cerebellar unipolar brush cells		93.173	5R21DC016759-02	163,293	—
Parent-toddler EEG neural synchrony as a window into social communication deficits in autism		93.173	5R21DC017210-02	106,342	—
Phase 2 Development of a Spoken Language Biomarker of Cognitive Impairment in Parkinson's Disease		93.173	5R21DC017255-02	86,990	5,340
Can Consumers and Audiologists Detect Ear Disease Prior to Hearing Aid Use?		93.173	5R33DC013115-05	255,548	30,236
Genetic Determinants of Taste Preferences and Risk of Metabolic Disease		93.173	7R03DC013373-03	4,288	—
Defining Trajectories of Cognitive-Communicative and Quality of Life Outcomes following Stroke	165	93.173	82910/R01DC017174	27,793	—
Sensory Interaction in Voice and Voice Disorders	274	93.173	AAC6717-001/5R01DC014519-05	(40,045)	—
Modulating Stimuli Intensity to Improve Clinical Outcomes in Aphasia Treatment	165	93.173	cc82912 7986/R01DC016979	36,356	—
Hyperglycemia, Hearing Loss and Vestibular Dysfunction: The CARDIA Study	246	93.173	P007560702-77180/R1R01DC017613 (REVISED)	6,421	—
Auditory brain function as a marker for Alzheimer's disease	56	93.173	R12933/R01DC009972-10S1	32,961	—
Central auditory deficits associated with HIV infection and treatment	56	93.173	R924/5R01 DC009972-10	9,838	—
Maximizing outcomes for preschoolers with developmental language disorders: testing the effects of a sequentially targeted naturalistic intervention	276	93.173	UNIV60403//5U01DC017135-02 REVISED	523,165	—
Auditory-Motor Control of Voice in Individuals with Essential Vocal Tremor	262	93.173	UTA19-001014//1R21DC017001-01A1	2,385	—
				<u>9,550,568</u>	<u>859,760</u>
SCH: INT: Collaborative Research: Development and analysis of new mathematical and statistical models for chronic pain					
Mechanisms of Probiotic Analgesia		93.213	3R01AT010413-03S1	181,121	120,243
Mass Spectrometric Studies of Thioether Biosynthesis		93.213	5R01AT007701-05	37,866	—
Creating and Optimizing Mindfulness Measures to Enhance and Normalize Clinical Evaluation (COMMENCE)		93.213	5R01AT009143-17	302,881	—
A Mindfulness-Based e-Health Intervention to Improve Medication Adherence among Breast Cancer Survivors		93.213	5R01AT009539-04	692,198	299,074
Mind-Body Approach to Improve Health-Related Quality of Life for People with Narcolepsy		93.213	5R34AT009447-03 REVISED	236,196	—
Positive Affect Regulation as Adjuvant to Integrative Therapies for Chronic Pain: Development of the LARKSPUR Clinic-Based Intervention		93.213	5R34AT009685-03 REVISION	171,500	—
A robust heterologous expression system of intact fungal secondary metabolite gene clusters for natural product discovery in <i>Aspergillus nidulans</i>	105	93.213	Agreement 6/27/18 //2 R44 AT009158-02	51,211	—
				<u>1,856,434</u>	<u>419,317</u>
Motor neuron adaptations to satisfy diverse behavioral demands					
Determinants and Cardiovascular Consequences of Disparities in Sleep and Circadian Rhythms between Black and White Adults		93.233	1F32HL151251-01A1	8,910	—
Training Grant in Circadian and Sleep Research		93.233	1R01HL152442-01	11,660	—
Strengthening circadian signals to enhance cardiometabolic function		93.233	2T32HL007909-21	115,105	—
Leveraging a Unique existing Cohort to elucidate the Link between sleep and cardio-metabolic disease		93.233	5R01HL140580-04	685,611	—
Training Grant in Circadian and Sleep Research		93.233	5R01HL141881-02	511,913	186,345
			5T32HL007909-20 REVISED	137,817	44,430
				<u>1,471,016</u>	<u>230,775</u>
Harm avoidance and incompleteness as dimensional endophenotypes in anxiety and OC spectrum disorders					
Transformation of the stress response into motor behavior by the external globus pallidus	29	93.242	00001242//5R01MH110449-03	51,281	—
From Irritability to Impairment: How Neurodevelopment of Executive Function and Parent-Child Neural Synchrony Influence the Transition from Normal to Abnormal	266	93.242	0012774A//R01MH112768	94,269	—
Symptom Dimensions of Threat-And Reward-Related Neurocircuitry	256	93.242	0046528 (126659-1)/5R01MH107540-04	(5)	—
Novel Methods for Evaluation and Implementation of Behavioral Intervention Technologies for Depression	216	93.242	0875 G SA507 Amd 6//3R01MH100117-05S1	7,016	—
Molecular mechanisms of target-specific synapse formation	49	93.242	1(GG008480-01)//5R01MH1094696-04	60,304	—
Social Processing Deficits in Remitted Adolescent Depression	269	93.242	10055251-01//2R56MH105426-06	39,831	—
Three Generations at High and Low Risk for Depression Followed Longitudinally	167	93.242	1015867/1/27394//1R01MH119771-01A1	146,789	—
Perturbation of the Treatment-Resistant Depression Connectome by Fast-Acting Therapies	167	93.242	144275//5R01MH036197-32	45,276	—
	216	93.242	1580 G WD844//5U01MH110008-04	8,262	—

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Department of Health and Human Services (continued):					
Transdiagnostic brain-behavior profiling to enhance cognitive behavioral therapy response	232	93.242	17565-01//5R01MH112705-03	\$ 58,165	—
Developing an HIV Prevention Intervention for Young MSM through Improved Parent-Child Communication	81	93.242	18-M61//5R34MH112445-02	4,983	—
How Early Life Experiences Create Individual Variation in Dopamine Circuit Architecture: Understanding Risk for Psychiatric Disease		93.242	1DP2MH122401-01	380,744	—
Hippocampal Mechanisms of Stress-Induced Generalization of Negative Memories		93.242	1F30MH122130-01	28,062	—
Neurocorrelates of alterations in facial expressivity in youth at clinical high-risk for psychosis		93.242	1F31MH121018-01A1	30,111	—
Technology Enabled Services for Coordinated Care of Depression in Healthcare Settings		93.242	1P50MH119029-01A1	100,374	—
2/5 CAPER Computerized assessment of psychosis risk		93.242	1R01MH120088-01A1	119,164	—
Optimizing prediction of preschool psychopathology from brain: behavior markers of emotion dysregulation from birth: A computational, developmental cognitive neuroscience approach		93.242	1R01MH121877-01A1	165,414	—
A Stepped Wedge Hybrid Type II Trial of an Online Positive Affect Intervention: Blending Implementation and Effectiveness to Improve HIV Continuum Outcomes in Ryan White Clinics in Chicago		93.242	1R01MH124632-01	13,084	—
Structural Connectivity of Positive and Negative Emotions: Secondary Analysis of the Human Connectome Project through the RDoC Lens		93.242	1R03MH119529-01A1 REVISED	26,447	—
Title: Neurobiology of seizure generalization during electroconvulsive therapy for major depression		93.242	1R03MH121769-01	20,066	—
Interrogating and sculpting synapses and circuits for rapidly acting antidepressant effects		93.242	1R56MH113923-01	(8,915)	—
LATIN-MH: Latin America Treatment and Innovation Network in Mental Health		93.242	2016.86612.002//5U19MH098780-05	(18,643)	—
A Crowd-Powered Technological Treatment for Depression and Anxiety	214	93.242	2019-3710//1R34MH113616-01A1	12,052	—
Small GTPase signaling in dendrites and spines		93.242	2R56MH071316-16	45,836	—
Virtual Reality Job Interview Training to Enhance Supported Employment for Adults with SMI	245	93.242	3004704106//R01MH110524	24,571	—
Effectiveness of a Targeted Brief Intervention for Recent Suicide Attempt Survivors	257	93.242	417659G /UR FAO GR511008 // 1 R01MH119284-01	26,693	—
Simulated Clinician Assessment for Cognitive Behavioral Therapy Skills	182	93.242	5065-AU//R01MH112625	27,924	—
NRSA F30 for Daniel W Fisher in support of: Role of HCN Channels in Major Depressive Disorder Etiology and Treatment		93.242	5F30MH109249-04	9,936	—
Cumulative environmental risk exposure in youth at clinical high-risk for psychosis		93.242	5F31MH119776-02	40,491	—
F32 for Shrutti Dave in support of: Optimizing noninvasive modulation of prediction and episodic memory networks via cerebellar stimulation		93.242	5F32MH118718-03	62,748	—
NRSA Postdoc Fellowship for K. Blum in support of: Determining the role of muscle afferent signals in cortical proprioceptive representation		93.242	5F32MH120893-02	62,878	—
Expanding College Student Mental Health with Stress Management Mobile Technologies		93.242	5K08MH112878-04	156,277	—
Contributions of Parallel Nigrostriatal Dopamine Circuits to Reward Learning and Habit Formation		93.242	5R00MH109569-05	199,127	—
Small GTPase signaling in spines		93.242	5R01MH071316-15	253,491	3,985
Mechanisms of Stress-Enhanced Aversive Conditioning		93.242	5R01MH078064-14	353,549	—
A Family Genetic Study of Autism and Fragile X Syndrome		93.242	5R01MH091131-07	476,885	39,564
Synaptic and dendritic dysfunction in psychiatric disorders		93.242	5R01MH097216-09	543,408	76,613
The role of glutamate receptors in compulsive and perseverative behavior		93.242	5R01MH099114-08	461,714	—
Artificial Intelligence in a Mobile Intervention for Depression (AIM)		93.242	5R01MH100482-05	(212)	—
Behavioral relevance of active dendritic mechanisms of integration and plasticity		93.242	5R01MH101297-07	813,142	—
Noninvasive Manipulation of Hippocampal-Cortical Brain Networks and Memory		93.242	5R01MH106512-05	200,030	1,022
Postsynaptic roles of ankyrin		93.242	5R01MH107182-05	254,849	—
Generating an Earlier Science of When to Worry: A Neurodevelopmental, Transactional Approach to Characterizing Irritability Patterns Beginning in Infancy		93.242	5R01MH107652-05	848,343	25,571
Cortico-Hippocampal Mechanisms of Context Memory		93.242	5R01MH108837-05	414,203	—
Age-Related Histone Modification Effect on Antipsychotic Action		93.242	5R01MH109466-05	469,372	—
Molecular, anatomic, and functional characterization of midbrain dopamine neuron subtypes		93.242	5R01MH110556-03	467,585	—
LiveWell: A Mobile Intervention for Bipolar Disorder		93.242	5R01MH110626-04	610,968	118,630
LifeSense: Transforming Behavioral Assessment of Depression Using Personal Sensing Technology		93.242	5R01MH111610-04	797,024	148,720
Optimized dosing of repetitive transcranial magnetic stimulation for enhancement of hippocampal-cortical networks		93.242	5R01MH111790-04	274,158	—
2/3 Community psychosis risk screening: An instrument development study		93.242	5R01MH112545-04	241,698	—
New Tools to Study Neurosteroid Estrogens		93.242	5R01MH113189-05	699,627	—
BMP Signaling and Neurogenesis in Major Depressive Disorder		93.242	5R01MH114923-02	679,658	—
Development of Sub 100 nm Resolution X-ray Nanotomography of Centimeter-Sized Tissues		93.242	5R01MH115265-03	403,841	—
Neurohypophysial regulation of midbrain dopamine systems.		93.242	5R01MH117111-03	385,794	—
Synthesis of Trials to Prevent Suicide Risk Behavior in Sexual and Gender Minorities		93.242	5R01MH117598-03	516,327	283,147
A pragmatic trial of two strategies for implementing an effective eHealth HIV prevention program		93.242	5R01MH118213-03	2,024,641	302,976
Sources and functional consequences of individual differences in human functional brain networks related to controlled behavior		93.242	5R01MH118370-02	482,865	—
An examination of psychomotor disturbance in current and remitted MDD: An RDoC Study		93.242	5R01MH118741-02	504,027	54,600
Neural Habituation in Ultra High-Risk Youth		93.242	5R21MH110374-02 REVISED	10,447	—
High-Risk Psychosis Youth and Caregivers: Emotion in Interaction		93.242	5R21MH115231-02	59,174	—
Exploring Melipaladines as New Serotonin Receptor Antagonists		93.242	5R21MH115301-02	225,981	—
Simultaneous eye tracking and hippocampal IEEG to identify oscillatory signals of memory retrieval and novelty detection in humans		93.242	5R21MH115366-02	316	—
Using Speech Acoustics to Reveal Motor Disruptions in Psychosis		93.242	5R21MH119677-02	168,970	21,659
Post-Graduate Research Training Aligned with the NIMH Strategic Plan		93.242	5R25MH115855-02	97,055	—
Exercise and markers of medial temporal health in youth at-risk for psychosis		93.242	5R33MH103231-05	66,313	51,340

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Department of Health and Human Services (continued):					
Training Program in Neurobiology of Information Storage		93.242	5T32MH067564-18 REVISED	\$ 191,094	—
Multidisciplinary Training Program in Digital Mental Health		93.242	5T32MH115882-03	270,838	—
Dimensions of Early Temper Loss and Low Concern: Clinical Utility and Mechanisms		93.242	5U01MH082830-10	41,476	—
Optical Dissection of the Neural Circuitry Controlling Sensorimotor Gating		93.242	7K01MH113132-04	149,950	—
DART2.0: comprehensive cell type-specific behavioral neuropharmacology	62	93.242	A03-0696//1RF1MH117055	267,538	—
Developing Insulin-like growth factor binding protein 2 (IGFBP2) peptide fragment-based therapeutics to treat functional and behavioral deficits in Ph	4	93.242	Agmt 11/27/19 // 1R41MH121140-01	121,455	—
Systematic Functional Interpretation of Regulatory Variants in Schizophrenia	151	93.242	EH15-150-S1/5R01MH106575-05	220,633	—
Biopsychosocial mechanisms underlying internalizing psychopathology in a prospective, population-based cohort of sexual minority young adults	288	93.242	GR105700 (CON-80001711)/5R01MH118245-02	43,886	—
Integrating a suite of mental health apps for depression in a healthcare setting	1	93.242	NU_Mohr/00028727//2R44MH114725-03	86,711	—
Targeting negative affect through mindfulness training in youth at risk for internalizing problems	276	93.242	UNIV61518//1R61MH119270-01A1	37,943	—
Altered auditory networks in HIV-induced central nervous system dysfunction	56	93.242	R1072//5R01NS108809-03	152,598	—
Prodromal Inventory for Negative Symptoms (PINS): A Development and Validation Study	229	93.242	SUB00001927//1R01MH116039-01A1	171,270	—
Mapping Dimensional Aspects of Biobehavioral Threat Reactivity in Young, Violence-Exposed Children: Linkages to Fear, Distress, and Disruptive Behavior	226	93.242	UCHC7-108267241//1U01MH113390-01A1	15,089	—
Discovery of novel small molecule antidepressants	277	93.242	VUMC64676//7R01MH106511-03	12,347	—
The NewTics Study: A novel approach to pathophysiology and cause of tic disorders	283	93.242	WU-17-444-MOD-3//5R01MH104030-04	62,415	—
Early Life Adversity, Biological Embedding, and Risk for Developmental Precursors of Mental Disorders	283	93.242	WU-19-11-MOD-1//5R01MH113883-03	133,889	—
Dyadic Synchrony as a Mechanism of Parent-Child Interaction Therapy (PCIT): A Neuroscience-Based Approach	283	93.242	WU-20-123//7R21MH115088-02	6,890	—
From Irritability to Impairment: How Neurodevelopment of Executive Function and Parent-Child Neural Synchrony Influence the Transition from Normal to Abnormal Functioning	283	93.242	WU-20-280-MOD-1//7R01MH107540-05	37,661	—
				<u>17,869,538</u>	<u>1,127,827</u>
Investigating the Influence of Alcohol Use and Partner Risk Heuristics on HIV Risk Behavior among Young Men Who Have Sex with Men					
Efficacy of Couples-Based HIV Prevention in Vulnerable Young Men		93.273	2F32AA028194-02 REVISED	54,226	—
Role of Alcohol Disparities in HIV Risk among Sexual Minority Youth		93.273	5R01AA024065-05	407,942	29,903
Newborn Phosphatidylethanol Screening to Detect Fetal Alcohol Exposure in Uruguay		93.273	5R01AA024409-05	243,527	—
			5U01AA023176-03	(9,901)	—
				<u>695,794</u>	<u>29,903</u>
The Neuroproteomics and Neurometabolomics Center on Cell-Cell Signaling					
Wake Forest NCORP Research Base	233	93.279	096739-17681//2P30DA018310-16	255,631	—
Great Lakes Node of the Drug Abuse Clinical Trials Network	282	93.279	101740-442410/UG1CA189824-S1	82,053	—
Collaborating Consortium of Cohorts Producing NIDA Opportunities (C3PNO) Supplement	172	93.279	18112701-Sub05//UG1DA049467	14,126	—
Collaborating Consortium of Cohorts Producing NIDA Opportunities (C3PNO)	216	93.279	1935 G XA461//5U24DA044554-04	9,503	—
A New Approach to Integrating Primary and Secondary HIV Prevention in Young Male Couples	216	93.279	1935 G XA461-02//5U24DA044554-04	29,491	—
Interferon-modulated vaccines against HIV		93.279	1DP2DA042417-01	573,508	—
2/2 Optimizing access, engagement and assessment to elucidate prenatal influences on neurodevelopment: The Brains Begin Before Birth(B4 ) Midwest Consortium		93.279	1DP2DA51912-01	56,979	—
COVID-19: 2/2 Optimizing access, engagement and assessment to elucidate prenatal influences on neurodevelopment: The Brains Begin Before Birth(B4 ) Midwest Consortium		93.279	1R34DA050266-01	169,119	—
Developing and Testing a Social Network Data Capture Tool to Improve Partner Services		93.279	COVID-19: 1R34DA050266-01	29,842	—
Reduced complexity mapping of oxycodone self-administration and stress responsiveness in rats		93.279	1R34DA052216-01 REVISED	834	—
Multilevel Influences on HIV and Substance Use in a YMSM cohort	260	93.279	20-4411-NWU//1R01DA048017-01A1	11,837	—
Drug Abuse and Related Health Disparities: An Intergenerational Longitudinal Study of Offspring of Delinquent Youth (Northwestern Offspring Project)		93.279	2U01DA036939-06	675,188	—
Multilevel Influences on HIV and Substance use in a YMSM Cohort		93.279	3R01DA042082-03S1	484,146	—
Protocol NIDA-CTN-0099: Emergency Department-Initiated Buprenorphine and Validation Network Trial (ED-INNOVATION)	130	93.279	3U01DA036939-05S2	759,375	—
Contribution of the Virome to HIV/AIDS pathogenesis		93.279	401655//3UG1DA015831-18S9	68,206	—
Substance Use, Stress, and HIV Influences on Systemic Inflammation Among Young Men Who Have Sex with Men (NIH NRSA Postdoc Fellowship for Ethan Morgan, PhD.)		93.279	5DP1DA048493-03	309,001	—
Understanding Substance Use Risk among Sexual Minority Women		93.279	5F32DA046313-02	18,008	—
A Multilevel Network Model of Drug Use and HIV Racial Disparities in Men		93.279	5K01DA046716-02	142,986	—
Understanding and reducing HIV risk behavior and substance use among self-identified bisexual adolescent men		93.279	5K08DA037825-05	94,377	—
Cognitive-Affective Substrates of Smoking: Targets for Maternal Behavior Change		93.279	5K08DA045575-03	202,713	—
Center for Prevention Implementation Methodology for Drug Use and HIV (Ce-PIM)		93.279	5K23DA037913-05	153,551	—
COVID-19: Center for Prevention Implementation Methodology for Drug Use and HIV (Ce-PIM)		93.279	5P30DA027828-10	1,023,736	283,486
			COVID-19: 5P30DA027828-10	8,258	—



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Department of Health and Human Services (continued):					
Center for chronic pain and drug abuse		93.279	5P50DA044121-03	\$ 1,622,467	107,226
New Inactivators of GABA Aminotransferase for Addiction and Epilepsy	93.279	93.279	5R01DA030604-10	499,382	87,895
Nicotinic acetylcholine receptor function in the mesolimbic dopamine system	93.279	93.279	5R01DA035942-05	(107)	—
Identifying nicotine, withdrawal mechanisms hidden within habenular complexity	93.279	93.279	5R01DA040626-02	(11)	—
netCanvas: Development, Hardening, and Dissemination of a Software Suite for the Collection of Complex Network and Contextual Data in HIV and Drug Research		93.279	5R01DA042711-05	467,639	43,503
Nicotinic receptor gene editing vectors	93.279	93.279	5R21DA045507-02 REVISED	(16)	—
System-Level Implementation to Reduce Excess Opioid Prescribing in Surgery	93.279	93.279	5R34DA044752-03	220,567	589
Enhancing Sustainment of State and Other Systems-wide Advances in the Implementation of Treatments for Opioid Use Disorders	190	93.279	61867865-128280/7R01DA037222-03 REVISED	(945)	—
The National Drug Abuse Clinical Trials Network: New England Consortium Node CTN-0099	288	93.279	GR109729 (CON-80002392)/3 UG1 DA 015831-19S1	89,449	—
Optimizing PrEP Adherence in Sexual Minority Men who Use Stimulants	244	93.279	PO#SPC-001603-OS0000283/1R01DA051848-01	2,085	—
Sensitivity to Unpredictable Threat and Smoking Lapse Behavior	230	93.279	R-19-0063/R21DA045285	56,857	—
Sensitivity to Unpredictable Threat and Smoking Lapse Behavior	230	93.279	R-19-0066/5R21 DA045285-02S2	23,286	—
Vulnerability to Drug Use & HIV: Advancing Prevention for Rural African Americans	229	93.279	RR376-417/4945376/5P30DA027827	121,103	—
Evaluating the Effectiveness of an eHealth EBI for Latino Youth in Primary Care	244	93.279	SPC-000247/5R01DA040756-03	12,876	—
Supporting Treatment Adherence for Resilience and Thriving (START): A mHealth intervention to improve ART adherence for HIV-positive stimulant-using	244	93.279	SPC-001373/FR01DA049843-02	28,575	—
Development of an implantable closed-loop system for delivery of naloxone for the prevention of opioid-related overdose deaths	283	93.279	WU-20-178/1UG3DA050303-01	1,157,730	—
				9,473,405	522,699
Enabling Technology for a Biomimetic Artificial Retinal Chemical Synapse Chip	232	93.286	17495-00/1R21EB028069-01	15,688	—
Assessing RF heating of deep brain stimulation implants in high-field open-bore MRI systems		93.286	1R03EB029587-01	11,576	—
Shape Control and Transport Properties of DNA-Copolymer Micelles	114	93.286	2002586569 Amd 2/5R01EB018358-02-REVISED	4,058	—
Neurodegenerative and Neurodevelopmental Subcortical Shape Diffeomorphometry Software	114	93.286	2003341343 Amd 3/RO1EB020062	105,963	—
Rapid Pediatric Cardiovascular MRI without Contrast Agent or Anesthesia		93.286	3R21EB024315-02S1	40,467	9,185
Tissue-dynamics Imaging for Therapeutic Efficacy in Ovarian Cancer	163	93.286	4102-77270/5R01EB016582-03	(8,738)	—
Center of Excellence for Mobile Sensor Data-to-Knowledge (MD2K)	243	93.286	5-40708/5U54EB020404-05	55,815	—
Patient-adjustable MRI technology for high-resolution imaging of deep brain stimulation		93.286	5R00EB021320-04	242,902	—
SCH: Interface Monitoring System to Promote Residual Limb Health		93.286	5R01EB019337-03	(27)	—
SCH: Interface Monitoring System to Promote Residual Limb Health		93.286	5R01EB019337-03	22,765	22,765
Image-Guided Transcatheter Delivery of Natural Killer Cell Therapy Augmented with IFN-Gamma Eluting Microspheres		93.286	5R01EB026207-03	368,933	—
Design-driven engineering of robust mammalian sense-and-respond functions		93.286	5R01EB026510-03	258,475	—
Developing a SMART scaffold for bladder augmentation		93.286	5R01EB026572-02	506,001	25,671
Safety assessment of MRI in patients with retained cardiac leads		93.286	5R03EB025344-02	63,283	—
Enabling Non-Invasive Cell Tracking for Patient-Specific Vascular Endothelial Cells		93.286	5R03EB027998-02	72,067	—
Interdisciplinary Graduate Education in Movement and Rehabilitation Sciences		93.286	5T32EB009406-10	91,582	—
Graduate Training Program for Magnetic Resonance Imaging		93.286	5T32EB025766-02	70,410	—
Unassisted Blood Pressure Monitoring Using Arterial Tonometry and Photoplethysmography		93.286	5U01EB020589-02	(3)	—
The Center for Innovation in Point-of-Care Technologies for HIV/AIDS at Northwestern University (C-THAN)		93.286	5U54EB027049-03	1,410,470	523,009
Human and Machine Learning for Customized Control of Assistive Robots	165	93.286	7185 cc 81301/5R01EB0204058-02	91,202	—
Computational methodologies for safety assessment of MRI in patients with deep brain stimulation implants		93.286	7R03EB024705-02	375	—
Improved Whole-Brain Spectroscopic MRI for Radiation Treatment Planning (Shim)	69	93.286	A278172/5U01EB0128145-02	21,809	—
COVID-19: The Center for Innovation in Point-of-Care Technologies for HIV/AIDS at Northwestern University (C-THAN) RADx Supplemental Request		93.286	COVID-19: 3U54EB027049-02S1 REVISED	532,378	—
Antigen Loaded Particles for Tolerance Induction	245	93.286	Sub#3003585891/5R01EB013198-09 REVISED	(50,875)	—
				3,926,576	580,630
Genomic Analysis of Enhanced Response to Heart Failure Therapy in African Americans (GRAHF)	256	93.307	0041119(124864-3)/5R01MD009118-05 REVISED	4,287	—
Latino vs. Non-Latino Disparities in Advance Care Planning & End-of-Life Care	113	93.307	183120-02/5R01MD007652-05	2,432	1,727
Simulation Modeling to Understand and Address HIV Disparities in Racial, Ethnic, and Sexual Minority Populations		93.307	1R01MD014703-01A1	39,153	—
ELLAS: Environment, Leiomyomas, Latinas and Adiposity Study	245	93.307	3004650350/5R01MD011570-05	33,465	—
Health disparity in pharmacogenomics: African American SNPs and drug metabolism		93.307	5R01MD009217-06	19,489	—
Ethics in HIV Prevention Research Involving LGBT Youth		93.307	5R01MD009561-04 REVISED	—	—
Reducing Assessment Barriers for Patients with Low Literacy		93.307	5R01MD010440-04S1	1,251,771	654,047
Understanding socioeconomic disparities in perinatal risk: The role of epigenetic and transcriptional regulation in the placenta		93.307	5R01MD011749-04 REVISED	1,187,720	565,593
Effectiveness and Implementation of a Mindfulness Intervention for Depressive Symptoms Among Low-income, Racial/Ethnic Minority Adults in a Federally Qualified Health Center		93.307	5R01MD012236-03	541,322	—
Characterizing PrEP Adherence and Patterns of Use in a Diverse Community Cohort of Young Men		93.307	5R01MD013609-03	446,284	—
Collateral Consequences of Parents Incarcerations for Their Adolescent Children: A Prospective Longitudinal Study		93.307	5R01MD014020-02	481,385	—
The OPTIMIZE Study: Optimizing Patient Navigation for Perinatal Care		93.307	5R01MD014068-02	320,321	59,843
Understanding the Disparities in Postpartum Hemorrhage and Hemorrhage Outcomes		93.307	5R03MD011628-02	103,617	7,192
Northwestern University Minority Health and Health Disparities Research Training (NU-MHRT)		93.307	5T37MD014248-02	236,491	—
A Pragmatic Trial of An Adaptive eHealth HIV Prevention Program for Diverse Adolescent MSM		93.307	5U01MD011281-05	1,915,417	634,146

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Department of Health and Human Services (continued):					
African American Cardiovascular pharmacogenetic CONSorTium (ACCOuNT): discovery and translation		93.307	5U54MD010723-05	\$ 1,613,035	1,128,128
Using epigenomic subtyping to understand the racial differences in lymphoma	221	93.307	FP064397//R21MD011439	65,259	—
VietAmerican Health Pilot Study	252	93.307	RF00219-2021-0066//1R21MD013542-01A1	521	—
				<u>8,261,969</u>	<u>3,050,676</u>
Impact of Culturally Aware Mentoring Interventions on Research Mentors and Graduate Training Programs	272	93.310	0000000238//1U01GM132372-01	36,128	—
Enhanced Grant Writing Coaching Groups for a Diverse Biomedical Workforce	269	93.310	10050224-03//1U01GM132366-01	37,552	—
Identifying Mechanisms Governing T Cell Diversity		93.310	1DP2A1136599-01	364,236	—
Cell-free DNA sequencing approaches to define the genetic etiology of unexplained epilepsy		93.310	1DP2NS111506-01	527,093	—
Genetic mapping of visual circuits		93.310	3DP2EY027983-01 S1	729,575	—
Renewable and Specific Affinity Reagents for Mapping Proteoforms in Human Tissues		93.310	5UH3CA246635-02	451,338	162,879
A systems-level study of signaling networks and differentiation	221	93.310	FP060024 Amd 1 // 1R01EY025957-01A1	80,002	—
Center for 3D Structure and Physics of the Genome	242	93.310	PO No. WA00753476//OSP20170535 Amd 3//U54DK107980-	77,122	—
Genetics and quantum chemistry as tools for unknown metabolite identification	229	93.310	SUB00001824//1U2CES030167-01	83,483	—
				<u>2,386,529</u>	<u>162,879</u>
University of Pittsburgh Clinical and Translational Science Institute (CTSI) ACT Administrative Supplement	256	93.350	0055353(130910-17)//SUL1TR001857-05	38,094	—
A National Center for Digital Health Informatics Innovation	158	93.350	1011902_NWU//SU24TR002306-04	557,811	—
COVID-19: A National Center for Digital Health Informatics Innovation.	158	93.350	COVID-19: 1011902_NWU//SU24TR002306-04	15,822	—
Lifespan and Life Course research: Integrating Strategies	257	93.350	2010004//U24TR002260	23,074	—
Northwestern University Clinical and Translational Sciences Institute (NUCATS)		93.350	3UL1TR001422-04S1	26,597	16,176
Northwestern University Clinical and Translational Science Institute		93.350	3UL1TR001422-06S4	6,159,623	125,959
Northwestern University Clinical and Translational Science Institute (NUCATS)		93.350	5KL2TR001424-04	—	—
Northwestern University Clinical and Translational Science Institute (NUCATS)		93.350	5KL2TR001424-06	562,715	67,755
Northwestern University Clinical and Translational Science Institute (NUCATS)		93.350	5TL1TR001423-04 REVISED	(1,139)	—
Northwestern University Clinical and Translational Science Institute (NUCATS)		93.350	5TL1TR001423-04 REVISED	23,577	23,577
Northwestern University Clinical and Translational Science Institute (NUCATS)		93.350	5TL1TR001423-06	427,343	35,955
Improving Patient Reported Outcome Data for Research through Seamless Integration of the PROMIS Toolkit into EHR Workflows		93.350	SU01TR001806-04	1,637,936	1,230,450
				<u>9,471,453</u>	<u>1,499,872</u>
Analyzing and Interpreting Clinician and Patient Adverse Event Data to Better Understand Tolerability in ECOG-ACRIN Studies	55	93.353	1204001//1U01CA233169-01	102,487	—
Structure and Function of the SS18-SSX-containing mSWI/SNF (BAF) Complex Unveiling New Paths Toward Therapeutic Targeting	55	93.353	1U54CA231638-01//1205702	441,273	—
Implementation and Evaluation of an Expanded Bilingual Electronic Symptom Management Program across a Multi-site, Fully integrated Comprehensive Cancer Center		93.353	1UM1CA233035-01	1,045,389	178,736
Using Information Technology to Improve Outcomes for Children Living with Cancer		93.353	SU01CA246612-02	219,902	13,361
Accelerating Colorectal Cancer Screening and Follow-up through Implementation Science in Chicago (ACCSIS-Chicago)	221	93.353	AWD069107-01-PR (SUB00000212)//4UH3CA233229-02	52,973	—
				<u>1,862,024</u>	<u>192,097</u>
A Community-Developed, Culturally Based PC Consult Program Delivered via Tele-health for African American and White Rural Southern Elders with Life Limiting Illness	209	93.361	000521619-001//1R01NR017181-01A1	31,665	—
Testing the Efficacy of a Couple-focused, Tailored mHealth Intervention for Symptom Self-Management among Men with Prostate Cancer and their Partners	251	93.361	5114999//5R01N016990-03	25,946	—
EHR-based Universal Medication Schedule to Improve Adherence to Complex Regimens		93.361	5R01NR015444-05	592,418	283,751
Use of simulation to improve ventricular assist device self-management		93.361	5R21NR016745-02 REVISED	10,083	—
Morning Light Treatment at Home to Improve Glucose Metabolism in People at Increased Risk for Type 2 Diabetes		93.361	7R21NR016377-02	50,583	—
				<u>710,695</u>	<u>283,751</u>
Mitigating Long-term Treatment-related Morbidity in Childhood Cancer Survivors	209	93.393	000519160-003//5R35CA220502-02	11,693	—
Disease Beliefs and Cognition: Effect on Diabetes Management in Older Breast Cancer Survivors	95	93.393	0255-3801-4609//1R01CA214491-03	208,161	—
A novel therapy for pancreatic neuroendocrine tumors	284	93.393	0WSU20054//1R01CA240607-01A1	8,235	—
PROMIS AYA/Optimizing Health Related Quality of Life Measurement in Adolescent and Young Adult Oncology: A PROMISing Solution	282	93.393	100730-114162//R01CA218398	101,147	—
Using MOST to EMPOWER: Optimizing an emotion regulation intervention to enhance well-being among young adult cancer survivors	282	93.393	100730-550033//R01 CA242849	60,241	—
Targeting Posttranslational Modifications in Breast Carcinogenesis		93.393	1R01CA250110-01	92,438	—
Minimally Invasive Colorectal Cancer Risk Stratification with Nanocytology: Targeting Underscreened Populations	24	93.393	1R33CA225323-01	212,064	—
Patient Navigation 2.0: Addressing the Challenge of Scaling Navigation through Checklist-based Implementation		93.393	2R01CA163830-07A1	35,415	—
The National Person-Centered Assessment Resource (PCAR)		93.393	3U2CCA186878-04S1	4,828,322	28,816
K00 for Deanna Tiek in support of: Novel relationships of splicing factors in temozolomide-resistant glioblastoma		93.393	4K00CA234799-03	51,350	—
Testing Novel Pharmacogenetic and Adherence Optimization Treatments to Improve the Effectiveness of Smoking Cessation		93.393			
Treatments for Smokers with HIV	255	93.393	578028//1R01CA243914-01	201,618	—
Epigenetic Regulation by Histone Modifiers in Development and Cancer (Pre-doc to Post-doc Transition Award for Christie Sze, BA.)		93.393	5F99CA234945-02	29,434	—
Regulation of Human Papillomavirus Gene Expression		93.393	5R01CA059655-27	423,514	—
In Vivo Model of Epstein-Barr Virus Latency		93.393	5R01CA073507-20	48,253	—
HPV and the DNA Damage Response		93.393	5R01CA142861-10	265,335	—

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Department of Health and Human Services (continued):					
Inhibition of pancreatic carcinogenesis via targeting c-Raf and sEH	93.393		5R01CA172431-05 REVISED	\$ 12,181	—
Kaposi's Sarcoma-associated Herpesvirus Mimics of Cellular microRNAs	93.393		5R01CA180813-05 REVISED	26,224	—
Behavioral Activation and Varenicline for Smoking Cessation in Depressed Smokers	93.393		5R01CA184211-05	64,625	60,742
Progesterone Signaling and Blockade in Human Breast Tumorigenesis and Prevention	93.393		5R01CA192124-05	298,802	—
Reducing the Effects of Active Surveillance Stress, Uncertainty and Rumination thru Engagement in Mindfulness Education (REASSURE ME)	93.393		5R01CA193331-05	543,706	379,537
Functional Dissection of the K27M Histone Mutation In Gliomagenesis	93.393		5R01CA197313-04 REVISED	(15,024)	—
The inhibitory network between EZH2 and PARP1 in triple-negative breast cancer	93.393		5R01CA208257-05	416,534	5,794
Transcriptional Elongation Control in Development and Disease	93.393		5R01CA214035-19	727,792	—
Evaluating the protective effect of a tissue selective estrogen complex (TSEC) in women with newly diagnosed ductal carcinoma in situ	93.393		5R01CA218436-04	515,387	318,516
Genomic Prediction of Doxorubicin-Induced Cardiotoxicity	93.393		5R01CA220002-03	266,384	6,236
Translating buccal nanocytology for lung cancer screening into clinical practice	93.393		5R01CA225002-03	411,457	144,241
Role of NF90 in Prostate Cancer	93.393		5R01CA227918-03	412,677	—
Determinants of dermal drug delivery to the normal and the irradiated breast	93.393		5R01CA235647-02	289,990	24,454
Communicate and LEarn About youR Variant of Uncertain Significance (CLEAR VUS)	93.393		5R03CA194643-02 REVISED	—	—
Using Text Messaging to Increase HPV Vaccination among Young Sexual Minority Men	93.393		5R21CA208329-02	(3,081)	—
Using Text Messaging to Increase HPV Vaccination among Young Sexual Minority Men	93.393		5R21CA208329-02	28,050	28,050
Feasibility of OncoMed to Improve Self-Management and Adherence to Oral Anticancer Medications	93.393		5R21CA226671-02	155,945	—
Evaluating Patient-Reported Outcomes Monitoring in Routine Care of Patients with Chronic Myeloid Leukemia for Increasing Adherence and Clinical Response to Therapy: The EMPATHY Pilot Study	93.393		5R21CA230367-02	163,216	46,498
Mutations of Chromatin and its Modifying Machineries in Malignancies	93.393		5R35CA197569-06	940,685	—
Histone Modification and Transcription Elongation in Human Cancer	93.393		5R50CA211428-05	178,080	—
Structural Cell Biology of DNA Repair Machines	215		7336107 Mod 4 // 5P01CA092584-18	52,202	—
Informatics Tools for Quantitative Digital Pathology Profiling and Integrated Prognostic Modeling	93.393		7U01CA220401-03	12,417	—
Systematic Discovery of Neomorph Protein-Protein Interactions in Cancer for Oncogenic Pathway Perturbation	69		A234115//5U01CA217875-03	35,046	—
CXCR4 as a target for colon cancer chemoprevention	221		AWD100181 (SUB0000087)\1R01CA240710-01	73,413	—
Biomarkers to Improve Targeting of Breast Cancer Prevention in Women with Atypical Hyperplasia	128		NWU-263646/PO#7124040//1R01CA237607-01A1	11,529	—
Culturally Adapted Cognitive Behavioral Stress and Self-Management (CCBSM)	244		SPC-001083//5R01CA206456-05	97,652	—
Methyloic biomarkers for magnesium deficiency and colon neoplasia prevention	277		VUMC 57993//5R01CA202936-05	237,657	—
The WashU 4DN Network Data Coordination and Integration Center	283		WU-20-105//5U01CA200060-04	10,379	—
The WashU 4DN Network Data Coordination and Integration Center	283		WU-20-213//5U01CA200060-05	88,519	—
				12,626,664	1,042,884
Multi-site adaptive trial of a technology-based, EHR-integrated physical activity intervention in breast and endometrial cancer survivors					
	272	93.394	000000266//3R37CA225877-01A1S1	186,554	—
Transforming the diagnosis and care of patients with CTCL using TCR sequencing	26	93.394	114835//5R01CA203731	3,411	—
Image-guided Interventional Combination Liver Cancer Immunotherapy	93.394		1R01CA241532-01A1	29,812	—
Incorporating Biomarkers of Prognosis and Cardiovascular Disease Risk in the Fit2Thrive Physical Activity Promotion Intervention for Breast Cancer Survivors	93.394		1R21CA219028-01A1	153,662	—
A comparison of interventions to teach patients skin self-examination	93.394		5R01CA154908-09	383,280	256,247
MRI-Monitored Delivery of Sorafenib-Eluting Microspheres to Liver Tumors	93.394		5R01CA181658-05	170,503	—
Biophotonics to Couple Pancreatic with Upper GI Screening via Ultrathin Endoscopy	93.394		5R01CA183101-05	369,815	144,520
(PQD5) imaging systemic tissue injuries induced by anticancer drugs	93.394		5R01CA185214-04 REVISED	(10,799)	—
MRI-Guided Irreversible Electroporation Ablation for Liver Tumors	93.394		5R01CA196967-04	—	—
Risk-stratification of Prostate Cancers via Field Carcinogenesis Nanocytology	93.394		5R01CA200064-05	356,034	15,367
Systemic RNA interference to reactivate p53 tumor suppression	93.394		5R01CA208783-04	397,057	11,194
MRI-Guided Dendritic-Cell-Based Vaccine Immunotherapy for Pancreatic Cancer	93.394		5R01CA209886-05	280,768	—
Tumor immune and glycan biomarkers for progressive prostate cancer	93.394		5R01CA212409-03	549,407	157,193
Catheter-Directed Image-Guided Delivery of Cytostatic and Cytotoxic Combination Therapy to Liver Tumors	93.394		5R01CA218659-03	487,451	42,775
A Multilevel Physical Activity Intervention for South Asian Women and Girls	93.394		5R01CA242520-02	568,243	202,630
Identification of Long Non-coding RNAs as Novel Biomarkers for Heterogeneous Glioblastomas	93.394		5R21CA209345-02	—	—
Technology-Supported Physical Activity Intervention for Metastatic Breast Cancer Survivors:Fit2ThriveMB	93.394		5R21CA239130-02	171,486	—
Real-time volumetric specimen imager for 3D intra-operative lumpectomy margin assessment	46	93.394	5R44CA206801-03	60,185	—
Multi-site adaptive trial of a technology-based, EHR-integrated physical activity intervention in breast and endometrial cancer survivors					
	272	93.394	893K546//1R37CA225877-01A1	260,497	—
Advanced Development of an Open-Source Platform for Web-Based Integrative Digital Image Analysis in Cancer (Gutman)	69	93.394	A236915//5U24CA194362-05	82,844	—
COVID-19: Production of protein array for serum antibody screening	93.394		COVID-19: 3P30CA060553-2SS5	42,410	—
Development of 5hmC and 5mC biomarkers in cell-free circulating DNA for sensitive colon cancer detection and prognosis	221	93.394	FP064995//U01CA217078	105,913	—
Epigenomic markers of circulating cell-free DNA and treatment outcome in multiple myeloma	221	93.394	FP066297-02-PR-B//5R01CA223662-02	229,148	—
Impact of ecological park restoration on health in low income neighborhoods: A natural experiment	137	93.394	RC110102NWU//1R01CA239187-01	13,033	—



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Department of Health and Human Services (continued):					
Sirt2 Directs Kras IR Cell Resistance and Tumorigenesis	93.396		5R01CA182506-05	\$ 59,384	—
Triad1 regulates myelopoiesis and functions as a leukemia suppressor	93.396		5R01CA195642-05	339,197	—
Integrating Epigenomic and Nuclear Receptor Signaling in Castrate Resistant Prostate Cancer	93.396		5R01CA196270-05	300,529	—
Interplay between ER and TGF-b in carcinogenesis	93.396		5R01CA202948-05	268,423	—
Target MIC shedding to revive anti-tumor immunity	93.396		5R01CA204021-05	275,337	—
The role of GPSM3 in tumor-promoting emergency myelopoiesis	93.396		5R01CA208354-04	258,721	—
Identification and targeting of mechanisms specific to glioma stem cells in glioblastoma	93.396		5R01CA214928-03	360,276	12,434
Galpha13 and pancreatic cancer progression	93.396		5R01CA217907-03	319,829	—
WEE1 inhibition and tumor immunity	93.396		5R01CA222963-03	586,437	—
Role of Desmoglein 1 in Keratinocyte-Melanocyte Communication and Melanoma	93.396		5R01CA228196-02	366,644	14,474
Genetic mechanisms underlying sexual dimorphism in cancer and response to therapy	93.396		5R01CA229618-03	59,928	—
Targeting a Treg deubiquitinase in antitumor immune therapy	93.396		5R01CA232347-03	433,437	—
How Circulating Melanoma Cells Usurp the Leukocyte Transmigration Mechanism for Successful Metastasis	93.396		5R01CA236904-02	290,324	—
Identifying the pathways that drive progression of the MPNs to AML	93.396		5R01CA237039-02	396,974	—
Understanding Progesterone Receptor action in Obesity for Endometrial Cancer Prevention	93.396		5R01CA243249-02	342,635	116,812
Targeting hyaluronan synthesis and signaling with BET inhibitors in pancreatic cancer	93.396		5R21CA220625-02	81,903	—
DISE – a natural cancer surveillance mechanism – a new road to cancer therapy	93.396		5R35CA197450-06	1,045,897	—
Mitochondrial metabolism and ROS regulate cancer	93.396		5R35CA197532-05	583,169	—
Genomics and bioinformatics analysis to understand castration-resistant prostate cancer	93.396		5R50CA211271-05	140,117	—
Development of novel therapies for megakaryocytic malignancies	93.396		5R50CA211534-04	104,428	—
Bioinformatic Analysis of Next Generation Sequencing Data from Cancer Cells	93.396		5R50CA221848-04	170,295	—
Underlying Acetylation Promotes Cancer Stem Cell Phenotypes in Breast Cancer	93.396		7R01CA197943-06	187,361	—
MnSOD Acetylation Promotes Cancer Stem Cell Phenotypes in Breast Cancer	93.396		7R01CA216882-03	111,125	—
Targeting Musashi-2 (MSI2) regulation of VEGFR2/VEGF-A in lung cancer	93.396		7R01CA218802-03	137,353	—
Matching panels of in vivo and in vitro model system of pediatric brain tumors	13	93.396	901599-NU//1U01CA217813-01A1 REVISED	6,977	—
Quantitative analyses of tumor cell extravasation	125	93.396	S4485 PO373349//5-1U01CA202177-05	87,275	—
				<u>9,372,099</u>	<u>330,629</u>
The Robert H. Lurie Comprehensive Cancer Center					
Spatio-Temporal Organization of Chromatin and Information Transfer in Cancer	93.397		3P30CA060553-26S2	7,060,346	61,677
SPORE in Prostate Cancer	93.397		3U54CA193419-05S1	1,625,249	794,494
SPORE for Translational Approaches to Brain Cancer	93.397		5P50CA180995-05	1,665,742	695,212
Nucleic Acid-Based Nanoconstructs for the Treatment of Cancer	93.397		5P50CA221747-03	2,177,939	—
The Chicago Collaborative to Promote and Advance Cancer Health Equity	93.397		5U54CA199091-05	1,875,401	—
Epigenomic Biomarkers of HIV-Associated Cancers in Nigeria	93.397		5U54CA203000-05	1,144,592	—
ECOG/IFSTRF PSA for ECOG Clinical Trial Protocols	76	93.397	Agmt 8/13/12 / U01CA021115	1,008,056	421,993
				<u>1,007,817</u>	—
				<u>17,565,142</u>	<u>1,973,376</u>
Mechanistic Basis of Resistance to Chemohormonal Treatment in Prostate Cancer					
The Role of CHAF1B in Maintaining Malignant Leukemia Stem Cells	93.398		1F30CA250248-01	1,148	—
Collaborative Northwestern Surgical Oncology Research Training (CONSORT)	93.398		1K99CA230314-01A1	30,963	—
Profiling Glycosyltransferase Activities on the Epithelial-Mesenchymal Transition in Breast Epithelial Cells using peptide arrays and mass spectrometry	93.398		1T32CA247801-01	4,460	—
Therapeutic and Sustained Cytokine Delivery at the Tumor Site Using Engineered Mononuclear Cells	93.398		5F30CA196185-04	36,063	—
Clinical bacterial isolate engineered as an immunotherapy for prostate cancer	93.398		5F30CA203325-04	34,764	—
The role of glioblastoma derived activated leukocyte cell adhesion molecule in peripheral monocyte PD-L1 induction and immunosuppression (NRSA Predoc Fellowship Award for Jonathan B. Lamano, MS.)	93.398		5F30CA206413-04	41,019	—
The role of tumor derived exosomes in bone metastasis of prostate cancer	93.398		5F30CA225133-03 REVISED	53,074	—
NIH NRSA Predoc Fellowship for Maureen McNulty: The Effect Of Cohesin Mutations In Hematologic Malignancies	93.398		5F31CA216976-03	18,295	—
The function of Ubiquitin-Specific Peptidase 22 (USP22) on T regulatory cell function. NRSA for Elena Montauti	93.398		5F31CA220801-03	39,941	—
The design, synthesis, and characterization of potent and selective MEK7 inhibitors as targeted therapies for T-cell acute lymphoblastic leukemia	93.398		5F31CA228431-02 REVISED	39,272	—
NRSA F31 for Namratha G Sastry in Support of: Novel Roles of LY6K in Glioblastoma Tumorigenicity	93.398		5F31CA232630-02	32,374	—
Bioresponsive MR probes for imaging pancreatic cancer	93.398		5F31CA235997-02	28,653	—
Irreversible Inhibition of Cerebellar Gli Transcription Factors by Cobalt (III) Complexes	93.398		5F31CA236175-02	28,014	—
Development of Gd(III)-P(II) MR Probes for Tandem Detection & Chemotherapy	93.398		5F31CA239426-02	27,966	—
Tissue Factor/Protease-Activated Receptor 2 in IDH1 wild-type and IDH1 mutant gliomas	93.398		5F32CA216996-03	67,418	—
Targeted discovery of anti-proliferative natural products using genomics and metabolomics	93.398		5F32CA221327-03	50,405	—
Treating cognitive impairments in cancer patients via systematic light exposure	93.398		5K07CA184145-05	38,670	—
Designing with Dissemination in Mind: Optimization of a mHealth Physical Activity Intervention for Breast Cancer Survivors	93.398		5K07CA196840-05	178,566	—
Development of a Novel Statewide Learning Collaborative to Increase Lung Cancer Guideline Adherence and Improve Cancer Care Delivery	93.398		5K07CA216330-04	157,595	—
The Role of ZEB1 Mutations in Cutaneous T Cell Lymphoma	93.398		5K08CA191019-06	109,726	—
A molecular informed therapy for Diffuse Intrinsic Pontine Gliomas (DIPG)	93.398		5K99CA234434-02	84,500	—

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Department of Health and Human Services (continued):					
Carcinogenesis Training Program		93.398	5T32CA009560-34	\$ 365,748	—
Training Program in Signal Transduction and Cancer		93.398	5T32CA070085-24	251,461	—
Training Program in Oncogenesis and Developmental Biology		93.398	5T32CA080621-15	8,743	—
Cancer Nanotechnology Training Program		93.398	5T32CA186897-05	277,878	—
Behavioral and Psychosocial Research Training in Cancer Prevention and Control		93.398	5T32CA193193-05	313,583	—
				2,370,055	—
Northwestern Cancer Prevention Consortium					
NCI Community Oncology Research Program (NCORP) Research Bases (UG1)	66	93.399	UG1CA189828-06-NWU1 // 2UG1CA189828-06 REVISED	202,660	—
ECOG-ACRIN NCORP Research Base: Cancer Care Delivery Research (CCDR)	66	93.399	UG1CA189828-06-NWU2//2UG1CA189828-06 REVISED	61,751	—
				690,249	—
E2F1 in BM progenitor cell differentiation and cardiovascular repair					
Comprehensive Home-based Self-Management Support for COPD Patients	209	93.837	000514985-001//7R01HL131110-03	7,668	—
AAA Geometric Surrogates – Geometric Surrogates for Clinical Management of Abdominal Aortic Aneurysms	95	93.837	0255-C061-4609 // 5R34HL143747-02	45,213	—
Transition from Risk Factors to Heart Failure: Prevalence, Pathogenesis, and Phenomics	265	93.837	1000001715/5R01HL121293-04	10,580	—
Risk Factors for Ischemic Stroke	282	93.837	100720-114489//R01HL127028	144,135	—
PRE-DETERMINE: Biologic Markers and MRI SCD Cohort Study	26	93.837	113896//5R01HL08851-09	13,219	—
Machine Learning for the Automated Identification and Tracking of Rare Myocardial Diseases	26	93.837	116706//R01HL091069	88,484	—
A first-in-class therapeutic to block ischemia/reperfusion injury following acute myocardial infarction	26	93.837	120816//7R01HL140731-02	164,708	—
Cardiac Exosomes in myocardial Ischemic injury	47	93.837	1225-SUB//1U54HL119810-07	68,362	—
Impact of Disparities Affecting Survival among Advanced Heart Failure Patients and Transplant Recipients	26	93.837	123168//1R01HL150401-01	11,687	—
The role of p21-activated Kinase (Pak1) in Atrial Fibrillation.	47	93.837	1353-SUB//R01HL141892-03	23,856	—
Joint Effect of Malpractice Risk and Financial Incentives on Cardiac Testing	172	93.837	14091801//5R01HL128330-04	110,789	—
High-Definition Conformal Electronics for VT/VF	81	93.837	14-M49//5R01HL113550-6	124,606	—
Development of combination immunotherapies for atherosclerotic inflammation	81	93.837	19-S13//R01HL141470-02	163,433	—
Alternative Mechanisms of Monocyte Transendothelial Migration in Inflammation		93.837	1DP2HL132390-01	197,562	—
*Youth Exposure to Violence and Pulmonary and Cardiovascular Health: Meta- and Primary-Analytic Approaches to Understanding Mediators and Moderators.*		93.837	1F31HL147413-01	33,064	—
NRSA Predoc Fellowship for Emily Pinheiro: A Patient-Specific hiPSC Model of Nilotinib-Induced Peripheral Artery Disease					
Pharmacogenomics		93.837	1F31HL147509-01A1 REVISED	21,752	—
Social Determinants of Health and Novel Prediction of Cardiovascular Health from Young Adulthood to Middle Age in the CARDIA Study					
Study		93.837	1F31HL151160-01	13,685	—
Micropatterned surfaces for modeling muscular dystrophy-associated cardiomyopathy		93.837	1F31HL151178-01	31,136	—
Quantifying Compliance to the New 2017 Hypertension Treatment Guidelines and Investigating the Association Between Guideline Compliance and Patients' Trajectory of Blood Pressure		93.837	1F32HL154712-01	5,150	—
Predicting risk of cardiotoxicity among young and emerging adult breast cancer patients from treatment to survivorship		93.837	1K01HL145345-01A1	45,843	—
Mentored patient-oriented research of novel mechanisms for cardiovascular disease in patients with chronic kidney disease		93.837	1K01HL152009-01	39,642	—
Mechanistic insights into the role of mitochondrial iron in doxorubicin-induced cardiomyopathy using human induced pluripotent stem cells		93.837	1K24HL150235-01	57,651	—
Epigenetic Determinants of Lipoproteins Across the Early Adult Life Course					
Cardiovascular Health Associations with Minority stress: Biobehavioral Evaluations and self-Reported Sociopsychological outcomes by SOGI status (CHAMBERS)		93.837	1R01HL140927-01A1	25,816	—
Real-time Wideband Cardiac MRI for Patients with a Cardiac Implantable Electronic Device		93.837	1R01HL146844-01A1	118,112	—
Myocardial Vulnerability to Ischemia-Induced Dysfunction and Heart Failure: The Impact of HIV/SIV, ART, and Targeted Immunotherapy		93.837	1R01HL149866-01A1	2,065	—
Automatic quantification of myocardial motion in older adults		93.837	1R01HL151079-01	105,750	—
4D Virtual Catheter (vCath) Assessment of Hemodynamic Pathways in Aortopathy Pathogenesis		93.837	1R01HL154862-01	792	—
Optimizing the Implementation of a Population Panel Management Intervention in Safety-Net Clinics for Childhood Hypertension		93.837	1R03HL144891-01	70,063	—
A double-blind randomized controlled trial to assess the efficacy and safety of a quadruple ultra-low-dose treatment for hypertension (QUARTET USA)		93.837	1R21HL150498-01	56,274	—
1/2 + PROMote weight loss in obese PAD patients to preVEnt mobility loss: the PROVE Trial		93.837	1R56HL148192-01	193,310	—
Determinants of Midlife & Longitudinal Change in Cognitive Function: CARDIA Study	116	93.837	1R61HL139852-01	387,544	185,026
Spirolactone Initiation Registry Randomized Interventional Trial in Heart Failure with Preserved Ejection Fraction SPIRRIT-HFpEF	62	93.837	1UG3HL141729-01A1	507,960	85,516
Molecular markers of early cardiometabolic health transitions in the CARDIA study	124	93.837	200103-05//5R01HL122658-03	1,413	—
Efferocytosis-Directed Inflammation Resolution and Repair in the Hypoxic Heart		93.837	2037894//5U01HL134679-02	4,836	—
Research Training in CVD Epidemiology and Prevention		93.837	230189//5R01HL136685-04	7,486	—
Patient Level Prediction of Clinical Outcomes and Cost-Effectiveness in SPRINT (Optimize-SPRINT)		93.837	2R01HL122309-06A1	143,703	—
A double-blind randomized controlled trial to assess the efficacy and safety of a quadruple ultra-low-dose treatment for hypertension (QUARTET USA)	49	93.837	2T32HL069771-17 REVISED	244,803	—
Pregnancy as a Window for Future Cardiovascular Health		93.837	4(GG011659-03)/5R01HL139837-03	15,044	—
Cook County Clinical Research Site (CC_CRS) of the MACS/WIHS Combined Cohort Study (MW_CCS)	91	93.837	4R33HL139852-02	544,431	—
Metabolic pathways to cardiovascular disease: A multi-omics approach	251	93.837	4U10HL119992-04 (432)	40,559	—
Efficacy of Potassium Nitrate In Heart Failure with Preserved Ejection Fraction	255	93.837	50811-324-NWU//1U01HL146245-02	10,022	—
Early Psychosocial Intervention and Child and Parent Cardiovascular Disease Risk	161	93.837	5113277//1R01HL143885-01A1	40,520	—
4D Flow MRI-based assessment of atrial fibrillation (NIH NRSA Predoc Fellowship for Liliana Ma, AB.)		93.837	574598//5R01HL121510-04	54,520	—
			5875-NU-DHHS-7809//1R01HL137809-01A1	21,203	—
			5F30HL137279-04	32,965	—

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Department of Health and Human Services (continued):					
4D Flow MRI for characterization of brain arteriovenous malformations	93.837		5F30HL140910-03	\$ 41,893	—
Defining regulatory regions for cardiomyopathy genes	93.837		5F30HL142187-03	49,978	—
Evaluation of Aortic Hemodynamics and Compliance in Aortic Stenosis	93.837		5F30HL145995-02	35,165	—
The Role of CD99L2 in Leukocyte Transendothelial Migration in vitro and in vivo	93.837		5F31HL131355-03	35,854	—
Regulation of Cardiac Metabolism and Heart Failure by Tristetraprolin (NIH NRSA Predoc Fellowship for Adam de Jesus, BA.)	93.837		5F31HL132552-05	13,099	—
Adolescent Family Stress and Early Cardiovascular Risk: Psychosocial and Behavioral Pathways	93.837		5F32HL134276-03 REVISED	(5,104)	—
Modulating senescence in induced pluripotent stem cell-derived endothelial cells for vascular disease modeling and therapy	93.837		5F32HL137292-02 REVISED	(462)	—
Social Network Characteristics and Cardiovascular Health in South Asian Americans	93.837		5F32HL149187-02	67,454	—
Quantitative MRI for the assessment of subclinical CAD in T2DM	93.837		5K01HL121162-05	103,765	—
A Systems Science Approach to Understanding Racial/Ethnic Disparities in Obesity	93.837		5K01HL133531-04	106,382	—
The Role of Gut Microbiota in Neointimal Hyperplasia After Vascular Injury	93.837		5K08HL130601-05	136,944	—
Modulation of Macrophage Function through Alternative Splicing in Cardiometabolic Diseases	93.837		5K08HL135348-04	180,942	—
Cardiomyocyte TGF-beta: a novel therapeutic target for preventing cardiac fibrosis in humans	93.837		5K08HL141659-02 REVISED	—	—
Associations Among Apolipoprotein A1 Structural Variants and High-Density Lipoprotein Function	93.837		5K23HL133601-04	139,477	—
Implementation science to improve cardiovascular outcomes among liver transplant recipients	93.837		5K23HL136891-04	167,105	—
A Systems Approach to Align ICU Care with Patient Treatment Goals	93.837		5K23HL146890-02	191,653	—
Myofilament proteins in cardiomyopathy and arrhythmias	93.837		5K99HL141698-02	79,830	—
Respiratory and Metabolic Adaptation to Hypoxia	93.837		5R01HL035440-30	120,786	65,416
The Roles of Endothelial PECAM and the LBRC in Leukocyte Transmigration	93.837		5R01HL046849-28	202,286	—
PAI-1 and Vascular Senescence	93.837		5R01HL051387-24	647,603	87,718
Sarcoglycan in Myopathy and Muscle Membrane Stability	93.837		5R01HL061322-19	(2,669)	—
Sarcoglycan in Myopathy and Muscle Membrane Stability	93.837		5R01HL061322-21	389,235	—
Beyond PECAM: Mechanisms of Transendothelial Migration	93.837		5R01HL064774-18 REVISED	495,675	—
Prox1 in Mammalian Lymphangiogenesis	93.837		5R01HL073402-19	400,296	—
CEREBRAL AUTOREGULATION MONITORING TO REDUCE BRAIN INJURY FROM CARDIAC SURGERY	93.837		5R01HL092259-10	115,970	13,507
Determinants, Trajectories, and Consequences of Abnormal Cardiac Mechanics	93.837		5R01HL107577-08	541,258	56,315
Redox Regulation of Vascular cGMP Signaling in Neonatal Lungs	93.837		5R01HL109478-08	(8,489)	—
Redox Regulation of Vascular cGMP Signaling in Neonatal Lungs	93.837		5R01HL109478-08	73,711	73,711
Functional Cardiovascular 4D MRI in Congenital Heart Disease	93.837		5R01HL115828-08	683,788	206,443
MRI of Diffuse Left Ventricular Fibrosis in Atrial Fibrillation	93.837		5R01HL118995-05 REVISED	187,099	—
Comprehensive Cardiac Structure-Function Analysis in Heart Transplantation	93.837		5R01HL117888-05 REVISED	185,422	—
Atrial arrhythmias and Ca2+ waves in HF: simulation and experimental studies	93.837		5R01HL119095-05	190,995	29,618
Decrypting Variants of Uncertain Significance in Long-QT Syndrome	93.837		5R01HL122010-07	1,263,896	651,357
Mechanisms of sulfonyleurea receptor mediated cardiomyopathy	93.837		5R01HL122109-04 REVISED	10,497	—
Efferocytosis Directed Inflammation Resolution and Repair in the Hypoxic Heart	93.837		5R01HL122309-05 Revised	61,802	—
Childhood Origins of CHD Disparities: Neural & Immune Pathways	93.837		5R01HL122328-04 REVISED	54,771	—
Low Intensity Exercise intervention for peripheral artery disease: The LITE Trial	93.837		5R01HL122846-04 REVISED	118,115	20,189
Exploiting Tie2 Activation for the Treatment of Vascular Diseases	93.837		5R01HL124120-04	(34,398)	—
Pathophysiological Significance of Atrial Fibrillation Electrogram Patterns	93.837		5R01HL125881-05	330,113	25,576
TELEMSARTAN plus EXERCISE to improve functioning in PAD: The TELEX Trial	93.837		5R01HL126117-05	438,017	157,734
Fox Transcription factors in lymphatic vessel development	93.837		5R01HL126920-04	154,665	—
Statistical methods to correct for measurement error in self-reported dietary data from lifestyle intervention trials	93.837		5R01HL127491-03	29,645	6,249
Role of SNRK in cardiac metabolism and development of heart failure	93.837		5R01HL127646-04	256,896	—
Cardiomyopathy Genomes Project	93.837		5R01HL128075-04	(19,909)	—
Cardiomyopathy Genomes Project	93.837		5R01HL128075-06	485,546	80,292
Vimentin-mediated regulation of the inflammasome in acute lung injury	93.837		5R01HL128194-04	320,682	—
Mechanical circulatory support: Measures of adjustment and quality of life	93.837		5R01HL130502-05	728,838	279,164
Statistical methods for estimating relative intensity physical activity and its association with cardiometabolic disease	93.837		5R01HL131606-02 REVISED	22,549	5,524
Improve PAD Performance with METformin. The PERMET Trial	93.837		5R01HL131771-04 REVISED	527,638	123,933
Community Translation of the South Asian Healthy Lifestyle Intervention (SAHELI)	93.837		5R01HL132978-04	667,491	229,477
Role of Valve-Mediated Hemodynamics on Bicuspid Aortopathy	93.837		5R01HL133504-02 REVISED	—	—
Metabolic Pathways Underlying the Contrasting Sodium-BP and DASH/Omni-Heart-BP Relationships	93.837		5R01HL135486-04	577,145	342,985
An Interpersonal Relationships Intervention for Improving Cardiovascular Health in Youth	93.837		5R01HL136676-03	595,806	191,640
Methods to Improve Personalized Cardiovascular Disease Prevention Across the Life Course	93.837		5R01HL136942-04	328,342	77,028
Rapid Real-Time Cardiovascular MRI for Detecting Coronary Artery Disease	93.837		5R01HL138578-03	335,805	2,823
Mechanistic insights into the deleterious effects of SIRT2 in the heart under stress conditions	93.837		5R01HL138982-03 REVISED	635,634	—
TAM-Kinases in Transplant	93.837		5R01HL139812-03 REVISED	480,952	131,483
Oxidative stress contributes to atrial fibrillation by causing remodeling of the autonomic nervous system	93.837		5R01HL140061-03	290,425	—
Regulating fibrosis and growth through latent TGFbeta binding proteins	93.837		5R01HL140938-03	569,346	—
Mechanistic insights into HIV-mediated heart failure with preserved ejection fraction	93.837		5R01HL140973-03	671,941	—
Low-Profile 3D-Printed Radiopaque Bioresorbable Vascular Scaffolds	93.837		5R01HL141933-02	604,706	—
Spontaneous cardiac fibrosis in PAI-1-deficient mice and men: A rare mutation informs a common molecular pathophysiology	93.837		5R01HL142761-02	299,235	38,962

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Department of Health and Human Services (continued):					
Molecular mechanisms of Foxo-mediated angiogenesis	93.837		5R01HL144129-03	\$ 515,754	—
Pathogenesis of lung injury mediated by lung-restricted antibodies	93.837		5R01HL147290-02	612,532	44,131
Role of Spleen educated monocytes in mediating ischemia-reperfusion injury following lung transplant	93.837		5R01HL147575-02	734,230	—
Understanding the contributions of the neighborhood social environment to cardiovascular disease risk factors in a multi-ethnic cohort of Chicago women	93.837		5R03HL145223-02	128,036	—
Microbe-Related Modulation of Neointimal Hyperplasia after Arterial Injury	93.837		5R03HL146880-02	57,067	—
Pseudomonas Genomic Signatures Associated With Persistence in Cystic Fibrosis	93.837		5R21HL129930-02	(334)	—
High Resolution and Functional MRI Assessment of Intracranial Atherosclerotic Plaque	93.837		5R21HL130969-02	51,803	—
Comparing and Combining Bortezomib and Mycophenolate in SSc Pulmonary Fibrosis	93.837		5R34HL122558-03 REVISED	62,047	—
Vascular Surgery Scientist Training Program	93.837		5T32HL094293-08	(8,541)	—
Vascular Surgery Scientist Training Program	93.837		5T32HL094293-12	311,805	—
Northwestern University Molecular and Translational Cardiovascular Training Program	93.837		5T32HL134633-04	379,451	—
Channelopathies and Cardiomyopathies Among Sudden Deaths in the Young	93.837		5U01HL131914-03 REVISED	515,689	—
Northwestern CORE Clinical Research Site: Trans-omics for HIV/AIDS Research	93.837		5U01HL146240-02	3,027,238	307,569
Low Flow Nocturnal Oxygen Therapy on Hospital Admissions and Mortality in Patients with Heart Failure and Central Sleep Apnea (LOFT-HF)	155	93.837	60059059//1UG3HL140144-02	21,364	—
Precision medicine for dilated cardiomyopathy – novel assessment of cardiac mechanics via speckle tracking echocardiography to identify early phenotypes	155	93.837	60072275/R01HL149423	154,746	—
Precision Medicine for Dilated Cardiomyopathy in European and African Ancestry	155	93.837	60077268//5R01HL128857-05	35,885	—
The WHI Strong and Healthy SilenT Atrial fibrillation Recording study (WHISH STAR)	190	93.837	61526610-125216//R01HL136390//5R01 HL 136390-04	15,451	—
Pregnancy as a Window to Future Cardiovascular Health: Adverse Pregnancy Outcomes – Heart Health Study	169	93.837	7-312-0214047-52577L//U10HL119991	6,047	—
Continuation of the nuMOM2b Heart Health Study	169	93.837	7-312-0217457//U10HL145358-01A1	29,913	—
Vascular Growth and Regeneration		93.837	7R35HL140014-03	689,581	—
Mediators of Atherosclerosis in South Asians in America	219	93.837	8696sc/R01HL093009	8,192	—
Pregnancy as a Window to Future Cardiovascular Health: Adverse Pregnancy Outcomes	169	93.837	888-15-16-12//12-312-0214047-52917L	49,887	—
Response of the Gut Microbiome and Circulating Metabolome to Diet Intervention in Young Children: Ancillary Study to the Keeping Ideal Cardiovascular Health Family Intervention Trial (KIDFIT)	13	93.837	901552-NU//1K23HL145101-01	9,646	—
Understanding Inflammatory and Metabolic Pathways of Myocardial and Vascular Dysfunction in South African Youth Living with Perinatal HIV	13	93.837	901603-NU//1R01HL151287-01A1	8,014	—
A synthetic heparin derivative that targets collagen to repair damaged vasculature after balloon angioplasty	47	93.837	965-SUB // 3U54HL119810-05S1	(1,380)	—
MMP Responsive Nanoparticles for Treating Acute Myocardial Infarction	218	93.837	97966869 // 5R01HL139001	160,084	—
A New Biological Therapy for Atrial Fibrillation	47	93.837	982-SUB//3U54HL119810-05S1	112,006	—
Pediatric Replacement of the Pulmonary Valve – TOF Trial	43	93.837	ACT.#3201200621; PO#963055-RSUB//1R34HL1	34,703	—
Role of S-nitrosylation in Transdifferentiation	134	93.837	AGMT00003306AM1/R01HL133254-03	35,428	—
BEST-CL1: Trial to Compare Best Endovascular versus Best Surgical Therapy in Patients with Critical Limb Ischemia (BEST)	145	93.837	Agr. 8/7/14 // U01HL107407	23,195	—
COVID-19: Administrative Supplement to Real-time Wideband Cardiac MRI for Patients with a Cardiac Implantable Electronic Device		93.837	COVID-19- 3R01HL151079-01S1	11,205	—
Nonenhanced 3T QISS MR Angiography of the Peripheral Arteries	151	93.837	EH15-107-S2//5R01HL130093-04	—	—
Nonenhanced 3T QISS MR Angiography of the Peripheral Arteries	151	93.837	EH15-107S5//5R01HL130093-05	27,317	—
Pre-Procedural Evaluation of High-Risk Patients using Next-Generation Radial QISS	151	93.837	EH17-147-S1//5R01HL137920-02	4,297	—
Pre-Procedural Evaluation of High-Risk Patients using Next-Generation Radial QISS	151	93.837	EH17-147-S2//5R01HL137920-03	9,541	—
The Fragile Families Cardiovascular Health Follow Up Study	162	93.837	eSUB0000420//1R01HL149869-01A1 REVISED	2,085	—
Role of Valve-Mediated Hemodynamics on Bicuspid Aortopathy	225	93.837	FY20.954.006_AMD2//5R01HL133504-05	214,290	—
Renin cell identity and blood pressure homeostasis	270	93.837	GB10827.PO#2257593//1R01HL148044-01A1	6,588	—
TRANSFORM-HF (ToRsemide compArison with furoSemide FOR Management of Heart Failure) Study	288	93.837	GR104831(CON-80001527)//7U01HL125511-02	6,340	—
REPRIEVE A5332 and A5333s	124	93.837	Mod. 6/PS#225707//U01HL123336-06	27,995	—
Non-Invasive Biosensors To Detect Cardiovascular Changes In Heart Failure	83	93.837	RG884-G2//R01HL130619	164,980	—
HCMR – Novel Predictors of Outcome in Hypertrophic Cardiomyopathy	133	93.837	SP0057005//5U01HL117006-05	6,234	—
HCMR – Novel Predictors of Outcome in Hypertrophic Cardiomyopathy	96	93.837	Study# 2222/0003//1U01HL117006-01A1	2,867	—
INVESTED – : Influenza Vaccine to Effectively Stop Cardio Thoracic Events and Decompensated heart failure (INVESTED)	26	93.837	SUB 5.22.17//5U01HL130163-02	4,433	—
Pravastatin Clinical Center Participation Terms and Conditions – Clinical Center (#28	81	93.837	U24HL140168	414	—
Atrial fibrillation burden, vascular disease of the brain, and cardiac MRI in MESA	271	93.837	UWSC8533//1R01HL127659-01	882	—
Individual response to vitamin D treatment	271	93.837	UWSC9381//5R01HL096875-08	14,271	—
Tissue sodium, inflammation, and blood pressure in MESA	277	93.837	VUMC 59440//5R01HL133860-04	27,438	—
Dietary sodium, inflammation, and salt sensitivity of blood pressure	277	93.837	VUMC76348//5R01HL148661-02	42,905	—
Exercise in Genetic Cardiovascular Conditions	288	93.837	Yale 2.23.2017//R01HL125918	1,667	—
				<b>28,724,884</b>	<b>3,519,386</b>



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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Department of Health and Human Services (continued):					
Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) (Insight)	52	93.838	001-Amend2//5U01HL128954-04	\$ 9,471	—
Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) (RETHINC)	52	93.838	003//5U01HL128954-05	8,043	—
Resolution of Diffuse Inflammatory Lung Injury in Neonatal Mice	114	93.838	004008239//5R01HL114800-06	52,699	—
Self-management Behaviors Among COPD Patients with Multi-morbidity	95	93.838	0255-8785-4609//5R01HL126508-05	181,914	—
The clinical impact of longitudinal measures of cardiac and pulmonary vascular morphology in smokers	26	93.838	119856//5R01HL116473-08	20,419	—
The transcription factor Miz1-mediated mechanisms of lung aging	232	93.838	17843//7R01HL141459-03	7,247	—
The role of airway epithelial CRAC channels in allergic lung inflammation	93.838	93.838	1F31HL151170-01	10,550	—
Determinants of age-related regulatory T cell function during influenza A virus-induced lung injury.	93.838	93.838	1F32HL151127-01	32,004	—
Single-Cell Transcriptomic Analysis to Identify Drivers of Pulmonary Fibrosis	93.838	93.838	1K08HL146943-01A1	73,907	—
Mechanisms of regulatory T cell-mediated recovery from severe influenza A virus infection	93.838	93.838	1R01HL149883-01	87,066	—
Differential role of tissue-resident and monocyte-derived alveolar macrophages in the development of pulmonary fibrosis	93.838	93.838	1R56HL135124-01	262,401	—
An Anesthesia-Centered Bundle to Reduce Postoperative Pulmonary Complications: The PRIME-AIR Study	124	93.838	234261//1UG3HL140177-01A1	10,866	—
Transitions from Impaired Respiratory Health to Lung Disease	93.838	93.838	2R01HL122477-06A1	186,988	36,760
Combined Cardiopulmonary Failure in COPD: SPIROMICS HF	49	93.838	3(GG015835-01)//2R01HL093081-09	236,542	—
The American Lung Association (ALA) Lung Health Cohort	93.838	93.838	3U01HL146408-02	1,510,845	1,179,889
Pulmonary microvascular perfusion in the Multi-Ethnic Study of Atherosclerosis	49	93.838	5(GG010919-05)//5R01HL077612-12	3,669	—
Approaches to Genetic Heterogeneity of Obstructive Sleep Apnea	255	93.838	570229//5R01HL13401504	9,452	—
LUBAC Mediated Epithelial Signaling During Influenza A Infection	93.838	93.838	5F31HL132454-03	(524)	—
A Systems Biology Approach to Mapping Aging in the lung	93.838	93.838	5F32HL136111-02	(1,348)	—
Mechanisms of Hydrocortisone Regulation of the Perinatal Pulmonary Vasculature	93.838	93.838	5K08HL124295-03	(2,097)	—
Mechanisms of Hydrocortisone Regulation of the Perinatal Pulmonary Vasculature	93.838	93.838	5K08HL124295-03	56,698	56,698
High carbon dioxide impairs lung repair	93.838	93.838	5K08HL125940-05	65,396	—
Regulatory T cell Uhrf1 and DNA methylation in repair of acute lung injury	93.838	93.838	5K08HL128867-05	126,532	—
Mitochondrial metabolic regulation of lung epithelium: alveolar generation and regeneration	93.838	93.838	5K08HL143138-02	143,892	—
Pathophysiology of Acute Lung Injury	93.838	93.838	5P01HL071643-15	1,397,441	—
The deleterious effects of hypercapnia on the lungs	93.838	93.838	5R01HL085534-12 REVISED	(24,129)	—
Lung Function Decline and Disease Risk from Young Adulthood to Middle Age	93.838	93.838	5R01HL122477-05 REVISED	195,180	159,571
CNS Pathways: Integrating Respiratory and Metabolic Control	93.838	93.838	5R01HL122921-04	—	—
Hypercapnia and Suppression of Anti-viral Host Defense	93.838	93.838	5R01HL131745-03	425,834	—
Macrophage Modulation of Lung Fibrosis	93.838	93.838	5R01HL134375-04	628,527	—
Wnt-beta-catenin cross interactions in alveolar macrophages and epithelial cells in persistence of SSc-ILD	93.838	93.838	5R01HL134800-03 REVISED	378,256	—
The Role of Placental Maternal Vascular Underperfusion in Neonatal Pulmonary Hypertension	93.838	93.838	5R01HL139798-02 REVISED	(6,773)	—
The Role of Placental Maternal Vascular Underperfusion in Neonatal Pulmonary Hypertension	93.838	93.838	5R01HL139798-02 REVISED	59,574	59,574
The transcription factor Miz1-mediated mechanisms of lung aging	93.838	93.838	5R01HL141459-02	(3,745)	—
Donor nonclassical monocytes initiate lung injury following transplantation	93.838	93.838	5R01HL145478-02	477,052	—
Role of hypercapnia on the lung airways	93.838	93.838	5R01HL147070-02	475,842	—
Regulation of airway epithelial cell-mediated inflammation by CRAC channels	93.838	93.838	5R01HL149385-02	488,527	—
Role and Regulation of Sodium, Potassium ATPase in Lung	93.838	93.838	5R37HL048129-23	(559)	—
Glucocorticosteroid Action In Inflammatory Disease	93.838	93.838	5R37HL068546-35	(1,692)	—
Training Program In Lung Sciences	93.838	93.838	5T32HL076139-14	(8,670)	—
Training Program In Lung Sciences	93.838	93.838	5T32HL076139-17	443,743	—
Losartan Effects on Emphysema Progression Trial (LEEP)	11	93.838	5U01HL128954-03	29,232	18,975
PVDMICS: Pulmonary Vascular Disease Phenomics Program (U01HL125177)	47	93.838	851-SUB//5U01HL125177-04	—	—
PETAL Network: VIOLET-Vitamin D to Improve Outcomes by Leveraging Early Treatment	47	93.838	869-SUB//5U01HL123009	13,599	—
Integrated analysis of autonomic biomarkers in prematurity-related ventilatory control: determination of neurorespiratory maturation and predictors of co-morbidity risk	13	93.838	901513-NU//5U01HL133704-02	—	—
miR-17-92 Haploinsufficiency Influences Alveolar and Vascular Endothelial Development	13	93.838	901527-NU//1K08HL140152-02	(3,668)	—
PETAL Network: CLOVERS- Crystalloid Liberal or Vasopressors Early Resuscitation in Sepsis	47	93.838	972-SUB//5U01HL123009	7,411	—
The Role of Placental Maternal Vascular Underperfusion in Neonatal Pulmonary Hypertension	13	93.838	A18-0219-S001 – NU//7R01HL139798-04	54,650	—
Pulmonary Complications in a Birth Cohort after a Randomized Trial of Exposure to Antenatal Corticosteroids: the ALPS Follow-Up Study	81	93.838	Agmt 6/7/17//R01HL098354	31,445	4,997
Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) – CleanUp	256	93.838	CNVA00046691 (133106-11)//5U01HL128954-05	49,334	—
A novel data science and network analysis approach to quantifying facilitators and barriers of low tidal volume ventilation in an international consortium of medical centers	151	93.838	EH17-325-S7//1R01HL140362-01A1	95,925	—
Chicago Metropolitan Asthma Consortium for severe/exacerbation-prone asthma	221	93.838	FP066077-A//5UG1HL139125-02	128,183	—
Third Coast HIV-related Cardiovascular and Sleep Disorders K12 Career Development Program (TC-CSK12)	221	93.838	FP068767-01//5K12HL143959-02	163,331	—
Azithromycin and the Airway Microbiome in Asthma	221	93.838	P064388-02 // 5R34HL136991-02	99,745	—
Pulmonary Complications in a Birth Cohort after a Randomized Trial of Exposure to Antenatal Corticosteroids: the ALPS Follow-Up Study	81	93.838	S-ALP1920-CF28//5R01HL098354-06	18,947	—
				<b>8,705,174</b>	<b>1,516,464</b>

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Department of Health and Human Services (continued):					
The roles of mDia2 in hematopoietic stem and progenitor cell engraftment and migration		93.839	1R01HL148012-01A1	\$ 129,601	—
Defining the Role of IQGAP1 in Leukocyte Transmigration in vitro and in vivo		93.839	5F30HL134202-05	43,299	—
Membrane-Cytoskeletal Remodeling in Platelet Biogenesis		93.839	5K08HL114871-05 REVISED	21,290	—
Tailored Adaptation of the AHRQ VTE QI Guide to Local Hospital Context.		93.839	5K08HL145139-02	189,279	—
Aberrant megakaryopoiesis in the myeloproliferative neoplasms.		93.839	5R01HL112792-08	638,547	75,000
Generating Human Cord-Blood-Derived Functional Megakaryocytes and Platelets	232	93.839	7800 Amd 2 // R01HL130760-03 / R01HL130760	4,694	—
The role of Pleckstrin-2 as a functional node in myeloid proliferation		93.839	9R01HL150729-06A1	50,494	—
Vascular-Targeting Genomic and Genetic Strategies for Acute Chest Syndrome	102	93.839	PO0110427 // IN4687826NW // 5R01HL111656-07	13,985	—
EHR Anticoagulants Pharmacovigilance	241	93.839	S51110000040313/7R01HL125089	28,089	—
1/2 CATHETER-DIRECTED THERAPY FOR CHRONIC DVT(C-TRACT TRIAL)	283	93.839	WU-18-261/UG3HL138325	6,773	—
				1,126,051	75,000
Transforming Hypertension Management in Nigeria					
		93.840	5R01HL144708-02	504,573	220,449
Association of genetic and autoantibody signatures with SLE clinical course	209	93.846	000504653-SC002//5R01AR064820-03	(23)	—
Characterization of the lupus nephritis microRNAome	209	93.846	000518393-002//1R01AR073850-01	44,559	—
Causes and Roles of Hypercitrullination in Preclinical Rheumatoid Arthritis	26	93.846	117944//5R01AR070171-02	—	—
Osteoarthritis Progression And Sensory Pathway Alterations	172	93.846	12052504-Sub05//5R01AR064251-07	423,407	—
*RISK* The nervous joint: New concepts in the development of osteoarthritis.	172	93.846	16100402-Sub01//1R61AR073576-01	69,964	—
Impaired osteoblast and osteocyte maturation in the pathogenesis of renal osteodystrophy	216	93.846	1652GWA093//5R21AR073977-02	41,133	—
Muscle-Tendon Structure and Function Following Chronic Limb-Shortening Imposed by Proximal Row Carpectomy		93.846	1F31AR076920-01	11,465	—
Assessing contributions of muscular imbalance to shoulder osteoarthritis		93.846	1F31AR077426-01	11,210	—
Northwestern University Skin Disease Research Center Resource-based Center		93.846	1P30AR075049-01	668,969	—
Algorithms to Identify Systemic Lupus from Electronic Health Record Data		93.846	1R21AR072263-02	20,963	—
Metaorganismal TMAO pathway driving scleroderma pathogenesis: novel gene-environment interaction paradigm and therapeutic target		93.846	1R61AR076821-01 REVISED	110,730	—
An In Silico, Medical Record-based Model for Understanding the Initiation of Autoimmune Events (IMMUNE)		93.846	1R61AR076824-01	270,562	—
AAID-PEPR: Asthma and Atopic Dermatitis Validation of PROMIS Pediatric Instruments		93.846	1U19AR069526-01 REVISED	562,804	123,704
A Sequenced Strategy for Improving Outcomes in Patients with Knee Osteoarthritis Pain	114	93.846	2004638920//1UG3AR077360-01	56,581	—
Replacing Sedentary Time using an Innovative mHealth Intervention among Total Knee Replacement Patients	258	93.846	20-4064//1R21AR074780-01A1	11,920	—
OAI Ancillary- Prediction of Incident and progressive OA from imaging biomarkers	211	93.846	238323//5R01AR066601-05	(536)	—
Selective Inhibition of CYP26A1 in the Skin for the Treatment of Ichthyosis	59	93.846	2R44AR069416-02	95,229	—
Aberrant TLR responses driving organ fibrosis in systemic sclerosis		93.846	2R56AR042309-22A1	16,737	—
The Child-Centered Outcomes in Practice and Research (COPR) Center of Excellence: Strengthening the Clinical Validity Evidence Base for PROMIS Measures in Chronically Ill Children	43	93.846	3210940919-XX//1U19AR069525-01	45,734	—
Epha/Ephrin – A Signaling in Epidermal Differentiation and Disease		93.846	4R01AR062110-05	—	—
Vasculitis Clinical Research Consortium (VCRC)	255	93.846	575155//5U54AR057319-16	—	—
Dose-specific Responsiveness of Glucocorticoid Receptor-driven Transcription in Skeletal Muscle (Predoc Fellowship for Isabella M. Salamone)		93.846	5F31AR073655-02	35,500	—
Quantifying the Biomechanical and Neural Factors Contributing to Shoulder Instability		93.846	5F31AR074288-02	36,798	—
Breaking down barriers: defining the role of EphA2 in building epidermal tight junctions in atopic dermatitis		93.846	5K01AR072773-03	81,140	—
Epidermal polarization: the desmosomal cadherin desmoglein 1 regulates tissue mechanics and barrier function		93.846	5K01AR075087-02	72,421	—
Northwestern University Skin Disease Research Core Center		93.846	5P30AR057216-10	49,219	—
Core Center for Clinical Research at Northwestern University		93.846	5P30AR072579-04	729,347	723
NIAMS Multidisciplinary Clinical Research Center in Rheumatology		93.846	5P60AR064464-05	(108)	—
Regulators of Epidermal Gene Expression		93.846	5R00AR065480-04	115,482	—
Function of Desmoglein 1/Pemphigus Foliaceus Antigen		93.846	5R01AR041836-28	398,033	—
Inter-junctional signaling in epithelial junctional complex		93.846	5R01AR044016-24	391,727	—
Development of a Novel RA/Atherosclerosis Mouse Model		93.846	5R01AR064546-05	(701)	—
Long-term Significance of Pre-radiographic Lesions in Persons at Risk for Knee OA		93.846	5R01AR065473-05	107,167	3,893
Mechanisms Underlying Heterotopic Ossification		93.846	5R01AR066539-04	177,294	—
Simultaneous Targeting of IRE1a in B Cells and Macrophages for Lupus Therapy		93.846	5R01AR066634-05	(74)	—
Simultaneous Targeting of IRE1a in B Cells and Macrophages for Lupus Therapy		93.846	5R01AR066634-05	2,071	2,071
Glycosphingolipids Mediate Diabetic Wound Healing Impairment		93.846	5R01AR068375-05	515,228	—
3-D printed hyperelastic bone composites for bone regeneration and spine fusion		93.846	5R01AR069580-04	255,553	—
Inflammatory arthritis: mechanistic insights into initiation and progression		93.846	5R01AR070265-04	450,862	—
Cadherin clusters and actin filaments		93.846	5R01AR070166-05	410,119	—
Lupus Intervention Fatigue Trial (LIFT)		93.846	5R01AR071091-03	598,155	78,959
Noninvasive tools for assessing muscle structure and function		93.846	5R01AR071162-05	552,047	286,963
Supramolecular nanofibers for recombinant growth factor-free spine fusion		93.846	5R01AR072721-03	663,336	68,031
The molecular basis of Interleukin-31 driven itch		93.846	5R01AR073279-02 REVISED	332,671	—
Brain Pathophysiology of Osteoarthritis Pain		93.846	5R01AR074274-02 REVISED	623,731	5,845
Damage-Associated Molecular Patterns Driving Fibrosis Progression in Scleroderma		93.846	5R01AR074997-02	435,285	52,989

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Department of Health and Human Services (continued):					
Synovial Macrophage Transcriptional Signatures for Predicting Therapeutic Efficacy		93.846	5R01AR075423-02	\$ 490,100	—
Quantifying Underuse and Overuse of Knee Replacement		93.846	5R21AR069867-03 REVISED	1,665	—
The pathogenic mechanism of anti-phosphatidylethanolamine antibodies		93.846	5R21AR071705-02	194,029	26,812
Regulation of the Profibrotic Mechanisms of MACRO+ Myeloid Cells in Scleroderma		93.846	5R21AR073371-02	82,296	—
Novel Role for A20 in Fibrosis Susceptibility		93.846	5R21AR074292-02	206,527	—
Targeting NAD metabolism to treat systemic sclerosis		93.846	5R21AR074523-02	209,444	69,977
Transcriptional Signature of Macrophages in SSC		93.846	5R21AR074902-02	224,065	—
Desmoplakin Assembly and Function in Epidermis (R37 MERIT Extension Application R37AR043380)		93.846	5R37AR043380-25	455,580	—
Postdoctoral Rheumatology Training		93.846	5T32AR007611-18 REVISED	240,002	—
Post Graduate Program in Cutaneous Biology		93.846	5T32AR060710-08	200,819	—
Translation of novel and repurposed drugs to address the acute and late effects of mustard exposure		93.846	5U01AR071168-04	913,746	23,623
Central Pain Mechanisms, Pain Intensity and Drug Response in Rheumatoid Arthritis		93.846	7R01AR064850-06	12,061	12,061
Defining Components of Physical Therapy Achieving Maximum Function after TKR		93.846	7R01AR071048-03	173,293	46,270
Amelioration of Vesicant-Induced Skin Injury by High Dose 25-Hydroxyvitamin D		93.846	7U01AR064144-06	59,300	—
IMPACCT – Infrastructure for Musculoskeletal Pediatric Acute Care Clinical Trials		93.846	901575-NU/1R34AR075303-01	34,058	—
Evolving Adaptive and Effector Mechanisms from Pre-RA Through Established Disease	13	93.846	FY17.090.001 FY20.090.004_AMD5/3UH2AR067681-05S1	20,335	9,888
Pathogenic Wnt-beta catenin target genes in macrophages and fibrosis	225	93.846	GR106866(CON-80001829)/1R01AR073270-01	50,698	—
Treatments Against RA and Effect on FGD PET CT: The TARGET TRIAL	288	93.846	ps#113296/5U01AR068043-03 REVISED	5,625	—
SBIR Phase II – Radikal Therapeutics	175	93.846	salosAgmt 03/27/18/2R44AR065886-02A1	5	—
Failed Regeneration in the Muscular Dystrophies: Inflammation, Fibrosis and Fat	228	93.846	SUB00001919/U54AR052646	7,377	—
Failed Regeneration in the Muscular Dystrophies: Inflammation, Fibrosis and Fat	228	93.846	SUB00001921/U54AR052646	203,545	—
Mapping Modifiers of Cardiomyopathy in Muscular Dystrophy	228	93.846	UFDSP00011909/U54AR052646	(124)	—
Mapping Modifiers of Cardiomyopathy in Muscular Dystrophy	228	93.846	UFDSP00012258/U54AR052646	(521)	—
				13,277,636	811,609
Phosphate Binder Therapy and Chronic Kidney Disease in Children					
3- Way Approach for ED Prevention	216	93.847	1652 G YA008/1U01DK122013-01	5,465	—
Functional Retinal Imaging to Monitor Pharmaco-Therapies in Diabetic Retinopathy	232	93.847	17662-00/2R01DK101536-06	22,305	—
NRSA Postdoc Fellowship for Chelsea Hepler: A Central Circadian Clock-Adipose Tissue Circuit Regulates Thermogenesis and Energy Balance		93.847	1DP3DK108248-01 REVISED	227,552	—
Non-invasive Imaging Biomarkers to Identify a High-risk Chronic Kidney Disease Phenotype					
Methylomics of prenatal GDM: Natural history & lifestyle intervention in children		93.847	1F32DK122675-01A1 REVISED	23,782	—
Antifibrotic Actions of SARA	160	93.847	1K23DK120811-01A1	71,738	—
Antifibrotic Actions of SARA		93.847	1R01DK100790-50363-S2//5R01DK100790-04	(38,372)	—
Clock Control of Muscle Glucose Metabolism and HIF Activity		93.847	1R01DK105055-02	(20,841)	—
Neutrophils instruct macrophage responses to promote mucosal healing		93.847	1R01DK105055-02	1,523	1,523
The roles of mDia2 in membrane remodeling and organelle clearance during reticulocyte formation		93.847	1R01DK123358-01A1	55,251	—
Methodological and data-driven approach to infer durable behavior change from mHealth data		93.847	1R01DK124199-01	52,914	—
Evaluating the EVO treatment optimized for resource constraints: Elements Vital to treat Obesity		93.847	1R01DK124220-01	81,086	—
Rho-associated kinase-dependent cytoskeletal and tight junction dysregulation in necrotizing enterocolitis		93.847	1R01DK125414-01	15,011	—
Improving Diabetes Risk Assessment and Screening in Minority-Predominant Community Health Center Patients		93.847	1R01DK125749-01	10,492	—
Use of simulation-based mastery learning to improve polypectomy outcomes		93.847	1R03DK117216-01A1	(7,356)	—
The mechanistic impact of Finger 1 variants on polycystin-2 (PKD2) channels in the primary cilia		93.847	1R21DK112066-01	(26)	—
Expanding live donor kidney transplantation through advocacy training and social media	114	93.847	1R21DK124816-01	21,649	—
Urinary Knowledge Study (U-KNOW)	121	93.847	1R56DK119709-01	(8,086)	—
Wake Forest Collaborative Application for an APOLLO Clinical Center	282	93.847	2003447902/5R01DK1119662-03	124,806	—
Testing Intervention Strategies for Addressing Obesity and Binge Eating		93.847	206423/5R01DK104842-03	6,964	—
Training Grant in Gastrointestinal Physiology and Psychology		93.847	287-101750-119551/5U01DK116040-04	19,801	—
GATA1 Mutation in Defective Erythropoiesis		93.847	3K01DK116925-03S1	125,929	—
Hyperglycemia and Adverse Pregnancy Outcome (HAPO) Follow Up Study		93.847	3T32DK101363-05S1 REVISED	—	—
Phenotype of urinary symptoms and relationships with genotype, sleep and obesity		93.847	4R01DK101329-05	(40,842)	—
Phenotype of urinary symptoms and relationships with genotype, sleep and obesity		93.847	4U01DK094830-05 REVISED	34,059	—
Vitamin D and Type 2 Diabetes (D2d)	203	93.847	4U01DK097779-06	(44)	—
Health literacy intervention to improve diabetes outcomes among rural primary care	212	93.847	4U01DK097779-06	21,112	21,112
Preconceptional health of Latinas and its association with child adiposity	251	93.847	5017374-SERV//2U01DK098245-06	11,940	—
GDCN Clinical Center – Advancing Clinical Research in Primary Glomerular Diseases, UM1 DK100867-06	251	93.847	50961//5R01DK107572-04	161,649	—
GDCN Clinical Center – Advancing Clinical Research in Primary Glomerular Diseases, Fixed Price	251	93.847	5112424//5R01DK116028-02	70,747	—
Cure GN 2.0 – UNC-PCC	251	93.847	5112858//SUM1DK100867-06 REVISED	—	—
The Kidney-Brain Connection: Role of Uremic Toxins	255	93.847	5113027//SUM1DK100867-06 REVISED	5,396	—
The Kidney-Brain Connection: Role of Uremic Toxins	255	93.847	5117458//5U01DK100867-08	1,518	—
Genomic Basis for the Circadian Regulation of B-cell Function and Glucose Homeostasis	255	93.847	574485//5U01-DK-103225-05	2,209	—
NIH NRSA Predoc Fellowship for Bilal Abdullah Naved: Strategies in Renal Nanomedicine to Impact Treatment Paradigms in Kidney Disease		93.847	578136//2-U01-DK-103225-06	59,170	—
Microenvironmental Signaling Cues to Model Glomerular Endothelial Cell and Podocyte Interactions		93.847	5F30DK116481-03 REVISED	34,160	—
		93.847	5F30DK123985-02	43,838	—
		93.847	5F31DK108544-02	(6,045)	—

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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Department of Health and Human Services (continued):					
A mixed methods evaluation of social support and homophily in weight loss		93.847	5F31DK120151-02 REVISED	\$ 30,399	—
Transition from Acute to Chronic Pelvic Pain in a Murine Model of Chronic Prostatitis		93.847	5K01DK114395-03	86,407	—
Glucocorticoid and circadian clock coregulation of insulin sensitivity and metabolism		93.847	5K01DK121875-02	76,812	—
Regulation of Ulcerative Colitis by mast cells and histamine		93.847	5K08DK097721-05	156,772	136,079
Defining bacterial virulence, cAMP and PKA in necrotizing enterocolitis		93.847	5K08DK106450-04	(243)	—
Dissecting the Nutritional Regulation of Feeding Circuits		93.847	5K08DK118188-04	155,590	—
SenseWhy: Overeating in Obesity Through the Lens of Passive Sensing		93.847	5K25DK113242-03	180,560	—
Disordered Tissue Biomechanics as a Driver of Esophageal Disease		93.847	5P01DK117824-02	1,507,467	103,161
Kidney Therapeutics: Translating Discoveries into Prevention, Treatment and Cures for Kidney Diseases		93.847	5P30DK114857-03	1,094,629	46,626
The genetic identity of the primary cilia ion channels of kidney collecting duct cells and their regulation by internal calcium		93.847	5R00DK106655-05	173,779	—
Pathogenesis of Diabetic Nephropathy		93.847	5R01DK060635-18	291,568	—
The mechanics of symptom generation in dysphagia		93.847	5R01DK079902-09	—	—
Mast cells in male pelvic pain and lower urinary tract dysfunction		93.847	5R01DK083609-10	308,966	—
Integration of Feeding Time and Glucose Metabolism by the Circadian Gene Network		93.847	5R01DK090625-09	438,400	153,069
Effectiveness of Physiologic Testing in PPI Non-Responders		93.847	5R01DK092217-07	365,484	133,335
Cholestasis and the Unfolded Protein Response		93.847	5R01DK093807-08	317,086	—
Genetics and Genomics of Maternal Glycemia During Pregnancy		93.847	5R01DK097534-05	(21,080)	—
Genetics and Evolution of Fetal Human Fat Accretion During Development		93.847	5R01DK099820-05	18,069	—
Interplay of Dietary Lipid and Circadian Dysregulation in Metabolic Syndrome		93.847	5R01DK100814-05	127,470	—
Regulation of FGF23 by DMP1 in Health and in Chronic Kidney Disease (CKD)		93.847	5R01DK101730-05	264,364	8,197
Impact of phosphate and FGF23 reduction on intermediate end points in CKD		93.847	5R01DK102438-05	196,690	14,989
The roles of plectestrin-2 as a functional node in erythropoiesis		93.847	5R01DK102718-05	92,196	—
Regulation of FGF23 in Chronic Kidney Disease (CKD) by iron and inflammation		93.847	5R01DK102815-05	376,038	63,475
Testing a medication risk communication and surveillance strategy: The EMC2 Trial		93.847	5R01DK103684-04	76,621	41,587
Altered Microbiome of Chronic Pelvic Pain		93.847	5R01DK103769-04	442,934	136,807
Urinary Renin Angiotensin System in Diabetes		93.847	5R01DK104785-03 REVISED	43,651	—
A Culturally Targeted Transplant Program to Increase Live Donation in Hispanics		93.847	5R01DK104876-05	577,841	317,348
Development, cellular plasticity and homeostasis of the exocrine pancreas		93.847	5R01DK106286-05	(5,046)	—
Omega-3 derived epoxy fatty acids and sEH in pancreatitis-induced carcinogenesis		93.847	5R01DK107767-04	290,746	43,342
Lipoteichoic acid mediated immune modulation of chronic pain		93.847	5R01DK108127-04	201,063	—
Barrier integrity, microbiome and HIV target cell interactions in the human male genital tract pre and post circumcision		93.847	5R01DK108434-04	468,081	98,140
SMART Weight Loss Management		93.847	5R01DK108678-05	587,464	64,683
Nuclear Repressors in Genomic Control of Healthful Obesity		93.847	5R01DK108987-05	288,340	—
Nonhuman Primate Model of Bladder Regeneration Using Autologous Bone Marrow Cells		93.847	5R01DK109539-04	464,185	259,986
Novel Diagnostics and Therapeutic Targets for Calcification in CKD		93.847	5R01DK110087-05	370,911	130,489
Transplant Regimen Adherence for Kidney Recipients by Engaging Information Technologies: The TAKE IT Trial		93.847	5R01DK110172-04	622,888	328,877
Lysosomes in neonatal enterocytes and their pathologies		93.847	5R01DK111032-04	496,419	—
The effects of capsinoids on brown adipose tissue recruitment and activation in obesity		93.847	5R01DK112281-03 REVISED	229,537	—
The Circadian System as a Neuronal Regulator of Feeding Time and Body Weight Setpoint		93.847	5R01DK113011-03	377,823	—
Repairing the Kidney Endothelium via Targeted Extracellular Matrix Modifiers		93.847	5R01DK113168-02	211,740	—
Mechanism of autophagy activation in the prevention of type 2 diabetes		93.847	5R01DK113170-04	354,734	12,542
Role of HNF4a in the regulation of FGF23 in health and disease		93.847	5R01DK114158-03	421,109	—
Molecular Mechanisms of Epithelial Contribution to Esophageal Inflammation and Tissue Repair		93.847	5R01DK116988-03	323,392	—
Predicting Newborn and Childhood Adiposity: An Integrated Omics Approach		93.847	5R01DK117491-03	566,958	318,695
Rescuing Kidneys at Risk of Discard		93.847	5R01DK118425-02	579,664	102,270
Molecular mechanisms for bone marrow failure and clonal progression during the innate immune response in Fanconi Anemia		93.847	5R01DK121354-02	475,623	22,249
Estrogen and Abdominal Muscle Fibrosis		93.847	5R01DK121529-02	694,394	14,829
The Unfolded Protein Response in Fatty Liver		93.847	5R01DK121997-02	349,814	—
Molecular dysregulation of primary cilia TRPP2 channels caused by Finger 1 variants		93.847	5R01DK123463-02S1	362,842	—
Circadian Control of Nutrient-Sensing Pathways Through Clock-HIF Interactions in Skeletal Muscle		93.847	5R03DK116012-02	34,504	—
Mechanisms of Salmonella Clearance by Neutrophils in the Intestinal Lumen		93.847	5R03DK116663-02	59,834	—
Health and Economic Impacts of Coverage Requirements and Health System-Community Coordination for Diabetes Prevention		93.847	5R18DK110741-04	489,726	—
Effect of Barrier Function on HIV Interactions in the Glans after Circumcision		93.847	5R21DK105865-02	1,847	—
Promoting Utilization of Kidneys by Improving Patient Level Decision Making		93.847	5R21DK108104-02 REVISED	128,929	—
Olfactory contributions to sleep-dependent food craving and calorie intake		93.847	5R21DK118503-02	203,154	9,438
Vision: Validated Systematic Integration of Epigenomic Data	161	93.847	5R24DK106766-04/6138-NU-DHHS-6766	129,401	—
Diabetes Risk Education and Communication Trial (DIRECT) for Primary Care Patients with Prediabetes		93.847	5R34DK113541-02 REVISED	7,573	—
Coordinating Pragmatic Primary care Population management for Obesity (C3PO)		93.847	5R34DK114773-02	216,437	—
NW University Program in Endo Diabetes and Hormone Action		93.847	5T32DK007169-41	239,376	—
Basic Science Training Grant in Urology		93.847	5T32DK062716-15	132,261	—
Transplant Surgery Scientist Training Program		93.847	5T32DK077662-14S1	110,038	—
NUKIDS: Scientist Training Program in Kidney Disease		93.847	5T32DK108738-05	267,028	54,208
10/22 Diabetes Prevention Program Outcomes Study (DPPPOS) Phase 3- Research Project		93.847	5U01DK048380-27	332,357	—

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Department of Health and Human Services (continued):					
Pelvic Pain and Depression		93.847	5U01DK082342-09	\$ 16,674	12,539
Pelvic Pain and Depression		93.847	5U01DK082342-12	492,070	—
LURN II: Enhanced Characterization of Patients with LUTS Using Biopsychosocial Approaches		93.847	5U01DK097779-08	272,512	—
Pilot Studies Targeting Mineral Metabolism in CKD		93.847	5U01DK099930-07	2,874	—
Glycemic Profiles and Pregnancy Outcomes Study (GLOSS)		93.847	5U01DK123745-02	53,516	—
Glycemic Profile of Pregnancy Consortium Biostatistics Research Center		93.847	5U01DK123759-02	537,356	—
Home sleep and circadian phase: mediators of racial disparities in diabetes risk		93.847	7R01DK095207-06	8,885	—
Endothelial PHD2/HIF Axis in Ischemic Kidney Injury and Inflammation		93.847	7R01DK115850-03	68,527	—
Sensorimotor Impairments in Men with Chronic Prostatitis/Chronic Pelvic Pain Syndrome: Relationship of resting state brain activity to pelvic floor muscle activation	259	93.847	85596622/5R01DK110669-02	13,619	—
The Tshilo Dikotla Study: Metabolic Outcomes of Children HIV/ARV-Exposed Uninfected in Botswana	13	93.847	901539-NU/7R01DK109881-04	9,015	—
Metabolomic Signatures of Insulin Resistance and Visceral Adiposity Changes in HIV-infected Adults on Newer Line Antiretroviral Therapy	13	93.847	901542-NU/7R21DK112720-02	20,034	—
Aberrant DNA Methylation Underlying Adverse Prenatal Exposures and Increased Newborn and Childhood Adiposity	13	93.847	901556-NU/5R01DK118403-02	36,561	—
Stent vs. Indomethacin for Preventing Post-ERCP Pancreatitis: The SVI Trial	132	93.847	A00-2010-S010/5U01DK104833-06	45,810	—
SpHincterotomy for Acute Recurrent Pancreatitis	132	93.847	A00-3656-S009/5U01DK116743-02	8,062	—
HiLo – Pragmatic trial of higher vs. lower serum phosphate targets in patients undergoing hemodialysis (UH3 phase)	62	93.847	A032136/4UH3DK118748-02	40,582	—
Antifibrotic Actions of SARA	13	93.847	A19-0185-S001-NU/5R01DK105055-04	99,767	—
Excess Radiation Exposure in Infants and Children From Videofluoroscopic Swallow Studies	132	93.847	A20-0260-S001/1R01DK122975-01	9,059	—
A new approach to predict graft outcome from histology in children undergoing kidney transplantation using machine learning methods	69	93.847	A259308/1R21DK122229-01	13,217	—
Genito-urinary Microbiological Determinants of Self-Perceived Bladder Health	12	93.847	Agmt 9/4/18/U01DK106786	3,775	—
Dissecting Carbohydrate-Mediated Regulation of Gut-Brain Communication	221	93.847	AWD035726-03-PR (SUB00000302)/3P30DK020595-43S1	7,867	—
Technology supported treatment of sleep apnea in prediabetes	221	93.847	AWD100319(SUB00000080)/1R01DK120312-01A1	236,852	—
Inflammatory Pathways in BPH/LUTS	151	93.847	EH17-147-S1/5R01DK117906-03	325,766	—
Circadian Genes and Adipose Function: Impact of Chronotype, Obesity and Race	221	93.847	FP056658/5R01DK103014-04	(112)	—
Systematic identification of functional T1D-associated non-coding SNPs using genetic, transcriptomic and epigenetic methods	270	93.847	GB10378_POW2238745/DP3DK111906	26,352	—
Plasticity of Renin Cells in the Kidney Vasculature	270	93.847	GB10541_PO #2231728/R01DK116718	26,352	—
Acute Liver Failure Study Group 13C-Methacetin Breath Test for the Prediction of Outcome in Acute Liver Failure	268	93.847	GMO180216/5U01DK058369-19	(3,424)	—
A Multi-Center Group to Study Acute Liver Failure	268	93.847	GMO-161131/5U01DK058369-20	29,793	—
A Phase 2a Study to Evaluate the Safety and Tolerability of OCR-002 (ornithine phenylacetate) in the Treatment of Patients with Acute Liver Failure/Severe Acute Liver Injury (STOP-ALF) – A Multi-Center Group to Study Acute Liver Failure	268	93.847	GMO-170910/5U01DK058369-19	3,282	—
The Impact of ADPKD-Causing PKD1 Nonsense Variants on Polycystin Channel Function in the Primary Cilia	128	93.847	NOR-217886-02/PO#66861701/5P30DK090728-10	69,558	—
Large-scale nutrigenetics and genomics in a tractable metazoan model	242	93.847	OSP2018042/5R01DK115960-03	355,536	—
Effects of Biomedical Risk Factors on Neuro-cognition Using MRI: Long term follow-up of the Diabetes Control & Complications Trial/Epidemiology of Diabetes Interventions and Complications Study Cohort	34	93.847	RESS12846/DK114812-01/3500-07249 (Case)	9,897	—
EDIC Hypoglycemia-Arrhythmia Study	34	93.847	RESS13291/5U01DK094157-08 REVISED	(1,248)	—
Epidemiology of Diabetes Interventions and Complications (EDIC)	34	93.847	RESS13291/5U01DK094157-08 REVISED	(20,440)	—
Epidemiology of Diabetes Interventions and Complications (EDIC)	34	93.847	RESS14458/5U01DK094157-09 REVISED	197,789	—
Epidemiology of Diabetes Interventions and Complications (EDIC)	34	93.847	RES515414/5U01DK094157-10	875	—
Pregnancy-Related Risk Factors and Glucose Intolerance in Women during Midlife	116	93.847	RNG200279-05/R01DK106201	7,426	—
Novel Role of Hepatic SEL1L-HRD1 ERAD in FGF21 Gene Transcription	245	93.847	SUBK00009305/5R01DK120330-03	398,593	—
Control of islet beta specific Pdx-1 and MafA transcription	276	93.847	UNIV59587/5R01DK050203-22	99,017	—
				<b>23,180,716</b>	<b>2,649,595</b>
AtRIal Cardiopathy and Antithrombotic Drugs in prevention After cryptogenicstroke (ARCADIA) "study"	223	93.853	010785-133385 Amd. 2//1U01NS095869-02 Revised	3,879	—
Multi-arm Optimization of Stroke Thrombolysis (MOST): a blinded, randomized controlled adaptive, multi-arm, adjunctive-thrombolysis efficacy trial in ischemic stroke	223	93.853	011266-133385//1U01NS100699-01A1	3,500	—
Sleep for Stroke Management and Recovery Trial (Sleep SMART) Stroke Trial	223	93.853	011337-133385//1U01NS009043-01A1	2,000	—
FVIIa for Acute hemorrhagic Stroke Administered at Earliest Time (FASTEST) Trial	223	93.853	012764-007//1U01NS110772-01	19,343	—
Evaluation of glucocerebrosidase pathway biomarkers in Parkinson Disease	95	93.853	0255-1042-4609/1U01NS094148	(12,843)	—
NN106: Prospective Phase II Study of Cytochrome C Oxidase Activity as a Novel Biomarker In Subjects With Newly Diagnosed Primary Glioblastoma Multiforme	124	93.853	1 U01NS093663-01A1	2,393	—
Multi-modality 4D Flow MRI data enhancement for quantification of cerebral aneurysms hemodynamics	163	93.853	11000730-01//5R21NS106696-02	31,977	—
Sensorimotor processing, decision making, and internal states: towards a realistic multiscale circuit model of the larval zebrafish brain	89	93.853	138078-5105175/5U19NS104653-03	96,415	—
Scalable Electrode Technology for High Resolution Chronic Recording of Brain	263	93.853	1806591/5R01NS104344-03	102,872	—
Cracking the Olfactory Code (Project 1)	147	93.853	19-AO-00-1002081-113030//1U19NS112953-01	173,857	—
Cracking the Olfactory Code (Project 3)	147	93.853	19-AO-00-1002081-113032//1U19NS112953-01	104,685	—
NIH NRSA Predoctoral Fellowship Award for Michael Iorga: Intraoperative Functional Mapping Using Infrared Thermography	93.853	93.853	1F31NS115362-01	23,820	—
Investigating ETF1 at the Interface of Translation Repression and Nonsense-Mediated Decay in C9-ALS/FTD Neurotoxicity	93.853	93.853	1F31NS117084-01	17,992	—
Imaging excitatory synaptic input to hippocampal dendritic segments during spatial navigation.	93.853	93.853	1F32NS116023-01	9,599	—
The Role of Mitochondria in TDP-43 Proteinopathy	93.853	93.853	1R01NS107396-01	385,488	—
Examining the role of glycosphingolipids in the progression and heterogeneity of synucleinopathies	93.853	93.853	1R01NS109157-01 REVISED	343,857	—

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Department of Health and Human Services (continued):					
MAPK as target of glioma immunoeediting by CD8 T-cells, and predictor of response to immunotherapy		93.853	1R01NS110703-01A1	\$ 136,117	—
SLFN5: A Novel Therapeutic Target for Glioblastoma		93.853	1R01NS113352-02	350,607	—
Role of Protein Methylation in Cell Mitosis and Glioblastoma		93.853	1R01NS115403-01A1	121,400	—
Glutamate receptor signaling pathways in the circuit integration of adult-born neurons		93.853	1R01NS115471-01A1	21,529	—
Arginine Metabolism Regulates Myeloid Immune Suppression in Glioblastoma		93.853	1R01NS115955-01	128,278	—
Models of rodent facial musculature for the study of active tactile sensing		93.853	1R01NS116277-01	32,940	—
Interaction between Tissue Factor, Junctional Adhesion Molecule-A, and Integrin B1 to drive self-renewal in glioblastoma		93.853	1R01NS117104-01	27,356	—
Immune-modifying nanoparticles for the treatment of traumatic brain injury		93.853	1R01NS117476-01	25,358	—
Targeting IDH mutations to improve seizure control in glioma patients		93.853	1R01NS118039-01	5,778	—
Mechanisms of gene regulation and RNA processing in synucleinopathies		93.853	1R01NS118824-01 REVISED	44,887	—
Development of a novel therapeutic strategy for treatment of SOD1-linked ALS by CRISPR/Cas9-mediated SOD1 promoter editing		93.853	1R01NS118928-01	44,236	—
Dissecting the role of cerebellar Purkinje cell impairment in the moonwalker ataxia		93.853	1R03NS114738-01	51,224	—
Sculpted Light in the Brain Conference		93.853	1R13NS111901-01	3,658	—
Defining The Impaired Proteostasis Network in ALS Patient Motor Neurons		93.853	1R21NS107761-01A1	200,271	—
Discovery of Novel Pathways Mediating Huntingtin Neurotoxicity		93.853	1R21NS110420-01	293,144	—
Defining The Mechanisms by Which NEK1 Genetic Variants Associated with ALS Patient Motor Neurons Lead to Motor Neuron Degeneration		93.853	1R21NS111248-01	150,457	—
Development of CHCHD2-linked PD mouse models		93.853	1R21NS114765-01	154,214	—
Towards elucidation of circuit mechanisms for feeding-related manual dexterity		93.853	1R21NS116886-01	63,855	—
Brainstem circuits of corticospinal neurons		93.853	1R34NS116713-01	37,531	—
Synaptic Coding in the Cerebellar Corticonuclear Circuit		93.853	1R35NS116854-01	110,872	—
Understanding pathophysiological mechanisms underlying neurodegeneration		93.853	1R56NS108639-01A1	377,225	—
Mechanisms of cAMP dependent potentiation of mossy fiber synapses		93.853	1R56NS118888-01	395	—
Chicago Stroke Trials Consortium		93.853	1U24NS107233-01 REVISED	11,850	7,500
Whole-brain recording into nucleic acids using template-independent polymerases		93.853	1UF1NS107697-01	621,898	249,168
Training in Neurotherapeutics Discovery and Development for Academic Scientists	213	93.853	201602366-02/A17-0080-S002/SR25NS099170-04	14,431	—
AT-HOME-PD	124	93.853	232297/SU01NS107009-03	48,866	—
Determinants of Dopaminergic Neuron Degeneration in Parkinson's Disease		93.853	2P50NS047085-16	(31,134)	—
Cajal-Retzius cells and neuronal signaling in postnatal cortical networks		93.853	2R01NS064135-11	479,667	—
Genetic Modifiers of Childhood Epilepsy		93.853	2R01NS84959-06A1	105,138	—
Concordance of TDP-43 Inclusions with Cortical Atrophy and Clinical Phenotype		93.853	2R01NS85770-06	111,368	—
Research Education Program for Trainees in Neurology		93.853	2R25NS070695-11	901	—
Rhythmicity and Synchrony in the Basal Ganglia		93.853	3P50NS047085-15S1	(17,643)	—
Understanding the Cellular Basis of Movement Disorders		93.853	3R01NS082351-07S1	575,705	—
LRRK2-mediated molecular and synaptic events in the striatum		93.853	3R01NS097901-05S1	369,063	—
Modulation of the prefrontal cortical network in neuropathic pain		93.853	3R01NS112292-01A1S1	142,639	—
The influence of 3D printed prostheses on neural activation patterns of the primary motor cortex in children with unilateral congenital upper-limb red	248	93.853	44-1014-1005-202/1R01NS1114282-01	4,166	—
Neural Stem Cell Carriers for Glioblastoma Immunotherapy		93.853	4R33NS101150-03	303,124	—
NN105: An Exploratory Phase II Study to Determine the Tolerability, Safety, and Activity of a Novel Vasopressin 1a Receptor Antagonist (SRX246) in Irritable Subjects with Huntington's Disease (HD)	124	93.853	4U44NS090616-02	1,082	—
Functional Annotation of a Comprehensive Set of SCN2A Variants	28	93.853	5001370-5500001215/5R21NS110355-02	60,997	—
StretchfMRI: a new technique to study the brainstem correlates of long-latency responses	227	93.853	56808/1R21NS111310-01A1	3,953	—
Regulation of Gliotransmission by Store-Operated Calcium Channels		93.853	5F30NS090817-03 REVISED	(169)	—
NRSA Fellowship for Warren Alexander McGee in support of: TDP-43-regulated microRNAs and TDP-43 Proteinopathy		93.853	5F30NS090893-05	34,063	—
Immune Modifying Microparticles for Acute Treatment of Spinal Cord Injury		93.853	5F30NS093811-04	30,738	—
Dendritic Organization of Synaptic Input to CA1 Hippocampal Place Cells during Spatial Navigation		93.853	5F31NS098666-03	6,582	—
Impact of direct dopaminergic neuromodulation of the subthalamic nucleus in health and in experimental Parkinson's disease		93.853	5F31NS100357-02	(498)	—
NRSA F31 for Sripath Balasubramanian Sharma in support of: Micro-RNAs 29b and 21 in Traumatic Brain Injury		93.853	5F31NS105451-02 REVISED	4,044	—
Elucidating Motor Pathways Involved in Hand Impairment Post Stroke		93.853	5F31NS105486-02	1,825	—
NRSA Predoc C. Versteeg in support of: Determining the role of the Cuneate nucleus in the processing of proprioceptive information in the awake behaving animal		93.853	5F31NS106833-03	43,652	—
The Use of Eye Movement Testing to Detect Neurocognitive Change Associated with Subconcussive Impacts		93.853	5F31NS106840-02 REVISED	28,647	—
Interaction of Subunits Regulating Resurgent Current Through Voltage Gated Na Channels		93.853	5F31NS108444-02	20,647	—
NIH NRSA Predoc Fellowship for Molly Hemmiller: Hippocampal Neural Correlates of Memory Enhancement Via Theta-Rhythmic Human Brain Stimulation Via Simultaneous TMS/fMRI		93.853	5F31NS111892-02 REVISED	37,895	—
Synaptic Regulation of Innate Freezing by the Fastigial Nucleus of the Cerebellum		93.853	5F32NS106720-03 REVISED	55,681	—
Investigating the Role of Extremely Long-lived Mitochondrial Proteins in Mammalian Neurons (Postdoc Fellowship for Ewa K. Bomba-warczak, PhD.)		93.853	5F32NS106812-02 REVISED	25,915	—
Identification of Biomarkers Reflecting Homeostatic Sleep Drive		93.853	5F32NS110183-02 REVISED	62,374	—
Investigation of Histone H3 Post-Translational Modifications in Pediatric Brainstem Glioma		93.853	5K08NS097624-03	141,090	102,060
Radiographic markers of clinical function in Cervical Spondylotic Myelopathy		93.853	5K23NS091430-03 REVISED	88,498	16,481

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Department of Health and Human Services (continued):					
Circadian Dysfunction, Encephalopathy, and Cognitive Outcomes after Critical Illness		93.853	5K23NS092975-05	\$ 186,906	—
Molecular mechanisms underlying mitochondria-lysosome membrane contact sites in neuronal function and neurodegeneration		93.853	5K99NS109252-02	95,744	—
An epigenomic approach to identifying noncoding mutations in epilepsy		93.853	5R00NS089858-05	400	—
Role of PCDH12 in neural circuit formation during brain development and disease		93.853	5R00NS089943-05	218,104	—
Dopaminergic and Muscarinic Signaling in the Striatum		93.853	5R01NS034696-22	63,770	—
Myoferlin in muscle membrane fusion and repair		93.853	5R01NS047726-15 REVISED	316,523	—
A primate model of an intra-cortically controlled FES prosthesis for grasp		93.853	5R01NS053603-14	532,134	—
Combined Approach to the Genetic Basis of Epilepsy		93.853	5R01NS053792-17	209,947	—
Store-Operated Channels in the Nervous System		93.853	5R01NS057499-13 REVISED	391,640	—
The Loss of Independent Joint Control of the Upper Limb in Spastic Hemiparetic CP		93.853	5R01NS058667-07	335,704	—
Synaptic Circuit Organization of Motor Cortex		93.853	5R01NS061963-13	393,207	—
Functional Development of Motor Networks		93.853	5R01NS067299-10	296,806	—
GABAergic Signaling in the External Globus Pallidus		93.853	5R01NS069777-09	381,862	—
Cellular dissection of herpes simplex encephalitis with IPS cells	170	93.853	5R01NS072381-09	(937)	—
The Role of Lysosomal Glucocerebrosidase in Synucleinopathies		93.853	5R01NS076054-10	680,293	—
Understanding the cellular basis of Movement Disorders		93.853	5R01NS082351-05	(1,705)	—
Genetic Modifiers of Childhood Epilepsy		93.853	5R01NS084959-05	51,747	—
Cerebral Small Vessels in Motor and Cognitive Decline		93.853	5R01NS085002-05 REVISED	(56,969)	—
Concordance of TDP-43 Inclusions with Cortical Atrophy and Clinical Phenotype		93.853	5R01NS085770-05	39,406	—
Neurogenetic Approaches to Study Directed Behavior in Drosophila		93.853	5R01NS086859-07	436,752	—
MicroRNAs and Perinatal Hypoxia-Ischemia		93.853	5R01NS086945-05	(31,157)	—
MicroRNAs and Perinatal Hypoxia-Ischemia		93.853	5R01NS086945-05	18,365	18,365
The Neural Control of Internal Joint State		93.853	5R01NS086945-05	82,877	21,225
Intranasal Stem-Cell Based Therapy of Glioblastoma		93.853	5R01NS086973-05	(25,492)	—
Mechanisms of Distorted Inputs in Chronic Spinal Injury		93.853	5R01NS087990-05 REVISED	125,047	823
Mechanisms Underlying Tau45-230-Induced Neuronal Degeneration		93.853	5R01NS089313-05 REVISED	(25,492)	—
The role of α-synuclein accumulation in lysosomal hydrolyase trafficking and function		93.853	5R01NS090993-05	256,901	—
Effect of Unilateral and Bilateral STN Stimulation on Eye-Hand Coordination		93.853	5R01NS092823-05	177,514	—
Targeting histone demethylase activity for the treatment of pediatric brainstem glioma		93.853	5R01NS092950-05	195,483	—
Coding properties of Vibrissal-Responsive Trigeminal Ganglion Neurons		93.853	5R01NS093079-05	160,041	—
Glioblastoma Phenotype Modulation Through miRNA Control of Wnt Signaling		93.853	5R01NS093585-05	119,574	—
Metabolic Control of Immune Suppression in Gliomas		93.853	5R01NS093843-05	283,927	10,397
Designing brain machine interfaces to drive plasticity and enhance recovery after brain injury		93.853	5R01NS093903-04	325,050	—
Biomimetic Somatosensory Feedback through Intracortical microstimulation		93.853	5R01NS094748-05	594,387	365,955
Autophagy Regulation of Glioblastoma Tumorigenesis and Responses to Therapy		93.853	5R01NS095251-05	579,359	330,894
Radiation + Temozolomide Induced Mutation and Malignant Progression of GBM		93.853	5R01NS095634-05	217,523	—
Microcircuits of the Subiculum and Epilepsy		93.853	5R01NS095642-05	267,482	—
Rational derivation of DA neuron subtypes from iPS cells for improved modelling of Parkinson's disease		93.853	5R01NS096092-03	360,921	—
Cellular plasticity and equilibrium in GBM progression		93.853	5R01NS096240-04	291,939	—
AMPK, metabolism and ALS		93.853	5R01NS096376-04	281,786	14,406
IDO1 and immunotolerance in glioblastoma.		93.853	5R01NS096746-06	446,702	56,870
The Human Motor Output Map		93.853	5R01NS097851-05	299,404	—
The role of amyloid precursor protein in HIV-1 replication and associated neurodegeneration		93.853	5R01NS098509-05	420,493	143,237
A wearable myoelectric computer interface to reduce muscle co-activation in acute and chronic stroke		93.853	5R01NS099064-04	378,134	—
Regulation of CD4+ T cell-mediated Demyelination Following Oligo Ablation		93.853	5R01NS099210-05	370,685	24,865
Mouse model studies of TMEM230-linked Parkinson's disease		93.853	5R01NS099334-04	343,624	—
Investigation of ALS caused by mutant CHCHD10		93.853	5R01NS099623-05	483,249	52,033
Postsynaptic functions of neuronal adhesion molecules: focus on Cntnap2		93.853	5R01NS099638-05	361,899	5,916
Subcortical auditory processing in sports-related concussions and contact/collision sports		93.853	5R01NS100785-04	499,250	—
Tissue Factor as a Key Determinant of IDH1 Mutant versus IDH1 Wild-type Glioma Thrombosis and Malignancy		93.853	5R01NS102500-03	522,371	—
Determining How Defective Nucleo-Cytoplasmic Trafficking Leads To Neurodegeneration In C9orf72-Related ALS And FTD		93.853	5R01NS102669-04	229,158	—
Cellular and Molecular Role of CXCR4 signaling in Painful Diabetic Neuropathy		93.853	5R01NS104219-03	620,673	41,757
Deciphering the Roles of Kainate Receptors in Developing CNS Circuits		93.853	5R01NS104295-03	796,851	—
Contralateral Corticobulbospinal Structural and Functional Changes Post Stroke: Biomarkers for the upper limb flexion synergy		93.853	5R01NS105502-03	628,231	—
Genetic Approaches to Optimize CAR T cells for Glioblastoma Therapy		93.853	5R01NS105759-02	497,010	—
Molecular Mechanisms Integrating Circadian Timing and Photic Signaling		93.853	5R01NS106379-03	634,293	252,075
Mechanisms of striatal structural and functional plasticity.		93.853	5R01NS106955-02	360,143	—
Mechanisms of electrical stimulation of a canonical motor microcircuit		93.853	5R01NS107539-03	443,507	—
Role of Host Cell Factors in Newborn Herpes Simplex Virus (HSV) Encephalitis		93.853	5R01NS109552-03	517,750	—
Hemostasis, Hematoma Expansion, and Outcomes After Intracerebral Hemorrhage		93.853	5R01NS110631-02	357,906	—
Motoneuron mortality in neurodegenerative diseases induced by homeostatic dysregulation of excitability		93.853	5R01NS110779-02	268,940	39,940
Optimizing the restoration and rehabilitation of function using cortically controlled FES following SCI		93.853	5R01NS110953-02	336,285	104,714
Role of purine metabolism in chemoresistance		93.853	5R01NS112535-02	484,095	67,314
Combining myoelectric training with sleep-based memory reactivation to improve motor recovery after stroke		93.853	5R01NS112856-02	419,731	—
		93.853	5R01NS112942-02S1	344,674	—

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Department of Health and Human Services (continued):					
Development of Novel MNK Inhibitors for Treating Glioblastoma		93.853	5R01NS113425-02	\$ 669,260	—
Cellular mechanisms of hippocampal network neuroplasticity generated by brain stimulation		93.853	5R01NS113804-02	706,553	44,623
TRPC3 channels as pharmacological targets for the treatment of ataxia		93.853	5R21NS090346-02 REVISED	(1,001)	—
Developing novel treatment strategies for Spinocerebellar ataxia type 1		93.853	5R21NS099962-02 REVISED	25,749	—
Neural Stem Cell Carriers for Glioblastoma Immunotherapy		93.853	5R21NS101150-02	(1,463)	—
Hippocampal microcircuits regulating neurogenesis		93.853	5R21NS103138-02 REVISED	55,743	—
The effects of a-synuclein accumulation on proteome composition, stability and aggregation		93.853	5R21NS107768-02	186,353	—
Exploring the role of protein farnesylation in the regulation of SNARE protein ykt6 in synucleinopathy models		93.853	5R21NS107770-02	208,746	—
A Novel approach to therapy in ALS and ALS/Dementia using new insights from ALS5/SPG11		93.853	5R21NS109917-02	164,575	—
Characterized Adult Primary Human Microglia Cells for Research		93.853	5R24NS104160-03	196,085	—
Research Education Program for Trainees in Neurology		93.853	5R25NS070695-10 REVISED	196,878	—
Ionic Currents and Spiking in Cerebellar Nuclear Neurons		93.853	5R37NS039395-19	477,905	—
Synaptic Transmission, Plasticity, and Integration in the Subthalamic Nucleus		93.853	5R37NS041280-20	123,398	—
The role of ATP13A2/PARK9 in secretion of exosomes and alpha synuclein		93.853	5R37NS096241-04	757,222	350,057
General Motor Control Mechanisms and Disease Training Program		93.853	5T32NS041234-18	303,773	—
TRAINING PROGRAM IN THE NEUROSCIENCE OF HUMAN COGNITION		93.853	5T32NS047987-14	265,458	—
Clinical Coordination Center for STEADY-PD3		93.853	5U01NS080818-04	230,468	95,755
Study in Parkinson Disease of Exercise Phase 3 Clinical Trial: SPARK3		93.853	5U01NS113851-02	1,903,321	481,866
Clinical Research Sites for the Network of Excellence in Neuroscience Clinical Trials (NEXT Sites)		93.853	5U24NS107213-03	325,515	—
Channelopathy-Associated Epilepsy Research Center		93.853	5U54NS108874-03	2,700,981	1,285,339
MyCog – Rapid detection of cognitive impairment in everyday clinical settings		93.853	5UH3NS105562-04	1,167,418	—
Maternal Outcomes and Neurodevelopmental Effects of Antiepileptic Drugs (MONEAD) II	190	93.853	61869966-125439/2U01NS038455-18 REVISED	119,579	—
Epigenetic Regulation of Nerve Injury	272	93.853	761K946/R01NS100510-02	156,313	—
Role of Inflammation in Progressive Multifocal Leukoencephalopathy		93.853	7R01NS047029-16	110,256	—
An Intracortical Brain-Computer Interface Model for High-Efficiency Development of Closed-Loop Neural Decoding Algorithms.	72	93.853	800010796-01U01000153//5R01NS109257-02	76,288	—
FTLD Clinical Research Consortium	219	93.853	8568sc//5U54NS092089-05	(2,042)	—
Dopaminergic Neurotransmission in a Model of DOPA-responsive Dystonia	69	93.853	A146916//5R01NS088528-05	48,363	—
Maternal Outcomes and Neurodevelopmental Effects of Antiepileptic Drugs (MONEAD)	69	93.853	A234187//61856235-125439/2U01NS038455-17	1,500	—
A randomized, double-blind, placebo-controlled trial of urate-elevating inosine treatment to slow clinical decline in early Parkinson disease ("Inosine Phase 3")	124	93.853	Agmt 4/24/17//5U01NS090259-03	23,362	—
NN108: Topiramate as a disease altering therapy for Cryptogenic Sensory Peripheral Neuropathy (CSPN)	124	93.853	Agmt Signed 02/27/12//U01NS095388	19,672	—
Clinical Trial Readiness for SCA1 and SCA3	134	93.853	AGMT00004439/5U01NS104326-03	1,185	—
COHORT OF HIV-ASSOCIATED SEIZURES AND EPILEPSY IN ZAMBIA (CHASE): SCALE UP AND EXPANSION INFORMED BY R21 FINDINGS	257	93.853	AWD00000487/URFAO:GR511027//R01NS094037	12,361	—
Chicago Stroke Trials Consortium	221	93.853	AWD100391(SUB00000187)/7U24NS107233-02	86,900	—
Role of interneurons in brain tissue oxygen regulation	151	93.853	EH17-251-S1//5R01NS107383-03	87,009	—
Probing Somatosensory Representations in the Cuneate Nucleus of Awake Primates	221	93.853	FP060211//5R01NS095162-02	143,442	—
Development of Novel MR Imaging for Ischemic Stroke Evaluation	221	93.853	FP063797-1//R01NS093908	11,209	—
The Stroke Hyperglycemia Insulin Network Effort (SHINE) Trial	270	93.853	GB10253155953//5U01NS069498-07	500	—
Network for Emergency Care Clinical Trials: Strategies to Innovate EmeRgEncy Care Clinical Trials Network (SIREN) – Network Clinical Center (Hub) (U24)	131	93.853	MCW Signed 11/09/17//1U24NS100648-03	2,889	—
(CREST-2) Trial: Carotid Revascularization and Medical Management for Asymptomatic Carotid Stenosis Trial	129	93.853	NWU-187276-02//5U01NS080168-03	26,423	—
ZFP24 Control of the myelination program of oligodendrocytes		93.853	R01NS067550	4,222	—
SUDEP Translational Research Alliance – SUTRA	34	93.853	RES512393//5U01NS090407-04	(1,461)	—
SUDEP Transnational Research Alliance (SUTRA); Autonomic and Imaging Biomarkers of SUDEP; SUTRA	266	93.853	RES512393//U01NS090407	18,498	—
Differing Neuronal Mechanisms Mediating Locomotion and Spasms After Spinal Cord Injury	210	93.853	S002//2R01NS047567-13A1	(1,233)	—
LRP4 signaling in neuromuscular junction formation	34	93.853	SPN pending RES513371//2R01NS082007-07	38,756	—
Molecular and cellular dissection of the pathogenesis of herpes simplex encephalitis with iPSC-derived CNS and PNS cells	170	93.853	SUB00000135//2R01NS072381-10	36,508	—
Quantification of dynamic ankle mechanics for assessment and treatment of locomotor dysfunction post stroke	245	93.853	SUBK00011246//5R21HD097663-02	69,858	—
Neuroimaging Biomarkers in Parkinsonism: Differentiating Subtypes and Tracking Disease Progression	228	93.853	UFDSP00011947//U01NS102038	198,129	—
Reverse Engineering Motor Unit Discharge	271	93.853	UWSC8225-(BPO2840)//5R01NS085331-05	28,734	—
Functional Segregation Within the Whisker-Barrel Neuraxis	283	93.853	WU-16-153-MOD-6//5R01NS091439-05 REVISED	205,734	—
				39,181,033	4,183,635
Using 3-D Primary Mucosal Cultures to Study Antibody Function at Mucosal Barrier	75	93.855	0000958776//5UM1-AI068618-13	19,528	—
Development and characterization of a nanocarrier for enhanced delivery of benznidazole during acute and chronic T. cruzi infection	35	93.855	0001552826//1R21AI44529-01	51,862	—
Molecular Regulation of Systemic Inflammation	35	93.855	0001561149//7R01AI20625-04	32,035	—
ZIP Immunology Consensus Substudy	95	93.855	0255-8661-4609//5U19AI118610-03	(16,187)	—
Dengue Human Immunology Project Consortium (DHIPC)	95	93.855	0255-8682-4609//5U19AI118610-05	356,144	—
Fluomics: The Next Generation	95	93.855	0255-A131-4609//5U19AI135972-03	118,340	—



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Department of Health and Human Services (continued):					
Effects of Inhibiting Early Inflammation in Kidney Transplant Patients: CTOT Ancillary Studies: Investigating the use of the NanoString platform to reveal and follow subclinical kidney graft injury	95	93.855	0255-B012-4609//5U01A1063594-16	\$ 25,081	—
Dengue Human Immunology Project Consortium (DHIPC) Core B	95	93.855	0255-C147-4609//4U19A1118610-06	35,755	—
Donor-Alloantigen-Reactive Regulatory T Cell Therapy in Liver Transplantation (deLTa)	219	93.855	10526sc//5U01A1110658-04	26,251	—
Identification of the Siglec-8-induced mode of eosinophil death and extracellular factors governing Siglec-6/8 expression and function	218	93.855	107905120//3U19A1070535-12S1	(902)	—
Novel therapies to modulate the inflammatory alloresponse in renal grafts (CTOT-21)	219	93.855	11156sc//U01A1113362	86,668	—
A Prospective Trial of Elemental Diet in Adults with Eosinophilic Gastrointestinal Diseases (EGIDs)	44	93.855	135407//U54A1117804	—	—
Consortium of Eosinophilic Gastrointestinal Disease Researchers	44	93.855	135408-CT1-OMEGA//5U54A1117804-05	—	—
Consortium of Eosinophilic Gastrointestinal Disease Researchers: OMEGA	44	93.855	135408-CT1-OMEGA//5U54A1117804-05 REVISED	—	—
EoE Clinical Study 2: Consortium of Eosinophilic Gastrointestinal Disease Researchers	44	93.855	135409-CT2-Diet Study//5U54A1117804-05 REVISED	—	—
ACTG A5320 Protocol Vice Chair Support	216	93.855	1560 G WA745 // 7UM 1A1068636-13 REVISED	963	—
ACTG A5322 Protocol Co-Chair Support: Leadership and Operations Center (LOC), AIDS Clinical Trials Group (ACTG); LOC 1/	216	93.855	1560 G WA747//SUM1A1068636-14R	13,148	—
ACTG A5322 Protocol Vice Chair Support	216	93.855	1560 G WA748//SUM1A1068636-14R	4,033	—
ACTG A5357 Protocol Co-Chair Support: Leadership and Operations Center (LOC), AIDS Clinical Trials Group (ACTG)	216	93.855	1560 G WA749//SUM1A1068636-14R	(2,677)	—
UCLA-ACTG Minority HIV Investigator Mentoring Program Award	216	93.855	1560 G WA796 // 7UM1A1068636-13 REVISED	7,306	—
ACTG A5382 Chair Support: Leadership and Operations Center (LOC), AIDS Clinical Trials Group (ACTG)	216	93.855	1560 G WA993 // 7UM1A1068636-13 REVISED	5,538	—
ACTG Data Management Committee DMC	216	93.855	1560 G WB105//SUM1A1068636-14R	41,331	—
ACTG A5376 Cohn WHISC Support	216	93.855	1560 G WB595 // 7UM1A1068363-13	2,438	—
ACTG Taiwo AEG Committee Support	216	93.855	1560 G WB850 // SUM1A1068636-14R	8,068	—
ACTG Protocol Facilitator	216	93.855	1560 G XB691 // SUM1A1068636-14	5,688	—
An Age-Dependent Role of the Inflammasome in the Pathogenesis of HSV Encephalitis	93.855	93.855	1F30A1150049-01	33,408	—
RACK1-mediated control of mRNA selectivity by poxviruses	93.855	93.855	1F31A1152548-01A1	4,220	—
Targeting the functions of the gonococcal Type IV pilus	93.855	93.855	1R01A1146073-01A1	30,902	—
Mechanism of Herpes Simplex Virus (HSV) Induced Membrane Fusion	93.855	93.855	1R01A1148478-01	346,090	42,950
Virus-host interactions governing alpha-herpesvirus genome delivery and neuroinvasion	93.855	93.855	1R01A1148780-01	216,660	—
Functionally Defining HIV-Host Interactions During the Early HIV-1 Lifecycle	93.855	93.855	1R01A1150998-01A1	111,536	—
Discovery of novel benzimidazole resistance mechanisms	93.855	93.855	1R01A1153088-01	16,838	—
2019 CFAR Women and HIV Symposium	93.855	93.855	1R13A1147966-01	25,000	—
Development of Lipid-based Nanoparticle Vaccines Against Mycobacterium tuberculosis	93.855	93.855	1R21A1131035-01	(1,015)	—
Elucidating a novel regulator of inflammation; the TLR4-Inhibitory Complex (TIC)	93.855	93.855	1R21A1131179-01A1	58,479	—
Stenotrophomonas Maltophilia Type IV Secretion: Modulator of Both Host-Cell Apoptosis and Interbacterial Killing	93.855	93.855	1R21A1139596-01A1	130,914	—
Combining Immune Tolerance and Myelin Repair Therapy in T cell-driven MS Models	93.855	93.855	1R21A1142059-01	222,472	—
Mechanisms and Modifiers of Zika Virus Innate Immune Evasion	93.855	93.855	1R21A1148949-01A1	14,508	—
An unbiased screen to identify Neisseria gonorrhoeae genes important for survival to neutrophil killing mechanisms	93.855	93.855	1R21A1148981-01A1	15,529	—
Vibrio vulnificus toxin-receptor interactions	93.855	93.855	1R21A1149061-01A1	14,824	—
6mer seed toxicity and AIDS	93.855	93.855	1R21A1150910-01	65,724	—
Regulation of Neuromyotonia Optica via Tolerance Induced by PLG Nanoparticles Encapsulating Aquaporin 4 Epitopes	93.855	93.855	1R21A1151438-01	124,899	—
Dynamics of Pseudomonas aeruginosa During Bacteremia	93.855	93.855	1R21A1153953-01	12,284	—
Dynamic interactions within alpha-herpesvirus virions and their impact on infection	93.855	93.855	1R21A1154104-01	45,226	—
HOPE in Action: A clinical trial of HIV-to-HIV deceased donor kidney transplantation	114	93.855	200364993//5U01A1134591-03	13,760	—
HOPE in Action: A Clinical Trial of HIV-to-HIV Liver Transplantation	114	93.855	2004130714//5U01A1138897-03	1,878	—
Anti IL5 and Churg Strauss Syndrome: a double blind, placebo controlled trial	142	93.855	20083504//4U01A1097073-04	—	—
Protocol Funds, Leadership and Operations Center (LOC), AIDS Clinical Trials Group (ACTG) [UM1A1068636]	216	93.855	20191266 // 7UM1A1068636-13	121,884	—
Binding Antibody FcMediated Antiviral Functions Across Humans and Non-human Primates	62	93.855	2035489//5P01A1120756-03	(9,314)	—
A Phase IV Open-Label Pharmacokinetic Study of Minocycline for Injection Following a Single Infusion in Critically Ill Adults (ACUMIN) DMID Protocol Number: 16-0011	62	93.855	225440//SUM1A104681-05	55,347	—
Patient-Oriented Research on Pseudomonas aeruginosa	93.855	93.855	2K24A1104831-06A1	46,002	—
Third Coast Center for AIDS Research	93.855	93.855	2P30A1117943-06 Revised	354,463	—
ALPHA-HERPESVIRUS TRANSPORT IN AXONS	93.855	93.855	2R01A1056346-16A1	34,388	—
Northwestern University Allergy and Immunology Research (NUAIR) Program	93.855	93.855	2T32A1083216-11	16,919	—
Optimizing Clinical Use of Polymyxin B: Teaching an Old Drug to Treat Superbugs	245	93.855	3004163905//5R01A1119446	(39)	—
Consortium of Eosinophilic Gastrointestinal Disease Researchers	44	93.855	309362(admin)//2U54A1117804-06	18,422	—
Consortium of Eosinophilic Gastrointestinal Disease Researchers, 309363	44	93.855	309363//2U54A1117804-06	13,835	—
Consortium of Eosinophilic Gastrointestinal Disease Researchers (CEGIR)	44	93.855	309364//2U54A1117804-6	21,740	—
Consortium of Eosinophilic Gastrointestinal Disease Researchers – Pilot Core	44	93.855	309365//2U54A1117804-06	9,976	—
Neurotropic herpesvirus envelopment and microtubule-mediated transport	3	93.855	310227//5R01A1125244-02	(907)	—
Neurotropic herpesvirus envelopment and microtubule-mediated transport	2	93.855	310227//5R01A1125244-05	103,811	—
HIV Vaccine Research and Design (HIVRAD) Program (Project 1)	238	93.855	330183-01//7P01A1048240-15	402,276	—
Mechanisms of Gonococcal Pilin Antigenic and Phase Variation	93.855	93.855	3R37A1033493-27S1	376,117	—
Chronic Rhinosinusitis Integrative Studies Program (CRISP)	93.855	93.855	4U19A1106683-05	(11,693)	—
Chronic Rhinosinusitis Integrative Studies Program (CRISP)	93.855	93.855	4U19A1106683-05	36,078	36,078
Rapid Access to Antibiotic Biosynthesis Machinery Using Synthetic Biology	28	93.855	5000654-5500001350//1U19A1142780-01	355,233	—
Chicago WIHS Consortium V (WIHS-V)	91	93.855	50615-324-NWU2-A1034993//5U01A1034993-24	5,912	—

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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Department of Health and Human Services (continued):					
Influenza virus receptors on human airway epithelial cells	180	93.855	5-53557//5R01A1114730-04	\$ 55,989	—
Control of E1 oligomerization regulates E1 function in papillomavirus DNA replication	48	93.855	55890112//5R01A1114897-05	1,249	—
Phenotypic and functional plasticity of mast cells in homeostasis and allergy (NRSA Predoctoral Fellowship for Krishan Dilip Chhiba, BA.)		93.855	5F30AI129237-04 REVISED	44,652	—
Role of mTOR in inflammatory monocytes in HIV infection		93.855	5F30AI131937-04	47,271	—
NIH NRSA Predoc Fellowship for Megan Nas: Discovering the Novel Type IV Secretion System of Stenotrophomonas Maltophilia.		93.855	5F31AI140589-02	38,675	—
Fellowship for DiGiuseppe, Stephen: Uncovering the mechanism of how poxviruses hijack the host translational machinery to promote infection		93.855	5F32AI140566-02 REVISED	51,913	—
The Influence of Early Integration Events on HIV Latency and Reactivation Potential		93.855	5K22AI136691-02	90,269	—
Cellular and Molecular Mechanisms of the Pathogenesis of Aspirin Exacerbated Respiratory Disease		93.855	5K23AI141694-02	179,033	—
Integrating Mechanistic Insights from Diverse Models to Prevent CMV Reactivation following Transplantation		93.855	5P01AI112522-05	1,948,215	32,244
Pathogenesis of Rebound SIV/HIV Viremia After Antiretroviral Therapy		93.855	5P01AI131346-04	1,771,292	967,794
Chronic Rhinosinusitis Integrative Studies Program 2 (CRISP2)		93.855	5P01AI145818-02	1,395,510	246,877
Third Coast Center for AIDS Research		93.855	5P30AI117943-05	2,124,444	908,935
The regulation and function of CD1d-restricted T cells		93.855	5R01AI043407-18	(1,255)	—
Type II Secretion and Legionella pneumophila Infection		93.855	5R01AI043987-19	5,253	—
ALPHA-HERPESVIRUS TRANSPORT IN AXONS		93.855	5R01AI056346-15	166,057	34,486
The Role of Group 1 CD1-restricted T Cells in Infectious Disease		93.855	5R01AI057460-16	393,833	36,232
Structural and Functional Studies of gp42 and HLA Class 2 in EBV Entry		93.855	5R01AI076183-15	3,191	—
Regulation of Allergic Inflammation by Histamine		93.855	5R01AI076456-10	(3,080)	—
Molecular mechanism of V. vulnificus MARTX toxin in pathogenesis and food safety		93.855	5R01AI092825-09	427,277	—
Regulation of food allergy and anaphylaxis by IL 33		93.855	5R01AI105839-05	122,291	—
The roles of Synoviolin in immune tolerance and autoimmunity		93.855	5R01AI108634-04	(1,224)	—
Mechanisms of MCMV reactivation in immunodeficient transplant recipients		93.855	5R01AI112911-04	(42,278)	—
Modeling concurrent cytomegalovirus infection and transplantation tolerance		93.855	5R01AI114824-02	79	—
Accessory Virulence Factors of Pseudomonas aeruginosa		93.855	5R01AI118257-05	347,493	—
Harnessing MUC16-IgG Interactions to Enhance HIV Vaccine Function		93.855	5R01AI125171-05	378,678	141,514
REDD1 dissociates the therapeutic and adverse effects of glucocorticoids in skin		93.855	5R01AI125266-04	423,866	81,027
Poxvirus manipulation of the host cell protein synthesis machinery		93.855	5R01AI127456-03	382,625	—
Hormones in allergic disease		93.855	5R01AI127783-04	262,526	—
Distinct mast cell responses in male and female SJL mice underlie sex dimorphic EAE susceptibility		93.855	5R01AI128292-04	542,093	—
Food Allergy Outcomes Related to White and African American Racial Differences (FORWARD)		93.855	5R01AI130348-04 REVISED	1,010,832	636,701
Autoantibody mediated pathogenesis in chronic rhinosinusitis with nasal polyps: mechanisms and consequences		93.855	5R01AI134952-03	457,826	—
Initiators, biomarkers and mechanisms of epithelial dysfunction and immune pathogenesis in chronic rhinosinusitis and aspirin exacerbated respiratory disease (AERD)		93.855	5R01AI137174-03	581,099	—
Structure and Function of EBV Protein Complexes that Trigger Epithelial Cell Entry		93.855	5R01AI137267-03	782,122	537,932
Siderophores of Legionella pneumophila		93.855	5R01AI139054-03	391,840	—
The role of non-classical MHC class I molecules in immune responses to Mycobacterium tuberculosis infection		93.855	5R01AI141083-03	538,770	—
Nuclear rotation and cellular reorganization during Cytomegalovirus infection		93.855	5R01AI141470-02	438,601	—
Design and characterization of biomimetic nanobiomaterials to elicit CD1-restricted T cell responses during sub-unit vaccination		93.855	5R01AI145345-02	585,974	—
Characterizing Mucosal Changes in the FRT Leading to Increased HIV Acquisition		93.855	5R01AI146087-02	349,574	55,166
Mitochondria regulate adaptive immunity		93.855	5R01AI148190-02	235,392	—
The role of FEZ1 in early HIV-1 infection		93.855	5R01AI150559-07	316,486	—
Diverse Functions of p38α MAPK in T Helper Differentiation		93.855	5R03AI125813-02	44,922	—
Clinical Evaluation of a New Highly Sensitive Multiplex qPCR for Detecting tuberculosis and Non-tuberculous Mycobacteria		93.855	5R03AI137674-02	38,758	24,158
Post-transcriptional regulation of Crp in Yersinia pestis		93.855	5R21AI111018-02	—	—
Probing the Functions of KLF2 Downregulation		93.855	5R21AI119137-02	50,750	—
Discovery and validation of avermectin resistance loci in free-living and parasitic nematodes		93.855	5R21AI121836-02	(10,423)	—
The non-canonical role of the CRISPR Cas2 nuclease in infection by Legionella pneumophila		93.855	5R21AI123462-02	46,327	—
Defining the Siderophore of Stenotrophomonas maltophilia, an Emerging, Multi-Drug Resistant Pathogen		93.855	5R21AI125968-02 REVISED	35,118	—
Biomarkers for Highly Virulent Pseudomonas aeruginosa Strains		93.855	5R21AI129167-02 REVISED	43,138	—
A Master Role of Symmetric Arginine Dimethylation in Lupus Autoantibody Response		93.855	5R21AI131087-02	189,862	—
T regulatory cell responses during viral infection		93.855	5R21AI132848-02	166,198	—
Regulation of HPV Replication by Sirtuin Deacetylases		93.855	5R21AI133984-02	87,899	—
Novel Proteoform Biomarkers of Acute Rejection in Liver Transplant Recipients		93.855	5R21AI135827-02	98,299	—
Reassessing Legionella pneumophila Recognition during Intracellular Infection of Human Macrophages		93.855	5R21AI137458-02	195,869	—
Leveraging immunostimulatory pathways that enhance BCG vaccination for the rational design of synthetic neonatal vaccine formulations		93.855	5R21AI137932-02	267,753	78,420
Identifying Kawasaki Disease-Specific Antibodies and Antigens		93.855	5R21AI140029-02 REVISED	5,891	5,891
Metabolic and Immune Consequences of Antibiotic-Related Microbiome Alterations during TB Treatment		93.855	5R21AI148033-02	186,275	39,372

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Department of Health and Human Services (continued):					
Identification of the Initial Targets of Transmission		93.855	5R37AI094595-09	\$ 1,001,127	642,192
Immunology and Molecular Pathogenesis Training Program		93.855	5T32AI007476-24	300,830	—
Northwestern University Allergy Immunology Research Program (NUAIR)		93.855	5T32AI083216-10	193,192	—
Northwestern University Infectious Diseases Education and Science (NulDeas)		93.855	5T32AI095207-09	103,969	—
Multicenter AIDS Cohort Study		93.855	5U01AI035039-26	74,297	—
Successful Clinical Response In Pneumonia Therapy (SCRIPT) Systems Biology Center		93.855	5U19AI135964-03	2,662,230	78,066
Using siglecs and their ligands to treat allergic diseases SALTAD		93.855	5U19AI136443-03	1,540,494	802,958
Chicago Clinical Trials Unit		93.855	5UM1AI069471-14 revised	2,077,144	1,032,893
Sustained Long Acting Prevention Against HIV Program Operation		93.855	5UM1AI120184-04	2,209,982	985,310
Innate Immune Surveillance of HIV-1 During Transmission and Systemic Infection	178	93.855	60088-12935-NWU/ 5 R01 AI127302-04	87,173	—
Uncoupling Substrate Specificity for Heme and Antimicrobial Peptide Binding and Import by the Multifunctional SAP Transporter	168	93.855	700191-0221-00//5R01AI139519-02	301,546	—
Macrophage Redox State in Sterilizing and Injurious Inflammation		93.855	7R01AI131267-04	143,661	—
Development and characterization of a nanocarrier for enhanced delivery of benzimidazole during acute and chronic T. cruzi infection		93.855	7R21AI144529-02	36,088	—
Optimizing the diagnosis of pediatric Clostridium difficile infection	13	93.855	901507-NU//5K23AI23525-02	(1,038)	—
US Prevalence, Distribution and Determinants of Adult and childhood Food Allergy (UPDATE-FA)	13	93.855	901526-NU//R21AI135702-02	11,869	—
Clostridium innocuum as an emerging multidrug-resistant antibiotic-associated diarrheal pathogen	13	93.855	901553-NU//R21AI144549-01	105,315	—
Identifying Kawasaki Disease-Specific Antibodies and Antigens	13	93.855	901565-NU//R21AI140029-03	9,623	—
Urinary ProAdrenomedullin to Risk Stratify Children with Community-Acquired Pneumonia	13	93.855	901574 NU//5R03AI147112-02	24,041	—
Macrophage Immune Modulation to Improve Outcome in Obstructive Cholestasis	13	93.855	901605-NU (Winter)//R21AI153747-01	4,777	—
IMPAACT Network Leadership and Operations Center (LOC) Grant – CRS 4001 PF	13	93.855	915377-NU//SUM1AI068632-14	7,504	—
Impact of CRS Blockade in HIV+ Kidney Transplant Recipients	219	93.855	9254sci/SU01AI118594-05	50,619	—
(CTOTC-12/ ARTEMIS) Safety of Donor Alloanigen Reactive Tregs to Facilitate Minimization and/or Discontinuation of Immunosuppression in Adult Liver Transplant Recipients	219	93.855	9320sci/SU01AI104347-05 REVISED	17,340	—
EpiModel 2.0: Integrated Network Models for HIV/STI Prevention Science	66	93.855	A011168//5R01AI138783-03	47,556	—
Modeling concurrent cytomegalovirus infection and transplantation tolerance	62	93.855	A031108//5R01AI114824-05	15,409	—
Modeling concurrent cytomegalovirus infection and transplantation tolerance	62	93.855	A031108//5R01AI114824-05	7,919	—
ARLG ACUMIN	62	93.855	A039058//SUM1AI104681-07	9,632	—
Intervention to Reduce Early Peanut Allergy in Children (REACH)	13	93.855	A19-0148-S001//1U01AI138907-01A1	283,170	—
Rapid discovery of millions of intact biosynthetic gene pathways for natural product compounds treating infectious diseases from the majority of un-sequenced filamentous fungi with a novel FAC-NGS tool	105	93.855	Agmt 4/30/20//1R44AI140943-02	75,121	—
Targeting Inflammation and Alloimmunity in Heart Transplant Recipients with Tocilizumab	124	93.855	AGMT 8/11/20//SU01AI136816-02	1,000	—
COVID-19: A Multicenter, Adaptive, Randomized Blinded Controlled Trial of the Safety and Efficacy of Investigational Therapeutics for the Treatment of COVID-19 in Hospitalized Adults	118	93.855	COVID-19: 20CTA-DM0006/75N91019D00024 TO 75N9101F00130	72,459	—
COVID-19: FORWARD-COVID 19 Supplement		93.855	COVID-19: 3R01AI130348-04S1	23,555	—
COVID-19: Identification of the Initial Targets of Transmission		93.855	COVID-19: 3R37AI094595-09S1	17,607	—
Next-Generation Phylodynamics-targeted Partner Service Models for Combined HIV Prevention	221	93.855	FP066835-A//5R01AI136056-03	251,957	—
Anti-TSLP (AMG 157) plus antigen-specific immunotherapy for induction of tolerance in individuals with cat allergy CATNIP	22	93.855	FY19ITN011//SUM1AI109565-06	(44,240)	—
Protocol ITN056ST: Evaluation of Donor Specific Immune Senescence and Exhaustion as Biomarkers of Operational Tolerance Following Liver Transplantation in Adults	22	93.855	FY19ITN158//SUM1AI109565-06	45,426	—
Immune Tolerance Network(TEWL-Pre-SunBeam)	22	93.855	FY20ITN338//SUM1AI109565-07	30,801	—
AIDS Clinical Trial Group Network Protocol Funds	26	93.855	Mod 1 //2UM1AI068636-10	26,854	—
Defense-in-depth against mucosal HIV clade C invasion	201	93.855	PO 39802//P01AI048240	68,143	—
Mucosal mechanisms of altered HIV susceptibility in adolescents	244	93.855	SPC-000886//5R01AI28782-04	54,107	—
Pathogenesis of Jellongvirus	229	93.855	SUB00001474//R01AI128924	110,370	—
Prospective Observational Evaluation of the Association between the Day 2 Vancomycin Exposure and Failure Rates among Adult Hospitalized Patients with MRSA Bloodstream Infections (PROVIDE)	62	93.855	UM1AI104681	15,252	—
The Role of Lipid-specific T cells in Mediating Protection Against M. tuberculosis	271	93.855	UWSC12062//R01AI146072-01A1	36,496	—
High vs. Standard Dose Flu Vaccine in Adult Stem Cell Transplant Recipients	277	93.855	VUMC62776//SU01AI32004-02	(5,699)	—
High vs. Standard Dose Flu Vaccine in Adult Stem Cell Transplant Recipients	277	93.855	VUMC62776//SU01AI32004-03	17,946	—
				<b>34,689,710</b>	<b>7,447,196</b>
The role of the microtubule regulators Kif4 and EB1 in HIV-1 infection – Project 2					
Structure and function of desmosomal cadherins	49	93.859	1(GG010108-17)//5P01GM105536-05	(1,846)	—
Center for the Structural Biology of Cellular Host Elements in Egress, Trafficking, and Assembly of HIV (CHEETAH Center)	269	93.859	1(GG011995-01)//5R01GM118584-04	145,732	—
Study of the early steps of the HIV replication cycle of infectious HIV particles	269	93.859	10044932-10//8P50AI150464-14	270,804	—
Understanding the Structural/Functional Basis of HIV Replication in Macrophages	219	93.859	10044932-17//8P50AI150464-13 REVISED	12,084	—
Development of Affinity Rod Scaffolds for Cryo-EM Sample Preparation	163	93.859	10996sci // 8P50AI150476-13	103,013	—
Team Dynamics, Networks, and Assembly (Team DNA)	216	93.859	11000768-046//R21GM127958-01A1	88,418	—
Team Dynamics, Networks, & Assembly (Team DNA)	216	93.859	1295 G TA411//5R01GM112938-05	116,997	—
Information Processing by Post-Translational Modification	89	93.859	1295 G UA135//5R01GM112938-05	65,248	—
National Infrastructure for Standardized and Portable EHR Phenotyping Algorithms	113	93.859	153447.5111019.0005//5R01GM105375-06	75,505	—
National Infrastructure for Standardized and Portable EHR Phenotyping Algorithms	113	93.859	183980//3R01GM105688-07S1	(344)	—
Mechanistic investigation of long non-coding RNAs in Drosophila oogenesis	93.859	93.859	194147//5R01GM105688-08	108,278	—
Tissue-Based Metal Imaging Tools and Their Application Towards Spatiotemporal Mapping of Zinc Fluxes in Ovaries	93.859	93.859	1F32GM122349-03	27,306	—
			1F32GM139401-01	11,143	—

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Department of Health and Human Services (continued):					
Analyzing the role of chromatin compaction in nuclear mechanics, structure, and function		93.859	1K99GM123195-01A1	\$ 32,311	—
Resource for Quantitative Elemental Mapping for the Life Sciences		93.859	1P41GM135018-01	32,729	—
Functional Roles of Nascent RNA Structure in Regulating and Coordinating Gene Expression		93.859	1R01GM130901-01A1S1	109,472	—
New Acid Catalysis Concepts for Asymmetric Synthesis		93.859	1R01GM131431-01	307,804	—
Molecular mechanisms controlling kinetochore-microtubule attachments during mitosis		93.859	1R01GM135391-01	152,634	—
Regulation of de novo purine synthesis by the MAPK/ERK pathway		93.859	1R01GM135587-01	237,835	—
Structure and Mechanism of Non-Homologous End Joining		93.859	1R01GM135651-01	67,487	—
Cytokinesis staging mechanisms		93.859	1R01GM137133-01	37,375	—
SCISIPBIO: Understanding and Assembling Dream Teams to Conduct Clinical and Translational Science		93.859	1R01GM137410-01	61,639	8,626
New Cooperative Catalysis Concepts for Asymmetric Synthesis		93.859	1R35GM136440-01	46,490	—
Characterizing functional translation in putative 'noncoding' regions of a genome		93.859	1R35GM138192-01	13,905	—
National Resource for Translational and Developmental Proteomics		93.859	2P41GM108569-06	709,273	—
Development of dictyBase, an online informatics resource		93.859	2R01GM064426-17	509,354	—
The Dictyostelium Stock Center		93.859	2R01GM087371-10	242,602	—
Cryo ptychography combined with x-ray fluorescence analysis of metals in cells		93.859	2R01GM104530-06 REVISED	293,954	14,723
National Infrastructure for Standardized and Portable EHR Phenotyping Algorithms	53	93.859	2R01GM105688-06	—	—
Characterization of new methanobactins and their biosynthetic enzymes		93.859	3F32GM131665-02S1	63,335	—
Developmental Dynamics of Ciliated Epithelia		93.859	3R01GM089970-09S1	(557)	—
Regulation and function of bacterial 100S ribosome		93.859	3R01GM121359-04S1	345,021	—
Cytoskeletal mechanisms of oocyte polarity		93.859	3R01GM124029-02S1	273,408	—
Biotechnology Predoctoral Training Program		93.859	3T32GM008449-27S1	463,457	—
Postdoctoral Pathways - Broadening Access to Career Advancement	25	93.859	4500002877 // 1R25GM121257 - 01A1	157,630	—
Analysis of lamin-chromatin interactions and their regulation of chromosome organization and gene expression	33	93.859	5-10742-01/5R01GM106023-08	235,713	—
Biosynthetic studies on an unusual amino acid monomer deriving the discovery of novel natural products through genome mining		93.859	5F32GM122397-02	3,808	—
Accessing the Silent Majority: Induction of Gene Expression in Fungal Artificial Chromosomes for Natural Product Discovery		93.859	5F32GM134679-02	64,217	—
Violence Exposure and Cardiovascular Risk in Adolescence		93.859	5F32HL146005-02	58,709	—
The role of innate immunity in the traumatic brain injury-induced immune suppression syndrome		93.859	5K08GM117341-04	(11,031)	—
Regulation and Function of Intermediate Filaments in Cell Mechanics		93.859	5P01GM096971-08	2,191,212	1,009,781
National Resource for Translational and Developmental Proteomics		93.859	5P41GM108569-05	547,796	—
Metalloregulation by MerR and Fur Protein Families		93.859	5R01GM038784-31 REVISED	364,407	—
Selective inhibition of nitric oxide synthase for multiple indications		93.859	5R01GM049725-23	30,553	23,911
Microtubule motors and generation of cell polarity		93.859	5R01GM052111-20	195,812	—
Development of dictyBase, an online informatics resource		93.859	5R01GM064426-16	(2,961)	—
Molecular Mechanisms of Basolateral Targeting in Polarized Epithelial Cells		93.859	5R01GM070736-13 REVISED	187,375	—
Carbene Catalysis Strategies for Organic Synthesis		93.859	5R01GM073072-13	6,877	—
DNA zip codes and the spatial organization of the yeast genome		93.859	5R01GM080484-12	240,228	—
Control and Function of Ndr/LATS Signaling Systems		93.859	5R01GM084223-09 REVISED	(4,821)	—
The Dictyostelium Stock Center		93.859	5R01GM087371-09 REVISED	(15,581)	—
Developmental Dynamics of Ciliated Epithelia		93.859	5R01GM089970-11	317,258	—
Microbial Succession and Adaptive Immune Responses in the Premature Infant		93.859	5R01GM108494-05	208,192	179,979
Biological Transition Metals		93.859	5R01GM111097-48 REVISED	552,058	—
Analysis of Novel Virus-Induced RNAs		93.859	5R01GM111652-04	52,040	—
Assembly and epigenetic inheritance of the human centromere		93.859	5R01GM111907-05	(29,130)	—
Assembly and epigenetic inheritance of the human centromere		93.859	5R01GM111907-07	338,827	—
Integrative informatics approach to develop safe glucocorticoid therapies		93.859	5R01GM112945-04	306,969	150,284
Molecular Regulation of Radial Intercalation		93.859	5R01GM113922-04	322,513	—
Structure and Function of Mammalian Copper Transporters		93.859	5R01GM115211-02	(62)	—
Algorithms for Glyco-Proteoform Detection		93.859	5R01GM115739-06	290,237	—
Capturing Transient Protein Structures on Multiple Spatial and Temporal Scales		93.859	5R01GM115761-04	194,408	—
Regulatory Roles of Zinc Fluxes in Metalloprotein Occupancy and Cell Cycle Progression		93.859	5R01GM115848-04	43,563	—
Neural Crest Ontogeny and the Control of Stem Cell Attributes		93.859	5R01GM116538-04	(10,657)	—
Defining the molecular and cellular mechanism of epigenetic transcriptional memory		93.859	5R01GM118712-04	259,339	—
Investigating the molecular mechanism of mitochondrial tethering		93.859	5R01GM120303-04	361,428	—
RNA Ligation Pathways in Mammalian Unfolded Protein Response		93.859	5R01GM120307-04	324,572	—
Specific inhibition of transcription factors with Cobalt-Schiff Base Complexes		93.859	5R01GM121518-04	175,273	—
New Methods and Strategies for the Concise Synthesis of Bioactive Polycyclic Molecules		93.859	5R01GM124089-03	246,385	—
Regulation of chromosome segregation during oocyte meiosis		93.859	5R01GM124354-03	264,893	—
Social signals that regulate C. elegans development		93.859	5R01GM126125-03	245,882	—
Prion-mediated protein aggregation/co-aggregation and cellular consequence		93.859	5R01GM126318-03	280,080	—
Cadherin-catenin regulation in dividing epithelial cells		93.859	5R01GM129312-03	309,268	—
Cell signaling in regeneration and tissue scaling		93.859	5R01GM129339-02	205,745	—
The role of monocyte and microglia interaction in the evolution of traumatic brain injury-induced neurodegeneration		93.859	5R01GM130662-02	450,920	—

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Department of Health and Human Services (continued):					
Enhancement of neural regeneration		93.859	5R01GM130835-02	\$ 354,899	—
Continuous Probing of Nanoconstruct-Cell Interactions at Biologically Relevant Time Scales		93.859	5R01GM131421-02	48,619	—
Development of Photoreversible 4D Cell Culture Technologies		93.859	5R01GM132677-02	226,209	—
A Quantum Dot Probe for Nanosecond-Timescale Imaging of Fast Biological Processes		93.859	5R21GM127919-02	183,949	—
A Microfluidic Device for Temporal Live-Cell Analysis of Intracellular Biomolecules		93.859	5R21GM132709-02	37,378	—
Mentoring for Success: Developing Fundamental Skills for Biomedical Research		93.859	5R25GM079300-13	517,217	—
Northwestern University Interdepartmental Neuroscience Postbaccalaureate Research Education Program		93.859	5R25GM121231-04	275,489	11,292
Metalloenzymes and metal homeostasis		93.859	5R35GM118035-05	567,194	—
Structural and biophysical studies of proteins, nucleic acids, and their complexes		93.859	5R35GM118108-04	599,959	—
Non-coding RNAs and their mechanisms and functions		93.859	5R35GM118144-05	699,159	—
Integrated Empirical and Translational Research to Diversify the Scientific Workforce		93.859	5R35GM118184-05	443,376	23,413
Impact of genetic variants on gene regulation and 3D genome organization in human diseases		93.859	5R35GM124820-04	445,894	—
Microtubule motors, cytoskeletal organization and cell polarity		93.859	5R35GM131752-02	424,451	—
Selective inhibition of nitric oxide synthase for multiple indications		93.859	5R35GM131788-02S1	236,005	25,345
Cellular and Molecular Basis of Disease Training Program		93.859	5T32GM008061-38	833,303	—
Medical Scientist Training Program		93.859	5T32GM008152-34	1,489,036	—
Molecular Biophysics Training Program at Northwestern University		93.859	5T32GM008382-28	254,431	—
Biotechnology Predoctoral Training Program		93.859	5T32GM008449-25	—	—
Chemistry of Life Processes Predoctoral Training Program		93.859	5T32GM105538-08	282,412	—
Dissecting functional cooperation among subunits in a catalytic ribonucleoprotein	155	93.859	60057276/R01GM120582	112,912	—
Dynamics and allostery in protein-RNA regulation	155	93.859	60060542/R01GM120923	33,763	—
Genetic Analysis of Beneficial Bacterial Colonization	272	93.859	790K1827/R35GM119627-03	57,095	—
Computational epigenetics modeling of cell identity genes	134	93.859	AGM100003280/R01GM125632-03	35,428	—
Genome-wide single-molecule analysis of human replication kinetics	242	93.859	OSP27340-01/5R01GM125632-02	47,263	—
Probing Cellular Membrane Processes by Single Particle Orientation and Rotational Tracking	84	93.859	SP00012129-01/R01GM115763	97,495	—
Orthogonal Ubiquitin Transfer to Profile E3 Substrate Specificity	84	93.859	SP00014037-01/R01GM104498	69,014	—
Orthogonal Ubiquitin Transfer to Profile E3 Substrate Specificity	84	93.859	SP0013463-01/2R01GM104498-06A1	168,161	—
				23,521,456	1,447,354
Intimate Partner Violence in Sexual Minority Female Adolescents and Young Adults					
Regulation of NOD-like receptors in juvenile influenza A virus infection	223	93.865	010314-006/5R01HD086170-04	402,940	—
Development of a standardized measure of social-communication abilities for children with neurodevelopmental disorders	269	93.865	10034012-CHIC/5K12HD047349-14	(1,460)	—
Integrating Environmental Cues at the Maternal-Fetal Vascular Interface	219	93.865	10364sc/5R01HD093012-04	82,730	—
Biomechanics and Walking in Cerebral Palsy: Ankle Foot Orthoses – Footwear Combinations	219	93.865	11731sc/5R01HD072455-07	34,851	—
Optimization of Drug Dosing in Pregnant Women through Research and Education (OPRC)	181	93.865	11865SUB/1R21HD09482301	4,166	—
Optimization of Drug Dosing in Pregnant Women through Research and Education (OPRC)	123	93.865	1423 NU//5U54HD047905-14	4,496	3,305
Effect of Injury Severity and Location on Spasms Post SCI	123	93.865	1428NW//5U54HD047904-15	2,019	—
Molecular Basis of Altered Drug Metabolism During Pregnancy	232	93.865	15K01HD084672-05	115,236	—
Universal strengths-based parenting support in pediatric health care for families with very young children following the Flint Water Crisis	147	93.865	16572/5R01HD089455-03	300,904	—
Cerebral organoid models of CHD2-associated intellectual and developmental disabilities					
Intergenerational health impacts of interpersonal and community-based violence: From childbirth to childbearing		93.865	18-A1-00-1001408/5R01HD096909-02	31,579	—
AMH signaling pathway variation in PCOS		93.865	1F32HD101280-01	9,930	—
LASDB Meeting 2019		93.865	1F32HD102152-01	14,795	—
Early origins of health disparities: Chronic inflammation		93.865	1R01HD100630-01	55,396	—
How Housing Vouchers Affect Biology & Health		93.865	1R13HD100162-01	14,001	—
A Cognitive Test Battery for Intellectual Disabilities	114	93.865	1R21HD101757-01	18,681	—
Pathways linking Early Adversity and Support to Behavioral and Physical Health	213	93.865	2003262020 // U01HD075957	93,911	—
Quantification of Shoulder Pathology and Manual Wheelchair Propulsion in Children and Adults with Spinal Cord Injury	253	93.865	201402548-02/1R01HD076189-01A1	(135)	—
using Advanced Biomechanical Modeling and Diagnostic Imaging		93.865	203344NU/1R01HD091235-03	37,384	—
Research Career Development in Obstetrics and Gynecology	273	93.865	203405427//R01HD098698-01	27,507	—
Pharmacologic strategies to use the levonorgestrel implant in HIV-infected women		93.865	2K12HD050121-16	44,428	—
Genes, Androgens and Intrauterine Environment in PCOS	249	93.865	34-2009-2031-001/5R01HD085887-05	17,208	—
Pathophysiology and Rehabilitation of Neural Dysfunction		93.865	3P50HD044405-15S1	44,851	44,851
Effect of Neural Constraints on Movement in Stroke		93.865	3T32HD007418-25S1	2,576	—
More Money, More Problems? Understanding the Hidden Costs of Social Mobility	251	93.865	4R01HD039343-15	(184)	—
Development of a serum biosignature for ectopic pregnancy	255	93.865	5112051//1R21HD095448-01 REVISED	93,593	—
Assessing microenvironment and endothelial cell instruction of testis function		93.865	564595/R01HD076279-05	11,485	—
Infant attention in the context of language		93.865	5F31HD089693-03	34,386	—
Maternal psychological stress, adverse birth outcomes, and the role of inflammatory mediators in the placenta		93.865	5F32HD095580-03	51,531	—
Research Career Development in Obstetrics and Gynecology		93.865	5F32HD100076-02	60,290	—
Interdisciplinary Engineering Career Development Center in Movement and Rehabilitation Sciences		93.865	5K12HD050121-15	174,488	—
Pharmacokinetics of Risperidone Across Pregnancy		93.865	5K12HD073945-09	747,162	598,902
Upper-Extremity Torque Perceptual Impairments in Chronic Hemiparetic Stroke		93.865	5K23HD087529-03	103,087	—
		93.865	5K25HD096116-03	119,439	—

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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Department of Health and Human Services (continued):					
Exploring novel regulatory mechanisms underlying enhancer activation and cell fate transition	93.865		5K99HD094906-02	\$ 88,390	—
Uterine Leiomyoma Research Center Program	93.865		5P01HD057877-10 REVISED	811,917	130,935
Center for Reproductive Health After Disease	93.865		5P50HD076188-05 REVISED	(5)	—
Northwestern Uterine Leiomyoma Research Center	93.865		5P50HD098580-02	1,179,409	442,214
Cognitive Architecture of Bilingual Language Processing	93.865		5R01HD059858-09	247,701	—
Neuromuscular Mechanisms Underlying Poor Recovery from Whiplash Injuries	93.865		5R01HD079076-05	12,357	7,998
Linking language and cognition in infancy: Entry points and developmental change	93.865		5R01HD083310-05	600,243	—
Motor impairment related changes in muscles properties in chronic stroke	93.865		5R01HD084009-04	123,950	34,090
PED Screen: Pediatric Sepsis EHR Registry, Clinical Outcomes, and Predictive Model	93.865		5R01HD087363-04	654,929	648,845
Integrative Genomics, Epigenomics and Bioinformatics Analyses of Human Uterine Fibroids	93.865		5R01HD089552-05	580,113	133,416
Bilateral Priming Plus Task Specific Training for Severe Upper Limb Hemiparesis	93.865		5R01HD091492-04	236,679	183,438
Understanding Diverging Profiles of Academic and Physical Health Outcomes in African American Youth	93.865		5R01HD093718-03	552,624	47,469
Homeostatic to reactive hyaluronan matrices in ovarian reproductive aging	93.865		5R01HD093726-03	319,338	135,546
Firearm Involvement Among Parents and Their Adolescent Children: A Prospective Longitudinal Study of At-Risk Youth	93.865		5R01HD093935-03	456,490	—
Effects of device-assisted practice of activities of daily living in a close-to-normal pattern on upper extremity motor recovery in individuals with moderate to severe stroke	93.865		5R01HD095187-02 REVISED	232,212	—
PProgressive Abduction LoadIng thErapy (PRALINE): A Phase IIb Stroke Rehabilitation Trial with Longitudinal Tracking	93.865		5R01HD096071-02	253,107	—
Effects of a Prenatal Depression Preventive Intervention on Parenting and Young Children's Self-Regulation and Functioning (EPIC)	93.865		5R01HD097215-02	629,006	10,853
Patient navigation to improve outcomes among low-income women in the postpartum period	93.865		5R01HD098178-02	566,448	—
Clinical Trial of ENhancing Recovery in CHildren Undergoing Surgery – ENRICH-US	93.865		5R01HD099344-02	246,860	30,000
3/4: Pre-IVF treatment with a GnRH antagonist in women with endometriosis – A prospective double blind placebo controlled trial (PREGNANT)	93.865		5R01HD100318-02	96,147	—
The Effects of Injury Timing on Neural Microstructural Complexity and Motor Impairments in Cerebral Palsy	93.865		5R03HD094615-02	113,075	—
Oncofertility Consortium Annual Conference	93.865		5R13HD063248-10	10,047	—
Preventing the Intergenerational Transmission of Antisocial Behavior: Successful Child Socialization Strategies in Families with a Parental History of Incarceration	93.865		5R21HD092671-02	210,674	—
Development of a Portable Synergy Resistant EMG-driven FES Device for Intuitive Control of Grasp and Release During Functional Arm Activities Following Stroke	93.865		5R21HD094073-02	127,448	—
SweetMama: Leveraging technology for diabetes education and support to low-income pregnant women	93.865		5R21HD094271-02	228,437	—
Extremely Long Lived Proteins and Female Reproductive Aging	93.865		5R21HD098498-02	252,605	35,800
Determination of the Recruitment of Indirect Motor Pathways in Chronic Hemiparetic Stroke	93.865		5R21HD099710-02	157,238	—
Endometriosis and Retinoids	93.865		5R37HD038691-20	163,327	—
Pathophysiology and Rehabilitation of Neural Dysfunction	93.865		5T32HD007418-29	276,003	—
Northwestern Center for Reproductive Science Predoctoral Training Program in Reproductive Science, Medicine, and Technology	93.865		5T32HD094699-02	91,466	—
Optimizing Medication Management for Mothers with Depression during Pregnancy (OPTI-MOM)	93.865		5U54HD085601-05	843,381	84,571
Maternal-Fetal Medicine Units Network – The Northwestern Study Center	93.865		5UG1HD040512-21	366,195	77,952
Intensive Combination Approach to Rollback the Epidemic (ICARE) in Nigerian Adolescents	93.865		5UG3HD096920-02	971,150	433,893
The Functional Importance of Powered Wrist Flexion/Extension and Simultaneous Control for Upper Limb Prostheses	165	93.865	7186-81991 Amnd 1//5R01HD094861-02	86,402	—
Role of Muscle stem cells in sarcomere addition and contracture development	165	93.865	80184//1R03HD094602	2,067	—
Effect of a patient-centered decision app on TOLAC: An RCT	219	93.865	8231sc//5R01HD078748-05	11,556	—
EAS: Shear Wave Elastography Assessment for Predicting Success of Labor Induction	272	93.865	856K531//1R01HD096361-01	32,467	—
Fertility Decision-Making in Transgender Youth	13	93.865	901547-NU//5R21HD097459-02	28,501	—
Intensive Rehabilitation Research Grant Writing Workshops in the United States	132	93.865	A00-3512-S001//5R25HD074546-09	13,173	—
The Chicago Longitudinal Study (CLS) Health Screening Examination	246	93.865	A005404701//2R01HD034294-23	—	—
Cord Blood Adductomics in Bronchopulmonary Dysplasia	13	93.865	A20-0046-S001 NU//1R21HD100831-01	35,384	—
Understanding preferences regarding the offer of elective induction of labor to inform development of a decision support tool	124	93.865	Agmt 2/6/2020//1R21HD098496-01	22,458	—
MFMU Network Capitation Agreement	81	93.865	Agmt 4/25/14//U10HD036801	243,176	104,720
SIESTA (Sleep of Inpatients: Empower Staff to Act) for Acute Stroke Rehabilitation	221	93.865	AWD100824 (SUB00000246)//1R01HD097786-01A1	36,367	—
Constraint induced movement therapy for walking in individuals post stroke	165	93.865	CC# 81388 CL4442//1R01HD082216	7,763	—
Application of Targeted Reinnervation for People with Transradial Amputation	165	93.865	CC#81930 CL4098//5R01HD081525-05	6,145	—
Improve dynamic lateral balance of humans with SCI	165	93.865	CL5253//1R01HD083314	8,381	—
Psychosocial Intervention, Maternal Inflammation, and Birth Outcomes: Centering vs Routine Prenatal Care (PIINC)	151	93.865	EH17-256-S2-1//5R01HD092446-02	62,988	—
Remediating Academic and Non-Academic Skills Deficit among Disadvantaged Youth	221	93.865	FP053700-3//P01HD076816	45,402	—
Maternal, Infant, and Child Health Outcomes of Sexual Minority Women: An Opportunity for Improving Health Equity	269	93.865	NW10048964//1R01HD0914505-01-2	19,388	—
Novel Pediatric Neurocognitive Screening Using Central Auditory Tests	56	93.865	R1064JLM//5R01HD095277-03	156,391	—
Long-term effects of zika virus infection on sound processing in the brain	56	93.865	R1297//1R21DC017603-01A1	41,202	—
High-performance, low-cost, passive prosthetic knees optimized to replicate physiological gait in multiple mobility scenarios	125	93.865	S4256-PO176307//5R03HD092676-02	—	—
Rural African American Young Adults' Pathways to Psychosocial and Physical Health	229	93.865	SUB00000358//2R01HD030588-24 Amnd 4	(12,917)	—
Origin of Chronic Diseases of Aging Among Rural African Young Adults	229	93.865	SUB00001828//1R01HD091046-01A1	76,696	—
Developmental, Contextual, and Psychosocial Predictors of Weathering and Health among Rural African Americans in their Fourth Decade of Life	229	93.865	SUB00002073//2R01HD030588-25 (Increment)	46,359	—
Study of Ovarian Aging and Reserve in Young Women (SOAR)	245	93.865	SUBK00009462//5R01HD088638-03	5,813	—

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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Department of Health and Human Services (continued):					
Pediatric HIV/AIDS Cohort Study (PHACS) Coordinating Center (CC) (U01)	204	93.865	TUL-HSC-556640-18/19/5U01HD052104-14	\$ —	—
Pediatric HIV/AIDS Cohort Study (PHACS) Coordinating Center (CC) (U01)	204	93.865	TUL-HSC-557540-19/20/5U01HD052104-15	16,412	—
Pediatric HIV/AIDS Cohort Study (PHACS): Understanding Maternal HIV Disease through Pregnancy and the Postpartum Period and its Role in Child Health Outcomes	204	93.865	TUL-HSC-557541-19/20/5U01HD052104-15	22,965	—
				<u>15,466,771</u>	<u>3,188,798</u>
Integrative Pathways to Health and Illness	272	93.866	0000000102//1U19AG051426-01A1	41,206	—
Integrative Pathways to Health and Illness	272	93.866	000000784//5U19AG051426-05	8,089	—
Regulation of tau expression in Alzheimer's disease and aging	95	93.866	0255-1551-4609/5R01AG054008-05	227,596	—
Statin Neuroprotection & Cognitive Dysfunction after Carotid Endarterectomy: Safety, Feasibility & Outcomes	49	93.866	10(GG011968-01)/5R01AG050819-02	991	—
Long-term Outcomes of Knee OA in the OAI Cohort	219	93.866	10477sc // 5R01AG050469-04	13,484	—
Structural characterization of Aβ strain variation in AD mouse models	259	93.866	110365091/5R01AG061865-03	402,971	—
The Subclinical Vascular Contributions to Alzheimer's Disease: The Multi-Ethnic Study of Atherosclerosis (MESA) Multisite Study of AD	282	93.866	111-720-551083/5R01AG058969-02	330,335	—
Frailty and Functional Status in Older Liver Transplant Patients	219	93.866	11172sc/3K23AG048337-05S1	6,152	—
Predicting post-transplant mortality and global functional health based on pre-transplant functional status in liver transplantation	219	93.866	11739sc/5R01AG059183-02	20,000	—
Application of Economics and Social Psychology to Improve Opioid Prescribing Safety (AESOPS)	259	93.866	124931788 // 4R33AG057395-03	82,795	—
Chicago Asian Resource Center for Minority Aging Research (RCMAR)	173	93.866	1268/5P30AG059304-02	29,373	—
Gene Therapy for Alzheimer's Disease	89	93.866	153271.5106938.0002/5R21AG059157-02	103,373	—
A Dynamic Environmental Exposure Approach to Study Behaviors in Mid-Life	232	93.866	17784-00//1R01AG062180-01A1	14,049	—
Quantifying age-related changes in shoulder muscle coordination in healthy adults		93.866	1F31AG057137-01A1	35,096	—
Aging, immunosenescence and glioblastoma		93.866	1K02AG68617-01	13,694	—
The Claude D. Pepper Older Americans Independence Center (OAIC) at Northwestern University		93.866	1P30AG059988-01A1	11,922	—
Clinical, Neuroanatomic, and Pathologic Signatures of FTLD-tau in Dementia Phenotypes		93.866	1R01AG062566-01A1	132,080	—
Defining native proteoform landscape for amyloid-beta in Alzheimer's disease		93.866	1R01AG063903-01	708,933	—
Boston Early Adversity and Mortality Study (BEAMS): Linking administrative data to long-term longitudinal studies		93.866	1R01AG064006-01	270,474	39,168
Cognitive SuperAging: A model to explore resilience and resistance to aging and Alzheimer's disease		93.866	1R01AG067781-01	39,733	—
Exploring the modulation of synaptic/extrasynaptic NMDAR balance as a novel therapeutic strategy in Alzheimer's disease and other neurodegenerations		93.866	1R01AG69266-01	8,874	—
Effects of a Dedicated Nurse Liaison Intervention for Geriatric Patients in the Emergency Department		93.866	1R03AG050945-01A1	(1,423)	—
Optimal Older Donor and Recipient Matching to Enhance Liver Transplant Outcomes		93.866	1R21AG049385-02	—	—
Hepatocyte growth factor to Improve Functioning in PAD: the HI-PAD Study		93.866	1R21AG056903-01	20,575	8,156
APelin, EXercise, and mobility in Peripheral Artery Disease, the APEX-PAD Study		93.866	1R21AG065705-01	22,016	—
Optimization of small molecule SERCA2b activators to inhibit neuron loss in Alzheimer's disease	143	93.866	1R41AG062001-01	17,004	—
Point-of-Care Wearable Pressure and Temperature Sensor System for Therapeutic Compression Garments and Venous Leg Ulcers	285	93.866	1R43AG059445-01	24,504	—
Sporadic Alzheimer's Disease modeled with diabetes and high cholesterol in rabbit		93.866	1R56AG050492-01A1	11,522	—
Sirtuins: novel determinants and therapeutic target in systemic sclerosis		93.866	1R56AG054207-01	—	—
An Epidemiologic Study of Disparities in Sleep and Cognition in Older Adults (DISCO)		93.866	1R56AG059291-01	11,138	—
Cell non-autonomous regulation of proteostasis in aging and longevity		93.866	1R56AG059579-01 REVISED	130,891	—
Mitochondrial Stress Response in FUS proteinopathy and related dementia		93.866	1R56AG061327-01A1 REVISED	76,164	—
LOAD risk genes in postsynaptic endosomal trafficking		93.866	1R56AG063433-01	(11,365)	—
RNA binding protein networks in tau pathogenesis		93.866	1R56AG063934-01	269,049	—
Regulation of Peripheral Proteostasis		93.866	1RF1AG057296-01	348,613	—
Molecular and cellular mechanisms of the UNC5C netrin receptor in Alzheimer's disease pathogenesis		93.866	1RF1AG057727-01A1 REVISED	490,096	—
Sex Differences in Central Stress Response and Alzheimer's Disease Neuropathology		93.866	1RF1AG057884-01	449,372	—
Preclinical development of a novel small molecule inhibitor of Alzheimer's disease-related cognitive impairment		93.866	1U01AG066722-01	182,306	—
Cell-specific genomic features of Alzheimer's disease progression (Supplement)	62	93.866	2833397//3RF1AG054474-01S1	63,082	—
Disordered Proteostasis as a Driver of Disease in the Aging Lung		93.866	2P01AG049665-06S1	428,715	—
BACE1 as a Therapeutic Target for Alzheimer's Disease		93.866	2R01AG022560-16	340,762	—
Exceptional Cognitive Aging: Neuropsychologic, Anatomic and Pathologic Correlates		93.866	2R56AG045571-06	426,252	11,006
Synaptic substrates of age-dependent memory deficits		93.866	2RF1AG017139-15	566,499	233,955
First-in-human SAD & MAD trials for MW151, a novel Alzheimer's disease drug candidate that attenuates proinflammatory cytokine dysregulation	236	93.866	3200002345-19-178//5R01AG061898-02	270,234	—
Genetic Epidemiology of Caffeine and Cognitive Decline		93.866	3K01AG053477-05S1	103,152	—
LitCog IV: Health Literacy and Cognitive Function Among Older Adults		93.866	3R01AG030611-13S1	342,716	—
Exceptional Cognitive Aging: Neuropsychologic, Anatomic and Pathologic Correlates		93.866	3R01AG045571-05S1 REVISED	181	—
Sustaining quality of life of the aged: Heart transplant or mechanical support?		93.866	3R01AG047416-05S1	570,492	359,428
Role of BMP Signaling in the Aging Brain		93.866	3R01AG054429-04S1	402,813	—
An Epidemiologic Study of Disparities in Sleep and Cognition in Older Adults (DISCO)		93.866	3R01AG059291-02S1	586,721	—
MRI of Left Atrial Hemodynamic Disorders in Atrial Fibrillation		93.866	3R21AG055954-02S1	114,762	—
ARMADA: Advancing Reliable Measurement in Alzheimer's Disease and cognitive Aging.		93.866	3U2CAG057441-03S1	2,085,934	1,196,249
The Mobile Toolbox for Monitoring Cognitive Function		93.866	3U2CAG060426-02S1	2,577,839	1,307,062
Aging, Emotion Regulation, and Stress	58	93.866	501436SG169//1R21AG059938-01A1	9,913	—
Life Course Process of Alzheimer's Disease: Sex Difference and Biosocial Mechanisms	251	93.866	5113263//5R01AG057800-03	60,664	—

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Department of Health and Human Services (continued):					
High-throughput multi-modal analysis of natural variation in C. elegans healthspan	255	93.866	572177 // 1R21AG053638-01A1	\$ 36,212	—
Connectomic Imaging in Familial and Sporadic Frontotemporal Degeneration	255	93.866	577121//SU01AG052943-04	103,728	—
CARDIA Year 35 Brain MRI Renewal	255	93.866	578134//1R01AG062819-01A1	8,989	—
Modeling Ovarian Aging Phenotype in Mechanically Tuned 3D Matrices (NIH NRSA Predoc Fellowship for Emma Gargus, BS.)		93.866	5F30AG058387-03	35,701	—
NRSA in support of Wesley Peng: Regulation of neuronal calcium transfer between mitochondria and lysosomes in health and neurodegeneration.		93.866	5F30AG066333-02	40,444	—
Identification of Heterogeneity within the High-Cost Patient Population: A Growth Mixture Modeling Approach (NIH NRSA Predoc Fellowship for Charlotte E. Ward, MPH.)		93.866	5F31AG055235-02 REVISED	13,234	—
Functional Properties of the Lateral Entorhinal Cortex in Learning and Aging		93.866	5F31AG055331-03 REVISED	11,802	—
F31 for Aneesha Nilakantan in Support of: Age-related Impairments of Recollection Precision: Neural Mechanisms and Modulation via Network-targeted Brain Stimulation		93.866	5F31AG057109-02 REVISED	(1,645)	—
NRSA F31 for Timothy John Hark in support of: Determining and Characterizing Substrates of Protein Degradation Impairments in Models of Alzheimer's Disease		93.866	5F31AG059364-02	43,868	—
Estradiol reduces mitochondrial oxidant stress in SNc DA neurons		93.866	5F32AG058396-03	65,522	—
Alterations of Sleep and Circadian Timing in Aging		93.866	5P01AG011412-21	2,160,710	588,076
Disordered Proteostasis as a Driver of Disease in the Aging Lung		93.866	5P01AG049665-04	1,828,683	488,598
Proteostasis in Aging and Neurodegenerative Disease		93.866	5P01AG054407-03S1	2,892,359	2,270,507
Alzheimer's Disease Core Center		93.866	5P30AG013854-25	2,617,312	—
Personality and Well-being Trajectories in Adulthood		93.866	5R01AG018436-20	300,130	50,847
BACE1 as a Therapeutic Target for Alzheimer's Disease		93.866	5R01AG022560-15	(576)	—
Molecular Neuropathology and Mechanisms of BACE1 Elevation in Alzheimer's Disease		93.866	5R01AG030142-10	122,127	—
LitCog III: Health Literacy and Cognitive Function among Older Adults		93.866	5R01AG030611-12	504,882	74,021
A Universal Medication Schedule to Promote Adherence to Complex Drug Regimens		93.866	5R01AG046352-05	349,428	86,880
Noninvasive Stimulation to Improve Hippocampal-Dependent Memory in Older Adults		93.866	5R01AG049002-06	503,395	—
Stellate Ganglion Blockade for the Management of Vasomotor Symptoms		93.866	5R01AG049924-03	620,009	196,134
PREDICT-AD/FTD: Multimodal Imaging Prediction of AD/FTD and Differential Diagnosis		93.866	5R01AG055121-04	711,350	137,312
Communication Bridge: A person-centered internet-based intervention for individuals with primary progressive aphasia		93.866	5R01AG055425-04	912,697	127,515
Determinants of neurodegenerative decline in the aphasic variant of Alzheimer's disease		93.866	5R01AG056258-08	476,048	5,625
INTERmittent pneumatic ComprESSION for Disability rEversal in PAD: the INTERCEDE Trial		93.866	5R01AG057693-03	589,151	58,264
LEAF 2.0: Randomized trial of a technology-based positive emotion intervention for informal caregivers of individuals with Alzheimer's disease		93.866	5R01AG058613-03	672,312	257,667
Decision Making and Implementation of Aging-in-Place/Long Term Care Plans among Older Adults		93.866	5R01AG058777-02	558,176	—
The Effect of High Intensity Walking on Frailty		93.866	5R01AG060162-02 REVISED	63,318	—
Lifecourse determinants and outcomes of epigenetic age acceleration across two generations		93.866	5R01AG061006-02	128,350	—
Novel Protein Aggregation Inhibitors and Upper Motor Neuron Stabilizers for ALS and other Neurodegenerative Diseases		93.866	5R01AG061708-02	704,128	—
The role of activity induced exosome signaling in synaptic pathology of Alzheimer's Disease		93.866	5R01AG061787-02	640,795	—
Molecular Mechanisms Underlying Behavioral and Psychological Symptoms in Alzheimers Disease		93.866	5R01AG062249-03	420,160	—
Bioenergetic Mechanisms Underlying Circadian Dietary Intervention		93.866	5R01AG065988-02	415,762	—
Personality and Non-Cognitive Factors in the Prediction and Moderation of Risk of Dementia Progression and Physical Health		93.866	5R01AG067622-02	206,045	—
The Effect of Home Heating Prices on the Mortality and Morbidity of Older Americans		93.866	5R03AG058113-02	81,363	—
COCOA to improve walking performance in Peripheral Artery Disease: the COCOA-PAD Study		93.866	5R21AG050897-02 REVISED	(389)	—
Behavioral Economics Applications to Geriatrics Leveraging EHRs (BEAGLE)		93.866	5R21AG057383-02	77,405	48,963
Physiological role of naturally occurring amyloid beta oligomers		93.866	5R21AG060203-02	163,071	—
Epigenetic regulation of the Klotho / Miz 1 axis in smoking-induced emphysema.		93.866	5R21AG060211-02	115,101	16,209
A test of the calcium hypothesis of Alzheimers disease		93.866	5R21AG060267-02	163,607	—
Highly Functional Organic Core Templated High-Density Lipoproteins to Reverse Vascular Disease		93.866	5R21AG062999-02	255,581	—
Unacylated Ghrelin to Improve FuncTioning in PAD: the GIFT Trial		93.866	5R21AG063076-02	159,415	4,798
Behavioral Economics Applications to Geriatrics Leveraging EHRs (BEAGLE)		93.866	5R33AG057383-04	458,873	—
Slow Outward Currents and Learning In Aging Hippocampus		93.866	5R37AG008796-28	443,771	—
C. elegans Model for Neurodegenerative Diseases of Aging		93.866	5R37AG026647-15	331,984	—
Predoctoral and postdoctoral training program in aging and dementia		93.866	5T32AG020506-19	453,762	63,770
Developing a Longitudinal Resource for Genetic Research in Behavioral and Health Sciences	272	93.866	636K694//4R01AG041868-04	—	—
Alzheimer's Disease Cooperative Study – A4	259	93.866	75689162//U19AG010483-25R	4,193	—
Early Onset AD Consortium – the LEAD Study (LEADS)	102	93.866	7861_NW//SU01AG057195-03	66,910	—
Alzheimer's Disease Neuroimaging Initiative (ADNI3)	259	93.866	79634993//WEI2015-01/2U19AG02490411	50,740	—
Long-Term Nicotine Treatment of Mild Cognitive Impairment	259	93.866	81622655//6R01AG047992-02	18,297	—
The role of personality in cognitive aging and dementia	193	93.866	83945/2//1152237//1R01AG06093301	26,201	—
Application of Economics & Social Psychology to Improve Opioid Prescribing Safety (AESOPS) Trial	259	93.866	96347693//5R21AG057395-02	2,196	—
Reducing High-Risk Geriatric Polypharmacy via EHR Nudges	164	93.866	9920180010//R21AG057396	732	—
Functional Limitations and Disability Among Middle-Aged Adults	62	93.866	A033130//1R01AG062502-01A1	4,612	—
Preparation for End-of-Life Decision Making in Mild Alzheimer's Disease	69	93.866	A184863//5R01AG057714-04	13,829	—
Royal Translational Research Center to Promote Context-Specific Caregiving of Community-Dwelling Persons Living with Alzheimer's Diseases or Related Disorders: FTD Tele-Savvy: Adapting and Testing an Evidence-based Psychoeducation Program for Caregivers	69	93.866	A261128//1P30AG064200-01	20,079	—



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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Department of Health and Human Services (continued):					
First-in-human study of MW151, a novel drug targeting neuroinflammation	101	93.866	Agmt 10/31/18//4R44AG060846-02	\$ 35,590	—
A wearable acoustomechanic sensor system for quantifying social interactions of patients with dementia	285	93.866	Agmt 3/15/19 // 1R43AG060812-01	53,978	—
A Therapeutic Wearable Sensor for Dysphagia	186	93.866	Awrd 4/18/2019//1R41AG062023-01	188,936	—
Cardiovascular and HIV/AIDS Effects on Brain Structure/Function and Cognition	256	93.866	CNVA00050794(128001-6)//5R01AG0348529-10	79,978	—
Early Onset Alzheimer's Disease Consortium	102	93.866	IN4683234NWUCS//1R56AG057195-01	12,600	—
Collaborative Care for the Older Injured Patient: A Trauma Medical Home	102	93.866	IN4688176NW//5R01AG0542493-03	30,808	—
Escitalopram for Agitation in Alzheimer Disease	114	93.866	JHU 07/19/19//5R01AG052510-03	18,648	—
ARTFL LEFFTDS Longitudinal Frontotemporal Lobar Degeneration (ALLFTD)	128	93.866	NOR-263134/PO #67115772// 1U19AG063911-01	16,188	—
Optimization of small molecule SERCA2b activators to inhibit neuron loss in Alzheimer's disease	143	93.866	NW-0820//2R42AG062001-02A1	889	—
The Effect of High Intensity Walking on Frailty	45	93.866	R01AG060162/AGMT 12/17/2020	12,870	—
SAGE LEAF: Reducing Burden in Alzheimer's Disease Caregivers through Positive Emotion Regulation and Virtual Support	27	93.866	R43AG065080-SB1	83,878	—
Tailored Non-Pharmacotherapy Services for Chronic Pain: Testing Scalable and Pragmatic Approaches	116	93.866	RNG210311-BUDG01-NU-00//1UG3AG067493-01	44,737	—
Production and quality analysis of clinical drug for a novel CNS protein kinase inhibitor therapeutic candidate	144	93.866	STTR//4R42AG062095	241,358	—
Nicotinamide riboside as an Enhancer of Exercise Therapy in hypertensive older adults: The NEET Trial.	228	93.866	SUB00002057//R21AG064282	2,636	—
Testing Tele-Savvy, an On-Line Psychoeducation Program for Informal Alzheimer's Caregivers	69	93.866	T882454//5R01AG054079-04	10,148	—
The ENRGISE Study	228	93.866	UFDSP00011851//U01AG050499	(13,570)	—
National Alzheimer's Coordinating Center	271	93.866	UWSC7728//3U01AG016976-20SA	140,410	—
High dimensional mediation analysis for DNA methylation markers mediating cardiovascular health metrics and cardiovascular diseases	283	93.866	WU-19-384-MOD-1//5R21AG063370-02	28,549	—
Lifecourse CVD Risk and Midlife Cognitive Trajectories and Brain Aging: Implications for Alzheimer's and Dementia Prevention	149	93.866	YAF2194-04//5R01AG063887-02	10,324	—
				<u>36,155,306</u>	<u>7,630,210</u>
Surgical IIH Treatment Trial					
Novel circuit mapping strategies to reverse engineer the retina	95	93.867	0255-3312-4605/5U10EY025990-02	3,155	—
Mechanisms of neurovascular coupling in the retina and their dysfunction in diabetes		93.867	1DP2EY026770-01	7,147	—
GABAergic Retinal Ganglion Cells in the Mammalian Retina		93.867	1F30EY031565-01	12,852	—
The role of beta2-adrenergic receptor and interleukin-6 signaling in macrophage-driven choroidal neovascularization		93.867	1F31EY030360-01 REVISED	21,673	—
Functional consequences of heterotypic retinal ganglion cell coupling		93.867	1K08EY030923-01	130,991	—
Exploring the angiogenesis-to-fibrosis transition in ischemic retinopathies		93.867	1R01EY031329-01	125,389	—
Non-canonical GABAergic Pathways in the Visual System		93.867	1R01EY30121-01A1	187,667	—
Synapses as Independent Computational Units in the Excitatory Pathways of the Retina		93.867	1R01EY30565-01A1	12,123	—
Long-term Follow-up of Patients Who Participated in the Multicenter Uveitis Steroid Treatment Trial (MUST Trial Follow-up Study)	114	93.867	1R01EY31029-01	378,711	—
Clinical optical coherence tomography for retinal metabolic imaging	156	93.867	2003214618//U10EY014660	26,746	—
Multidisciplinary Visual Sciences Training Program		93.867	2R44EY026466-001//2R44EY026466-02	—	—
Oxygen delivery and metabolism in diabetic retinopathy using visible-light optical coherence tomography		93.867	2T32EY025202-06 REVISED	41,984	—
F31 in support of Sam Cooler-Functional specialization by asymmetric receptive fields in the retina		93.867	5F30EY026472-05	36,167	—
Functional Divergence at the Mouse Type 6 Bipolar Cell Terminal		93.867	5F31EY029593-03	44,049	—
Intrinsic electrical properties shape feature selectivity in a novel retinal ganglion cell		93.867	5F31EY030344-02	43,449	—
Function of Basal Synapses at Mammalian Photoreceptors		93.867	5F31EY030737-02	48,048	—
The Role of MicroRNAs in Corneal Epithelial Homeostasis		93.867	5R01EY012141-23	591,610	—
The Role of MicroRNAs in Corneal Epithelial Homeostasis		93.867	5R01EY019463-08	(17,388)	—
The Mechanical Basis of Primary Open Angle Glaucoma		93.867	5R01EY019463-11	633,440	—
Neural Mechanisms of Fixation Choice While Searching Natural Scenes		93.867	5R01EY019696-10	726,712	538,989
Role of Host Cell Factors in Herpes Simplex Virus (HSV) Keratitis		93.867	5R01EY021579-07	382,255	85,632
Activation of the Angiopoietin-Tie2 Pathway to Treat Ocular Hypertension and Glaucoma		93.867	5R01EY023977-04	130,866	—
Investigating oxygen metabolism in diabetic retinopathy		93.867	5R01EY025799-04	714,108	129,101
Mechanisms underlying the formation of the cornea and ocular surface epithelium		93.867	5R01EY026078-05	438,764	200,480
The Roles of Autophagy in Limbal/Corneal Epithelia		93.867	5R01EY028304-03	319,807	—
Investigating nanoscale neuronal damages in early glaucoma towards clinical optical detection		93.867	5R01EY028560-03	312,116	—
Spatially resolved measurements of retinal metabolism		93.867	5R01EY029121-03	473,816	259,414
Cell types and functional circuitry in the mouse retina		93.867	5R01EY029306-02	207,061	—
A clinically applicable model of retinal oxygen metabolism		93.867	5R01EY030169-02	391,718	—
Ultra-fast Scalable OCT Systems based on a New Photon Detector		93.867	5R21EY027502-02 REVISED	26,727	—
Multidisciplinary Visual Sciences Training Program		93.867	5R21EY029516-02	182,593	—
Diabetic Retinopathy Clinical Research Network 2019-2023 Master Agreement	112	93.867	5T32EY025202-05 REVISED	111,006	—
DRCR Retina Network Chair Emeritus - Diabetic Retinopathy Clinical Research Network	112	93.867	Agmt 10.24.2019//2UG1EY014231-18	20,982	—
Microvasculature in Colon Field Carcinogenesis: Clinical-Biological Implications	24	93.867	Agmt 12/3/19	124,514	—
Data-Driven Biomechanical Simulation of Eye Movement and Strabismus	80	93.867	BMC ID 6610-01//R01CA224911-02	227,489	—
ER stress and diabetic retinopathy	192	93.867	E2048123//1R01EY029715-01	31,485	—
Macular Edema Treatment Trials Associated with MUST (META-MUST)	114	93.867	R1217228//2R01EY01994911	32,601	—
Ca2+ channels in retinal photoreceptors	234	93.867	Sub#2002749092//5U10EY024527-04	232	—
			W000941480//R01EY026817-01A1	99,206	—
				<u>7,281,831</u>	<u>1,213,616</u>

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Department of Health and Human Services (continued):					
Modeling the Incompleteness and Biases of Health Data		93.879	1R01LM13337-01	\$ 25,705	—
Bayesian Generative Methods for Extracting and Modeling Relations in EHR Narratives		93.879	1R21LM012618-02	47,992	—
Network Models for Metabolomics	240	93.879	21-015788-A 00/1R01LM013444-01	6,657	—
Health For All: Advancing Library-Academic Medical Center Partnerships to Navigate Wellness and Scale Preventive Services Access		93.879	3G08LM013188-02S1	75,746	—
Improving Physician Adoption of Pharmacogenomic Clinical Decision Support via Implementation Science Methodologies		93.879	5F31LM012492-02	463	—
Enhancing clinical trials participation through library partnerships		93.879	5G08LM012688-03	98,055	—
Informatics Platform for Mammalian Gene Regulation at Isoform-level		93.879	5R01LM011297-08 revised	212,013	—
Multidimensional Computer Adaptive Testing for Patient Reported Outcomes		93.879	5R01LM011962-04	(13,914)	—
Multidimensional Computer Adaptive Testing for Patient Reported Outcomes		93.879	5R01LM011962-04	7,096	7,096
Implementing and Evaluating a Machine Learning Tool for Entity Resolution in Drug Use and Sexual Contact Networks of YMSM		93.879	5R21LM012578-02	91,131	—
A FAIR Public Repository for Experimentally Verified Proteoforms		93.879	5R21LM013097-02	178,765	31,624
Predoctoral Training Program in Biomedical Data Driven Discovery (BD3)		93.879	5T32LM012203-05 REVISED	331,183	—
				1,060,892	38,720
Diabetic Retinopathy Clinical Research Network					
	112	93.988	Agmt 12/13/12 // U10 EY14231	38,291	—
Fogarty Global Health Training Fellowship Program					
	89	93.989	116559-5101817/5D43TW010543-04	127,842	—
Northwestern/Nigeria Research Training Program in HIV and Malignancies (NN-HAM)		93.989	2D43TW009575-07	178,525	68,343
Multidisciplinary NeuroAIDS Research Training to Improve HIV Outcomes in Nigeria		93.989	2D43TW009608-06	(267)	(267)
Expanded Multidisciplinary NeuroAIDS Research Training to Improve HIV Outcomes in Nigeria		93.989	5D43TW009608-08	314,888	126,233
HIV and Mycobacterial Disease in Mali		93.989	5D43TW010350-05	315,287	173,189
Building capacity for patient-centered outcomes research to improve the quality and impact of HIV care in Tanzania		93.989	5D43TW010946-02	183,150	53,085
University of Ibadan MEPI Junior Faculty Research Training Program (UI-MEPI-J)	231	93.989	7/225/29/NU-02/D43TW010140-02	66,102	—
Building Research And Innovation in Nigeria's Science – (BRAINS)	237	93.989	SP0031902-60041063/5D43TW010134-05	68,865	—
Support of Training and Mentoring in Nigeria for Academics (STAMINA)	235	93.989	UJ-STAMINA-NW04//D43TW010130-04	75,116	—
				1,329,508	420,583
A randomized, double-blind, placebo-controlled study of 4-hydroxytamoxifen topical gel in women with mammographically dense breasts -fixed pricing					
	267	93.RD	00004887/HHSN261201200034I-T011	—	—
A randomized, double-blind, placebo-controlled study of 4-hydroxytamoxifen topical gel in women with mammographically dense breasts					
	267	93.RD	00004892/HHSN261201200034I-03	37,081	—
Folic Acid and Zinc Supplementation Trial (FAZST)	269	93.RD	10026957-03/HHSN27520100007C	(74,106)	—
Top Down Proteomics of KRas Proteoforms	118	93.RD	17X183 // HHSN261200800001E	658	—
Identifying factors that determine the productivity of biomedical researchers	179	93.RD	18382-705-1//HHSN263201800176U	146,113	—
Pharmacokinetics and Safety of Commonly Used Drugs in Lactating Women and Breastfed Infants	62	93.RD	2335518/HHSN275201000003I	25,756	—
Skin Cancer Research Training	286	93.RD	6632.01-S07//GS00F009DA	30,000	—
Multi-Ethnic Study of Atherosclerosis – Field Center		93.RD	75N92020F00001-75N92020D00004	420,406	—
NIH Infant and Toddler Toolbox		93.RD	75N94019D000005	955,370	21,492
Examining neural correlates of stimulus-stimulus associations using fMRI and MVPA		93.RD	75N95019P000038	4,462	—
IPA for Michael Bass		93.RD	Agmt 10/8/19	7,561	—
AMD Ryan Initiative Study (ARIS) LONGITUDINAL STUDY OF EARLY AMD AND RETICULAR PSEUDODRUSEN	68	93.RD	Agmt 4/23/19//HHSN263201700001C	17,276	—
A real-time, cost-effective, accurate UV measurement and prevention system to reduce skin cancer incidence in consumers.	285	93.RD	AGMT 4/24/19//R44CA224658	224,538	—
COVID-19: High Collection-volume Nasal Swab and Patient App for Self-testing	141	93.RD	COVID-19: Delivery Order C-3967	9,525	—
Protocol Number: IRC-005 A Randomized Double-Blind, Phase 3 Study Comparing the Efficacy and Safety of High-Titer versus Low-Titer Anti-Influenza Immune Plasma for the Treatment of Severe Influenza A	185	93.RD	CRB-SSS-S-15-004659//HHSN2612008000	20,809	—
Cancer Prevention Agent Development Program: Early Phase Clinical Research		93.RD	HHSN261201200035I/75N91019F00130	516,536	—
Cancer Prevention Agent Development Program: Early Phase Clinical Research		93.RD	HHSN261201200035I/HHSN26100014	988,164	671,545
SurvivorConcierge: Extending Cancer Survivorship Care Beyond the Clinic Using a Smartphone-enabled Monitoring, Navigation and Tailored Intervention Program	279	93.RD	HHSN261201500013C	149,903	—
Depressive symptom presentation and course, cardiovascular events and mortality in the Coronary Artery Risk Development in Young Adults (CARDIA) Study					
		93.RD	HHSN268201800003I	162,329	—
CARDIA Task Area B – Cohort Limited Exam (Year 35)		93.RD	HHSN268201800003I 75N92020F00001	118,342	—
Coronary Artery Risk Development in Young Adults (CARDIA) Study – Chicago Field Center		93.RD	HHSN268201800003I-P0002	622,529	8,662
"NIH Toolbox" Design Consulting for Research Domain Criteria Field Test Battery		93.RD	HHSN2712018000720P	48,820	—
Protocol Implementation	234	93.RD	HHSN2722013-15-0045 Task B	22,661	—
Phase II Multi-Center, Prospective, Randomized, Double-Blind Study of Nitazoxanide in Acute and Chronic Norovirus in Hematopoietic Stem Cell and Solid Organ Transplant Recipients					
		93.RD	HHSN272201600016C	582,588	327,341
Structural Genomics Centers for Infectious Diseases		93.RD	HHSN272201700060C-12	5,093,835	3,698,570
COVID-19: Structural Genomics Centers for Infectious Diseases		93.RD	COVID-19: HHSN272201700060C-12	490,386	310,591
Asthma Cohort Support Contract		93.RD	HHSN275201300013C	110,993	—
Ambient Air Pollution Exposure During Pregnancy and Longitudinal Fetal Growth	68	93.RD	HHSN275201800006I TO No 75N94019F00125	2,658	—
I-PARTS Integrated Platform for Anti-Cancer Radiation Therapeutics Screening. Utilization of Engineered Single cell arrays and traditional Clonogenic assays.	159	93.RD	75N91019C00043	8,041	—

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Department of Health and Human Services (continued):					
Kinetics and distribution of purified IgG or 2 mcAbs at molecular level	204	93.RD	TUL-HSC-558729-20/21 // HHSN272201700033I	\$ 30,501	—
Cognitive Assessment and Monitoring Platform For Integrative REsearch (CAMPFIRE II)	37	93.RD	SC1725901//HHSN261201800047C/75N91018C00047	51,593	—
Multi-Ethnic Study of Atherosclerosis (MESA) – Task Area 3	271	93.RD	UWSC11311//HHSN268201500003I	142,658	—
Multi-Ethnic Study of Atherosclerosis (MESA) Chicago Field Center Subcontract	271	93.RD	UWSC8539//HHSN268201500003I	1,404	—
Office of Minority Health:					
Clinical Trials Awareness Modules for the Lupus Conversations Academic-Community Partnership		93.137	5CPIMP181168-02-02	303,912	139,143
Office of the Assistant Secretary for Health:					
Re-Entry Community Linkages (RE-LINK)		93.137	5 CPIMP161134-05-00	378,723	—
Office of the Director, National Institutes of Health:					
ECHO Consortium on Perinatal Programming of Neurodevelopment	95	93.310	0255-2298-4609//5UH3OD023337-05	8,324	—
ECHO PRO Research Resource: A Developmentally based Measurement Science Framework for Assessing Environmental Exposure and Child Health		93.310	1U24OD023319-01 REVISED	398,839	219,381
Illinois Precision Medicine Consortium (IPMC)		93.310	1UG3OD023189-01 REVISED	(3,810)	(3,810)
Infrastructure: Illinois Precision Medicine Consortium (IPMC)		93.310	3OT2OD026557-01S2	10,424,298	6,609,112
ECHO PRO Research Resource: A Developmentally based Measurement Science Framework for Assessing Environmental Exposure and Child Health		93.310	3U24OD023319-03S1	3,277,164	451,169
Biochemical Basis of Chromatin Folding and Chromosome Condensation		93.310	5DP5OD024587-04	353,080	—
The role of steady state broadly neutralizing antibody tissue levels in preventing distal site SHIV replication		93.310	5K01OD024882-03 REVISED	29,558	15,395
TOP2A effects on transcription in gliomas: implications for personalized therapy		93.310	7DP5OD021356-05	146,791	—
Lifecourse Approach to Developmental Repercussions of Environmental Agents on Metabolic and Respiratory health (LA DREAMERS)	259	93.310	94743768//UG3OD023287	(3,642)	—
Environmental Contributors to Child Health Originating from the National Fetal Growth Study (ECCHO-NFGS)	132	93.310	A00-2818-S006//5UG3OD023316-02 REVISED	18,278	—
Precision Medicine Initiative Cohort Program Coordinating Center (U2C)	277	93.310	VUMC60724//5U2COD023196-02 REVISED	51,185	—
Data and Research Support Center Linkage Pilot	277	93.310	VUMC65034//5U2COD023196-02	14,617	—
				<u>14,714,682</u>	<u>7,291,247</u>
PAGES (Progressing through the Ages: Global Climate Change, Evolution, and Societal Well-being)					
5-laser 30-parameter FACSymphony-S6 SORP Cell Sorter from BD Biosciences	233	93.351	076638-15799//5R25GM129196-05	58,424	—
CardioExcyte 96 System for Pharmacology Research at Northwestern University		93.351	1S10OD026814-01	904,075	—
Acquisition of a K2 Camera for Soft Matter Transmission Electron Microscopy		93.351	1S10OD026871-01A1	161,599	—
Acquisition of Amersham Typhoon 5 Variable-mode Imager		93.351	1S10OD026871-01	660,879	—
Understanding the mechanism(s) of systemic antibody delivery, distribution, and localization to mucosal sites in the in vivo macaque model		93.351	1S10OD026963-01	135,781	—
Animal Models for SCN2A Neurodevelopmental Disorders		93.351	3K01OD026571-03S1	310,434	168,575
Tandem Genetically Encoded Voltage and Calcium Indicator Mice for Optical Physiology of Excitable Cells		93.351	5R21OD025330-02	104,691	—
			5R21OD025345-02 REVISED	112,374	—
				<u>2,448,257</u>	<u>168,575</u>
Science Club Summer Camp: Training Teachers and Youth in Authentic STEM Practice		93.859	5R25GM129223-05	155,403	56,566
Data and Research Support Center: Precision Medicine Initiative Cohort Program Coordinating Center (U2C)	277	93.910	VUMC60724//U2COD023196	100,990	—
Department of Health and Human Services Total				<u>403,320,385</u>	<u>65,134,789</u>
Department of Homeland Security:					
Value-focused Robust Optimization for Disaster Response	15	97.061	ASUB00000364//17STQAC00001-03-00	83,762	—
Chalcogenide semiconductors for g-ray detection from earth abundant elements		97.077	14DNARI00006-05-00	(10,468)	—
Federal Emergency Management Agency:					
Coastal Probabilistic Hazard Analysis	251	97.RD	515357//HSHQDC16-A-B0011	27,466	—
Department of Homeland Security Total				<u>100,760</u>	<u>—</u>
Department of Housing and Urban Development					
Department Juvenile Reentry Assistance Program (JRAP)	41	14.897	CONTRACT NO. 11841	(2,197)	—
Department of Housing and Urban Development Total				<u>(2,197)</u>	<u>—</u>
Department of Justice:					
National Institute of Justice:					
Firearm Involvement in Delinquent Youth and Collateral Consequences in Young Adulthood: A Prospective Longitudinal Study		16.560	2016-R2-CX-0039	(79,132)	—
Firearm involvement of parents and their adolescent children: A prospective intergenerational study of high-risk youth		16.560	2017-IJ-CX-0019	375,415	—
Delinquent and Criminal Behaviors of Parents and Their Adolescent Children: A Prospective Intergenerational Study of Children of Former Juvenile Offenders		16.560	2020-MU-MU-0001	10,963	—
Improving Employment & Reducing Recidivism Among Prison Offenders via Virtual Reality Job Interview Training	245	16.560	SUBK00009850//2019-MU-MU-0004	4,896	—
				<u>312,142</u>	<u>—</u>

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Department of Justice (Continued):					
Office of Justice Programs:					
Field-generated Innovations to address elder abuse, neglect and financial exploitation		16.582	2017-VF-GX-K136	\$ 62,680	34,318
Department of Justice Total				374,622	34,318
Department of State:					
Innovative Approaches to Evaluating Citizen-Led Rule of Law Initiatives in Ukraine		19.345	SLMAQM19GR2131	142,797	—
Benjamin A. Gilman International Scholarship Program – Public Health Career Readiness Seminar	104	19.RD	3000187992//SECAGD19CA0099	1,984	—
U.S. Educational Partnerships	14	19.RD	Agmt 9/26/2017//S-IS400-16-GR-0042	(3,633)	—
Department of State Total				141,148	—
Department of the Interior:					
United States Geological Survey:					
Probabilistic Seismic Hazard Map testing in Nepal: A cooperative agreement between the USGS and Northwestern University		15.808	G19AC00104	4,376	—
Department of the Interior Total				4,376	—
Department of Transportation:					
Federal Highway Administration:					
Quantitative and Qualitative Methods for Capturing the Impacts and Value of NCHRP Research	199	20.RD	M1902630//NAS 165 Task Order #15 HR 20-44(009)//DT	68,383	—
Estimation of Travel Time Distributions Along User-Defined Travel Paths	119	20.RD	P010198023 NO. R4 // DTFH6116D00030	47,984	—
Developing Analysis, Modeling, and Simulation (AMS) Tools for Connected and Automated Vehicle (CAV) Applications	119	20.RD	P010198023 NO. R5 // DTFH6116D00030	25,300	—
Fundamentals of Travel Time Reliability Guide	119	20.RD	P010198023 R1 // DTFH6116D00030	3,331	—
Development of an Analysis/Modeling/Simulation (AMS) Framework for V2I and CV Environment	119	20.RD	P010198023 R2 // DTFH6116D00030	(32)	—
Implementation of Analysis, Modeling and Simulation Tools for Road Weather Connected Vehicle Applications	119	20.RD	P010203492 Mod 3//DTFH6116D00053	89,038	—
Role of Calibration in Quantitative Alternatives Analysis	119	20.RD	P010203492 R1 // DTFH6116D00053	(164)	—
Integrated Modeling for Road Condition Prediction (IMRCP) Phase 3	119	20.RD	P010203492//D5FH6116D00053	—	—
Department of Transportation Total				233,840	—
Department of Veterans Affairs:					
Clinical Impact of Respiratory-Swallow Training on Refractory Dysphagia in OP HNC Funding					
Edward Hines, Jr. VA Hospital:		64.RD	36C24E18C0051	640	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Jennifer Kahn	64.018		IPA Agmt Signed 05/31/2017 (578/151)	3,629	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Geoffrey Brown	64.018		IPA Agmt Signed 08/16/19 (578/151)	25,659	—
IPA Agreement for Kwang-Youn A. Kim: Maneuverability Enhancement Following Spinal Cord Injury	64.018		IPA AGMT. Signed 08/01/19 (578/151)	8,210	—
				37,498	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Mark Hongchul Sohn	64.RD		IPA AGMT. Signed 01/07/2020 (578/164)	52,830	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Brittany Nicole Krekeler	64.RD		IPA AGMT. Signed 02/11/2020 (578/151)	20,880	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Lutfiyya NaQiyba Muhammad, Sponsored by Dr. Bonnie Harris	64.RD		IPA AGMT. Signed 02/25/20	9,668	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Jungwha (Julia) Lee, Sponsored by Dr. Bonnie Martin-Harris	64.RD		IPA AGMT. Signed 02/25/2020 (578/151)	4,184	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Tara Cornwell	64.RD		IPA AGMT. Signed 04/09/2020	10,530	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Jennifer Kahn	64.RD		IPA AGMT. Signed 04/20/20 (RES 176)	2,248	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Elizabeth Bisch Platt	64.RD		IPA AGMT. Signed 05/15/20 (578/151)	5,301	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Alexis Renee Demonbreun	64.RD		IPA Agmt. Signed 09/11/2020 (578/151)	9,949	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Tara Cornwell	64.RD		IPA AGMT. Signed 09/26/2019	8,003	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Wendy Ochs	64.RD		IPA AGMT. Signed 10/22/19 (578/151)	17,734	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Abigail Barbara Day	64.RD		IPA AGMT. Signed 11/07/19 (578/151)	4,903	—
IPA For Todd Parrish: Neural Target Identification for Functional Disability Associated with Alcohol Related Characteristics Among Veterans with Co-occurring AUD+mTBI	64.RD		IPA AGMT. Signed 12/23/2019 (578/151)	8,113	—
Jesse Brown VA Medical Center:					
Intergovernmental Personnel Act (IPA) Assignment Agreement for Mengjia Kang	64.018		Agmt 8/10/20	16,941	—
IPA for Ziyun Lu	64.018		Agmt 8/10/20	55,447	—
Intergovernmental Personnel Act (IPA) Assignment Agreement in Support of Weiqi Huang	64.018		IPA Agmt 5/11/2020	64,109	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Michael Cavanaugh	64.018		IPA Agmt Signed 01/25/18	(35)	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Paul Cheresesh	64.018		IPA AGMT Signed 09/22/2019	74,297	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Saul Soberanes	64.018		IPA Agmt Signed 10/23/19	68,943	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for David Z. Ivancic	64.018		IPA Agmt Signed 7/27/19 (YR4)	54,051	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Shantel Olivares: Molecular Mechanisms of Nonalcoholic Fatty Liver Disease	64.018		IPA Agmt Signed 8/10/2020	63,330	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Meagan Shallcross	64.018		IPA Agmt. Signed 07/18/2019 (YR2)	22,199	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Ewa Kosciuczuk (537/151)	64.018		IPA Agmt. Signed 07/29/19 (YR2)	14,292	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Hao Wang	64.018		IPA AGMT. Signed 09/05/18	38,017	—

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Department of Veterans Affairs (continued):					
VA IPA for Thao Pham FY19		64.018	IPA Agmt. Signed 09/18/19 (YR2)	\$ 33,536	—
VA IPA for Christina Spaulding		64.018	IPA AGMT. Signed 09/18/2019	65,936	—
Leigh Ann Fall – Intergovernmental Personnel Act (IPA) Assignment Agreement		64.018	IPA Agmt. Signed 09/18/2019 (FY19-20)	64,681	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Linda India		64.018	IPA AGMT. Signed 10/15/18	(33)	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Yanni Yu		64.018	IPA Agmt. Signed 10/16/2019 (FY19-20)	72,222	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Elisa J. Gordon (NU Supervisor: David Brentrem)		64.018	IPA Agmt. Signed 11/08/18	6,627	—
				<u>714,560</u>	<u>—</u>
Intergovernmental Personnel Act (IPA) Assignment Agreement for Stefania Fatone, Sponsored by Dr. Steven Gard		64.RD	537/151 Agmt. 8/07/2020	4,834	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Yaqi Zhang (FY2019-20)		64.RD	Agmt 8/7/20	42,690	—
Ryan Caldwell FY20 IPA		64.RD	Award 04/07/2020	293	—
Julie Johnson VA IPA: David Brentrem		64.RD	IPA AGMT Signed 02/07/20	17,852	—
Intergovernmental Personnel Act (IPA) Assignment Agreement in support of Bin Liu		64.RD	IPA Agmt. Signed 01/10/2020	89,480	—
VA IPA FY20 for Elspeth Beauchamp		64.RD	IPA AGMT. Signed 09/18/2019	65,314	—
Michael Cavanaugh IPA FY20		64.RD	IPA AGMT. Signed 11/06/19	5,187	—
Intergovernmental Personnel Act (IPA) Assignment Agreement in support of Jianghong Wang		64.RD	IPA AGMT. Signed 11/19/2019	36,115	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Yinu Wang (FY2019-20)		64.RD	IPA AGMT. Signed 12/17/2019	58,800	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Linda India (FY2019-20)		64.RD	IPA AGMT. Signed 8/07/2020	3,465	—
VA Connecticut Healthcare System:					
IPA Agreement for Lori Post: Tracking Guns Among Veterans		64.018	IPA AGMT. Signed 08/26/2019	24,777	—
VA Sierra Pacific Network:					
Intergovernmental Personnel Act (IPA) Assignment Agreement for Benjamin Schalet		64.018	IPA Agmt. Signed 04/28/20 (YR3)	33,717	—
				<u>1,289,565</u>	<u>—</u>
Department of Veterans Affairs Total					
Environmental Protection Agency:					
The Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air): Next Stage	271	66.509	UWSC10113//838300001-0	79,985	—
Assessing land use change around biorefineries attributable to biofuels and the RFS2		66.RD	68HE0M19P0042	49,228	—
				<u>129,213</u>	<u>—</u>
Environmental Protection Agency Total					
National Aeronautics and Space Administration:					
A simulation pipeline for the study of kilonovae light curves and r-process nucleosynthesis in compact binary mergers	250	43.001	18042-02//80NSSC18K0565	55,379	—
Evolution of hydrogen in the inner solar system: volatile abundances and isotopic compositions in CAIs and chondrules from primitive carbonaceous chondrites	33	43.001	3-10829-1255-01//80NSSC18K604	53,859	—
The Balloon-Borne Large Aperture Telescope for Polarization – BLASTPol	255	43.001	573659 // 80NSSC18K0481-04	110,397	—
Probing Plasma Properties in Supernova Remnants observed by XMM-Newton	161	43.001	5841-NU-NASA-F03G/NNX15AF03G	947	—
Life Underground	259	43.001	65904754 Amd. 4 // NNA13AA92A	(11)	—
Biosignature Preservation in Sulfate-Dominated Hypersaline Environments	82	43.001	AWD7774162-GR206675//80NSSC20K0849	722	—
Biologic and Resource Analog Investigations in Low Light Environments (BRAILLE)	23	43.001	BMS5A-006 // 80NSSC17M0054	80,150	—
Continued X-Ray Monitoring of GW170817 with Chandra	184	43.001	DD7-18095X // NAS8-03060	22,245	—
Continued X-Ray Monitoring of GW170817 with Chandra	184	43.001	DD7-18096A // NAS8-03060	(1,354)	—
Continued Chandra Observations of GW170817	184	43.001	DD8-19100X//NAS8-03060	6,643	—
Chandra Observations of Extreme Mass Loss from the Progenitors of Luminous Type IIn SNe	184	43.001	G07-18045A	1,244	—
The Late-time X-ray Behavior of Short Gamma-ray Bursts: Implications for Energetics and Rates	184	43.001	G08-19025X //NAS8-03060	33,331	—
Source of Energy and pre-explosion progenitor evolution of Super-luminous Supernovae	184	43.001	G08-19047A//NAS8-03060	10,843	—
X-ray Observations of Rapid, Luminous and Blue Stellar Explosions	184	43.001	G09-20054A//NAS8-03060	3,213	—
Late-time X-rays to map the Zoo of Engine-driven Stellar Explosions	184	43.001	G09-20056X//NAS8-03060	1,715	—
Late-time Monitoring of GW170817 across the Electromagnetic Spectrum	184	43.001	G09-20058A//NAS8-03060	20,105	—
Continued Chandra-NuSTAR Monitoring of the Unprecedented Metamorphosis of SN2014C at t>1500 days since Explosion	184	43.001	G09-20060A//NAS8-03060	16,572	—
Revisiting the Mysterious X-ray Excess of SGRB 130603B	184	43.001	G00-21041X//NAS803060	17,738	—
Source of Energy and pre-explosion progenitor evolution of Super-luminous Supernovae	184	43.001	G07-18046A//NAS8-03060	—	—
Mapping extreme mass loss from evolved massive stars with coordinated Chandra-NuSTAR observations	184	43.001	G07-18054A // NAS8-03060	8,251	—
Late-time X-rays to map the Zoo of Engine-driven Stellar Explosions	184	43.001	G07-18057X // NAS8-03060	8,118	—
Late-time X-rays to map the Zoo of Engine-driven Stellar Explosions	184	43.001	G08-19044X // NAS8-03060	2,812	—
Continued NuSTAR Monitoring of the Unprecedented Metamorphosis of SN2014 at T>1000 Days since Explosion	31	43.001	RSA No. 1609661	6,026	—
Biosignature Preservation in Sulfate-Dominated Hypersaline Environments	125	43.001	S4664 – PO 248450//80NSSC18K1088	42,330	—
				<u>501,275</u>	<u>—</u>
Project FUSION: Facilitating Unified Systems of Interdependent Organizational Networks					
Multiple Undergraduate Research Projects	233	43.008	SUB00001667//80NSSC18K0511	132,579	—
Multiple Undergraduate Research Projects	233	43.008	099286-17921//80NSSC20M0046	38,500	—
Multiple Undergraduate Research Projects	233	43.008	2015-05200-09(078131-15789)-AB425//NNX154AI05H	42,384	—
				<u>80,884</u>	<u>—</u>

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National Aeronautics and Space Administration (continued):					
Controllable Combustion of Metal Fuels for Space Power Systems	264	43.012	2261204SOA//80NSSC20K0293	\$ 74,924	—
Air-Carbon Boundary Layer Chemistry for Hypersonic Ablation	138	43.012	G201-19-W7671//80NSSC19K0220	31,396	—
				<u>106,320</u>	<u>—</u>
Preparation and Characterization of Sn- and Sb-based Zintl Phases as Promising Thermoelectric Materials	31	43.RD	1536068-006//NNN12AA01C	45,502	—
G.O. Program to Characterize Magnetic Fields in Nearby Interstellar Clouds	31	43.RD	1563904//NNN12AA01C	—	—
Enhanced Real Time Distributed Strain and Temperature Monitoring for Rocket Ground Testing	106	43.RD	2019-T13.01// 80NSSC19C0356	29,067	—
Design and fabrication of strain-balanced low dark current short-wavelength infrared photodetectors based on type-II superlattices with optical response from 0.4 to 2.5um	152	43.RD	80NSSC18C0170	165,009	—
Compact and Highly Sensitive Multi-Axes Gyroscope using Large Momentum Transfer Point Source Atom Interferometry	60	43.RD	80NSSC19C0440	29,941	—
Plug and Play: Utilizing MOFs in Preexisting Carbon Dioxide Removal Assemblies for Enhanced Performance, Smaller Footprint, and Lower Energy Consumption	154	43.RD	Agmt 2/6/19//80NSSC18P2140	291	—
Metallicity and Azimuthal Angle Diagnostics of Inflows and Outflows: Interpreting HST Measurements of Circum-Galactic Gas Flows	188	43.RD	HST-AR-14293.001-A//NASS-26555	3,256	—
Combining Statistical Samples of Resolved-ISM Simulated Galaxies with Realistic Mock Observations to Fully Interpret HST and JWST Surveys	188	43.RD	HST-AR-14562.001-A//NASS-26555	9,957	—
Probing CO-dark Gas within the Planck Galactic Cold Clumps	188	43.RD	HST-GO- 15104.001-A//NASS-26555	34,948	—
VLA & HST Monitoring of Sgr A* in July 2019 with Spitzer and Chandra	188	43.RD	HST-GO- 15667.001-A//NASS-26555-01	20,704	—
A Legacy Imaging Survey of M33	188	43.RD	HST-GO-14610.029-A//NASS- 26555	9,336	—
Tracing Galactic Outflows to the Source: Spatially Resolved Feedback in M83 with COS	188	43.RD	HST-GO-14681.011-A//NASS-26555	37,476	—
Late-time monitoring of GW170817 across the electromagnetic spectrum	188	43.RD	HST-GO-15606.001-A//NASS-26555	17,369	—
UV Diagnostics as Barometers for Galactic Scale AGN Outflows	188	43.RD	HST-GO-15935.020-A-03	50,810	—
Late-time Observations of Calcium-Rich Transient SN 2019ehk	188	43.RD	HST-GO-16075.004-A//NASS-26555	2,067	—
Quantifying the Diversity of Relativistic Transients with Radio Observations	188	43.RD	HST-HF2-51403.001-A Amend 2//NASS-26555	115,458	—
Determining the Morphology of IRAS 08740-4243 for Calibration of BLAST	207	43.RD	NNA17BF53C/SOF 07-0195	7,000	—
Magnetic Field Structure in Perseus at 0.01 pc Scale	207	43.RD	SOF-06-0099-Santos//NNA17BF53C	16,500	—
A Tomography of the Magnetic Field Structure in IRDC G14.2: Massive Filaments from Large to Small Scales	207	43.RD	SOF-06-0183-Santos//NNA17BF53C	10,050	—
Joint HAWC+ALMA study of magnetic fields in Ophiuchus	207	43.RD	SOFIA 05-0133 01 // NAS2-97001	11,932	—
Joint HAWC+ALMA Study of Young Protostars in Ophiuchus	207	43.RD	SOFIA Grant 06-0116//NNA17BF53C	54,000	17,088
NASA Ames Research Center:					
Effects of Spaceflight on Gastrointestinal Microbiota in Mice: Mechanisms and Impact on Multi-System Physiology		43.007	NNX15AL05G 000015	204,004	16,920
NASA George C. Marshall Space Flight Center:					
The Columnar to Equiaxed Transition and Dendrite Fragmentation		43.003	NNX17AD48G-000006	138,683	—
Microstructure Evolution in Freeze-Cast Materials		43.007	80NSSC18K0196 P00006	86,741	—
NASA Goddard Space Flight Center:					
Energy and Geometry of Jet-driven Explosions in the Local Universe		43.001	80NSSC17K0052	(3,000)	—
The Strontium Isotope Composition of Neoproterozoic Carbonates: Implications for the Carbon Cycle and the Evolution of the Biosphere		43.001	80NSSC17K0245 P00003	104,812	—
Late-time X-ray Behavior of Short Gamma-Ray Bursts: Implications for Energetics and Rates		43.001	80NSSC18K0189	38,514	—
Late-time X-rays to map the Zoo of Engine-driven Stellar Explosions		43.001	80NSSC18K0379	42,717	—
The Physics, Observational Signatures, and Consequences of AGN-Driven Galactic Winds		43.001	80NSSC18K1096 P00003	140,233	—
Biofilms in the Deep Subsurface: Implications for Planetary Habitability		43.001	80NSSC18K1267	31,021	—
Supernova Remnant Observations and Dark Matter Searches with Micro-X		43.001	80NSSC18K1445-P00002	31,731	—
Mapping Extreme Mass Loss from Massive Stars with FERMI and the VLA		43.001	80NSSC18K1732	(3,762)	—
Tools for Modeling Selection Biases and for Advanced Astrophysical Interpretation of LISA Observations		43.001	80NSSC19K0323-P00001	65,931	—
X-ray Observations of Rapid, Luminous and Blue Stellar Explosions		43.001	80NSSC19K0384	15,743	—
Detailed mapping of extreme mass loss with coordinated NuSTAR-XMM Observations		43.001	80NSSC19K0646	35,219	—
Detailed mapping of extreme mass loss with coordinated NUSTAR-XMM Observations		43.001	80NSSC19K1119	64,943	—
Source of Energy and pre-explosion progenitor evolution of Super-luminous SNe		43.001	80NSSC19K1310	35,333	—
Exploring and Investigating the Physics of Time-Domain Multi-Messenger Astronomy across the Electromagnetic Spectrum & Beyond (FINESST 2019 A Hajela)		43.001	80NSSC19K1422-P00001	40,228	—
Habitability and Observational Prospects of Rocky Exoplanets Evaluated with 3D Chemistry-Climate Models		43.001	80NSSC19K1523	41,177	—
Mapping Extreme Mass Loss from Massive Stars with Fermi and the VLA		43.001	80NSSC19K1715	23,595	—
Neutrinos and Gamma-rays From Magnetic Reconnection in Blazars		43.001	80NSSC20K0213	58,990	—
XMM-NuSTAR Observations of Rapid, Luminous and Blue Stellar Explosions		43.001	80NSSC20K0247	8,051	—
Dark Matter Searches with the Micro-X Rocket		43.001	80NSSC20K0450	223,538	—
Disentangling Kepler's Planetary Systems		43.001	NNX14AD21G 000005 (573)	—	—
Lipid Biomarkers of the Deep Subsurface Biosphere		43.001	NNX15AM08G 000002	7,051	—
Correcting and Coating Thin Walled X-ray Optics via a Combination of Controlled Film Deposition and Magnetic Smart Materials		43.001	NNX17AE10G-000001	—	—
				<u>1,001,492</u>	<u>—</u>

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National Aeronautics and Space Administration (continued):					
Convective Effects on Solid/Liquid Interface Dynamics in the Freeze-Casting Process		43.008	NNX16AI78A	\$ 3,628	30
Efficient and Scalable Fabrication of Solid Oxide Fuel Cells via 3D-Printing		43.012	80NSSC17K0192-P00005	60,988	—
Compact Robust Integrated PPM Laser Transceiver Chip Set with High Sensitivity, Efficiency, and Re-Configurability		43.012	NNX16AE02G 000003	6,331	3,450
				<u>67,319</u>	<u>3,450</u>
NASA Lyndon B. Johnson Space Center:					
A US-Russian Collaborative Proposal for Data Collection in HERA: The Relationship between Composition, Interpersonal Relations, and Team Effectiveness in Space Crews	58	43.002	501237SG138 // NNX16AQ48G	14,506	—
SCALE: Shared Cognitive Architectures for Long-term Exploration		43.003	80NSSC18K0221-P00008	175,958	80,835
Team Task Switching in Astronaut Crews on the International Space Station: Integrating Multiteam Membership, Multiteam Systems, multi-tasking, & Multidimensional Networks to Monitor & Enable Functional Work Shifts in Astronaut Crews		43.003	80NSSC18K0276-P00008	148,797	—
CREWS: Crew Recommender for Effective Work in Space		43.003	NNX15AM32G-000017	124,595	19,303
Team Task Switching in Astronaut Crews on the International Space Station: Integrating Multiteam Membership, Multiteam Systems, Multitasking, & Multidimensional Networks to Monitor & Enable Functional Work Shifts in Astronaut Crews	83	43.003	RF890-G1 // NNX15AK73G	—	—
SCALE: Shared Cognitive Architectures for Long-term Exploration	83	43.003	RG026-G1 // NNX15AM26G	—	—
				<u>449,350</u>	<u>100,138</u>
National Aeronautics and Space Administration Total					
				<u>3,457,454</u>	<u>137,626</u>
National Foundation of the Arts and Humanities:					
Institute of Museum and Library Services:					
Getting to know their data doubles: An inquiry into student perceptions of privacy issues associated with academic library participation in learning analytics	102	45.312	IN-4370124-NU // LG-96-18-0044-18	10,990	—
National Endowment for the Arts:					
Public Perceptions of Artists in Communities: Phase II Research		45.024	1809942-38-18	22,060	—
National Endowment for the Humanities:					
Metal Soap Protrusions on Georgia O'Keeffe's Paintings: Establishing a New Quantitative Imaging Paradigm for Linking Scientific Research and Preservation		45.149	PR-258900-18	102,629	—
Tools for Listening to Texts-in-Performance		45.169	HAA-258799-18	—	—
				<u>135,679</u>	<u>—</u>
National Science Foundation:					
CBET-EPSCRC A Game-Changing Approach for Tunable Membrane Development: Novel Covalent Organic Framework Active Layers Supported by Solvent Resistant Materials	233	47.041	087147-16468-01/CBET-1706219	2,878	—
EFRI C3 SoRo: An integrated approach towards computational design, fabrication and understanding of bio-hybrid soft architectures capable of adaptive behavior	233	47.041	093088-175159/EFMA-1830881	103,270	—
Engineering Research Center for Innovative and Strategic Transformation of Alkane Resources – CISTAR	163	47.041	10001437-044 Amd 2//1647722-EEC	508,368	—
SNM: Customized Inkjet Printing of Graphene-Based Real-time Water Sensors	273	47.041	1727846//183405339/AAC5754	17,658	—
SNM: Collaborative Research: 3D Nanomanufacturing by Imprint and Strain Engineering (3D NISE)	114	47.041	2003142248 Amd 3 // 1635443	43,708	—
EAGER ISN: Unraveling illicit supply chains with a citizen science approach	253	47.041	203496NU//CMMI-1842369	33,556	—
PFI-RP: Bioresorbable Integrated Photonic Sensing Platform for Brain Implant	261	47.041	261006670061// IIP-1827693	45,529	—
DMREF: Collaborative Research: A Data-Centric Approach for Accelerating the Design of Future Nanostructured Polymers and Composites Systems	62	47.041	333-2389//1818574	41,250	—
RAISE-EQUIP: Single-Chip, Wall-Plug Photon Pair Source and CMOS Quantum Systems on Chip	25	47.041	4500003241//ECCS-1842692	61,668	—
EFRI C3 SoRo: Strong Soft Robots—Multiscale Burrowing & Inverse Design	246	47.041	A007037602 // EFMA-1830950	12,832	—
Scalable Integration of Graphene-Enhanced Coatings for High-Energy Lithium-Ion Battery Cathodes	280	47.041	Award 08/14/19//IIP-1913417	69,445	—
A novel wound dressing for infection control and tissue regeneration	93	47.041	Award 10/4/2019//IIP-1660301	51,877	—
Neuroprotective Engineering Based on Innate Responses to Stroke		47.041	CBET-1403036	38,824	—
Collaborative Research: Elucidation and Evaluation of Strategies to Mitigate Secondary Reactions in Cellulose Pyrolysis for Enhanced Production of Hydrolysable Anhydrosugars		47.041	CBET-1435228	—	—
CAREER: Engineering Non-Growth Metabolism for High-Yield Biochemical Production		47.041	CBET-1452549-003	79,739	—
CAREER: Rational design of a biomimetic nanomaterial library to probe mechanisms behind virus-induced immunopathology		47.041	CBET-1453576	46,654	—
UNS: Controlling mixing and segregation of granular media using unsteady flows		47.041	CBET-1511450	65,472	—
SusChEM: Integrated Materials and Process Systems Development for Sustainable Carbon Capture		47.041	CBET-1604890	97,546	—
NRI: Task-Based Assistance for Software-Enabled Biomedical Devices		47.041	CBET-1637764	156,179	—
CAREER: Prediction of multiscale emergent dynamics in decentralized cell populations		47.041	CBET-1653315	1,351	—
Collaborative Research: Electrorotational fluid instabilities		47.041	CBET-1704996	73,857	—
Engineering a secretion-based, high-titer protein production process in bacteria		47.041	CBET-1706125	63,180	—
Spectroscopic photon localization microscopy for super-resolution molecular imaging		47.041	CBET-1706642 001	54,954	—
GOAL: Advanced biomanufacturing with inducible feedback promoters		47.041	CBET-1803747	120,556	—
Investigating the impact of tumor heterogeneity on sustained low dosage immunotherapy via a peritumoral immunotheranostic hydrogel		47.041	CBET-1806007	104,308	—
From the Nuclear Pore Complex to Smart Artificial Nanochannels		47.041	CBET-1833214	61,261	—
GOAL: Charge Interactions in Transport of Mixed Solutes in Nanofiltration Membranes		47.041	CBET-1840816	82,461	—

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National Science Foundation (continued):					
RoL: EAGER: DESYN-C3 Moving information across synthetic membranes via engineered sensors	47.041		CBET-1844219	\$ 51,029	—
RoL: RAISE: DESYN-C3: A platform for Modular Pseudo-Organelles for Compartmentalization and Control of Pseudo-Cell Processes	47.041		CBET-1844336	138,784	—
Convergence: RAISE: Systems Approaches for Vulnerability Evaluation and Urban Resilience (SAVEUR)	47.041		CBET-1848683	286,693	78,399
Kokes Awards for the 26th North American Catalysis Society Meeting	47.041		CBET-1907565	34,570	—
Collaborative Research: Towards a Generalized Microkinetic Description of Lignin Liquefaction	47.041		CBET-1926412	1,549	—
GOAL: Flow driven segregation at the particle level	47.041		CBET-1929265	98,558	—
Conference: Concepts for Advancing Sustainable Urban Systems (SUS) Research Networks: SUSPIRE: Sustainable Urban Systems: Predictive, Interconnected, Resilient and Evolving	47.041		CBET-1929942	273	—
Collaborative Research: Cell-free glycoprotein synthesis technology for point-of-care vaccine biomanufacturing	47.041		CBET-1936789	18,989	—
Structural Health Monitoring of Biofilms for Sustainable Reactive Nitrogen Management	47.041		CBET-1937290	6,513	—
Elucidating and Computing Metabolic Networks for Co-Valorization of Cellulose and Lignin Derivatives	47.041		CBET-2022854	36,730	—
Collaborative Research: Innovation in Sustainable Mass Timber Building Systems	47.041		CMMI 1762757	132,065	—
LEAP-HI: Catalyzing Resilient Urban Infrastructure Systems: Integrating the Natural and Built Environments	47.041		CMMI 1854827	196,963	76,364
CAREER: Mechanics of Geomaterials Exposed to Multi-Physical Perturbations: Innovating Science, Training and Education through Fundamental Principles	47.041		CMMI-1351534-005	1,401	—
GOAL/Collaborative Research: Reliable Prediction of Endurance Life of Ultra-High-Strength Aerospace Rolling-Element Bearings	47.041		CMMI-1434834	(94)	—
Functionalities Emerging in Adaptive Brain Networks through Selective Synchronization of Neurons by Targeted Feedback	47.041		CMMI-1435358	(767)	—
Monolithic Nanofabrication: A Bottom-up Approach for Manufacturing Nanotextured Surfaces	47.041		CMMI-1462633 001	23,342	—
Design and exploration of high-temperature steels for electric power generation applications	47.041		CMMI-1462850	34,109	—
Electric Field Guided Micro Additive Manufacturing Process	47.041		CMMI-1463411	37,949	—
Processing of Advanced Foam Scaffolds for Iron-Air Battery Applications	47.041		CMMI-1562941 001	7,926	—
Magnetically Controlled- Laser Induced Plasma Micro-Machining (MC-LIPMM)	47.041		CMMI-1563244	110,741	—
Green Simulation: A Methodology for Reusing the Output of Past Computer Simulation Experiments	47.041		CMMI-1634982	108,834	—
CPS: Synergy: An Integrated Simulation and Process Control Platform for Distributed Manufacturing Process Chains	47.041		CMMI-1646592-002	249,506	—
Stability and Optimality Properties of Sequential Action Control for Nonlinear and Hybrid Systems	47.041		CMMI-1662233	87,384	—
Collaborative Research: Concurrent Design of Quasi-Random Nanostructured Material Systems (NMS) and Nanofabrication Processes using Spectral Density Function	47.041		CMMI-1662435	67,691	—
On-demand Generation of Diamond-like-carbon Layers for Efficient Lubrication of Mechanical Systems	47.041		CMMI-1662806	112,993	—
Exploiting Network Structure in Routing Problems: Applications to School Bus Routing	47.041		CMMI-1727744-002	125,028	—
Collaborative Research: Quantitative Analysis of Liposome Deformation at Nanoscale Using Resistive Pulse Sensing in Solid State Nanopores	47.041		CMMI-1740011	19,149	—
Unlocking Efficiencies in Earthmoving for Future Infrastructure: Modeling Plowing and Cutting Processes in Soils	47.041		CMMI-1742849	(402)	—
RAPID: Addressing Geographic Disparities in the National Organ Transplant Network	47.041		CMMI-1743886	(161)	—
Electromechanical Properties and Deformation of Biomembranes	47.041		CMMI-1748049	33,322	—
Data-driven multiscale damage and failure prediction	47.041		CMMI-1762035-001	205,489	—
Equitable and Efficient Scarce Resource Allocation using Stochastic Fractional Optimization	47.041		CMMI-1763035	36,251	—
Collaborative Research: GOAL: Modeling and optimizing patient-flow dynamics in hospitals and hospital networks	47.041		CMMI-1763100	118,387	—
Decision-Flow Queueing Networks for Analysis of Knowledge-Based Service Operations Systems	47.041		CMMI-1826353	179,202	—
Strong and Multifunctional Geopolymer Composites: A Multi-Scale Study	47.041		CMMI-1829101	77,885	6,292
Collaborative Research: RAPID: Spatial variability of small-strain stiffness, Go, and effects on ground movements related to geotechnical construction	47.041		CMMI-1841584	6,799	—
CAREER: Modeling Soil-Machine Interaction for Advances in Civil Construction and Terrestrial Robotics	47.041		CMMI-1846817	85,280	—
CAREER: Transformative mobility analysis: Mixed Methods framework	47.041		CMMI-1847537	118,847	—
Convergence: RAISE: Auto-regulatory Scaffolds for Directed Evolution of Non-living Functional Materials	47.041		CMMI-1848613	329,222	52,782
Mixed-Integer Programming Approaches for Risk-Averse Multicriteria Optimization	47.041		CMMI-1907463	—	—
Asset Allocation: A Statistical Learning Approach	47.041		CMMI-1916616	222,885	—
Multi-Scale Multi-Material Printing of 3D Bead Arrays via Self-Focused Electrohydrodynamic Jets	47.041		CMMI-1934350	98,888	—
Manipulating Nanoparticle-Modified Melt Pool Dynamics in Additive Manufacturing	47.041		CMMI-1934367	105,745	—
Collaborative Research: A Hierarchical Multidimensional Network-based Approach for Multi-Competitor Product Design	47.041		CMMI-2005661-0001	61,750	—
New Kind of Experiment and Theory to Determine the Effect of Crack-Parallel Stresses on Fracture of Concrete and Similar Materials	47.041		CMMI-2029641	1,784	—
EAGER: Investigating the Hinge Mechanics of the Spike Protein to Understand the Coronavirus Infection Mechanism	47.041		CMMI-2034584	32,707	—
COVID-19: RAPID: Collaborative Research: Data Analytics for Mechano-acoustic and Physiological Monitoring of COVID19 Symptoms	47.041		COVID-19: ECCS-2031495	30,217	—
NNCI: Soft and Hybrid Nanotechnology Experimental (SHyNE) Resource	47.041		ECCS-1542205	1,145,078	405,891
Diffraction-grating coupled surface emitting Terahertz quantum cascade laser source for high power, room temperature continuous wave operation	47.041		ECCS-1607838	(12)	—
Exploring local confinement of ultrafast light to enable nondestructive acoustic metrology at the nanoscale	47.041		ECCS-1611356	5,312	—
EAGER: MOCVD Growth of beta-(Al,In,Ga)2O3 for Transistor Applications	47.041		ECCS-1748339	(1,375)	—
NCS-FO: How Ecology Induces Cognition: Paleontology, Machine Learning, and Neuroscience	47.041		ECCS-1835389	255,292	—
CPS: Medium: Information based Control of Cyber-Physical Systems operating in uncertain environments	47.041		ECCS-1837515	142,599	—
Anti-ferromagnetic Electric-field-controlled Memory Devices	47.041		ECCS-1853879	40,840	—
NSF-BSF: CCSS: Resistance Tomography with 2D Sensor Membranes	47.041		ECCS-1912694	98,079	—
SNM: Robust Scalable Nanomanufacturing of Photonic Structures	47.041		EEC-1530734	255,948	14,600
REU SITE: RESEARCH EXPERIENCE FOR UNDERGRADUATES IN NANOSCALE SCIENCE AND ENGINEERING PROPOSAL	47.041		EEC-1757618	20,719	—
Planning Grant: Engineering Research Center for Accelerated Catalytic Design and Characterization (ACDC)	47.041		EEC-1840619	29,901	—



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National Science Foundation (continued):					
Planning Grant: Engineering Research Center for Democratizing Manufacturing Accessibility for Designers (DEMAND)		47.041	EEC-1840621	\$ 21,630	—
EFRI CEE: Macrogenomic engineering via modulation of chromatin nanoenvironment		47.041	EFMA-1830961	335,588	42,384
EFRI-CEE: Epigenetic Cell Reprogramming In Situ: A Novel Tool for Regenerative Engineering		47.041	EFMA-1830968	568,403	—
EFRI 2-DARE: Scalable Growth and Fabrication of Anti-Ambipolar Heterojunction Devices		47.041	EFRI-1433510	59,444	12,430
EFRI CEE: Epigenomic Regulation Over Multiple Length Scales: Understanding Chromatin Modifications Through Label Free Imaging and Multi-Scale Modeling	221	47.041	FP068540-01-PR// EFMA-1830969	226,374	—
Magnetic microrollers as a platform for active transport	146	47.041	IB00177512 – F0276-01 // CBET-1706562	55,324	—
PFI:BiC – Smart CROWdsourced Urban Delivery (CROUD) System		47.041	IIP-1534138	107,201	1,400
Partnership for development of high-performance magnetic memory technology		47.041	IIP-1919109	116,139	25,970
CAREER: Prediction of multiscale emergent dynamics in decentralized cell populations	271	47.041	UWSC12093/CBET-2025760	42,243	—
iSee: A Smart Device based Depression Behavior Monitoring and Analytics Service for College Students	137	47.041	RC106479NU//1632051	—	—
			9,295,113	9,295,113	716,512
Unveiling the Obscured Formation of Stars and Galaxies: Large-Scale Legacy Surveys with a New Three Color High Resolution Imaging Polarimeter on a 50-m Telescope	240	47.049	17-009589 D Amd. 1 // AST-1636621	32,850	—
The Center for Chemistry at the Space-Time Limit (CaSTL)	214	47.049	2014-3122 Mod 7//CHE-1414466	88,266	—
Predictive Computational Modeling of Two-Dimensional Materials: Defects and Morphologies	245	47.049	3003700315 // DMR-1509033 Amd 2	(122)	—
Center for the Chemistry of Molecularly Optimized Networks	62	47.049	333-2440// CHE-1832256	110,921	—
CCI Phase I: NSF Center for Synthesizing Coherence	62	47.049	333-2555//CHE-1925690	61,839	—
Student Observing Support Program	16	47.049	367148 // 1519126	18,739	—
Collaborative Research:Ultrafast Excited State Electron and Nuclear Coherences in Transition Metal Dimer Complexes and Their Roles in Photochemistry		47.049	47CHE-1665021	101,604	—
CCI Phase I: Center for Sustainable Separations of Metals	255	47.049	577550//1925708	43,142	—
QII – TAQS: Solid state integration of molecular qubits	155	47.049	60072764/1936219	94,050	—
U.S. CMS Operations at the LHC (High Luminosity) (HL) LHC CMS Detector Upgrade Project Trigger & DAQ: TT)	53	47.049	78877-11096-SUB0000175-01//PHY-1624356	31,168	—
U.S. CMS Upgrades for the High-Luminosity Large Hadron Collider	53	47.049	79433-20666/PHY-1946735	46,000	—
Center for Sustainable Polymers	246	47.049	A004088505 Amd. 3 // CHE-1413862	(120)	—
Center for Sustainable Polymers	246	47.049	A008060101//CHE-1901635 Amd.1	282,162	—
Center for Sustainable Polymers	246	47.049	A008060102//CHE-1901635-01	103,662	—
CAREER: Planet Formations in the Age of Kepler		47.049	AST-1352369	148,241	—
Accretion and Star Formation Induced by the Galactic Center Supermassive Black Hole Sgr A*		47.049	AST-1517246 002	24,618	—
Toward physically predictive modeling of massive black hole growth and feedback in galaxy formation		47.049	AST-1517491 002	—	—
Supernova Progenitors, Stellar Remnants, and their Binary Companions		47.049	AST-1517753	—	—
Collaborative Research: Enhancing Access to Radio Spectrum for Real-time Monitoring and Control		47.049	AST-1547328	2,472	—
CAREER: The Physics of Stellar Feedback and Star Formation Regulation in Galaxies		47.049	AST-1652522	284,044	—
Collaborative Research:CDS&E: Mining Physically Predictive Cosmological Simulations		47.049	AST-1715216	76,197	—
Black Holes in Dense Star Clusters		47.049	AST-1716762	240,269	—
REU Site: Preparing a Diverse Workforce through Interdisciplinary Astrophysics Research		47.049	AST-1577592	133,126	—
Unfolding the Dynamic and Colorful Lives of Compact Object Mergers		47.049	AST-1814782	112,408	—
Collaborative Research: Misaligned Short GRBs from Structured Jets in the Dawn of Gravitational Wave Astronomy		47.049	AST-1815304	5,811	—
WoU-MMA, Collaborative Research: Searches After Gravitational Waves Using Arizona's Observatories		47.049	AST-1909358	65,656	—
Collaborative Research: A multi-wavelength observational and theoretical study of the fastest evolving stellar explosions		47.049	AST-1909796	59,192	—
Collaborative Research: WoU-MMA: Multi-scale and multi-messenger modeling of jets in active galactic nuclei		47.049	AST-1911080	63,968	—
CAREER: Synthesis of molecular electronic-spin based qubits enabled by new empirically derived design principles		47.049	CHE-1455017	82,024	—
Organo-f-Element Chemistry: Integrated Synthetic, Mechanistic, and Catalytic and Thermochemical Studies		47.049	CHE-1464488	(18,527)	—
Molecular Plasmonics: Single Molecule and Ultrafast Surface-Enhanced Raman Spectroscopy		47.049	CHE-1506683	—	—
Nanoscale Curvature Effects on the Properties of Anisotropic Nanomaterials		47.049	CHE-1507790	(476)	—
Spin Dynamics of Photogenerated Multi-Spin Systems		47.049	CHE-1565925	(23,369)	—
Surfaces of Secondary Organic Aerosol Particles		47.049	CHE-1607640	131,993	114,357
SusChEM: Visible Light-Driven Reduction of Carbon Dioxide using Heavy Metal-Free Colloidal Quantum Dots as Sensitizers		47.049	CHE-1664184	126,009	—
New Lewis Bases for Chemical Catalysis		47.049	CHE-1665141	54,495	—
Voltage-dependent interfacial structure and properties of room temperature ionic liquids: operando X-ray studies		47.049	CHE-1665255	42,042	—
Allosterically Regulated Supramolecular Capsules and Receptors Assembled via the WLA		47.049	CHE-1709888	149,762	—
Donor-Acceptor Energy Transfer in the Presence of Photonic and Plasmonic Structures		47.049	CHE-1760537	160,957	—
Plasmon-Driven Chemistry as Revealed by Ultrafast SERS, Single Molecule SERS, and Electrochemical TERS		47.049	CHE-1807278	235,117	—
Correlative Tools for In Situ Analysis of Single Nanoparticles and their Ligands		47.049	CHE-1808502	181,885	—
Transient Physicochemical Properties of Nanomaterials		47.049	CHE-1808590	26,781	—
QLC: EAGER: Collaborative Research: Developing Experiment and Theory for Entangled Photon Spectroscopy		47.049	CHE-1836392	40,630	—
CAREER: Photocontrolled Dynamic Covalent Crosslinkers for Light-Responsive Polymer Networks		47.049	CHE-1847948	125,516	—
Synthetic, Mechanistic, and Catalytic Studies of Electrophilic d- and f-Element Complexes		47.049	CHE-1856619	78,171	—
Hyperpolarized Multi-Spin Systems as Qubits for Quantum Information Science		47.049	CHE-1900422	157,690	—
Studying the Processes of Assembly and Stimuli-Responsive Morphological Transformations in Solvated Macromolecular Nano-Assemblies		47.049	CHE-1905270	218,496	39,657
MRI: Acquisition of A Single Crystal Diffractometer With A Silver Microsource and A Detector Optimized for Silver Radiation		47.049	CHE-1920248	308,000	—

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National Science Foundation (continued):					
Collaborative Research: Isotopologue Synthesis and Use for Elucidating Important Chemical Mechanisms of Organic Condensation Reactions in Atmospheric Particles	47.049		CHE-2003359	\$ 167	—
COVID-19: RAPID: On-mask Chemical Modulation of Respiratory Droplets	47.049		COVID-19: DMR-2026944	55,364	—
COVID-19: RAPID: Hydrated Graphene Oxide Elastomeric Composites for Sterilizable and Reusable N95 Masks	47.049		COVID-19: DMR-2029058	28,201	—
COVID-19: RAPID: Regenerable Antiviral Nanoporous Materials for Protection	47.049		COVID-19: DMR-2029270	77,213	—
Ink-based additive manufacturing of high-entropy alloys from oxide and hydride powders	47.049		DMR 2004769	89	—
CAREER: Synthesis and Studies of One-Dimensional Magnets Supported by Bulky, Redox-Active Benzoquinonoid Bridging Ligands	47.049		DMR-1351959 004	(10,867)	—
Investigation of High Strain-Rate Deformation and Failure of FCC and BCC Nanostructures	47.049		DMR-1408901-003	(652)	—
CAREER: Ligand Engineering of Structure and Electronic Function in Complex Metal Oxyfluorides	47.049		DMR-1454688-005	75,670	—
Collaborative Research: High-Throughput Quantification of Solid State Electrochemistry for Next Generation Energy Technologies	47.049		DMR-1505103	77,939	—
Solution-Processed Monodisperse Nanoelectronic Heterostructures	47.049		DMR-1505849	(5,686)	—
Collaborative Research: Integrated Computational and Experimental Studies of Solid Oxide Fuel Cell Electrode Structural Evolution and Electrochemical Characteristics	47.049		DMR-1506925-002	(2,613)	—
Oxide Surfaces, From Bulk to Nanoparticles	47.049		DMR-1507101 003	104,337	—
Statics and Dynamics of Spatially and Dimensionally Constrained Oxides	47.049		DMR-1507810-001	(14,921)	—
Bioengineering Single Crystal Growth	47.049		DMR-1508399-002	(2,670)	—
Nonequilibrium States of Topological Quantum Fluids and Unconventional Superconductors	47.049		DMR-1508730-003	56,906	—
Shape and Dimensional Precision in Polymeric Nanostructures	47.049		DMR-1508731	149,564	—
Joint US-Africa Materials Advanced Studies Institute	47.049		DMR-1539724	13,997	—
Collaborative Research: Designer Glass Ceramics	47.049		DMR-1600837	70,894	—
Solid-State Oxides and Oxide-Fluorides	47.049		DMR-1608218	(13,752)	—
OP: Coherence and Energy Transfer Processes in Lattice Plasmon Lasers	47.049		DMR-1608258	15,584	—
Atomistic Studies of Concentrated Multicomponent Nickel-Based Alloys Utilizing Atom-Probe Tomography and Vacancy-Mediated Lattice Kinetic Monte Carlo Simulations	47.049		DMR-1610367 002	61,101	—
Advanced Algorithms for Colloids with Induced Many-Body Interactions	47.049		DMR-1610796-001	47,452	—
CDS&E: Organization and Dynamics of Charged Molecules in Heterogeneous Media	47.049		DMR-1611076 No. 001	765	—
Size Effect on the Evolution of Kirkendall Pores in Ti-Coated Ni Wires	47.049		DMR-1611308	58,037	—
Total Tomography of III-V Non-Planar Heterostructures	47.049		DMR-1611341	2,266	—
Interfacial ordering in aqueous solutions: X-ray scattering studies	47.049		DMR-1612876	149,614	—
DMREF: Collaborative Research: Tackling disorder and ensemble broadening in materials made of semiconductor nanostructures	47.049		DMR-1629383	16,319	—
Solid State Chemistry of Complex Chalcogenides	47.049		DMR-1708254	13,238	—
Quantum Interference and Coherence Effects on Charge Transport in Organic Semiconductors	47.049		DMR-1710104	137,760	—
Deposition, Equilibrium Structure and Mechanical Response of Polyelectrolyte Complexes	47.049		DMR-1710491	76,280	—
MRSEC: Center for Multifunctional Materials	47.049		DMR-1720139-005	2,759,834	140,795
DMREF: Collaborative Research: Synthesis, Characterization, and Modeling of Complex Amorphous Semiconductors for Future Device Applications	47.049		DMR-1729016	98,097	—
DMREF: Collaborative Research: Structure Genome of Metal-Insulator Transitions	47.049		DMR-1729303	139,527	—
DMREF: Collaborative Research: Accelerating Thermoelectric Materials Discovery via Dopability Predictions	47.049		DMR-1729487-001	30,927	—
EAGER: Bulk Nanostructured Metals from Twinned Nanowires	47.049		DMR-1747776	51,250	—
CAREER: Understanding the Role of Structure on Ionic/Electronic Properties in Polymeric Mixed Conductors	47.049		DMR-1751308-002	171,378	—
JUAMI (Joint Undertaking for Africa Materials Institute)	47.049		DMR-1756245	29,294	—
High-Pressure Synthesis of Missing Pnictide Superconductors	47.049		DMR-1801632-002	42,065	—
Collaborative Research: Predictive theory, synthesis and characterization of a new type of transparent conductor without doping	47.049		DMR-1806912	110,719	—
Materials Chemistry of Superprotonic Solid Acids	47.049		DMR-1807234	85,572	—
Nucleic Acid Nanostructures and their Cellular Transport Mechanisms	47.049		DMR-1822422	154,364	11,668
MRI: Acquisition of a Dedicated Electron Beam Lithography (eBL) System for Interdisciplinary Research, Hands-on Education and Inspiring Outreach	47.049		DMR-1828676	359,716	—
EAGER: Enabling Quantum Leap: Driven Non-Equilibrium Room Temperature Quantum States	47.049		DMR-1838507	49,310	—
Engineering New Anisotropic Superfluid Phases of <sup>3</sup> He	47.049		DMR-1903053	67,463	—
Symmetry Breaking in Non-Hermitian Plasmonic Lattices	47.049		DMR-1904385-001	155,756	—
Solid-State Oxides and Oxide-Fluorides	47.049		DMR-1904701	160,351	—
Manipulation of Hole-pinned Vortices: Classical and Quantum	47.049		DMR-1905742	77,853	—
Total Tomography of Nonplanar Heterostructures for Quantum Information Processing	47.049		DMR-1905768	126,728	—
Bioengineering Single Crystal Growth	47.049		DMR-1905982-001	102,221	—
Optical Spin Orientation and Transport in Layered Mono- and Di-chalcogenide Semiconductors	47.049		DMR-1905986	56,123	—
GOALI : "Collaborative Research: An Experimental and Theoretical Study of the Microstructural and Electrochemical Stability of Solid Oxide Cells"	47.049		DMR-1912530	52,626	—
GOALI: Investigation of Cyclic Failure in Aluminosilicate Nanocomposites	47.049		DMR-1928702	7,414	—
Unconventional Heteroanion Ceramics: 2D Layered Seleno- and Thio-Phosphates	47.049		DMR-1929356	180,727	—
Synthesis of Complex and Advanced Chalcogenide Materials	47.049		DMR-2003476	39,438	—
Quantum Coherence Effects on Charge Generation in Organic Semiconductors	47.049		DMR-2003739	2,805	—
Peptide Brush Polymers: Theory and Synthesis for Functional Design	47.049		DMR-2004899	8,251	—
Mottle Colloids with Tunable Random Walk: Individual Dynamics and Collective Behavior*	47.049		DMR-2004926	29,163	—
Structure and Function of Heteroanionic Materials	47.049		DMR-2011208	19,813	—

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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
National Science Foundation (continued):					
Analysis on Manifolds		47.049	DMS 1502632 005	\$ 467,163	—
Workshops: Homotopy Harnessing Higher Structures		47.049	DMS -1833295	1,792	—
Algorithms for Nonlinear Nonconvex Optimization under Uncertainty		47.049	DMS-1522747	1,353	—
RTG: Interdisciplinary Training in Quantitative Biological Modeling		47.049	DMS-1547394-004	419,718	—
Linear Partial Differential Equations on Singular Spaces		47.049	DMS-1600023	(912)	—
Midwest Dynamical Systems Seminar		47.049	DMS-1600654	—	—
Complex algebraic dynamics and geometry		47.049	DMS-1600718-001	—	—
Geometric Analysis on complex manifolds		47.049	DMS-1610278-002	—	—
Collaborative Research: Algorithms for Large-Scale Stochastic and Nonlinear Optimization		47.049	DMS-1620022	93,220	—
CAREER: Complexity of Disordered Systems		47.049	DMS-1653552 003	79,031	—
Dynamical aspects of Ramsey theory		47.049	DMS-1700147	3,059	—
Hodge theory and birational geometry		47.049	DMS-1700819 002	69,412	—
A Sheaf-Theoretic Approach to M5-Brane Geometry		47.049	DMS-1708503	94,520	—
Elliptic and parabolic PDEs on manifolds		47.049	DMS-1709544	37,846	—
Kahler manifolds with curvature lower bound		47.049	DMS-1709894	26,396	—
Collective dynamics of particles at fluid interfaces		47.049	DMS-1716114	39,154	—
Collaborative Research: Tolerance-Enforced Simulation of Stochastic Processes		47.049	DMS-1720433	24,557	—
Midwest Probability Colloquium 2017-2019		47.049	DMS-1744209-001	26,382	—
Midwest Topology Seminar		47.049	DMS-1747457	2,542	—
Northwestern University Quantitative Biology Center (NUQuB)		47.049	DMS-1764421-002	1,031,612	—
Dynamics with a Combinatorial Bent		47.049	DMS-1800544	87,971	—
Moduli of Galois representations and applications		47.049	DMS-1802037-002	51,989	—
Singularities and Smoothness in Geometric Partial Differential Equations		47.049	DMS-1809011	73,459	—
Homotopy theory of foliations and diffeomorphism groups		47.049	DMS-1810644	60,800	—
Global Harmonic Analysis		47.049	DMS-1810747-002	61,032	—
Collaborative Research: Factorization Homology, Deformation Theory, and Duality		47.049	DMS-1812057-002	92,272	—
Shanghai Microlocal Analysis Conference Travel Grant		47.049	DMS-1830112	10,984	—
Emphasis Year in Noncommutative Geometry		47.049	DMS-1839515	(62)	—
CAREER: An Integrated Inferential Framework for Big Data Research and Education		47.049	DMS-1841569/002	11,289	—
Conference: Dynamics Days 2019		47.049	DMS-1852561	—	—
Collaborative Research: Adaptive Gaussian Markov Random Fields for Large-scale Discrete Optimization via Simulation		47.049	DMS-1854582	53,282	—
Complex Dynamics and Diophantine Geometry		47.049	DMS-1856103	41,446	—
Midwest Dynamical Systems Conference 2019-2020		47.049	DMS-1856176	14,440	—
Stability of functional and geometric inequalities and applications		47.049	DMS-1901427	5,250	—
Problems in combinatorics and number theory via ergodic theoretic methods		47.049	DMS-1901453	63,416	—
Word distributions in groups		47.049	DMS-1902041	50,086	—
Geometric Partial Differential Equations and Complex Geometry		47.049	DMS-1903147	60,103	—
The 41st Stochastic Processes and Applications (SPA 2019)		47.049	DMS-1906251	266	—
Flexible Stein Manifolds and Fukaya Categories		47.049	DMS-1906564	56,389	—
Equidistribution of Torus Orbits		47.049	DMS-1946333	49,769	—
CAREER: Rigidity of Group Actions on Manifolds		47.049	DMS-2020013 001	49,680	—
Materials Research Science and Engineering Centers for Northwestern University	221	47.049	FP037621-02 // DMR-1420709	71,139	—
ACME: Advanced Cold Molecule Electron Electric Dipole Moment Search	288	47.049	GR105078(CON-80001598)/PHY-1404146	132,499	127,104
Telecom-Band Rotational Cooling of a Heavy Molecular Ion		47.049	PHY - 1806861 002	56,551	—
Gravitational-Wave Inference from Binary Compact Objects		47.049	PHY-1607709 0002	(266)	—
The Science and Fundamental Understanding of the Radio Frequency Surface Resistance of Nitrogen Doped SRF cavities		47.049	PHY-1734332	97,904	—
Collaborative Research: Axion Resonant InterAction DetectioN Experiment (ARIADNE) – a continuation proposal		47.049	PHY-1806671 003	124,700	—
Measuring gravity at the micron scale with laser-cooled trapped microspheres: a continuation		47.049	PHY-1806686-002	119,626	—
Collaborative Research: The SuperCDMS SNOLAB Experiment		47.049	PHY-1809730-002	235,218	—
Collaborative Research: Axion Resonant InterAction DetectioN Experiment (ARIADNE)		47.049	PHY-1826505	385	—
Lepton Magnetic Moments and Fine Structure Constant		47.049	PHY-1903756 /002	363,304	—
Antihydrogen and Antiproton Studies		47.049	PHY-1903757	(2,103)	—
Gravitational-Wave Inference from Binary Compact Objects		47.049	PHY-1912648	81,024	—
Collaborative Research: Uncovering how riboswitches exploit out-of-equilibrium RNA folding pathways to make genetic decisions		47.049	PHY-1914567	36,502	—
1st COFI Workshop on Precision Electroweak		47.049	PHY-1928439	2,100	—
				<u>15,343,029</u>	<u>433,581</u>

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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
National Science Foundation (continued):					
Critical Zone Observatory Network for Intensively Managed Landscapes	233	47.050	072212-14695	\$ 25,311	—
The Ca and Sr (radiogenic and stable) isotope geochemistry of weathering in Iceland		47.050	EAR-1613359	70,553	—
Collaborative Research: NSF/EAR-BSF: Coupled Sand and Clay Motion, Bed Morphodynamics, and Porewater Exchange		47.050	EAR-1734300	45,508	—
Superdeep Diamonds from the Transition Zone and Lower Mantle		47.050	EAR-1853521	127,723	—
PREEVENTS Track 2: Collaborative Research: Defining precursors of ground failure: a multiscale framework for early landslide prediction through geomechanics and remote sensing		47.050	ICER-1854951	119,833	—
CAREER: South Greenland's Holocene Climate History Reconstructed Using Three Paleolimnological Approaches		47.050	PLR-1454734	38,530	—
				<u>427,458</u>	<u>—</u>
CRI: CI-SUSTAIN: Racket on Alternative Platforms	148	47.070	502648-78050-01/CNS-1823244	57,761	—
CAREER: Robot Learning from Motor-Impaired Instructors and Task Partners	165	47.070	81454 Amd 3 //IIS-1552706	85,572	—
CIF21 DIBBs: PD: Ontology-enabled Polymer Nanocomposite Open Community Data Resource	166	47.070	A12761 Amd 01 // ACI-1640840	—	—
Collaborative Research: SI2-SSI: Scalable Infrastructure for Enabling Multiscale and Multiphysics Applications in Fluid Dynamics, Solid Mechanics, and Fluid-Structure Interaction		47.070	ACI-1450374	81,910	—
IRNC: RXP: StarLight SDX – A Software Defined Networking Exchange for Global Science Research and Education		47.070	ACI-1450871	486,130	177,511
CC*DNI CI Engineer: Integrating Campus Cyberinfrastructure and Research Computing at Northwestern University		47.070	ACI-1541457	35,516	—
Collaborative Research: SI2-SSI: Software Framework for Electronic Structure of Molecules and Solids		47.070	ACI-1550481	—	—
BD Spokes: SPOKE: MIDWEST: Collaborative: Advanced Computational Neuroscience Network (ACNN)	102	47.070	BL-4831218-NWUC//IIS-1636893	—	—
CPS: Synergy: Collaborative Research: Learning Control Sharing Strategies for Assistive Cyber-Physical Systems	165	47.070	CC# 81394 CL 4811 // 1544741	96,548	—
CAREER: Energy-Efficient and Energy-Proportional Silicon-Photonic Manycore Architectures		47.070	CCF-1453853-004	52,666	—
XPS: EXPL: CCA: Merging Parallel Run-times and Operating Systems		47.070	CCF-1533560 004	33,749	—
XPS: FULL: FP: Design and Synthesis of New Energy-efficient Self-healing Computing Electronics with Real-time Configurability		47.070	CCF-1533656	—	—
SHF: Small: Greybox Computing: An Associative Computing Methodology with Instruction Directed Power and Clock Management		47.070	CCF-1618065-001	113,744	—
AF: Small: Non-revelation Mechanism Design		47.070	CCF-1618502	68,088	—
SHF: Small: Collaborative Research: ALETHEIA: A Framework for Automatic Detection/Correction of Corruptions in Extreme Scale Scientific Executions		47.070	CCF-1619253	115,071	91,220
AIIF: Collaborative Research: Algorithms for Probabilistic Inference in the Real World		47.070	CCF-1637585	125,909	—
AIIF: Mechanism Design and Machine Learning for Peer Grading		47.070	CCF-1733950	296,817	—
Collaborative Research: TRIPODS Institute for Optimization and Learning		47.070	CCF-1740735	11,289	—
CPS: Breakthrough: Collaborative Research: A Framework for Extensibility-Driven Design of Cyber-Physical Systems		47.070	CCF-1834324	76,530	—
CAREER: SOISTICE: Software Synthesis with Timing Contracts for Cyber-Physical Systems		47.070	CCF-1834701 002	97,749	—
CAREER: Design and Synthesis of Energy-efficient Time-domain Computing for Intelligent Edge Processing		47.070	CCF-1846424-001	57,903	—
SHF: Small: The Compiler-Architecture Solution to the Data Dependent, Circuit-Level Critical-Paths Variations		47.070	CCF-1908488-001	79,933	—
CIF: Small: Wireless Massive Access: From Fundamental Limits to Practical Design		47.070	CCF-1910168	155,271	—
HDR TRIPODS: Collaborative Research: Institute for Data, Econometrics, Algorithms and Learning		47.070	CCF-1934931	44,259	—
Collaborative Research: AF: Medium: Design and Analysis of Models and Algorithms for Real-life Problems		47.070	CCF-1955351	62,828	—
SaTC: STARSS: ICM: Invariant Carrying Machine for Hardware Assurance		47.070	CNS-1441695	—	—
NeTS: Small: Mashup Content Harvesting for an Open Internet		47.070	CNS-1526052	9,499	—
NeTS: Small: Collaborative Research: Leveraging Personalized Internet Services to Combat Online Trolling		47.070	CNS-1615837	178,689	—
NeTS: SMALL: Broadband Service Reliability: Characterization And Improvement		47.070	CNS-1619317	78,721	—
EAGER: PUF-Locked Circuit Obfuscation for Counterfeit and Piracy Prevention		47.070	CNS-1651695 001	4,892	—
WiFiUS: Collaborative Research: Ultra-low latency and High Reliability for Wireless IoT		47.070	CNS-1701921	40,322	—
Collaborative Research: Chameleon: A Large-Scale, Reconfigurable Experimental Environment for Cloud Research		47.070	CNS-1743324-003	143,540	—
CSR: Medium: Collaborative Research: Interweaving the Parallel Software/Hardware Stack		47.070	CNS-1763743 003	257,327	—
NeTS: Small: Incentivizing Internet-Scale Web Mining with Bitcoin		47.070	CNS-1810582	34,259	—
CSR: Small: Development of Distributed Neural Processing Electronics for Whole-body Computing and Biomedical Sensor Fusion		47.070	CNS-1816870	54,899	—
Computer Science for All: Researcher Practitioner Partnerships Workshops (CS for All: RPP), Chicago and Los Angeles		47.070	CNS-1821362	66,894	—
SCC: I4all (interests for all): A smart socio-technical infrastructure to identify, cultivate, and sustain youth STEAM interests in a diverse midsized American city		47.070	CNS-1831685	852,962	184,628
Equitable Computer Science for All Learning Ecosystems: Developing Underserved Students' Computational Making Literacies Through Community-Embedded Out of School Time Programming		47.070	CNS-1838916	61,296	35,256
CPS: Synergy: Securing the Timing of Cyber-Physical Systems		47.070	CNS-1839511	348,215	207,145
CAREER: Efficient Query Processing for Private Data Federations		47.070	CNS-1846447	110,558	—
CRII: CSR: Systems and Tooling Enabling Adaptive Intermittent Computing		47.070	CNS-1850496-002	76,413	—
CNS Core: Small: Collaborative Research: The Interplay of Markets and Security in 5G Shared Spectrum Services		47.070	CNS-1908807	17,178	—
DCL: SaTC: Early Stage Interdisciplinary Collaboration: Privacy Enhancing Framework to Advance Behavior Models		47.070	CNS-1915847	125,292	—
Envisioning Workshops for Computing in Undergraduate Education		47.070	CNS-1944777	389,813	1,186
Collaborative Research: MLWINS: ANN for Interference Limited Wireless Networks		47.070	CNS-2003098	16,209	—
CRII: CHS: Automatically Praising Learning Process to Promote the Growth Mindset in Computer Science		47.070	COM IIS-1755628	55,119	—
COVID-19: RAPID: Internet Traffic and Compliance with Government Stay-at-Home Measures		47.070	COVID-19: CNS-2027922	58,540	—
COVID-19: RAPID: Low-cost, Batteryless Smart PPE Tackling the COVID-19 Pandemic		47.070	COVID-19: CNS-2032408	21,505	—
BIGDATA: Collaborative Research: F: Stochastic Approximation for Subspace and Multiview Representation Learning		47.070	IIS-1840866	58,138	—
CAREER: Web Information Extraction: Scaling and Integration		47.070	IIS-1351029 005	75,747	—

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National Science Foundation (continued):					
NRI: Autonomous Synthesis of Haptic Languages		47.070	IIS-1426961	\$ (2,435)	—
NRI: Electrosense imaging for underwater telepresence and manipulation		47.070	IIS-1427419-005	39,988	39,988
DIP: Modeling in Levels		47.070	IIS-1441552	14,379	—
CAREER: Coherent Computational Imaging: Micro Measurements in a Macro World		47.070	IIS-1453192	82,480	—
CHS: Medium: Collaborative Research: Understanding online creative collaboration over multidimensional networks		47.070	IIS-1514427	(50)	—
CHS: Large: Collaborative Research: TextureShop: Tools for the Composition and Display of Virtual Texture		47.070	IIS-1518602 003	132,696	—
EXP: Advancing Early STEM Learning through Haptic Feedback Displays		47.070	IIS-1522921	22,138	—
DIP: Collaborative Research: CRAFT: An Online Learning Platform for Scaffolding the Crowd Feedback Loop for Design Innovation Education		47.070	IIS-1530837	174,186	—
INSPIRE: Glitch Zoo: Teaming Citizen Science with Machine Learning to Deepen LIGO's View of the Cosmos		47.070	IIS-1547880-002	7,332	5,747
CAREER: Advancing Online Social Support for Older Adults with Disabilities		47.070	IIS-1551574-003	3,496	—
CHS: Small: Collaborative Research: The Presentation of Self in Networked Life		47.070	IIS-1617387 001	45,272	—
CHS: Small: Collaborative Research: Pathways to Community Success: Advancing a Comparative Science of Online Collaborative Organization		47.070	IIS-1617468-001	22,929	—
III: Small: Collaborative Research: Algorithms for Query by Example of Audio Databases		47.070	IIS-1617497	17,416	—
CHS: Small: Coordination of Opportunistic Actions to Produce Globally Effective Behaviors for Physical Crowdsourcing		47.070	IIS-1618096	101,577	—
RI: Small: Modeling and Learning Visual Similarities under Adverse Visual Conditions		47.070	IIS-1619078	102,853	—
EXP: Agile Research Studios: Scaling Cognitive Apprenticeship to Advance Undergraduate and Graduate Research Training in STEM		47.070	IIS-1623635	229,884	—
CAREER: Understanding and addressing geographic inequalities in location-aware technologies		47.070	IIS-1707296-003	68,431	—
CHS: Small: Collaborative Research: RUI: Human-centered Semantic Relatedness		47.070	IIS-1707319	19,388	—
CHS: Small: Assessing the Role of Platform Algorithms in Shaping News Attention		47.070	IIS-1717330	196,478	—
RI: Small: Collaborative Research: Information-driven Autonomous Exploration in Uncertain Underwater Environments		47.070	IIS-1717951	108,860	—
EXP: Readily Available Learning Experiences: Turning the Entire Web into Scaffolded Examples to Bridge Conceptual Knowledge - Gaps for Novice Web Developers		47.070	IIS-1735977	111,164	—
CRUI: CHS: Early Detection of Collective Misconceptions with Network-aware Machine Learning Tools		47.070	IIS-1755873	54,378	—
CHS: Small: Collaborative Research: Structured Data Peer Production: Addressing Challenges and Leveraging Opportunities		47.070	IIS-1815507/001	63,868	—
RI: Small: A Unified Compositional Model for Explainable Video-based Human Activity Parsing		47.070	IIS-1815561	31,945	—
Making Minecraft Multimodal: A Naturalistic Platform for Collaborative Learning and Creating		47.070	IIS-1822865-002	145,251	—
BIGDATA: EAGER: Catalyzing Research in Multimodal Learning Analytics		47.070	IIS-1832234	(1,579)	—
Collaborative Research: NCS-FO: Discovering dynamics in massive-scale neural datasets using machine learning		47.070	IIS-1835345	54,581	—
BIGDATA: IA: Collaborative Research: Asynchronous Distributed Machine Learning Framework for Multi-Site Collaborative Big Brain Data Mining		47.070	IIS-1837999	26,514	—
RI: Medium: Collaborative Research: Next-Generation Statistical Optimization Methods for Big Data Computing		47.070	IIS-1840857	82,375	—
CAREER: Computational Journalism: Integrating Algorithms and People in the Production of News Information		47.070	IIS-1845460	78,151	—
CHS: Medium: Next Generation Content Production Tools for People with Vision Impairments		47.070	IIS-1901456-003	237,735	—
CHS: Medium: Collaborative Research: Empirically Validated Perceptual Tasks for Data Visualization		47.070	IIS-1901485	192,753	—
CHS: Small: Collaborative Research: Modeling the Ecological Dynamics of Online Organizations		47.070	IIS-1910202-001	8,624	—
CAREER: Enhancing Critical Reflection on Data by Integrating Users' Expectations in Visualization Interaction		47.070	IIS-1930642 /003	137,066	115,979
CAREER: Transforming Online Scholarly Communication with Networked Crowd Computation		47.070	IIS-1943506	28,848	—
EAGER: An Inexpensive Tactile Fingertip for Dexterous Manipulation		47.070	IIS-1952598	57,746	—
NSCI S12-SSE: The N-jettiness software framework for precision perturbative QCD calculations in particle and nuclear physics		47.070	OAC-1740142	178,336	—
GPU-Enabled General Relativistic Simulations of Misaligned Black Hole Accretion Systems		47.070	OAC-1811605-001	—	—
CyberTraining: CIU: The LSST Data Science Fellowship Program		47.070	OAC-1829740	71,198	—
Collaborative Research: Framework: Data: HDR: Nanocomposites to Metamaterials: A Knowledge Graph Framework		47.070	OAC-1835782	19,455	—
Collaborative Research: Frameworks: Multiphase Fluid-Structure Interaction Software Infrastructure to Enable Applications in Medicine, Biology, and Engineering		47.070	OAC-1931372	18,317	—
Mid-scale RI-1 (M1:IP):SAGE: A Software-Defined Sensor Network		47.070	OAC-1935984	645,478	73,358
BD Spokes: SPOKE: MIDWEST: Collaborative: Integrative Materials Design (IMaD): Leverage, Innovate, & Disseminate		47.070	oIIS-1636909	56,944	—
S&AS: INT: Autonomous Multi-Robot Visual Monitoring for Urban, Agricultural, and Natural Resource Management	217	47.070	S-001096/IIS-1724341	20,746	—
III: Small: Quantifying Multifaceted Perception Dynamics in Online Social Networks	100	47.070	SA17-0018-S001/1618244	(3,304)	—
				<u>9,075,158</u>	<u>932,018</u>
COVID-19: RAPID: Point-of-Need Detection of COVID-19 using CRISPR-Enabled Cell-Free Synthetic Biology					
IDBR: Development of Higher Eigenmode Ultrasound Bioprobe for Sub-Cellular Biological Imaging		47.074	COVID-19: MCB-2028651	39,702	—
REU Site: Synthetic Biology (SynBREU)		47.074	DBI-1256188	(277)	—
CSBR: Living Stocks – Enhancement of the Caenorhabditis Natural Diversity Resource		47.074	DBI-1757973	31,546	—
Mechanisms of sensory control of developmental rate		47.074	DBI-1930382	287,213	—
Reticulospinal Execution of Innate Decision-Making		47.074	IOS- 1755244	156,798	—
The Response of Primary Mesenchyme Cells to VEGF		47.074	IOS-1456830	1,750	—
CRNS: Functional imaging and computational models of place field integration in pyramidal cell dendrites		47.074	IOS-1456837	332	—
Collaborative Research: Uncovering the Role of Sirtuins in Linking Food Availability and Stress Tolerance Through Multi-Scale Signaling Networks in Mussels		47.074	IOS-1516235-001	(49,212)	—
The Vibrissotactile Natural Scene		47.074	IOS-1557495	—	—
CAREER: Discovery of the molecular mechanisms underlying microevolution of phenotypic plasticity in a developmental trait		47.074	IOS-1558068	106,467	—
CAREER: Mapping the proteomic landscape of neural systems.		47.074	IOS-1751035-001	50,227	—
Biophysical Studies of Metalloenzymes		47.074	IOS-1846234	216,183	—
			MCB-1515981 001	(121,897)	—

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National Science Foundation (continued):					
Collaborative Research: Bilateral BBSRC-NSF/BIO: Synthetic Biology for Lignin Utilization		47.074	MCB-1614953	\$ 130,405	—
CAREER: Uncovering Quantitative Design Principles of RNA Regulators for Synthetic Biology		47.074	MCB-1650040 002	174,090	143,265
Collaborative Research: Repurposing the translation apparatus for mirror image polypeptide synthesis		47.074	MCB-1716766	223,483	—
Collaborative Research: EAGER: Customized cell biosensors for interrogating cancer cell physiology		47.074	MCB-1745753	29,664	—
EAGER: Toward engineering a synthetic enhancer in <i>Caenorhabditis elegans</i>		47.074	MCB-1748307	129,595	—
Biophysical Studies of Metalloenzymes		47.074	MCB-1908587	309,535	—
RAPID: Collaborative Research: A cell-free synthetic biology platform for water quality monitoring – field testing and validation at the Camp Fire sit		47.074	MCB-1929912	66,492	—
Collaborative Research: EAGER: Uncovering the role of Golgi organization on function		47.074	MCB-1935356	19,935	—
Novel determinants of prokaryotic copper homeostasis		47.074	MCB-1938715	73,119	—
Locus specific manipulatIn of chromatin function		47.074	MCB-2024073	107,370	—
				<u>1,982,520</u>	<u>143,265</u>
NSF/SBE-BSF: Integration of kinesthetic and tactile information in perception, action, and learning	165	47.075	81464/CL5296/1632289	18,114	—
Doctoral Dissertation Research: The Online Processing of NP-Ellipsis and the Mechanisms of Antecedent Retrieval		47.075	BCS – 1749580	265	—
The Development of Relational Processing in Infancy		47.075	BCS-1729720	140,103	—
Surviving the Terminal Classic Maya Collapse: Settlement and Household Archaeology at Aventura, Belize		47.075	BCS-1732129	64,540	—
CompCog: Reading as a rational process of visual information gathering		47.075	BCS-1734217	58,639	—
NCS-FO: Collaborative Research: Understanding the neural basis for sensorimotor control loops using whisker-based robotic hardware platforms		47.075	BCS-1734981	143,489	—
Doctoral Dissertation Research: The Role Socioeconomic and Cultural Variation in Neurotrauma Recovery		47.075	BCS-1756617	1,137	—
Doctoral Dissertation Research: The Regeneration of Human Settlements amidst Ruins after Episodes of Societal Collapse		47.075	BCS-1806248	14,736	—
Doctoral Dissertation Improvement Grant: Power Relations in the Context of Agricultural Production		47.075	BCS-1818785	6,712	—
Studies of memory reactivation during sleep using intracranial recordings		47.075	BCS-1829414	157,404	—
Doctoral Dissertation Research: More than just sun and skin: Investigating the social and developmental determinants of vitamin D production		47.075	BCS-1848357	17,143	—
Doctoral Dissertation Research: Intergenerational effects of prenatal stress on physiological and psychosocial outcomes		47.075	BCS-1849265	25,987	—
Doctoral Dissertation Research: Ritual, Network Formation, and Governance among Displaced Communities		47.075	BCS-1851195	13,055	—
Doctoral Dissertation Research: Legal Practices of State Neutrality in Educational Settings		47.075	BCS-1917943	11,718	—
LEARNING, CREATIVE PROBLEM-SOLVING, REM SLEEP, AND AWARENESS OF DREAMING.		47.075	BCS-1921678-001	152,326	—
Memory and context effects on representations of variation in phrasal intonation		47.075	BCS-1944773	18,286	—
Connectome mapping algorithms with application to community services for big data neuroscience	102	47.075	BL-4831222-NU	6,947	—
COVID-19: RAPID: Generating knowledge with next phase serological testing for SARS-CoV-2		47.075	COVID-19: BCS-2035114	31,761	—
COVID-19: RAPID: The Social and Behavioral Impact of COVID-19		47.075	COVID-19: SES-2027278	141,049	—
RCN: Building a Community of Practice for Household Water Insecurity Research	200	47.075	M1803245 // BCS-1759972	3,679	—
Motor exploration and motor learning during child development	137	47.075	RC107136NU/1854929	7,600	—
Problem-Solving Sociology Workshops		47.075	SES 1823709	3,142	—
Collaborative Research: International Migration and Fertility: Towards a Multidimensional Understanding		47.075	SES 1918274	81,545	—
CAREER: Comparative Statics and Dynamic Models		47.075	SES-1151410/003	(193)	—
Constructions of Traditional Medicine during Decolonization and the Global Cold War		47.075	SES-1456984-003	19,006	—
Collaborative Research: Time-Sharing Experiments for the Social Sciences (TESS): Proposal for Renewed Support, 2016-2019		47.075	SES-1628057	599,508	386,709
Coordination and Information Design		47.075	SES-1730483	27,920	—
Workshop: Advances in Experimental Political Science		47.075	SES-1822286	3,864	—
Collaborative Research: Using Web Data to Study Campaigns and Representation		47.075	SES-1823696	1,467	—
Fiduciary Duty, Financial Regulation, and the Market for Retirement Products		47.075	SES-1824463	140,875	—
Postdoctoral Fellowship: The Emergence and Consequences of Global Mathematics in the Twentieth and Twenty-first Centuries		47.075	SES-1826891	—	—
Applications of Dynamic Information Design		47.075	SES-1851883	98,208	—
Collaborative Research: Evidence in Economic Models		47.075	SES-1919494	86,852	—
Collaborative Research: Transparency and the Rule of Law: A Field Experiment in Ukraine		47.075	SES-1921294	58,417	—
Workshop: Human technology partnerships and the changing nature of work		47.075	SES-1940668	11,229	—
Understanding the Long-Run Effects of School Desegregation on Political and Social Preferences		47.075	SES-2018869	12,852	—
EAGER: Collaborative Research: Group Dynamics and Success in Science and Research		47.075	SMA-1747623	—	—
Collaborative Research: Understanding Team Success and Failure		47.075	SMA-1829344	71,882	—
Integration of Science Outreach into the Research Enterprise: Data-Driven Perspectives	170	47.075	SMA-1854018	18,307	—
Safe Bets and Risky Propositions: Leveraging Rich Data to Understand Scientific Diversity, Impact, and Potential of Teams		47.075	SMA-1856090	127,509	—
				<u>2,397,080</u>	<u>386,709</u>

**NORTHWESTERN UNIVERSITY**  
 Supplementary Schedule of Expenditures of Federal Awards  
 Year ended August 31, 2020

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
National Science Foundation (continued):					
Teachers and Students Synergistic Learning Through Youth Participatory Science	232	47.076	16774-00 // DRL 1720856	\$ 740	—
AGEP National Research Conference 2020: Sustaining, Institutionalizing and Scaling AGEP Alliance Models and Initiatives	25	47.076	4500002984//HRD-1841978	69,525	—
Methods to Protect Privacy in State Longitudinal Data Systems Research Files	222	47.076	5968-NU 02 // DGE-1437953	(1)	—
Preparing Future Faculty to Improve STEM Education: Broadening the National Impact of the CIRTL Network	272	47.076	795K406/1726625	19,490	—
Collaborative Research: NSF INCLUDES Alliance: An Alliance to Develop an Inclusive and Diverse National Faculty for Broadening Success of Underrepresented 2-Year and 4-Year STEM Students	17	47.076	Agmt 5/16/19//HRD-1834518	55,090	—
Doctoral Dissertation Research: A Geospatial Analysis of Alpine Glacial Variability		47.076	BCS-1812764	284	—
Graduate Research Fellowship Program (GRFP)		47.076	DGE – 1842165-003	4,405,728	—
NRT-DESE: Training in Data-Driven Discovery – From the Earth and the Universe to the Successful Careers of the Future		47.076	DGE-1450006-004	911,838	—
Collaborative Research: Using Educational DVDs to Enhance Young Children's STEM Education		47.076	DRL-1252121	(98)	—
Learning Ethnographies of New Engineers: A New Approach to Understanding the Transition from School to Work		47.076	DRL-1252372	—	—
CAREER: Blocks, Stickers, and Puzzles: Rethinking Computational Literacy Experiences in Informal Environments		47.076	DRL-1451762-005	42,812	—
Collaborative Research: Advancing Early STEM Learning Opportunities Through Tinkering and Reflection		47.076	DRL-1515788-002	63,526	—
Collaborative Research: Mixing Learning Experiences for Computer Programming Across Museums, Classrooms, and the Home Using Computational Music		47.076	DRL-1612619	190,376	—
Collaborative Research: Group-Based Cloud Computing for STEM Education Project		47.076	DRL-1614745	7,389	890
A Whole-School Model for Integrating Computational Thinking in High School Science and Mathematics		47.076	DRL-1640201 004	656,698	7,837
SPeAd: Broadening implementation of an innovative STEAM learning environment: Scaling up FUSE Studios through two models of partnership engagement with industry and schools		47.076	DRL-1657438	623,085	75,794
Collaborative research: Neural and cognitive strengthening of conceptual knowledge and reasoning in classroom-based spatial education		47.076	DRL-1661089	6,076	—
Collaborative Research: Mechanisms of Visuospatial Thinking in STEM		47.076	DRL-1661264 002	125,741	—
An investigation of the impact of culture and experience on reasoning about complex ecological phenomena among students from diverse backgrounds		47.076	DRL-1713368	152,267	—
EAGER-MAKER: A Cultural Framework for Equity in Maker Practices		47.076	DRL-1723750	69,639	—
Collaborative Research: Adapting and Implementing a Geospatial High School Course in Career and Technical Education Clusters in Urban Settings		47.076	DRL-1759360	179,891	—
Collaborative Research: Next Generation Science Standards (NGSS) and Designing School System Educational Infrastructure to support Elementary School Science Instruction		47.076	DRL-1761057	326,789	—
Using hyperlocal and networked strategies to support computer science education for middle grade students in Chicago		47.076	DRL-1824551	62,830	—
Broadening Participation in Computer Science Through Music, Dance, and Coding Across Learning Spaces		47.076	DRL-1837661	290,826	—
Methods for assessing replication		47.076	DRL-1841075	282,408	—
"CT-ifying" the High-School Science Curriculum to Broaden Participation in Computational Science		47.076	DRL-1842374	560,180	—
Building theories of scientific phenomena: Comparing and Integrating aggregate pattern-based and agent-based computational approaches		47.076	DRL-1842375	390,553	—
Collaborative Research: Strategies: Building a Learning Ecology to Increase STEM Participation Among Middle School Girls		47.076	DRL-1850543	373,603	—
Collaborative Research: Making Space for Story-Based Tinkering to Scaffold Early Informal Engineering Learning		47.076	DRL-1906808	47,676	—
Collaborative Research: Investigating a Nested Mentoring Model Designed to Support STEM Skill and Identity Development for Middle School Youth, Scientist		47.076	DRL-1906971	183,977	62,521
Improving Evaluations of R&D in STEM Education		47.076	DRL-1937719	38,505	—
An investigation of the impact of culture and experience on reasoning about complex ecological phenomena among students from diverse backgrounds		47.076	DRL-1946478	311,408	169,828
Collaborative Research: IUOE: EHR – Inclusive Learning and Teaching in Undergraduate STEM Instruction		47.076	DUE-1821684/003	286,479	10,810
Developing a National Research Agenda for Academic Support in STEM Higher Education		47.076	DUE-1836657	(42)	—
Collaborative Research: AGEP Transformation Alliance: CIRTL AGEP – Improved Academic Climate for STEM Dissertators and Postdocs to Increase Interest in Faculty Careers		47.076	HRD-1647146-005	31,918	—
CAREER: Investigation of Undergraduate Learning Contexts Considering Ethical, Racial, and Disciplinary Identities of Students in Engineering and Computer Science		47.076	HRD-1855494-001	153,698	—
Barry University Engaged STEM Scholars (ESS) Program	19	47.076	NSF-1930076 ESS-Sub 1//DUE-1930076	27,907	—
Learning in Places: Field Based Science in Early Childhood Education	271	47.076	UWSC11018//DRL-1720578	176,426	—
				<u>11,125,237</u>	<u>327,680</u>
COVID-19: Investigating the Association between Smoking Status and COVID-19 Outcomes, Collecting Data from Health Systems					
Affiliated with the National Cancer Institute's Cancer Center Cessation Initiative (C3I)	272	47.079	0000001070//OISE-20-66590-1	10,513	—
PIRE: Computationally Based Imaging of Structure in Materials (CuBISM)		47.079	OISE-1743748	752,397	—
				<u>762,910</u>	—
PIRE: Integrated Computational Materials Engineering for Active Materials and Interfaces in Chemical Fuel Production					
RAISE: C-Accel Pilot – Track A1: Northwestern Open Access to Court Records Initiative ( NOACRI)	233	47.083	077340-1 580 Amd. 03//OISE-1545907	12,336	—
		47.083	OIA-1937123	786,735	—
				799,071	—
ACME III: Advanced Cold Molecule Electron Electric Dipole Moment Search	288	47.RD	GR107174CON-80001859/1912513	122,873	—
National Science Foundation Total				<u>51,330,449</u>	<u>2,939,765</u>

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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
U.S. Agency for International Development:					
Agency for International Development:					
Testing the Effectiveness of Tailored Non-Formal Education Interventions Promoting Critical Thinking and Emotional Literacy in the Middle East					
MOMENTUM 2C – ACCEL	245	98.001	3003719520 // AID-OAA-A-15-00075 02	\$ (6,310)	—
Comparing HIV Mucosal Targets in US and Kenyan Populations	89	98.001	7200AA20CA00003	14,932	—
Global Security Act: Policy Analysis and Measurement	107	98.001	7503// AID-OAA-A-16-00032	98,261	—
Next-generation products for prevention of HIV infection in women (Project NIX HIV)	173	98.001	825060//7200AA18LA00003-01	119,647	—
	64	98.001	NXS-17-001 // AID-OAA-A-17-00014	67,804	—
				<u>294,334</u>	<u>—</u>
U.S. Agency for International Development Total				294,334	—
Research and Development Cluster Total				<u>535,065,332</u>	<u>77,906,002</u>
Student Financial Assistance Cluster:					
Department of Education:					
Federal SEOG 2018-2019		84.007	P007A181246	381	—
Federal SEOG 2019-2020		84.007	P007A191246	2,186,241	—
				<u>2,186,622</u>	<u>—</u>
Federal Work-Study 2018-2019		84.033	P033A181246	196,165	—
Federal Work-Study 2019-2020		84.033	P033A191246	3,224,115	—
Federal Work-Study 2020-2021		84.033	P033A201246	29,075	—
Federal Work-Study Administrative Cost Allowance FY20		84.033		96,638	—
				<u>3,545,993</u>	<u>—</u>
Federal Perkins Loans – Outstanding as of 9/1/19				18,992,170	—
Federal Pell Grant 2018-2019		84.063	P063P181371	(280)	—
Federal Pell Grant 2019-2020		84.063	P063P191371	7,816,502	—
				<u>7,816,222</u>	<u>—</u>
Federal Direct Loan Program 2018-2019		84.268	P268K191371	85,843	—
Federal Direct Loan Program 2019-2020		84.268	P268K201371	184,964,480	—
Federal Direct Loan Program 2020-2021		84.268	P268K211371	6,084,187	—
				<u>191,134,510</u>	<u>—</u>
Department of Education Total				<u>223,675,517</u>	<u>—</u>
Department of Health and Human Services:					
Health Professionals Student and Primary Care – Outstanding as of 9/1/19					
		93.342		175,732	—
Department of Health and Human Services Total				<u>175,732</u>	<u>—</u>
Student Financial Assistance Cluster Total				<u>223,851,249</u>	<u>—</u>
Other Programs:					
Corporation for National and Community Service:					
Jumpstart Northwestern	115	94.006	Agmt 09/04/19 // 2710200	72,035	—
Jumpstart Northwestern	115	94.006	Agmt 10/18/18 //920200	(84)	—
Corporation for National and Community Service Total				<u>71,951</u>	<u>—</u>
Department of Defense:					
Army:					
ANN SONIC NICO Workshop on Brain Science and Social Networks		12.431	W911NF1910014	1,658	—
National Security Agency:					
41st Stochastic Processes and Applications 2019, Evanston, IL, USA		12.901	H98230-19-1-0003	1,596	—
Washington Headquarters Services:					
MASINT Applications of Quantum Sensing Study	239	12.001	78226–Z9392201//HQ003418D0005	117,627	—
Department of Defense Total				<u>120,881</u>	<u>—</u>
Department of Energy:					
Kokes Awards for the 26th North American Catalysis Society Meeting		81.049	DE-SC0019731	22,717	—
Department of Energy Total				<u>22,717</u>	<u>—</u>



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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Department of Health and Human Services:					
Illinois Perinatal Quality Collaborative (ILPQC) – FY20 Federal Administration for Community Living:	98	93.667	FCSYU04929	\$ 88,518	66,316
Older Adults Engagement Resource Center	140	93.048	90EECC000 1-01-00	11,678	—
Age Friendly Chicago – Alzheimer’s Disease Program Initiative	39	93.U02	Johnson AGMT 11/4/20	25,593	—
Centers for Disease Control and Prevention:					
Overdose Data to Action, Strategy 2: Statewide Unintentional Drug Overdose Reporting System	13	93.136	916058-NU//NU17CE924980-01-00	63,400	—
Meeting the Needs of Early Childhood Systems to Integrate Evidence-Based Parenting Programs	18	93.424	33-18-8812//6NU38OT000140-05-02	(303)	—
Meeting the Needs of Early Childhood Systems to Integrate Evidence-Based Parenting Programs	18	93.424	33-18-8812//6NU38OT000140-05-02	(1,594)	(1,594)
				<u>(1,897)</u>	<u>(1,594)</u>
Improving the Health of Illinoisans Through Chronic Disease Prevention	99	93.426	03286008H//1NU58DP006511-02-00	50,250	—
Assuring Comprehensive Prevention and Treatment for Families Affected by HIV to Eliminate Perinatal HIV Transmission in the United States	249	93.939	34-7220-3001-003//NU65PS923665-02-00 Amnd 2	23,213	—
Center for the Evaluation of the Chicago HIV Services Portfolio	40	93.940	51549 TOR 666//NU62PS924560-01-00	142,560	4,097
Evaluation Center Extension to Evaluate PrEP Implementation and Data to Care Services	40	93.940	6 NU62PS00521-03-02	56,053	18,095
Integrated HIV Surveillance and Prevention, Component B – Demonstration Project	40	93.940	98537//5 NU62PS5924560-02-00	353,043	—
Integrated HIV Surveillance and Prevention, Component B – Demonstration Project	40	93.940	98537//5NU62PS5924560-02-00	177,736	—
Evaluation of Chicago’s Community HIV Services Portfolio	40	93.940	Agreement No. 51549	263,248	27,591
Evaluation Center Extension to Evaluate PrEP Implementation and Data to Care Services	40	93.940	CONTRACT PO #42045/236320/50105365//U62PS005021	—	—
				<u>992,640</u>	<u>49,783</u>
CDC Supplement: ILPQC MNO Initiative additional support for provider education and safe discharge planning		93.946	6NU58DP006360-03-01	60,627	14,262
Illinois Perinatal Quality Collaborative Working Together for Healthier Moms and Babies in Illinois		93.946	6NU58DP006360-03-01	164,194	84,977
				<u>224,821</u>	<u>99,239</u>
The HIV Outpatient Study (HOPS) Activity to Abstract Data from Persons Receiving Ambulatory Care for HIV Infection in the United States (the “Prime Agreement”)	36	93.U03	Agr. 12/1/2016 // 200-2015-63931	103,086	—
Centers for Medicare & Medicaid Services:					
Great Lakes Practice Transformation Network	103	93.638	5345//L1CMS331444	2,311,648	1,969,080
Special Innovations Project: PACT as a Local Quality Improvement Intervention	196	93.U04	7-001-T0007-01//HHSM-500-2014-QIN0101	866	—
MACRA-Provider Resource Network (M-PRN)	7	93.U05	SC-17-009//HHSM-500-2017- 0004C	329,544	36,409
Health Resources and Services Administration:					
I PROMOTE ILLINOIS (Innovations to ImPROve Maternal OuTcomEs in Illinois)	232	93.110	17747-00//6U7AMC33720-01-02	4,061	—
ACOG Alliance for Innovation on Maternal Health (“AIM”)	8	93.110	Agmt 02/06/2020 // UC4MC28042	14,000	—
				<u>18,061</u>	<u>—</u>
Mothers and Babies Training and Technical Assistance	98	93.870	FCSYV04131//X10MC31139	45,094	—
Mothers and Babies Training and Technical Assistance	98	93.870	FCSZV04131	5,001	—
				<u>50,095</u>	<u>—</u>
Evaluation of HIV Services Portfolio	40	94	51549 TOR 666 // H89HA00008	54,441	—
HRSA/SPNS Evidence-Informed Approaches to Improving Health Outcomes for People Living with HIV	139	93.928	18-SA-321001-848//U90HA31882 Amd.#2	239,810	—
Illinois Perinatal Quality Collaborative (ILPQC) Title V	99	93.994	96380057G_A1	285,343	124,442
Quality Management of HIV Prevention Services in Chicago	40	93.U06	51549 TOR 700 // H89HA00008	299,301	50,999
Substance Abuse and Mental Health Services:					
Center for Child Trauma Assessment, Services and Interventions		93.243	5U79SM080018-05	578,399	—
				<u>5,748,810</u>	<u>2,394,674</u>
Department of Health and Human Services Total					
Department of State:					
Young African Leaders Initiative	109	19.009	FY19-YAU-BE-NWU-06//S-ECAGD-18-CA-0022	5,586	—
Fulbright Pre-Departure Orientation 2018-2019	104	19.U07	FSC1901_NWU_3.31.19//S-ECAGD-19-CA-0046	111,218	—
				<u>116,804</u>	<u>—</u>
Department of State Total					
National Aeronautics and Space Administration:					
Meteoritic Nanodiamond Analysis by Atom-Probe Tomography	283	43.001	PO#2928922C/WU-18-16 Mod 3//NNX16AD26G	28,881	—
				<u>28,881</u>	<u>—</u>
National Aeronautics and Space Administration Total					

**NORTHWESTERN UNIVERSITY**  
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Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
National Foundation of the Arts and Humanities:					
Institute of Museum and Library Services:					
Avalon Media System: Integrating audiovisual collections with research, digital preservation, and a sustainable developer community		45.312	LG-70-17-0042-17	\$ 113,665	100,116
Beyond the Repository: Integrating Local Preservation Systems with National Distribution Services		45.312	LG-70-18-0168-18	110,176	28,614
				<u>223,841</u>	<u>128,730</u>
National Endowment for the Arts:					
Caravans of Gold, Fragments in Time: Art, Culture, and Medieval Trans-Saharan Exchange		45.024	1847267-44-19	8,052	—
Morning Will Come: Modernity in Indian Cinema		45.024	1858584-34-20	8,060	—
National Endowment for the Arts Research Labs	276	45.024	UNIV59613 // DCA 2017-05	4,003	—
				<u>20,115</u>	<u>—</u>
National Endowment for the Humanities:					
The Digital Berkeley Folk Music Festival Collection		45.149	PW-253873-17	35,456	—
The American Indian Center of Chicago and Urban Native American Histories		45.149	PY-258677-18	—	—
				<u>35,456</u>	<u>—</u>
Caravans of Gold, Fragments in Time: Art, Culture, and Medieval Trans-Saharan Exchange		45.164	GI-261115-18	5,604	—
National Foundation of the Arts and Humanities Total				<u>285,016</u>	<u>128,730</u>
U.S. Agency for International Development:					
Agency for International Development:					
Promoting Rule of Law in Georgia	65	98.001	AID-114-A-15-00004	12,709	—
Reinsertion for Youth in Conflict with the Law	51	98.U08	NU SP0056964//AID-523-A-16-00003	62,372	—
U.S. Agency for International Development Total				<u>75,081</u>	<u>—</u>
Other Programs Total				<u>6,470,141</u>	<u>2,523,404</u>
Medicaid Medical Assistance Program:					
Department of Health and Human Services:					
Centers for Illinois Medicaid EHR Incentive Program Education and Outreach Program	97	93.778	2018-37-002	351,756	254,433
Centers for Illinois Medicaid EHR Incentive Program Education and Outreach Program	97	93.778	2020 37-002	635,526	163,457
Department of Health and Human Services Total				<u>987,282</u>	<u>417,890</u>
Medicaid Medical Assistance Program Total				<u>987,282</u>	<u>417,890</u>
Grand Total				<u>\$ 766,374,004</u>	<u>80,847,296</u>

See accompanying notes to supplementary schedule of expenditures of federal awards.

**NORTHWESTERN UNIVERSITY**

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2020

<b>Sponsor Full Name</b>	<b>Pass-through ID Number</b>
Adaptive Health, Inc.	1
Albert Einstein College of Medicine	2
Albert Einstein College of Medicine, Inc.	3
AlisBio LLC	4
Alliance for Clinical Trials in Oncology	5
Alliance for Sustainable Energy, LLC, National Renewable Energy Laboratory	6
Altarum Institute	7
American College of Obstetricians and Gynecologists	8
American College of Rheumatology	9
American Foundry Society Inc.	10
American Lung Association	11
American Urogynecologic Society	12
Ann & Robert H. Lurie Children's Hospital	13
An-Najah National University	14
Arizona State University	15
Associated Universities, Inc., National Radio Astronomy Observatory	16
Association of Public and Land-grant Universities	17
Association of University Centers on Disabilities	18
Barry University	19
Battelle Energy Alliance, LLC, Idaho National Laboratory	20
BBN Technologies	21
Benaroya Research Institute at Virginia	22
Blue Marble Space	23
Boston Medical Center	24
Boston University	25
Brigham and Women's Hospital	26
BrightOutcome Inc.	27
Broad Institute, Inc.	28
Brown University	29
California Institute of Technology	30
California Institute of Technology, Jet Propulsion Laboratory	31
CanCure LLC	32
Carnegie Institution of Washington	33
Case Western Reserve University	34
Cedars-Sinai Medical Center	35
Cerner Corporation	36
Charles River Analytics Inc.	37
Chicago Association for Research and Education in Science	38
Chicago Department of Family and Support Services	39
Chicago Department of Public Health	40
Chicago Housing Authority	41

**NORTHWESTERN UNIVERSITY**

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2020

<b>Sponsor Full Name</b>	<b>Pass-through ID Number</b>
Children's Hospital Boston	42
Children's Hospital of Philadelphia	43
Cincinnati Children's Hospital Medical Center	44
CJE SeniorLife	45
Clarix Imaging Corporation	46
Cleveland Clinic Lerner College of Medicine of Case Western Reserve University	47
Cold Spring Harbor Laboratory	48
Columbia University	49
Community Action Project of Tulsa County, Inc.	50
Consejo Ciudadano de Seguridad y Justicia de Chihuahua, A.C.	51
COPD Foundation	52
Cornell University	53
Critical Path Institute	54
Dana-Farber Cancer Institute	55
Dartmouth College	56
DCS Corporation	57
DePaul University	58
DermaXon LLC	59
Digital Optics Technologies, Inc.	60
Dow Chemical Company	61
Duke University	62
Duke University Medical Center	63
Eastern Virginia Medical School	64
East-West Management Institute Inc.	65
ECOG-ACRIN Medical Research Foundation, Inc.	66
Elorac, Inc.	67
Emmes Company, LLC	68
Emory University	69
Engineering and Software System Solutions, Inc.	70
Fermi Research Alliance, LLC, Fermi National Acceleratory Laboratory	71
Florida International University	72
Florida State University	73
Forsyth Institute	74
Fred Hutchinson Cancer Research Center	75
Frontier Science and Technology Research Foundation	76
FuelCell Energy, Inc.	77
Fundação Faculdade de Medicina	78
Gallaudet University	79
George Mason University	80
George Washington University	81
Georgetown University	82

**NORTHWESTERN UNIVERSITY**

## Supplementary Schedule of Expenditures of Federal Awards

## Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2020

<b>Sponsor Full Name</b>	<b>Pass-through ID Number</b>
Georgia Institute of Technology	83
Georgia State University	84
Global Engineering and Materials, Inc.	85
Government of Israel Ministry of Defense Mission to the USA	86
Great Lakes Hemophilia Foundation	87
Grzybowski Scientific Inventions, Ltd.	88
Harvard University	89
Health Research, Incorporated	90
Hektoen Institute for Medical Research	91
Henry M. Jackson Foundation for the Advancement of Military Medicine	92
Histogen Inc.	93
Honeywell Federal Manufacturing & Technologies, LLC	94
Icahn School of Medicine at Mount Sinai	95
ICON Clinical Research, LLC	96
Illinois Department of Healthcare and Family Services	97
Illinois Department of Human Services	98
Illinois Department of Public Health	99
Illinois Institute of Technology	100
ImmunoChem Therapeutics, LLC	101
Indiana University	102
Indiana University Purdue University Indianapolis	103
Institute of International Education, Inc.	104
Intact Genomics, Inc.	105
Intelligent Fiber Optic Systems Corporation	106
International AIDS Vaccine Initiative	107
International Business Machines Corporation	108
International Research & Exchanges Board	109
Iowa State University	110
Jackson State University	111
Jaeb Center for Health Research	112
Joan and Sanford I. Weill Medical College of Cornell University	113
Johns Hopkins University	114
Jumpstart for Young Children, Inc.	115
Kaiser Foundation Research Institute	116
Lehigh University	117
Leidos Biomedical Research, Inc.	118
Leidos, Inc.	119
Los Alamos National Security, LLC, Los Alamos National Laboratory	120
Loyola University Chicago	121
Lynntech, Inc.	122
Magee-Womens Research Institute and Foundation	123

**NORTHWESTERN UNIVERSITY**

## Supplementary Schedule of Expenditures of Federal Awards

## Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2020

<b>Sponsor Full Name</b>	<b>Pass-through ID Number</b>
Massachusetts General Hospital	124
Massachusetts Institute of Technology	125
Massachusetts Institute of Technology, Lincoln Laboratory	126
Mathematica Policy Research, Inc.	127
Mayo Clinic	128
Mayo Clinic Jacksonville	129
McLean Hospital	130
Medical College of Wisconsin	131
Medical University of South Carolina	132
MedStar Health Research Institute	133
Methodist Hospital Research Institute	134
Metis Foundation (TX)	135
Michelin North America, Inc.	136
Michigan State University	137
Montana State University	138
National Alliance of State and Territorial AIDS Directors	139
National Association of Area Agencies on Aging	140
National Collegiate Inventors and Innovators Alliance, Inc.	141
National Jewish Health	142
Neurodon LLC	143
NeuroKine Therapeutics, LLC	144
New England Research Institutes, Inc.	145
New York University	146
New York University School of Medicine	147
Northeastern University	148
Northern California Institute for Research and Education	149
Northrop Grumman Corporation	150
NorthShore University HealthSystem Research Institute	151
Nour, LLC	152
NRG Oncology Foundation, Inc.	153
NuMat Technologies, Inc.	154
Ohio State University	155
Opticent Health, Inc.	156
Opto-Knowledge Systems, Inc.	157
Oregon Health & Science University	158
PACT & Health LLC	159
Pennington Biomedical Research Center	160
Pennsylvania State University	161
Princeton University	162
Purdue University	163
RAND Corporation	164

**NORTHWESTERN UNIVERSITY**

## Supplementary Schedule of Expenditures of Federal Awards

## Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2020

<b>Sponsor Full Name</b>	<b>Pass-through ID Number</b>
Rehabilitation Institute of Chicago	165
Rensselaer Polytechnic Institute	166
Research Foundation for Mental Hygiene, Inc.	167
Research Institute at Nationwide Children's Hospital	168
Research Triangle Institute	169
Rockefeller University	170
Rosalind Franklin University of Medicine and Science	171
Rush University Medical Center	172
Rutgers University, the State University of New Jersey	173
SAFCell, Inc.	174
Salzman Group, Inc.	175
San Diego State University Foundation	176
Sandia Corporation, Sandia National Laboratories	177
Sanford Burnham Prebys Medical Discovery Institute	178
Scientific Consulting Group, Inc.	179
Scripps Research Institute	180
Seattle Children's Hospital	181
SIMmersion LLC	182
Smart Information Flow Technologies, LLC	183
Smithsonian Astrophysical Observatory	184
Social & Scientific Systems, Inc.	185
Sonica LLC	186
Southern Methodist University	187
Space Telescope Science Institute	188
Spaulding for Children (MI)	189
Stanford University	190
Stanford University, SLAC National Accelerator Laboratory	191
State University of New York at Buffalo	192
State University of New York at Stony Brook	193
Steel Founders' Society of America	194
Technion – Israel Institute of Technolog	195
Telligen, Inc.	196
Temple University	197
Tera-Print LLC	198
Texas A&M Transportation Institute	199
Texas A&M University System	200
Texas Biomedical Research Institute	201
Thomas Jefferson University	202
Tufts Medical Center, Inc.	203
Tulane University	204
U.S. Civilian Research & Development Foundation	205

**NORTHWESTERN UNIVERSITY**

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2020

<b>Sponsor Full Name</b>	<b>Pass-through ID Number</b>
UChicago Argonne, LLC, Argonne National Laboratory	206
Universities Space Research Association	207
University Health Network (Toronto)	208
University of Alabama at Birmingham	209
University of Alberta	210
University of Arizona	211
University of Arkansas for Medical Sciences	212
University of California, Davis	213
University of California, Irvine	214
University of California, Lawrence Berkeley National Laboratory	215
University of California, Los Angeles	216
University of California, Riverside	217
University of California, San Diego	218
University of California, San Francisco	219
University of California, Santa Barbara	220
University of Chicago	221
University of Chicago, National Opinion Research Center	222
University of Cincinnati	223
University of Colorado	224
University of Colorado Denver	225
University of Connecticut Health Center	226
University of Delaware	227
University of Florida	228
University of Georgia	229
University of Houston	230
University of Ibadan	231
University of Illinois at Chicago	232
University of Illinois at Urbana-Champaign	233
University of Iowa	234
University of Jos	235
University of Kentucky	236
University of Lagos	237
University of Louisiana at Lafayette	238
University of Maryland, College Park	239
University of Massachusetts Amherst	240
University of Massachusetts Lowell	241
University of Massachusetts Medical School	242
University of Memphis	243
University of Miami	244
University of Michigan	245
University of Minnesota	246



**NORTHWESTERN UNIVERSITY**

## Supplementary Schedule of Expenditures of Federal Awards

## Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2020

<b>Sponsor Full Name</b>	<b>Pass-through ID Number</b>
University of Missouri-Columbia	247
University of Nebraska at Omaha	248
University of Nebraska Medical Center	249
University of New Hampshire	250
University of North Carolina at Chapel Hill	251
University of North Texas Health Science Center at Fort Worth	252
University of Notre Dame	253
University of Oregon	254
University of Pennsylvania	255
University of Pittsburgh	256
University of Rochester	257
University of South Carolina	258
University of Southern California	259
University of Tennessee Health Science Center	260
University of Texas at Arlington	261
University of Texas at Austin	262
University of Texas at Dallas	263
University of Texas at El Paso	264
University of Texas at San Antonio	265
University of Texas Health Science Center at Houston	266
University of Texas M. D. Anderson Cancer Center	267
University of Texas Southwestern Medical Center at Dallas	268
University of Utah	269
University of Virginia	270
University of Washington	271
University of Wisconsin-Madison	272
University of Wisconsin-Milwaukee	273
University of Wisconsin-Whitewater	274
UT-Battelle, LLC, Oak Ridge National Laboratory	275
Vanderbilt University	276
Vanderbilt University Medical Center	277
Versiti Wisconsin, Inc.	278
Vignet Inc.	279
Volexion, Inc.	280
Vox Biomedical LLC	281
Wake Forest University Health Sciences	282
Washington University in St. Louis	283
Wayne State University	284
Wearifi, Inc.	285
Westat, Inc.	286
WestEd	287
Yale University	288

## NORTHWESTERN UNIVERSITY

### Notes to Supplementary Schedule of Expenditures of Federal Awards

Year ended August 31, 2020

#### (1) Organization and Scope of Operations

Northwestern University (the University) is a not-for-profit corporation organized under the laws of the State of Illinois, whose charter establishes a Board of Trustees to oversee the implementation of its mission to carry out research and education. All federal expenditures of the University are included in the scope of this U.S. Office of Management and Budget (OMB) Circular Single Audit Report. The U.S. Department of Health and Human Services has been designated as the University's cognizant agency for the single audit.

#### (2) Summary of Significant Accounting Policies

**Basis of Accounting** – The accompanying supplementary schedule of expenditures of federal awards (the Schedule) summarizes the expenditures of the University and its subsidiaries under programs of the federal government for the year ended August 31, 2020. The Schedule is prepared on the accrual basis of accounting. Since the Schedule presents only a selected portion of the operations of the University, it is not intended to, and does not, present the consolidated financial position or changes in net assets of the University.

For purposes of the Schedule, federal awards include all grants, contracts, and similar agreements entered into directly between the University and agencies and departments of the federal government and all subawards to the University by nonfederal organizations pursuant to federal grants, contracts, and similar agreements. Complete CFDA numbers and pass through numbers are provided on the Schedule when available.

**Indirect Costs** – The University has negotiated indirect cost rates with the U.S. Department of Health and Human Services. The University does not use the de minimis F&A rate described in 2 CFR 200.414 of the Uniform Guidance.

**Expenditure and Revenue Recognition** – The Schedule presents the expenditures of individual programs on the accrual basis of accounting. All program outlays, including accrued expenditures and capital outlays, are reported as expenditures. Related revenues (which are not presented herein) are recognized up to award amounts for financial statement and program reporting. Award reporting periods do not necessarily coincide with the fiscal reporting period of the University. Negative amounts presented in the Schedule represent adjustments, in the normal course of business, to expenditures reported in prior years.

**Pass Through Awards** – The University receives certain federal awards from pass through awards of the State of Illinois and other nonfederal organizations. The total amount of expenditures for such pass through awards is included in the Schedule.

**Subrecipients** – The University passes through certain funds to subrecipient organizations. The total amount of such subrecipient expenditures is included in the Schedule for each federal award, where applicable.

**De Minimis F&A** – The University applies the 10% de minimis F&A rate to modified total direct costs (MTDC) to subawards if the subrecipient does not receive an approved negotiated F&A rate as described in 2 CFR 200.414 of the Uniform Guidance.

**NORTHWESTERN UNIVERSITY**

Notes to Supplementary Schedule of Expenditures of Federal Awards

Year ended August 31, 2020

**(3) Federal Student Loan Programs**

Loans made by the University to eligible students under federal student loan programs and federally guaranteed loans originating with the University and issued to its students during the year ended August 31, 2020, are summarized as follows:

Federal Perkins Loan Program (CFDA 84.038)	\$	—
Federal Direct Loan Programs (CFDA 84.268)		191,134,510
HPSL Primary Care Loans (CFDA 93.342)		<u>—</u>
Total Federal Student Loan Programs	\$	<u>191,134,510</u>

The Perkins and Health Professions Student Loan (HPSL) programs are administered directly by the University and balances and transactions relating to these programs are included in the University's consolidated financial statements. The balances of loans outstanding under the Perkins (CFDA 84.038) and HPSL (CFDA 93.342) programs were \$14,282,706 and \$172,540, respectively, at August 31, 2020. The University incurred \$0 in administrative expenses under the Federal Supplemental Educational Opportunity Grant, Federal Work Study, and Perkins programs for the year ended August 31, 2020.



KPMG LLP  
Aon Center  
Suite 5500  
200 E. Randolph Street  
Chicago, IL 60601-6436

**Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With Government Auditing Standards**

The Board of Trustees  
Northwestern University:

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 Northwestern University, which comprise the consolidated statement of financial position as of August 31, 2020, the related consolidated statements of activities and cash flows for the year then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated December 18, 2020.

*Internal Control Over Financial Reporting*

In planning and performing our audit of the consolidated financial statements, we considered the University's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the consolidated financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we do not express an opinion on the effectiveness of the University's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

*Compliance and Other Matters*

As part of obtaining reasonable assurance about whether the University's consolidated 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 consolidated financial statements. 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 University'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 University's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

Chicago, Illinois  
December 18, 2020



KPMG LLP  
Aon Center  
Suite 5500  
200 E. Randolph Street  
Chicago, IL 60601-6436

**Independent Auditors' Report on Compliance for Each Major Federal Program; Report on Internal Control Over Compliance; and Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance**

The Board of Trustees  
Northwestern University:

**Report on Compliance for the Major Federal Program**

We have audited Northwestern University's (the University's) compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on the University's major federal program for the year ended August 31, 2020. The University's major federal program is identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

*Management's Responsibility*

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

*Auditors' Responsibility*

Our responsibility is to express an opinion on compliance for the University's major federal program based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for the major federal program. However, our audit does not provide a legal determination of the University's compliance.

*Opinion on Each Major Federal Program*

In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on its major federal program for the year ended August 31, 2020.



## **Report on Internal Control Over Compliance**

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the University's internal control over compliance with the types of requirements that could have a direct and material effect on a major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for the major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the University's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that have not been identified. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, we did identify certain deficiencies in internal control over compliance, described in the accompanying schedule of findings and questioned costs as item 2020-001.

The University's response to the internal control over compliance findings identified in our audit is described in the accompanying schedule of findings and questioned costs. The University is also responsible for preparing a corrective action plan to address each audit finding included in our auditors' report. The University's response and corrective action plan were not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response or the corrective action plan.

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.

## **Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance**

We have audited the consolidated financial statements of the University as of and for the year ended August 31, 2020, and have issued our report thereon dated December 18, 2020, which contained an unmodified opinion on those consolidated financial statements. Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the



consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

KPMG LLP

Chicago, Illinois  
May 27, 2021



**NORTHWESTERN UNIVERSITY**  
Schedule of Findings and Questioned Costs  
Year ended August 31, 2020

**(1) Summary of Auditors' Results**

- (a) Type of report issued on whether the consolidated financial statements were prepared in accordance with U.S. generally accepted accounting principles: Unmodified
- (b) Internal control deficiencies over financial reporting disclosed by the audit of the consolidated financial statements:
  - Material weaknesses: No
  - Significant deficiencies: None reported
- (c) Noncompliance material to the consolidated financial statements: No
- (d) Internal control deficiencies over major program disclosed by the audit:
  - Material weaknesses: No
  - Significant deficiencies: Yes
- (e) Type of report issued on compliance for major program: Unmodified
- (f) Audit findings that are required to be reported in accordance with 2 CFR 200.516(a): Yes
- (g) Major program:
  - Student Financial Assistance Cluster – Various CFDA numbers
- (h) Dollar threshold used to distinguish between Type A and Type B programs: \$3,000,000
- (i) Auditee qualified as a low risk auditee: Yes

**(2) Findings Relating to the Consolidated Financial Statements Reported in Accordance with *Government Auditing Standards***

None

**NORTHWESTERN UNIVERSITY**  
Schedule of Findings and Questioned Costs  
Year ended August 31, 2020

**(3) Findings and Questioned Costs Relating to Federal Awards**

**Finding 2020-001** Inaccurate Enrollment Reporting

**Federal Agency:** U.S. Department of Education (USDE)

**Program Name:** Student Financial Assistance Cluster – Federal Pell Grant Program and Federal Direct Loan Program

**CFDA # and Program Expenditures:** 84.063 (\$7,816,222)  
84.268 (\$191,134,510)

**Federal Award Numbers:** P063P181371  
P063P191371  
P268K191371  
P268K201371  
P268K211371

**Federal Award Year:** July 1, 2019 to June 30, 2020  
July 1, 2020 to June 30, 2021

**Questioned Costs:** None

***Condition Found***

The University's internal controls over compliance did not prevent or identify errors reported to the National Student Loan Data System (NSLDS) with respect the Published Program Length of an academic program.

The U.S. Department of Education (USDE) uses enrollment data reported by the University to determine: (1) eligibility for interest subsidies, (2) loan repayment start dates, and (3) in-school loan deferments. The enrollment information is also used by USDE to measure program completion data to evaluate the effectiveness of financial aid programs.

During our testing of 40 borrowers under the Direct Loan program and/or Pell Grant recipients that had a reduction or increase in attendance levels, graduated, withdrew, dropped out, or enrolled but never attended during the fiscal year, we noted the published program length for one academic program was inaccurately reported. Specifically, the Published Program Length for the Speech-Language Pathology program was reported as four years, when the Published Program Length reported should have been seven quarters. As a result, there were 45 students in this academic program whose Published Program Length was inaccurately reported to the NSLDS. The program information in the University's academic records was not subject to a management review at a level of precision that would identify an error in the program length.

The number of students reported on the University's Roster files ranged from 7,701 to 9,803 students during fiscal year 2020. The University has 730 academic programs.

**NORTHWESTERN UNIVERSITY**  
Schedule of Findings and Questioned Costs  
Year ended August 31, 2020

***Criteria***

The Uniform Guidance (2 CFR 200.303) requires nonfederal entities to, among other things, establish and maintain effective internal control over the Federal award that provides reasonable assurance that the non-Federal entity is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award. Effective internal controls should include establishing procedures to ensure student Program-Level enrollment information is accurately reported to the NSLDS.

***Cause***

In discussing these conditions with University officials, they stated the published program length of 1 of the 730 programs was reported incorrectly as a result of a data entry error.

***Possible Asserted Effect***

Inaccurate submission of student enrollment information, specifically the published program-length, inhibits the USDE's ability to measure program completion data to evaluate the effectiveness of financial aid programs.

***Repeat Finding***

A similar finding was not reported in the prior year audit.

***Statistical Sampling***

The sample was not intended to be, and was not, a statistically valid sample.

***Recommendation***

We recommend the University review its procedures to ensure student enrollment information is accurately reported to the NSLDS.

***Views of University Officials***

The University agrees with the finding.

Northwestern University offers 730 individual programs whose lengths and myriad other details are carefully maintained. In this case, the program length of 1 of those 730 programs was recorded incorrectly, as a result of a data entry error, leading to a 0.13% error in the program data, and a 0.3% error in enrollment reporting for academic year '19-20.

Northwestern immediately corrected the program and related enrollment reports, confirmed the accuracy of all other program lengths and created an annual quality assurance process for program data. The program length component of enrollment reporting is included solely to enforce loan limitations for undergraduate students under the federal Subsidized Usage Limit Applies (SULA) program. Since this error involved a graduate program, there were no financial risks.

Northwestern believes this was an isolated incident and expect the elimination of reporting mandates for academic program lengths with the repeal of SULA requirements under the Consolidated Appropriations Act 2021 signed into law on December 27, 2020.

**SUMMARY SCHEDULE OF PRIOR  
AUDIT FINDINGS NORTHWESTERN  
UNIVERSITY  
For Year Ended August 31, 2020**

**2019-001            Property Management**

**Corrective Action Plan:**

In fiscal year 2020, Accounting Services shall reiterate proper procedures to department Unit Representatives regarding the disposition of equipment, including timely submission of disposal requests and procedures for replacement of equipment under warranty. Accounting Services will also continue to perform its own audit of the re-inventories prepared by Unit Representatives as well, gearing its sampling towards higher risk items. Accounting Services shall also stress the importance of affixing property tags on all capital equipment, ensuring the tag numbers match property records, and the process for requesting tag replacements when necessary.

**Expected Implementation Date: August 31, 2020**

Fully Corrected	Partially Corrected	Not Corrected	Change in Plan	No Further Action/Other
	X			

**Explanation (if required):**

Management deems this finding as partially corrected. In fiscal year 2020, management presented training on capital equipment inventory procedures to department Unit Representatives. The presentation covered proper procedures for reporting various types of disposals, including replacements of capital equipment. Additionally, management communicated both the importance and the process for affixing property tags and ensuring property records match capital equipment during the inventory process.

Due to the COVID-19 pandemic, the State of IL and local government established regulations to enforce social distancing for health and safety concerns in 2020. Northwestern complied with the regulations to restrict on-campus access. Management was unable to perform an audit of completed inventories because of these restrictions in fiscal year 2020. Management shall continue to provide continuous guidance throughout the fiscal year, and perform alternative procedures to gain comfort over completed inventories in the current fiscal year.

**Findings and Questioned Costs Relating to Federal Awards**

**Corrective Action Plan**

Year Ended August 31, 2020

**Finding No. 2020-001: Inaccurate Enrollment Reporting**

*CFDA Numbers:* Various

*Program:* Student Financial Aid Cluster

*Corrective Action:* Northwestern immediately corrected the program and related enrollment reports, confirmed the accuracy of all other program lengths and created an annual quality assurance process for program data. The quality assurance process includes an annual review by local program experts in each Northwestern school to confirm the continued offering of each program, the length in semesters or quarters, intent to enroll full or part-time students, and designations of day, evening, weekend or remote classes.

The program length component of enrollment reporting is included solely to enforce loan limitations for undergraduate students under the federal Subsidized Usage Limit Applies (SULA) program. Since this error involved a graduate program, there were no financial risks.

*Contact Person:* Jacquelyn Casazza, Assistant Provost and University Registrar  
*Expected Implementation:* May 2021