



NORTHWESTERN UNIVERSITY

Single Audit Report

Year ended August 31, 2018

(With Independent Auditors' Report Thereon)

NORTHWESTERN UNIVERSITY

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Year ended August 31, 2018

Table of Contents

	Page
Independent Auditors' Report	1
Consolidated Financial Statements:	
Consolidated Statements of Financial Position	3
Consolidated Statements of Activities	4
Consolidated Statements of Cash Flows	5
Notes to Consolidated Financial Statements	7
Supplementary Schedule of Expenditures of Federal Awards	29
Notes to Supplementary Schedule of Expenditures of Federal Awards	87
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 <i>Government Auditing Standards</i>	89
Independent Auditors' Report on Compliance for Major Federal Program; Report on Internal Control Over Compliance; and Report on Supplementary Schedule of in Expenditures of Federal Awards Required by the Uniform Guidance	91
Schedule of Findings and Questioned Costs	94



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

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 statement of financial position as of August 31, 2018, the related consolidated statements of activities and cash flows for the year then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of 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 audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on 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 2018 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Northwestern University as of August 31, 2018, and the changes in its net assets and its cash flows for the year then ended in accordance with U.S. generally accepted accounting principles.



Other Matter

The accompanying consolidated financial statements of the University as of August 31, 2017 and for the year then ended were audited by other auditors whose report thereon dated January 10, 2018, expressed an unmodified opinion on those consolidated financial statements.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 19, 2018 on our consideration of the University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.

KPMG LLP

Chicago, Illinois
December 19, 2018

Consolidated Statements of Financial Position

As of August 31, 2018 and 2017

<i>(in thousands of dollars)</i>	2018	2017
Assets		
Cash and cash equivalents	\$185,535	\$92,623
Accounts receivable, <i>net</i>	273,954	263,424
Contributions receivable, <i>net</i>	311,458	318,780
Notes receivable, <i>net</i>	151,666	151,679
Investments	11,287,087	10,717,787
Land, buildings, and equipment, <i>net</i>	3,258,035	2,933,679
Other assets	12,051	9,495
Total assets	\$15,479,786	\$14,487,467

Liabilities		
Accounts payable and accrued liabilities	\$204,237	\$298,891
Deferred revenue	302,709	277,853
Deposits payable and actuarial liability of annuities payable	154,743	156,179
Government advances for student loans	19,077	30,559
Bonds, notes, and other debt payable, <i>net</i>	2,555,136	2,040,602
Total liabilities	\$3,235,902	\$2,804,084

Net assets		
Unrestricted	\$7,654,713	\$7,338,857
Temporarily restricted	2,887,890	2,720,408
Permanently restricted	1,701,281	1,624,118
Total net assets	\$12,243,884	\$11,683,383
Total liabilities and net assets	\$15,479,786	\$14,487,467

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

Consolidated Statement of Activities

For the fiscal year ended August 31, 2018, and summarized financial information for the fiscal year ended August 31, 2017

(in thousands of dollars)	2018				2017
	Unrestricted	Temporarily	Permanently restricted	Total	Total
Operating revenues					
Tuition and fees	\$1,071,402			\$1,071,402	\$1,008,586
(less scholarships and fellowships)	(451,121)			(451,121)	(419,944)
Net tuition and fees	620,281			620,281	588,642
Auxiliary services	83,907			83,907	80,812
Grants and contracts	648,008			648,008	617,448
Private gifts	216,935			216,935	199,630
Investment return designated for operations	482,747	\$164,454		647,201	604,534
Sales and services	209,690			209,690	183,999
Professional fees	38,448			38,448	34,929
Total operating revenues	2,300,016	164,454		2,464,470	2,309,994
Net assets released from restrictions	207,762	(207,762)			
Total operating revenues and other additions (reductions)	2,507,778	(43,308)	—	2,464,470	2,309,994

Operating expenses					
Salaries, wages, and benefits	1,420,531			1,420,531	1,343,723
Services, supplies, travel, and other	614,019			614,019	587,686
Depreciation and asset retirement obligation accretion	150,732			150,732	143,471
Maintenance and utilities	205,253			205,253	178,038
Interest on indebtedness	68,648			68,648	44,378
Total operating expenses	2,459,183			2,459,183	2,297,296
Excess (deficit) of operating revenues over expenses	48,595	(43,308)	—	5,287	12,698

Nonoperating revenues and expenses					
Private gifts and grants for buildings and equipment	2,853	40		2,893	512
Restricted private gifts		41,994	78,289	120,283	169,641
Net gain (loss) on annuity obligations		574	(1,126)	(552)	(3,808)
Investment return, reduced by operating distribution	258,375	168,182		426,557	482,832
Change in value of derivative instruments	7,419			7,419	7,732
Other expenses, net	(1,386)			(1,386)	(633)
Excess of nonoperating revenues over expenses	267,261	210,790	77,163	555,214	656,276
Change in net assets	315,856	167,482	77,163	560,501	668,974
Beginning net assets	7,338,857	2,720,408	1,624,118	11,683,383	11,014,409
Ending net assets	\$7,654,713	\$2,887,890	\$1,701,281	\$12,243,884	\$11,683,383

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

Consolidated Statements of Cash Flows

For the fiscal years ended August 31, 2018 and 2017

<i>(in thousands of dollars)</i>	2018	2017
Cash flows from operating activities		
Change in net assets	\$560,501	\$668,974
Adjustments to reconcile change in net assets to net cash used in operating activities		
Depreciation and asset retirement obligation accretion	150,732	143,471
Losses (gains) on disposals, retirements, and sales of buildings and equipment, <i>net</i>	41,907	(362)
Amortization (accretion) of issuance costs, premiums, and discounts, <i>net</i>	(174)	(2,369)
Allowance for student loans receivable	467	317
Realized and unrealized gains on investments, <i>net</i>	(1,036,599)	(1,040,580)
Gifts of contributed securities	(35,376)	(51,886)
Proceeds from sale of unrestricted contributed securities	19,053	46,886
Change in value of derivative instruments	(7,419)	(7,732)
Restricted contributions received for long-term investment and capital projects	(61,873)	
Private gifts and grants for buildings and equipment	—	(512)
<i>Changes in assets and liabilities</i>		
Accounts receivable	(10,347)	63,022
Contributions receivable	1,282	(55,357)
Other assets	(2,719)	(789)
Accounts payable and accrued liabilities	(47,424)	(3,439)
Deposits and annuities payable	(1,436)	15,343
Deferred revenue	24,856	(11,230)
Government advances for student loans	(11,482)	(7,207)
Net cash used in operating activities	(416,051)	(243,450)

Cash flows from investing activities		
Purchases of investments	(1,647,796)	(1,786,688)
Proceeds from sales of investments	2,127,728	2,439,081
Acquisitions of land, buildings, and equipment	(556,940)	(667,350)
Proceeds from sale of buildings or equipment	297	244
Student loans disbursed	(23,157)	(21,345)
Principal collected on student loans	23,317	28,113
Other	(13,430)	(14,154)
Net cash used in investing activities	(89,981)	(22,099)

Cash flows from financing activities		
Proceeds from issuance of notes, bonds, and other debt payable	615,000	232,000
Payments for debt issuance costs	(2,522)	
Principal payments on notes, bonds, and other debt payable	(97,770)	(89,715)
Proceeds from sale of restricted contributed securities	16,323	
Proceeds from private gifts and grants for buildings and equipment	—	512
Restricted contributions received for long-term investment and capital projects	67,913	
Net cash provided by financing activities	598,944	142,797

Consolidated Statements of Cash Flows (continued)

For the fiscal years ended August 31, 2018 and 2017

Increase (decrease) in cash and cash equivalents	92,912	(122,752)
Cash and cash equivalents at beginning of year	92,623	215,375
Cash and cash equivalents at end of year	\$185,535	\$92,623

Supplemental disclosure of cash flow information		
Change in accrued liabilities for construction in progress	(\$39,648)	\$40,952
Capitalized interest	20,889	23,243
Cash paid for interest	85,382	67,663

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

Notes to the Consolidated Financial Statements

For the fiscal years ended August 31, 2018 and 2017

1. Summary of Significant Accounting Policies

University Activities

Northwestern University (Northwestern or the University) is a major private research university with more than 21,000 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. Activities supporting its mission may be classified as either operating or nonoperating. Operating revenues include student tuition, research funding, investment return designated for operations, educational sales and services, private gifts, professional fees, unrestricted private gifts, and auxiliary services. Operating expenses reflect support for all functions of the University. Nonoperating activities include unrealized gains and losses on investments, annuity obligations, and derivative instruments; gifts for building; all permanently restricted endowment gifts; and other.

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. These 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 in three categories based on the existence or absence of donor-imposed restrictions. For further discussion of the classification of donor-restricted endowment funds and disclosures about both donor-restricted and board-designated endowment funds, see note 8.

The category *Permanently Restricted Net Assets* applies to gifts, trusts, and pledges whose donor-imposed stipulations neither expire with the passage of time nor can be fulfilled or otherwise removed by the actions of the University, and primarily consist of the historic dollar value of contributions to establish or add to donor-restricted endowment funds.

The category *Temporarily Restricted Net Assets* includes gifts for which donor-imposed restrictions have not been met (these may include future capital projects), as well as trust activity and pledges receivable whose ultimate use is not permanently restricted. In addition, the excess of the fair value over the historical cost of permanently restricted endowments is classified as temporarily restricted net assets until appropriated for expenditure.

The category *Unrestricted Net Assets* describes funds that have no donor-imposed restrictions. All revenues, expenses, gains, and losses are classified as unrestricted net assets unless they are changes in temporarily or permanently restricted net assets. Net unrealized losses on permanently restricted endowment funds for which the historical cost exceeds fair value are recorded as a reduction to unrestricted net assets.

Revenue from temporarily restricted sources is reclassified as unrestricted revenue when the circumstances of the restriction have been fulfilled. Donor-restricted revenues whose restrictions are met within the same fiscal year are reported as unrestricted revenue. The expiration of a donor-imposed restriction on a contribution is recognized in the period in which the restriction expires. All expenditures are reported in the unrestricted class of net assets, since the use of restricted contributions in accordance with the donor's stipulations causes the release of the restriction. Donor-restricted purposes primarily include instruction, research, library collections, scholarship and awards, and building construction.

Fair Value Measurements

The University makes fair value measurements and disclosures about fair value measurements as required by the Fair Value Measurements and Disclosures Topic of the FASB ASC. For further discussion, see notes 4 and 7.

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 that convert readily to cash and carry little risk of change in value at maturity due to interest-rate changes; original maturities of the investments are three months or less.

Contributions

Contributions received, including unconditional promises to give (pledges), 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 included in revenue until the conditions are substantially met.

Investments

Investments in securities and 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; 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 fair value hierarchy is based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value. The following describes this hierarchy and the primary valuation methodologies used by the University for financial instruments 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 are 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.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input significant to the fair value measurement. In the event that changes in the inputs used in the fair value measurement of an asset or liability result in a transfer of the fair value measurement to a different categorization, such transfers between fair value categories are determined and recognized at the end of the reporting period. The categorization of an investment is based upon 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 that use NAV as a practical expedient for valuation purposes are shown separately from the valuation hierarchy. For further discussion, see note 4.

Equity securities with readily determinable fair values and debt securities 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 classified as Level 1 because the securities have observable market inputs. Certain fixed income 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 that do not have readily determined fair values, and of other investments that are generally less liquid, are based on valuation information received on the relevant entity 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. The fair values for these securities are classified as Level 3, reflecting significant unobservable inputs that are supported by little or no market inputs.

Investments in certain real assets and other investments are recorded at acquisition or construction cost, or at fair value as of donation date if received as a contribution. The University performs a periodic assessment of these assets for impairment by comparing the future cash flows expected from the asset to the carrying value of the asset. 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, 2018 and 2017. 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 financial instruments 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 an interest-rate swap agreement to hedge variable interest-rate exposure. 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 the interest-rate swap 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, the interest-rate swaps are classified as Level 2. For further discussion, see notes 4 and 7.

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—either temporarily restricted or permanently restricted—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, 2018 and 2017.

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 the equipment, which are estimated to be 3 to 20 years; of the buildings and land improvements, which are estimated to be up to 40 years; and of the 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.

Charitable Remainder Trusts

Charitable remainder trusts are classified as permanently restricted net assets if, upon termination of the trust, the donor permanently restricts the remaining trust assets. If the remainder is not permanently restricted by the donor, the charitable remainder trust assets are recorded as temporarily restricted net assets.

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, and certain employee and student insurance coverages. This pro-gram 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 9 and 11 for additional discussion.

Revenue Recognition

Revenues from tuition and fees are reported in the fiscal year in which they are earned, including pro-rata adjustments for educational programs crossing over fiscal years. Fiscal year 2019 fall-quarter tuition and fees, billed but not earned in fiscal year 2018, are reported as deferred revenue in fiscal year 2018. Similarly, fiscal year 2018 fall-quarter tuition and fees, billed but not earned in fiscal year 2017, are reported as deferred revenue in fiscal year 2017.

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. Grants and contracts revenue is recognized as expenses are incurred. Professional fees arise from faculty and department services provided to external institutions such as hospitals. Sales and services revenues represent fees for services and goods provided to external parties in the course of educational activities. It also includes revenues from the provision of physical plant services and goods to external institutions contiguous to the University campuses; 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 they are earned); and other income including revenues not otherwise categorized that are also recognized in the fiscal year in which they are earned.

Federal Grants and Contracts Revenue

The University receives funding or reimbursement from federal agencies. In addition, 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.

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 income, 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 2015 through 2018.

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.

In December 2017, the US president signed into law H.R. 1, formerly known as the Tax Cuts and Jobs Act (TCJA). The University continues to evaluate the impact H.R. 1 will have on its operations pending the release of further guidance.

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 April 2015, the FASB issued Accounting Standards Update (ASU) 2015-03, "Interest—Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs." This ASU requires debt issuance costs related to a recognized debt liability to be presented in the statement of financial position as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. The University adopted the provisions of ASU 2015-03, which require retrospective application, in the accompanying consolidated financial statements. Accordingly, the August 31, 2017, consolidated statement of financial position reclassified \$8,478 of net deferred financing costs, previously reported as other assets, as a reduction of bonds, notes, and other debt payable.

Recent Accounting Pronouncements

In June 2018, the FASB issued ASU 2018-08, "Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made," which includes guidance to assist entities in evaluating whether a transfer of assets should be accounted for as a contribution (nonreciprocal transaction) within the scope of Topic 958, Not-for-Profit Entities, or as an exchange (reciprocal) transaction subject to other guidance. The guidance also clarified that a contribution is conditional if the agreement includes both a barrier (as defined) and a right of return or release. The standard is effective in fiscal year 2019 for the University.

In August 2016, the FASB issued ASU 2016-14, "Not-for-Profit Entities: Presentation of Financial Statements of Not-for-Profit Entities." The guidance addresses net asset classifications, and reporting and disclosures about liquidity, financial performance, expenses, and cash flows. The standard is effective in fiscal year 2019 for the University.

In February 2016, the FASB issued ASU 2016-02, "Leases," new guidance to increase the transparency and comparability of lease reporting by recognizing lease assets and liabilities on the balance sheet and disclosing key information about leasing activities. The standard is effective in fiscal year 2020 for the University.

In January 2016, the FASB issued ASU 2016-01, "Financial Instruments—Overall: Recognition and Measurement of Financial Assets and Financial Liabilities," affecting accounting for equity investments and financial liabilities under the fair value option and certain presentation and disclosure requirements for financial instruments. The standard is effective in fiscal year 2019 for the University.

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers," a new revenue recognition topic in the codification that provides a principle-based framework to replace earlier industry-specific and rule-based revenue recognition standards. Under the new ASU, revenue is recognized for the transfer of promised goods or services to customers in an amount that reflects the consideration that the entity expects to be entitled to in exchange for those goods or services. Additional disclosure is required to enable users of the financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. The standard is effective in fiscal year 2019 for the University.

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

Summarized Comparative Information

The consolidated financial statements include certain prior-year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with GAAP. Accordingly, such information should be read in conjunction with the University's consolidated financial statements for the year ended August 31, 2017, from which the summarized information was derived.

Reclassifications

Certain prior-year amounts have been reclassified to conform to the current-year presentation, with no effect on excess (deficit) of operating revenues over expenses, excess of nonoperating revenues over expenses, or net assets.

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>	2018	2017
Research and other sponsored programs support	\$84,711	\$85,760
Student receivables	120,393	117,739
Other receivables	69,510	60,566
Accounts receivable subtotal	274,614	264,065
Less allowances for student uncollectible amounts	(660)	(641)
Total accounts receivable, net	\$273,954	\$263,424

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

<i>(in thousands of dollars)</i>	2018	2017
Notes receivable	\$155,939	\$155,485
Less allowances for student uncollectible amounts	(4,273)	(3,806)
Total notes receivable, net	\$151,666	\$151,679

3. Contributions Receivable

Contributions receivable as of August 31 consisted of the following:

<i>(in thousands of dollars)</i>	2018	2017
Unconditional promises expected to be collected in		
Less than one year	\$53,615	\$57,821
One to five years	185,228	181,136
More than five years	114,416	130,727
Contributions receivable subtotal	353,259	369,684
Less unamortized discounts	(41,345)	(48,976)
Less allowances for uncollectible amounts	(456)	(1,928)
Total contributions receivable, net	\$311,458	\$318,780

Contributions receivable are discounted at rates ranging from 1.7 to 6.5 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, temporarily invested expendable funds, and commercial real estate.

Substantially all of these assets are merged into internally managed investment pools on a market value basis. Each holder of units in the investment pools 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 and derivatives, grouped by the valuation hierarchy as defined in note 1, as of August 31, 2018 and 2017:

<i>(in thousands of dollars)</i>					2018
	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	\$83,132	—	—	—	\$83,132
US equity	561,412	\$68,609	—	\$1,026,835	1,656,856
International equity	261,213	14,382	\$66	1,635,779	1,911,440
Fixed income	56,736	580,417	—	266,423	903,576
High-yield credit	—	—	—	301,826	301,826
Absolute return	—	—	—	2,123,246	2,123,246
Private investments	24,086	321	17,633	2,409,604	2,451,644
Real assets	244,976	17,687	91,052	1,429,307	1,783,022

<i>(in thousands of dollars)</i>					2018
	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
Other investments	—	30,879	25,799	—	56,678
Interest-rate derivatives	2,500	(1,742)	—	—	758
Subtotal investment assets at fair value	1,234,055	710,553	134,550	9,193,020	11,272,178^(a)
Interest-rate swaps	—	(13,410)	—	—	(13,410)
Total	\$1,234,055	\$697,143	\$134,550	\$9,193,020	\$11,258,768

^(a) Investments held at cost totaling \$27,657 thousands should be added to the subtotal investment assets at fair value, and beneficial interest in charitable remainder trusts totaling \$12,748 thousands should be subtracted from the subtotal investment assets at fair value to reflect total investment assets as of August 31, 2018.

<i>(in thousands of dollars)</i>					2017
	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	\$214,864	—	—	—	\$214,864
US equity	594,477	\$53,365	—	\$757,237	1,405,079
International equity	282,996	19,638	\$19	1,598,400	1,901,053
Fixed income	57,968	655,750	—	219,584	933,302
High-yield credit	—	—	—	334,441	334,441
Absolute return	49,951	50,806	—	1,888,951	1,989,708
Private investments	20,014	358	17,310	2,210,735	2,248,417
Real assets	253,072	16,612	112,719	1,217,986	1,600,389
Other investments	—	34,091	24,966	—	59,057
Interest-rate derivatives	4,000	(3,058)	—	—	942
Subtotal investment assets at fair value	1,477,342	827,562	155,014	8,227,334	10,687,252^(a)
Interest-rate swaps	—	(20,830)	—	—	(20,830)
Total	\$1,477,342	\$806,732	\$155,014	\$8,227,334	\$10,666,422

^(a) Investments held at cost totaling \$30,535 thousands should be added to the subtotal investment assets at fair value to reflect total investment assets as of August 31, 2017.

Investments included as NAV as Practical Expedient consist primarily of the University's ownership in investments (principally limited partnership interests in long-only equity and credit, hedge, 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 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 University exercises diligence in assessing the policies, procedures, and controls of external investment managers; management's assessment includes a valuation review process of the most recent available audited and unaudited financial statements and discussions with the majority of external investment managers about the aggregate carrying value of the respective investments at August 31, 2018. The assessment may result in adjustment to the external managers' valuations of the securities' fair value if those valuations are not in accordance with GAAP. Management reviewed the valuation policies for all partnerships in which the University is invested and deemed that its policies are appropriate and that the carrying amount of these assets represents a reasonable estimate of fair value. A small number of investments within certain partnerships may have holdings at a carrying value of cost. In the absence of another basis, management has determined this method to be appropriate for these specific investments and representative of an approximation of the fair value.

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, 2018 and 2017:

<i>(in thousands of dollars)</i>	2017					2018
	Fair value	Purchases	Sales and settlements	Realized and unrealized gains (losses)	Transfers into and out of Level 3	Fair value
International equity	\$19	\$55	—	(\$8)	—	\$66
Private investments	17,310	5,271	(\$7)	(4,941)	—	17,633
Real assets	112,719	—	(8,367)	5,199	(\$18,499)	91,052
Other investments	24,966	—	—	833	—	25,799
Total investments	\$155,014	\$5,326	(\$8,374)	\$1,083	(\$18,499)	\$134,550

<i>(in thousands of dollars)</i>	2016					2017
	Fair value	Purchases	Sales and settlements	Realized and unrealized gains (losses)	Transfers into and out of Level 3	Fair value
US equity securities	\$59	—	(\$54)	(\$5)	—	—
International equity	1,329	\$198	(1,304)	(204)	—	\$19
Private investments	14,752	6,726	(575)	(3,593)	—	17,310
Real assets	98,589	12,714	(9,197)	10,613	—	112,719
Other investments	23,488	—	—	1,478	—	24,966
Total investments	\$138,217	\$19,638	(\$11,130)	\$8,289	—	\$155,014

There were no significant transfers or reclassifications between Levels 1 and 2 during fiscal years 2018 and 2017. In fiscal year 2018, there was one transfer out of Level 3, since this underlying fund investment now adheres to US GAAP and uses NAV as a practical expedient. There were no transfers into or out of Level 3 in fiscal year 2017.

As of August 31, 2018 and 2017, 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 \$8.3 million and \$11.1 million as of August 31, 2018 and 2017, respectively.

The table below 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, 2018, the University was committed to making future capital contributions in the amount of \$2.3 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.

<i>(in thousands of dollars)</i>					
	Fair value	Remaining life	Uncalled commitments	Redemption terms	Redemption restrictions
US equity	\$1,656,856	No limit	—	Daily to annually, with 1- to 90-day notice periods	Lock-up provisions ranging from none to 3 years
International equity	1,911,440	No limit	\$26,443	Daily to annually, with 1- to 180-day notice periods	Lock-up provisions ranging from none to 3 years
Fixed income	903,576	No limit	—	Daily to quarterly, with 1- to 90-day notice periods	No lock-up provisions
High-yield credit	301,826	No limit to 12 years	152,522	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	2,123,246	No limit	13,206	Daily to greater than annually, with 1- to 120-day notice periods; private partnership ineligible for redemption	Lock-up provisions ranging from none to 5 years; side pockets on many funds; one partnership not redeemable
Private investments	2,451,664	No limit to 12 years	1,059,468	Partnerships ineligible for redemption; equity securities daily, with 1-day notice period	Private partnerships not redeemable; no lock-up provisions on equity securities
Real assets	1,783,022	No limit to 14 years	1,013,545	Partnerships ineligible for redemption; commodity and equity funds weekly to quarterly, 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 and 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 equities, 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. Three investments in this category currently may not be redeemed over the next year, while one other may only be partially 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. Four investments in this portfolio currently may not be redeemed over the next year due to lock-up provisions. As of August 31, 2018, the remaining investments have either full or partial liquidity over the next year, with the exception of those having side pockets.

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 some commodity and equity funds.

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

Investment Return

The components of total investment return for the fiscal years ended August 31 were as follows:

<i>(in thousands of dollars)</i>	2018	2017
Investment income	\$37,159	\$45,855
Net realized gains	675,390	576,519
Net change in fair values, unrealized	361,209	464,992
Total investment return	\$1,073,758	\$1,087,366

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 2018, a \$100 million adjustment to payout in excess of the spending rule was authorized to support strategic investment and is included in the investment return designated for operations line of the consolidated statement of activities. Gross investment income from specific investments held at cost totaled \$15.9 million and \$15.5 million for the fiscal years ended August 31, 2018 and 2017, respectively. Investment expenses related to specific investments held at cost totaled \$6 million and \$3 million for the fiscal years ended August 31, 2018 and 2017, respectively. All other investment returns are categorized as non-operating. As reflected in the consolidated statement of activities, investment return for the fiscal years ended August 31 was as follows:

<i>(in thousands of dollars)</i>	2018	2017
Changes in unrestricted net assets		
Operating: investment return	\$382,747	\$370,137
Operating: investment return to support strategic investment	100,000	75,000
Nonoperating: investment return, reduced by operating distribution	258,375	293,052
Changes in temporarily restricted net assets		
Operating: investment return	164,454	159,397
Nonoperating: investment return, reduced by operating distribution	168,182	189,780
Total investment return	\$1,073,758	\$1,087,366

Certain expenses paid directly by the University for investment management and custody services totaled \$75 million and \$65.4 million for the fiscal years ended August 31, 2018 and 2017, respectively, and 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 held in the fixed income asset class of investments within Level 2.

Credit exposure represents the University's potential loss if all the counterparties fail to perform under the terms of the contracts, and if all collateral, if any, becomes worthless. This exposure is measured by the fair value of the cash collateral held at the counter-parties 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. 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, 2018 and 2017, the University posted collateral of \$2.5 million and \$4 million, respectively, to one counterparty. To date, the University has not incurred any losses on derivative financial instruments due to counterparty nonperformance.

The University has hired an external manager to use derivative financial instruments to obtain market exposure in equity and fixed income indices on excess cash balances. 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.

For further discussion of credit-related derivatives, see note 7.

The following tables summarize the derivative financial instruments held by the University as of August 31, 2018 and 2017:

<i>(in thousands of dollars)</i>				2018
	Notional amount	Assets	Liabilities	Fiscal year net gain (loss)
Investment-related derivatives				
Interest-rate swaptions	\$200,000	\$2,500	(\$1,742)	—
Total investment-related	200,000	2,500	(1,742)	—
Credit-related derivatives				
Interest-rate swaps	125,002	—	(13,410)	\$7,419
Total credit-related	125,002	—	(13,410)	7,419
Total derivative financial instruments	\$325,002	\$2,500	(\$15,152)	\$7,419

<i>(in thousands of dollars)</i>				2017
	Notional amount	Assets	Liabilities	Fiscal year net gain (loss)
Investment-related derivatives				
Interest-rate swaptions	\$200,000	\$4,000	(\$3,058)	(\$145)
Equity futures	60,252	4,443	—	8,179
Total investment-related	260,252	8,443	(3,058)	8,034

<i>(in thousands of dollars)</i>				2017
Credit-related derivatives				
Interest-rate swaps	125,000	—	(20,830)	7,732
Total credit-related	125,000	—	(20,830)	7,732
Total derivative financial instruments	\$385,252	\$8,443	(\$23,888)	\$15,766

5. Land, Buildings, and Equipment

Land, buildings, and equipment for the fiscal years ended August 31 consisted of the following:

<i>(in thousands of dollars)</i>	2018	2017
Land	\$31,036	\$31,036
Construction-in-progress	563,507	688,360
Buildings and leasehold improvements	3,828,036	3,278,609
Equipment	651,033	607,409
Accumulated depreciation	(1,815,577)	(1,671,735)
Total land, buildings, and equipment, net	\$3,258,035	\$2,933,679

Included in construction-in-progress costs are building and leasehold improvement capitalizations. Building costs are funded by bonds, gifts (received or pledged), grants, and unrestricted funds.

Under the University's interest capitalization policy, actual interest expense incurred during the period of construction of an asset for University use is 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 may include buildings and major equipment.

Lease Obligations

The University is obligated 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 in various years through fiscal year 2031. Real estate lease expenses totaled \$14.1 million and \$13.4 million for the fiscal years ended August 31, 2018 and 2017, respectively. Sublease rental income totaled \$2.9 million for the fiscal years ended August 31, 2018 and 2017. At August 31, 2018, there were no subleases that are noncancelable for one year or more. The future minimum lease payments under noncancelable operating leases through August 31 of each period are shown below.

<i>(in thousands of dollars)</i>	
2019	\$15,833
2020	15,611
2021	14,122
2022	12,748
2023	10,885
2024 and thereafter	58,025
Total	\$127,224

Rentals under Leases

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

<i>(in thousands of dollars)</i>	
2019	\$1,210
2020	491
2021	472
2022	448
2023	460
2024 and thereafter	4,781
Total	\$7,862

6. Deposits Payable and Actuarial Liability of Annuities Payable

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

<i>(in thousands of dollars)</i>	2018	2017
Agency deposits payable	\$123,468	\$119,777
Actuarial liability of annuities payable	19,939	20,239
Student loan deposits payable	5,537	7,981
Other deposits payable	5,799	8,182
Total deposits payable and actuarial liability of annuities payable	\$154,743	\$156,179

7. Bonds, Notes, and Other Debt Payable

Bonds, notes, and other debt payable for the fiscal years ended August 31 are as follows:

<i>(in thousands of dollars)</i>	Interest-rate mode	Fiscal year maturity	Interest rate	2018	2017
Illinois Finance Authority (IFA)–Series 2004	Variable	2034	1.52% ^(a)	\$135,800	\$135,800
IFA–Series 2008	Variable	2046	1.49% ^(a)	125,000	125,000
Taxable–Series 2012	Fixed	2039–2047	4.20%	200,000	200,000
Taxable–Series 2013	Fixed	2015–2044	4.56% ^(b)	568,175	572,945
Taxable–Series 2015	Fixed	2038–2048	3.78% ^(b)	500,000	500,000
IFA–Series 2015	Fixed	2022–2028	4.24% ^(b)	128,545	128,545
Taxable–Series 2017	Fixed	2047–2057	3.74% ^(a)	500,000	—
Commercial paper (\$300,000 available)	Variable	2019	2.19% ^(b)	260,000	145,000

<i>(in thousands of dollars)</i>	Interest-rate mode	Fiscal year maturity	Interest rate	2018	2017
Promissory note	Fixed	2021	1.72% ^(c)	24,000	32,000
Lines of credit (\$750,000 available)	Variable	2019	2.66% ^(b)	115,000	200,000
Bonds, notes, and other debt payable subtotal				2,556,520	2,039,290
Unamortized issuance costs, premiums, and discounts, <i>net</i>				(1,384)	1,312
Total bonds, notes, and other debt payable, <i>net</i>				\$2,555,136	\$2,040,602
^(a) Interest rate reset weekly ^(b) Weighted average interest rate at August 31, 2018 ^(c) Imputed rate on non-interest-bearing note					

Total obligations including bonds, notes, and other debt payable at August 31, 2018, are scheduled to mature through August 31 of each period as noted at right. The schedule has been prepared based on the contractual maturities of the debt outstanding at August 31, 2018. Accordingly, if remarketing of bonds fails 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.

<i>(in thousands of dollars)</i>	
2019	\$387,935
2020	13,085
2021	13,450
2022	4,790
2023	6,660
2024 and thereafter	2,130,600
Total	\$2,556,520

Bonds Payable

During the year ended August 31, 2018, the Taxable–Series 2017 Fixed Rate Bonds were issued to acquire, construct, and equip certain educational facilities of the University and to pay certain costs relating to the issuance of the bonds, subject to conditions set forth in a trust indenture between the University and Wells Fargo Bank, NA.

Derivative Financial Instruments

The University has entered into interest-rate swap agreements to hedge variable interest-rate exposure related to certain variable rate debt. The agreements effectively fix the interest rate from 4.12 percent to 4.38 percent. The notional value is \$125 million through expiration on August 31, 2023.

The University recognized a net unrealized gain on the swap investment totaling \$7.4 million and \$7.7 million, respectively, for the fiscal years ended August 31, 2018 and 2017. The fair values of the swap position were in a liability position of \$13.4 million and \$20.8 million as of August 31, 2018 and 2017, respectively, and are included in accounts payable and accrued liabilities on the consolidated statements of financial position. Also see note 4.

8. Endowments

The FASB ASC Not-for-Profit Entities Presentation of Financial Statements Subtopic provides guidance on the net asset classification of donor-restricted endowment funds for not-for-profit organizations subject to an enacted version of the Uniform Prudent Management of Institutional Funds Act (UPMIFA) and improves disclosure about an organization’s endowment funds, both donor-restricted and board-designated, regardless of whether the organization is subject to 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 as permanently restricted net assets 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 that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until it is 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 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 2,700 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, 2018 and 2017:

<i>(in thousands of dollars)</i>				<i>2018</i>
Endowment net asset composition by type of fund	Unrestricted	Temporarily restricted	Permanently restricted	Total
Donor-restricted endowment funds	(\$45)	\$2,584,982	\$1,572,271	\$4,157,208
Institution-designated endowment funds	4,229,710			4,229,710
Total endowment funds	\$4,229,665	\$2,584,982	\$1,572,271	\$8,386,918

<i>(in thousands of dollars)</i>				<i>2017</i>
Endowment net asset composition by type of fund	Unrestricted	Temporarily restricted	Permanently restricted	Total
Donor-restricted endowment funds	(\$57)	\$2,422,041	\$1,483,792	\$3,905,776
Institution-designated endowment funds	4,041,798			4,041,798
Total endowment funds	\$4,041,741	\$2,422,041	\$1,483,792	\$7,947,574

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 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:

<i>(in thousands of dollars)</i>				2018
	Unrestricted	Temporarily restricted	Permanently restricted	Total
Endowment net assets, beginning of year	\$4,041,741	\$2,422,041	\$1,483,792	\$7,947,574
Net investment loss	(3,143)	(3,119)	—	(6,262)
Net appreciation, realized and unrealized	337,549	334,864	—	672,413
Total investment return	334,406	331,745	—	666,151
Contributions	—	3,380	79,265	82,645
Appropriation of endowment assets for expenditure	(167,459)	(165,526)	—	(332,985)
Other changes				
Transfers to create institutional funds	49,811	—	—	49,811
Transfers of institutional funds per donor requirement	—	535	9,339	9,874
Spending of institution-designated endowment fund	(36,152)	—	—	(36,152)
Other reclassifications	7,318	(7,193)	(125)	—
Endowment net assets, end of year	\$4,229,665	\$2,584,982	\$1,572,271	\$8,386,918

<i>(in thousands of dollars)</i>				2017
	Unrestricted	Temporarily restricted	Permanently restricted	Total
Endowment net assets, beginning of year	\$3,831,631	\$2,235,406	\$1,411,130	\$7,478,167
Net investment loss	(6,188)	(6,247)	—	(12,435)
Net appreciation, realized and unrealized	357,024	354,471	—	711,495
Total investment return	350,836	348,224	—	699,060
Contributions	—	1,400	56,575	57,975
Appropriation of endowment assets for expenditure	(164,091)	(159,515)	—	(323,606)
Other changes				
Transfers to create institutional funds	66,740	—	—	66,740
Transfers of institutional funds per donor requirement	—	368	12,305	12,673
Spending of institution-designated endowment fund	(43,435)	—	—	(43,435)
Other reclassifications	60	(3,842)	3,782	—
Endowment net assets, end of year	\$4,041,741	\$2,422,041	\$1,483,792	\$7,947,574

Underwater Endowment Funds

The University monitors endowment funds to identify those for which historical cost was more than fair value. As of August 31, 2018 and 2017, the historical cost of such accounts was approximately \$4.7 million and \$1.9 million, and the market value totaled \$4.7 million and \$1.8 million, respectively. Associated unrealized losses are recorded in the unrestricted net assets classification; subsequent gains increase unrestricted net assets.

9. Retirement 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 the mutual funds offered by Fidelity Investments. Participating employee and University contributions are immediately vested. The University contributed \$81.5 million and \$77 million to the two plans in 2018 and 2017, respectively. It expects to contribute \$86.5 million to the two plans in 2019.

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 healthcare plan. In the consolidated statement 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 post-employment benefits was \$9.8 million and \$10.1 million at August 31, 2018 and 2017, respectively, and is included in accounts payable and accrued liabilities on the consolidated statements of financial position.

The University funds the benefit costs as they are incurred. The following table sets forth the postretirement plan's obligations, benefits paid, contributions, net periodic postretirement benefit cost, and assets for the fiscal years ended August 31:

<i>(in thousands of dollars)</i>	2018	2017
Benefit obligations	\$15,924	\$15,691
Benefits paid	1,473	1,003
Employer contributions	816	387
Contributions from participants	656	617
Net periodic postretirement benefit cost	1,299	985
Fair value of plan assets	—	—

The changes in other than periodic benefit cost included in unrestricted net assets on the consolidated statements of financial position totaled net gains of \$1.2 million and \$0.8 million as of August 31, 2018 and 2017, respectively; an increase of \$0.4 million due to net gains during the fiscal year.

The APBO was \$15.9 million and \$15.7 million at August 31, 2018 and 2017, 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, 2018 and 2017. For both fiscal years 2018 and 2017, 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:

	2018	2017
Settlement (discount) rate	3.8%	3.3%
Weighted average rate of increase in future compensation levels	2.5%	3%
Healthcare cost trend rate	6.75%	7%

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

	2018	2017
Discount rate	3.3%	3%
Weighted average rate of increase in future compensation levels	3%	3%
Healthcare cost trend rate	7%	6.75%

A one-percentage-point change in assumed healthcare cost trend rates would have had these effects in fiscal year 2018:

<i>(in thousands of dollars)</i>	<i>1% point decrease</i>	<i>1% point increase</i>
(Decrease) increase in total of service and interest cost	(\$73)	\$84
(Decrease) increase in postretirement benefit obligation	(697)	783

Estimated future benefit payments reflecting anticipated service, as appropriate, are expected to be paid as shown below:

<i>(in thousands of dollars)</i>	
2019	\$894
2020	801
2021	885
2022	991
2023	1,043
2024–2028	5,847
Total	\$10,461

The University offers a deferred compensation plan under Internal Revenue Code 457(b) to a select group of management and highly compensated employees. There is no University contribution related to this deferred compensation plan. The University has recorded both an asset and a liability related to the deferred compensation plan that totaled \$89.3 million and \$76.5 million as of August 31, 2018 and 2017, respectively; these are included in investments and deposits payable and actuarial liability of annuities payable on the consolidated statements of financial position.

10. 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 wholly owned 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, 2018 and 2017, accounts receivable arising from support and operational activities with NMHC totaled \$19.3 million and \$17 million, respectively, and are included in accounts receivable on the consolidated statements of financial position. For the fiscal years ended August 31, 2018 and 2017, contributions totaling \$109.3 million and \$114.4 million, respectively, have been made from NMHC to the University and are included in private gifts on the consolidated statement of activities. For the fiscal years ended August 31, 2018 and 2017, revenues arising from operational activities with NMHC totaled \$24.4 million and \$23.4 million, respectively, and are included in professional fees on the consolidated statement of activities.

11. Self-Insurance Reserves and Other Contingencies

Reserves for losses under the University's self-insurance program, aggregating \$8.3 million and \$8 million at August 31, 2018 and 2017, 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 7.5 percent in fiscal years 2018 and 2017. 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. Guaranteed notes under these programs totaled \$13.2 million and \$20.6 million as of August 31, 2018 and 2017, respectively. These loans are included in notes receivable and deposits payable on the consolidated statements of financial position. Reserves in anticipation of securitized student loan future defaults totaled \$47,000 and \$74,000 at August 31, 2018 and 2017, respectively. Notes receivable on the consolidated statements of financial position are shown net of these reserves as of August 31, 2018 and 2017.

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, 2018 and 2017, respectively, these loans totaled \$18.9 million and \$23.1 million, and are included in notes receivable on the consolidated statements of financial position. The University continues to service the repurchased loans. At August 31, 2018 and 2017, \$68,000 and \$83,000, respectively, were reserved in anticipation of future defaults. Notes receivable on the consolidated statements of financial position are shown net of these reserves as of August 31, 2018 and 2017.

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.

12. Grants and Contracts

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

<i>(in thousands of dollars)</i>	2018	2017
Federal grants	\$484,398	\$461,741
Private grants and contracts	159,565	151,041
State grants	4,045	4,666
Total grants and contracts	\$648,008	\$617,448

13. 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 maintenance of facilities, as well as for depreciation, accretion for asset retirement obligations, 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:

<i>(in thousands of dollars)</i>					2018
	Maintenance of facilities	Depreciation and accretion	Interest on indebtedness	All other operating expenses	Total
Instruction	\$29,824	\$22,417	\$10,209	\$742,345	\$804,795
Research	52,358	39,356	17,923	395,198	504,835
Academic support	38,864	29,212	13,305	302,308	383,689

<i>(in thousands of dollars)</i>					2018
Student services	25,153	18,907	8,611	198,438	251,109
Institutional support	13,217	9,934	4,524	336,091	363,766
Auxiliary services	41,117	30,906	14,076	64,890	150,989
Total	\$200,533	\$150,732	\$68,648	\$2,039,270	\$2,459,183

<i>(in thousands of dollars)</i>					2017
	Maintenance of facilities	Depreciation and accretion	Interest on indebtedness	All other operating expenses	Total
Instruction	\$26,488	\$20,705	\$6,404	\$832,301	\$885,898
Research	47,272	36,952	11,430	398,801	494,455
Academic support	36,419	28,469	8,806	205,578	279,272
Student services	23,262	18,184	5,625	181,574	228,645
Institutional support	10,804	8,445	2,612	276,348	298,209
Auxiliary services	39,295	30,716	9,501	31,305	110,817
Total	\$183,540	\$143,471	\$44,378	\$1,925,907	\$2,297,296

14. Subsequent Events

The University has evaluated subsequent events in accordance with the FASB ASC Subsequent Event Topic through December 19, 2018, the date when the consolidated financial statements were issued. The University did not identify any events to be disclosed.

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Research and Development Cluster: Department of Agriculture	National Institute of Food and Agriculture	Molecular characterization of interferon-resistant HIV-1 using novel imaging techniques	208	10.001	DA2-17-62986-1//59-0210-2-160	\$ 15,899	—
		Research Strategy to understand the impacts and impact pathways of food, agricultural and nutrition policies in Feed the Future (FIF) countries	179	10.960	PO#639288/6156//TA-CA-15-008-06	171,059	—
		MARTX toxin effector domains modulate virulence of foodborne <i>Vibrio vulnificus</i>		10.310	2017-67011-26070	38,216	—
		The Family Check-Up 4 Health: A Family-Centered Health Maintenance Approach to Improve Nutrition and Prevent Obesity in Early Childhood	17	10.310	ASUB22//2018-68001-27550	7,841	—
Department of Agriculture Total						233,015	—
Department of Commerce	National Institute of Standards and Technology	Advanced Materials Center for Excellence: Center for Hierarchical Materials Design (ChiMaD)		11.609	70NANB14H012 Amd 6	6,051,965	1,273,213
		High-fidelity and reduced order models to investigate the thermal history and residual stress for powder bed fusion processes		11.609	70NANB17H283	89,066	—
						6,141,031	1,273,213
		NIST SURF – Gaithersburg	11.620	70NANB17H088	(1,960)	—	
				40,731	—		
				38,771	—		
Department of Commerce Total						6,179,802	1,273,213
Department of Defense	Air Force Office of Scientific Research	Active Nanophotonics in the Flatland with Novel Hybrid Metasurfaces	153	12.300	N00014-17-1-2425 P00003	118,573	—
		Enhancing Quality of Orthotic Services with Process and Outcome Information	169	12.420	Agmt 12/19/16//W81XWH-16-1-0788	51,203	—
		A Fast-Light Enhanced Ring Laser Vibrometer for Detection of Extremely Small Vibrations	89	12.RD	PO No. 4440778007	49,323	—
		Drinking Water Treatment Residuals as Material for in-situ Capping of Metal Contaminated Sediments	233	12.RD	UFDSP00012338//W912H018C0039	12,030	—
		GDIT's Defense and Veterans Brain Injury Center (DVBC) contract No. W91Y7Z-13-C-015	250	12.RD	W91Y7Z-13-C-0015//3004730431	71,564	—
		iGRAB: Innovative Glove for Rehabilitation and Assistance using Biomimicry	130	12.RD	W81XWH-16-C-0012	29,141	10,775
		Scientific Autonomous Reasoning Agent (SARA) integrating Materials Theory, Experiment and Computation	56	12.RD	80776-11044//FA9550-18-1-0136	104	—
		WRMC Pain Management	139	12.RD	MED0035//W911QY-12-C-0039	(130,476)	—
		A 4D Nanoprinter for Making and Manipulating Macroscopic Materials		12.800	FA9550-16-1-0150 P00002	1,297,068	304,377
		ABC Stochastic Multiresolution Theory for Microstructure Based Predictive Materials Science: Application to Multiphase Polymer Systems.		12.800	FA9550-14-1-0032-P00003	18,564	—
		Biomimetic Lipid Nanoparticles: Bio-Sensing and Bio-Functional Applications		12.800	FA9550-13-1-0192	159,181	—
		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	155,630	—
		Combinatorial Screening of Emergent Nanophotonic Behavior through Biomolecule-Encoded Superlattice Formation		12.800	FA9550-12-1-0280/P00005	(4,997)	—
		Convergent Evolution to Engineering: Multiscale Structures and Mechanics in Damage Tolerant Functional Bio-composite and Biomimetic Materials	223	12.800	S-000700 Amd 6 // USAF FA9550-15-1-0009	103,054	—
		Discovering the Extent of Estimable Prediction in Science and Technology (DEEP)	228	12.800	FP059116-B // FA9550-15-1-0162	210,095	—
		Electrochemical Imaging and Mechanistic Studies on the Nanometer Scale		12.800	FA9550-14-1-0003-P00006	2,567,656	859,228
		Electronic Structure Theory for Photo-Induced Spin-Forbidden Dynamics		12.800	FA9550-15-1-0031/P00002	12,702	—
		Electronic Structure Theory for Spin-Forbidden Reaction Dynamics		12.800	FA9550-18-1-0252	19,861	—
		Hybrid Plasmonic-MOF Nanoparticle Superlattices		12.800	FA9550-14-1-0274 P00003	(27,391)	—
		Investigation of Experimental and Theoretical Challenges for Developing Superluminal Sensors		12.800	FA9550-18-1-0401	5,731	—
		Logic-Enabled Spectroscopy of Single Trapped Molecular Ions		12.800	FA9550-13-1-0116	451	—
		Merging reactivity and properties: photocontrolled synthesis of π -conjugated polymers		12.800	FA9550-18-1-0159	75,794	—
Miniaturized Mechanical Tester for the Multiscale Testing of Biomaterials and Metamaterials		12.800	FA9550-16-1-0236	(3,337)	—		
Modeling and Predicting Individual Scientific Impact		12.800	FA9550-17-1-0089 P00001	3,005	—		
Molecular Ion Quantum Control		12.800	FA9550-17-1-0352	121,158	—		
Molecular models to investigate diamagnetic anisotropy: Towards the directed synthesis of rare-earth free permanent magnets		12.800	FA9550-14-1-0358	(9,696)	—		
MURI Center for Dynamic Magneto-optics	250	12.800	23003023213 // FA9550-14-1-0040 05	292,262	—		
MURI: Unraveling the Biology, Chemistry and Nanoscience of Natural and Synthetic Melanins	224	12.800	104170196//FA9550-18-1-0142	188,060	—		
Nanostructured Interfaces and Patterning Tools for Probing Bioinspired Materials and Systems		12.800	FA9550-12-1-0141/P00003	(815)	—		
Novel Characterization Methods for Anisotropic and Mixed-Conduction Materials		12.800	FA9550-15-1-0247 P00002	70,164	—		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients	
Department of Defense (continued)		Novel Materials for Transverse Peltier Refrigeration		12.800	FA9550-15-1-0377 P00002	\$ 186,005	—	
		PECASE: Multi-dimensional Vibrational-Electronic Spectroscopy to Probe Electronic-to-Vibrational Energy Transfer in Hybrid Nanomaterials		12.800	FA9550-16-1-0379-P00001	206,050	—	
		Plasmonic Optoelectronic Interactions		12.800	FA2386-13-1-4124 Mod. P00003	(16,500)	—	
		Polymeric and Molecular Materials for Advanced Organic Electronics		12.800	FA9550-15-1-0044 P00002	235,052	—	
		Reconfigurable Matter from Programmable Atom Equivalents		12.800	FA9550-17-1-0348 P00001	1,070,757	—	
		Rotation, Shift and Scale Invariant Ultrafast Automatic Image Recognition Using an Opto-Electronic Correlator		12.800	FA9550-18-1-0359	3,993	—	
		Soft Chemical Approaches to the Synthesis of Metastable Materials		12.800	FA9550-17-1-0247-P00001	228,131	—	
		Towards Software Apprentices that Learn in Dynamic Domains		12.800	FA9550-16-1-0138 P00002	305,433	—	
		Center of Excellence for Advanced Bioprogrammable Nanomaterials (C-ABN)		12.800	FA8650-15-2-5518 P00008 P000011 P000012	1,300,754	26,269	
		Development of a Targeted Intravascular Therapy to Stop Non-Compressible Torso Hemorrhage	230	12.800	010635-002//FA8650-17-2-6G19	280,932	—	
		Managing the Mosaic of Microstructure	35	12.800	1150119-294722-P00007//FA9550-12-1-0458	63,096	—	
						9,117,903	1,189,874	
			High-speed Low-noise Short-wavelength Infrared Type-II Superlattice Heterojunction Phototransistor		12.910	FA8650-18-1-7810	465,393	—
			Compact and Integrated IMU for GPS Denied Navigation Using Fast-Light Gyroscopes and Accelerometers	64	12.RD	Agmt 3/26/2013 / 01 // FA8651-13-C-0018	85	—
			Enterprise APT Detection and Forensics with Provenance Graphs	116	12.RD	PO 5005026677 00001 // FA8650-15-C-7561	268,353	—
			Ptychography-based Rapid Imaging of Nano-Structures with Multi-layer Assemblies (PRISMA)	262	12.RD	No. 86101156 Amd 1 // FA8650-17-C-9112	1,807,044	—
			Ultrasensitive and Compact Superluminal Ring Laser Accelerometer for Inertial Navigation	64	12.RD	Agreement 3/26/13 / 01//FA8651-13-C-0011	50	—
	Army		A Novel Approach to Assay DNA Methylation in Prostate Cancer		12.420	W81XWH-13-1-0319	21,321	—
			A novel serum and tissue immunoglycomic biomarker panel to distinguish progressive Prostate Cancer		12.420	W81XWH-17-1-0642	134,467	—
			Beta-Blockers for the Prevention of Acute Exacerbations of COPD	214	12.420	000507860-008//W81XWH-15-1-0705	170,042	—
			Characterization of clustered CTCs to eliminate breast cancer metastasis		12.420	W81XWH-16-1-0021	11,122	—
			Cobalt(III) Schiff base complexes as inhibitors of p53 aggregation in cancer		12.420	W81XWH-16-1-0379	34,518	—
			Combination of IL13Rα2 CAR T cell therapy with PD-1 immune checkpoint blockade for treatment of glioblastoma		12.420	W81XWH-17-1-0411	125,408	—
			Comprehensive Molecular Profiling of African-American Prostate Cancer to Inform on Prognosis and Disease Biology	250	12.420	3003962014//W81XWH-15-1-0661	44,423	—
			Connecting Mechanical to Biomechanical Performance of Prosthetic Feet to Design Customized, Passive Devices that Provide Improved Mobility	132	12.420	123775//W81XWH-17-1-0427	17,920	—
			Creation and validation of a pre-biopsy nomogram for predicting high-risk prostate cancer in African American men		12.420	W81XWH-17-1-0608	246,635	52,610
			D-Cycloserine for the Treatment of Chronic, Refractory Low Back Pain		12.420	W81XWH-17-1-8426	474,467	—
			Development of an Engaging Training Tool to Provide Superior Muscle Computer Interfaces for Rehabilitation of Neuromusculoskeletal Injuries	169	12.420	Sub No. 4471 CC81932//W81XWH-15-2-0035	82,377	—
			Discovery of Novel Therapeutics for Disordered Sleep in Fragile X Syndrome		12.420	W81XWH1610594	532	—
			Effect of a Novel Intervention using Daily Intermittent Hypoxia and High-Intensity Training on Upper Limb Function in Individual with Spinal Cord Injury	169	12.420	SC160072//W81XWH-17-1-0340	25,955	—
			Epigenomic Priming as an Immunotherapy Enhancer in Ovarian Cancer		12.420	W81XWH-17-1-0141	333,569	—
			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	322,292	112,638
			Harnessing Druggable Synthetic Lethal Interactions in Triple-Negative Breast Cancer with Elevated MYC Expression		12.420	W81XWH1810053	93,846	—
			Hyperexcitability in Sensory Circuits in Fragile X Syndrome		12.420	W81XWH-17-1-0230	408,105	—
			Increasing Bone Mass and Bone Strength in Individuals with Chronic Spinal Cord Injury: Maximizing Response to Therapy		12.420	W81XWH-16-1-0763	145,107	3,991
			Inhibiting Prostate Cancer Cell Motility	157	12.420	1007494_NWU Amd 2 // W81XWH-15-1-0527	35,285	—
			Investigating Long Noncoding RNAs as Biomarkers and Mediators of Prostate Cancer Progression in African American Men	225	12.420	103588sc//W81XWH-17-1-0302	43,354	—
			Investigation of Genetic and Immune Mechanisms of Response to BCG for Non-Muscle Invasive Bladder Cancer: a Translational Study of S1602		12.420	W81XWH1810257	4,623	—
			In-vivo functional muscle regeneration utilizing an implantable modular bioreactor	284	12.420	W81XWH1420004	123,426	2,515
			Locally applied statins to reduce scarring	284	12.420	W81XWH1420004	124,517	—
			Longitudinal Observation of Myoelectric Upper Limb Orthosis Use among Veterans with Upper Limb Impairment		12.420	W81XWH-16-1-0733	135,082	101,520
			Loss of ZDHHC-mediated Scribble palmitoylation disrupts cell polarity and promotes prostate cancer progression		12.420	W81XWH-17-1-0362	179,557	—
		Macrophage Responses to Epithelial Dysfunction Promote Lung Fibrosis in Aging		12.420	W81XWH-15-1-0215	359,939	—	
	Macrophage Responses to Epithelial Dysfunction Promote Lung Fibrosis in Aging		12.420	W81XWH-15-1-0214	178,321	28,546		
	Neuromodulation and Neurorehabilitation for Treatment of Functional Deficits after mTBI + PTSD	40	12.420	Pape-0024//W81XWH-15-1-0516	(852)	—		
	No Longer Smooth: Introducing Striations into Prosthetic Socket Construction to Improve Suspension, Rotation, Fit and Comfort		12.420	W81XWH-16-1-0485	137,867	30,706		
	Peer-led Suicide Prevention: Promoting Healthy Family Role Transitions for Military Personnel	261	12.420	416496-G//W81XWH-14-1-0322	175,468	—		
	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	381,980	82,256		
	Role of C10orf12 in Prostate Cancer		12.420	W81XWH-17-1-0578	262,405	—		
	rTMS: A Treatment to Restore Function after Severe TBI	40	12.420	Pape 0020//W81XWH-14-1-0568	114,960	—		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients		
Department of Defense (continued)		SERS Nanosensors for in vivo Glucose Sensing		12.420	W81XWH-16-1-0375	\$ 174,516	—		
		SERS Nanosensors for in vivo Glucose Sensing		12.420	W61XWH-16-1-0376	660,499	—		
		Sleep homeostasis and synaptic plasticity		12.420	W81XWH-16-1-0169	162,177	—		
		T Cell Receptor Repertoire Analysis as a Biomarker for Predicting Graft Rejection in Transplant Recipients		12.420	W81XWH-17-1-0679	128,723	—		
		Targeted reinnervation as a means to treat neuromas associated with major limb amputation		12.420	W81XWH-13-2-0100	262,555	45,480		
		Targeting Balance Confidence as a Strategy to Increase Integration and Improve Outcomes in Users of Lower-limb Prostheses	177	12.420	322801NWU/W81XWH-17-1-0697	42,330	—		
		Targeting EZH2 in castration-resistant prostate cancer		12.420	W81XWH-17-1-0405	445,514	—		
		Targeting EZH2 in castration-resistant prostate cancer		12.420	W81XWH-17-1-0406	285,930	—		
		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	73,719	—		
		The Role of mDia1 in the Aberrant Innate Immune Signaling in del(5q) Myelodysplastic Syndromes		12.420	W81XWH-15-1-0335	195,106	—		
		Therapeutic Sleep for Traumatic Brain Injury		12.420	W81XWH-16-1-0166	147,753	—		
		Ubiquitin pathway activation: A new strategy for treating ALS		12.420	W81XWH-17-1-0086	327,655	—		
		Why does acute post whiplash injury pain transform into chronic pain? Multi-modal assessment of risk factors and predictors of pain chronification	199	12.420	2018983-NW/W81XWH-15-1-0603	122,101	—		
		Women's-Specific Footwear with Prosthetic Feet	203	12.420	4182/W81XWH-17-2-0072 / PO 930293	9,672	—		
							7,986,288	480,262	
				1.3.2: Ergodic Control for Optimal Information Acquisition		12.431	W911NF-14-1-0461-P00006	17,114	—
				10.2: Adoption of Innovations in Work Networks		12.431	W911NF-14-1-0259-P00004	122,489	—
				10.4: Properties Controlling Synchronization in Networks of Dynamical Systems		12.431	W911NF-15-1-0272-P00003	112,491	—
				7.4 Reactive Chemical Systems: Assembly and Dynamics of Soft Matter Observed by Liquid Cell TEM		12.431	W911NF-17-1-0326 P00002	158,631	38,750
				7.4 Reactive Chemical Systems: New Principles for Targeting and Triggering based on Molecular Self-Assembly in Topological Defects of Liquid Crystals	274	12.431	776K031 // W911NF-17-1-0575	70,659	—
				9.4: Next Generation Nano-electronics Utilizing Piezoelectricity and Piezoresistivity of 2D Materials Beyond Graphene		12.431	W911NF-15-1-0068/P00001	66,013	—
				A Comprehensive Study of Surface Defects in traditional Type II InAs_GaSb Superlattices and Ga_free Type II_Research Area 4_3_Electronic Sensing.		12.431	W911NF-15-1-0091 P00006	92,304	—
				Ab initio design of noncentrosymmetric metals: crystal engineering in oxide heterostructures. f. Research Area 6: Physics		12.431	W911NF-15-1-0017 P00006	165,339	—
				An integrated system for automating ribosome design		12.431	W911NF1810181	498,557	—
				Autonomous Error Protection in Superconducting Circuits	163	12.431	SUB0000078 Amd. 5 // W911NF1510421	179,253	—
				Endging Dynamic Particle Fracture and High-Strain Rate Communion of Granular Continua		12.431	W911NF-18-1-0035	79,549	—
				Center for Advanced 2D Organic Networks	56	12.431	76091-11011/W911NF-15-1-0447	201,856	—
				Collective impact and common goals: Planned vs. emergent networks as tools for leveraging community outcomes		12.431	W911NF-16-1-0464-P00004	317,233	—
				Creating and Manipulating High-Dimensional Photonic Entanglement		12.431	W911NF-12-1-0542/P00008	15	—
				Directed Rational Synthesis of Kagome Lattices for the Discovery of Emergent Materials 9.3					
				Physical Properties of Materials		12.431	W911NF-18-1-0006 P00001	92,374	—
				Efficient GHz Surface-Normal Modulators for SWIR ToF Imagers		12.431	W911NF-16-1-0458	106,706	—
				Engineering nanoscale protein containers		12.431	W911NF-16-1-0169 P00004	45,640	—
				Engineering Synthetic Ribosomes (Topic 3.1)		12.431	W911NF-11-1-0445/P00004	(2,221)	—
				Engineering the translation apparatus for the synthesis of electronically active sequence-defined polymers		12.431	W911NF-16-1-0372 P00002	1,279,254	879,625
				Exploring Sketching as a Modality for Intelligent Tutoring Systems: Adaptive and Intelligent Training Technologies, Paragraph 4.2.1, page 66		12.431	W911NF-17-2-0054-P00002	176,989	—
				Forecasting Emergent Phenomena with Human Computer Collaboration	172	12.431	A12789 001 // W911NF-16-1-0524	13,997	—
				Handling Adverse Visual Conditions for Target Tracking and Recognition		12.431	W911NF-16-1-0138 P00003	128,613	—
		II.A.1.b.i.2: Engineering Nanocellulose Materials for High Ballistic Impact Performance		12.431	W911NF-17-1-0430 P00001	112,664	—		
		Infinite Coordination Polymer Particles from Polymeric Coordinating Precursors		12.431	W911NF-15-1-0151 P00006	78,053	—		
		Laser Filamentation Science	227	12.431	6501622/05/W911NF-11-0297	(35,480)	—		
		Material Synthesis Toward Design Rules for Capture and Sensing of Toxic Chemicals		12.431	W911NF-18-2-0074	6,989	—		
		Missile Impact with Material Communion: New Concept – Turbulence Analogy		12.431	W911NF-15-1-0240 P00004	76,393	—		
		Modeling Neuroscience for Enhancing Memory Operations through Non-Invasive Channels (MNEMONIC)	192	12.431	19-000275 03 // W911NF-16-2-0021	323,253	—		
		Modeling of concrete failure under blast and fragment loading	73	12.431	PO 12909/W912HZ17C0028	17,949	—		
		Multisensory Integration by Circadian Clocks – Area 3 Mathematics (Biomathematics) and Area 8 Life Sciences (Neurophysiology)		12.431	W911NF-16-1-0584 P00001	167,700	35,624		
		New Theoretical and Experimental Methods for Predicting Fundamental Mechanisms of Complex Chemical Processes	253	12.431	C00045065-5/W911NF-14-1-0359	215,685	—		
		Physically-based tempered fractional-order operators for efficient multiscale simulations		12.431	W911NF-15-1-0569 P00001	80,938	—		
		Precision Chemical Dynamics and Quantum Control of Ultracold Molecular Ion Reactions	222	12.431	1000 G SA978 Amd 2 // W911NF-14-1-0378	352,430	—		
		QUANTA: Quantitative Network-based Models of Adaptive Team Behavior	226	12.431	KK1623 03 // W911NF-15-1-0577	125,183	—		
		Quantum Disc-based Focal Plane Arrays for Low-cost High-performance Uncooled LWIR Imaging		12.431	W911NF-16-1-0410 P00005	540,500	—		
		Real Time Terahertz Heterodyne Imaging System	200	12.431	Agmt 11/21/2017 // W911NF-17-P-0017	27,473	—		
		RFQ for Silver Bullet Program	148	12.431	PO 8200206547 01 // W911NF-17-C-0024	86,153	—		
		Sea Urchin Spicules: Assembly of a Fracture-Toughened Material at the Nano- and Mesoscales	145	12.431	F8595-01 02 // W911NF-16-1-0262	60,307	—		
		Section II, A2, G-7.5 Metal-Organic Framework Materials for Force Protection		12.431	W911NF-13-1-0229 P00010	(2,989)	—		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients				
Department of Defense (continued)		Selective Laser Melting of Ni-based superalloys with combined precipitation- and oxide-dispersion-strengthening		12.431	W911NF-18-1-0129	\$ 9,073	—				
		Socio-Cognitive Networks: Theory & Data Driven Approaches for Understanding the Assembly and Interaction Networks of High Performance Teams		12.431	W911NF-14-1-0686-P00004	13,886	—				
		Stabilization of Reactive Chemical Species and Fundamental Studies of Small-Molecule Reactivity in Metal-Organic Frameworks		12.431	W911NF-14-1-0168/P00008	117,946	—				
		Stimuli-Responsive Control of Protein-Based Molecular Structure		12.431	W911NF1810200	7,844	—				
		Strong Electron-Photon Coupling using Plasmonic Light Compressors		12.431	W911NF-11-1-0390 P00011	127,438	—				
		Superconducting Single Photon Counter for Quantum Information Processing and Communications		12.431	W911NF-17-1-0184	106,780	—				
		Tool for Direct Deposition and Characterization of Nano-optoelectronic Devices		12.431	W911NF-17-1-0233 P00001	245,776	—				
		TOPIC 1.3.4 Infrared Detectors: Demonstration of Dual-Band SWIR/MWIR Mini-Arrays and FPAs Based on Type-II Superlattices		12.431	W911NF-13-1-0412/P00002	1,863	—				
		Towards the Synthesis of Zirconium-based Metal-Organic Frameworks in Water at Room Temperature		12.431	W911NF-18-1-0050	23,554	—				
		Ultra-low Energy Receivers based on Electron-Injection Detectors on a CMOS Unified Photonic Integration Platform		12.431	W911NF1810429	349	—				
		Wireless, bioresorbable neural stimulators for discovery in neuroscience		12.431	W911NF1810394	7,858	—				
							<u>6,818,123</u>	<u>953,999</u>			
				Coevolution of Dynamic Multi-genre Networks and Information Streams	22	12.630	9500012803/Job13765353/W911NF-09-2-0053 Mod. 13	279,046	—		
				OSCM: An Operating System for Cyberphysical Manufacturing	238	12.630	082621-16134 AE887 00 // W31P4Q1420001	221,881	—		
				Rapid Process Certification and Verification for High-Value-Added and Low-Volume Production	210	12.630	0220160021 // W31P4Q-14-2-0001	745,340	340,311		
							<u>1,246,267</u>	<u>340,311</u>			
				Syntaurus: An intelligent machine for chemical synthetic planning	92	12.910	W911NF-16-1-0384	284,111	—		
				Developing a Clostridium molecular toolkit for bioconversion of food waste	197	12.RD	Agmt 9/13/2017 // W911NF-17-P-0059	60,000	—		
				Formulation and Validation of Aging Models for CORTUF	73	12.RD	PO 12749/W912HZ17C0027	98,590	—		
				Industrial Production Methods for Ultra-High-Strength Fibers Based on Double-Walled Carbon Nanotubes	133	12.RD	Agmt 12/4/15 Amd 1/W912HZ-15-C-0004	(99,674)	—		
				Network Sciences Collaborative Technology Alliance	22	12.RD	PO# LBN9510212-0034 // W911NF-09-2-005	135,867	—		
				Realization of a High Power MWIR Laser Using Coherent Combination of Emitters	64	12.RD	Agmt 10/10/2017 // W56KGY-17-C-0010	28,852	—		
				Scaling & Supramolecular Engineering of Metal-Organic Frameworks (MOFs)	152	12.RD	A15A-T014// W911SR-17-C-0007	247,801	—		
		Defense Advanced Research Projects Agency		Biochronicity Grand Challenge: Human Time Stamp Development, Validation and Prediction		12.910	D15AP00027	159,287	2,276		
				Flexible Asynchronous Space-Time (FAST) Imaging		12.910	HR0011-17-2-0044-P00003	185,503	—		
				Generation of Mouse-Based Bioelectronic Noses – Phase 2	146	12.910	15-AO-00-005162-01/HR0011-16-2-0007	214,600	—		
				Montage: Capturing Collective Identity through Multidisciplinary Modeling and Experimentation	283	12.910	446016-19980 02 // D17AC00003	25,588	—		
				Programmable Multiplexed Droplets and Arrays Containing Reaction Networks	274	12.910	798K081/W911NF-18-2-0036	177,684	—		
				Targeted Neuroplasticity Training to Accelerate Complex Skill Learning	265	12.910	1604551 // N60001-17-2-4011	253,780	—		
				Thermoelectric Threads for Thermal Management Fabrics		12.910	HR00111710005	90,531	—		
								<u>1,106,973</u>	<u>2,276</u>		
						ACCESS – Agent-based Causal simulator with Cognitive, Environmental, and Social System factors	22	12.RD	PO#4201766990 14811 // HR001118C0022	120,799	—
						Achieving Closed-loop RNA-based PID Control with a Cell-free Testbed	251	12.RD	A005959604 Amd 1 // HR0011-16-C-0134	92,747	—
						Automated Approaches to Cellular Engineering and Biomufacturing	58	12.RD	D14PC00005/0001	(67,853)	—
						Nano Engineered Thermoelectric Systems (NETS) for Lightweight Portable Primary/Secondary Power Sources	283	12.RD	450391-19980/HR0011-16-C-0035 Mod 03	140,961	—
						Obtaining Multipath & Non-line-of-sight Information by Sensing Coherence & Intensity with Emerging Novel Techniques	189	12.RD	G001534-7505 // HR0011-16-C-0028 Amd No. 1	168,618	—
						The MIT-Broad Foundry: TA-2	132	12.RD	5710004200/HR0011-15-C-0084	42,576	—
						The MIT-Broad Foundry: TA-2 (Phase III)	132	12.RD	HR0011-15-C-0084	28,880	—
Defense Security Cooperation Agency		Novel Light Sources Based On Nonlinearity Enhanced By Nano-Antennas	89	12.RD	PO#4440432059 (1) 0620	16,278	—				
Defense Threat Reduction Agency		A novel toolbox for rapid, on demand, in vitro glycoprotein synthesis	12.351	HDTRA1-15-1-0052 P00006	985,339	336,465					
		Hierarchically engineered porous materials for the protection against chemical threats	12.351	HDTRA1-14-1-0014 P00005	141,124	—					
		Highly Stable and Bifunctional Bio-inspired Catalytic MOFs for Destruction of Chemical Threats	12.351	HDTRA11810003	510,378	45,933					
					<u>1,636,841</u>	<u>382,398</u>					
National Reconnaissance Office		DOMInATE (Deployable Optical Membrane Telescope)		12.RD	NRO000-18-C-0098	144,891	50,181				
Navy		A Bio-inspired Underwater Robot for Station keeping with Omnidirectional Disturbances	12.300	N00014-14-1-0594 // N00014-16-1-2132-P00002		(8,799)	—				
		A Bio-inspired Underwater Robot for Station keeping with Omnidirectional Disturbances	12.300	N00014-14-1-0594 // N00014-16-1-2132-P00002		89,035	80,386				
		A Materials Genome Approach to Understanding Biofilm Mechanics	12.300	N00014-15-1-2701-P00005		237,067	—				

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Department of Defense (continued)		Air photoelectron spectroscopy of 2D perovskites for rational design of stable solar cells with >15% efficiency		12.300	N00014-18-1-2102	\$ 221,563	—
		An Advanced Atom-Probe Tomograph for Three-Dimensional Studies of Structural Materials with Sub-Nanoscale Spatial Resolution and High Mass Resolving-Power		12.300	N00014-17-1-2870	900,000	—
		An Analogical Approach to Autonomy and Social Inference in a Cognitive Architecture		12.300	N00014-16-1-2613-P00002/N00014-13-1-0470	566,463	—
		Automated Alignment Engine for Photonics Integration		12.300	N00014-19-1-2089-P00001	152,078	—
		Blackbody Thermometry with Quantum State-Prepared Molecular Ions		12.300	N00014-17-1-2258 P00003	253,511	—
		Bulk Nanostructured Materials with Two-Dimensional Building Blocks		12.300	N00014-16-1-2838 P00002	260,634	—
		Cognitive Expertise by Repetition Enhanced Simulation-based (CERES) Training		12.300	N00014-18-1-2316 P00001	89,889	—
		Consensus-Based Distributed Information Fusion		12.300	N00014-16-1-2106-P00001	93,390	—
		Cutset Sampling Topologies for Intelligence, Surveillance, and Reconnaissance		12.300	N00014-17-1-2707 P00002	152,717	58,875
		Cyberalloys 2020: Naval Materials by Design		12.300	N00014-16-1-2400 P00001	253,422	—
		Data Farming from Simulations for Instantaneous Trade-off Analysis using Adaptive Batch-sequential Experiment Design		12.300	N00244-16-2-0002	7,267	—
		Design of stable solar cells with >15% efficiency based on 2D perovskites		12.300	N00014-17-1-2231 P00004	184,821	—
		Designing Hierarchical Three-dimensional Surfaces byControlling Strain		12.300	N00014-17-1-2482 P00002	130,987	—
		Drugs to Stimulate Neurite Regeneration from Damaged Cochlear Neurons		12.300	N00014-15-1-2130/N00014-16-1-2508	342,427	—
		Dynamic Allocation of Autonomy for Limited-Bandwidth Human-Robot Teams Based on Measures of Trust in the Human	169	12.300	Agmt 04/21/17 // N00014-16-1-2247	128,080	13,029
		Enhancing Intuitive Decision Making Through Implicit Learning		12.300	N00014-16-1-2251 P00005	226,643	—
		Functional Crystals Through Encodable Hard and Soft Matter		12.300	N00014-16-1-3117-P00001/N00014-15-1-0043	649,046	—
		Hierarchical Nanoscale Metamaterials		12.300	N00014-17-1-3023	446,889	—
		High power, multispectral, phased arrays based on quantum cascade lasers	219	12.300	A18-0471-S001/N00014-17-1-2836-1	188,556	—
		High-Strength High-Toughness 10%Ni Naval Steels		12.300	N00014-18-1-2594	2,591	—
		Instrumentation for Functionalized Two-Dimensional Nanoelectronic Heterostructures		12.300	N00014-16-1-3179	62,333	—
		Integrated Optics for Single-Photon Nonlinear Interactions		12.300	N00014-17-1-2409-P00002	117,004	61,393
		Large Scale Optimization Methods for Data Science Applications		12.300	N00014-14-1-0313 P00004	17,843	—
		Learning by Reading for Robust Reasoning in Intelligent Agents		12.300	N00014-16-1-2177 P00002	24,049	—
		Magneto-Optical Confocal Microscope for Exploring Opto-Electronic Nanomaterial Hybrids and Heterostructures		12.300	N00014-18-1-2131	222,484	—
		Mesoscale Integrated Photonic Systems for Structural Health Monitoring		12.300	N00014-16-1-3021-p0003	176,883	—
		Mesoscopic quantum science and metrology with levitated mechanical systems	261	12.300	417315/N00014-18-1-2370	16,483	—
		Methods for High-Dimensional Nonlinear Optimization		12.300	N00014-18-1-2098 P00001	126,729	—
		Multi-Dimensional Control in Laterally-Confined Atomically-Thin Nanostructures		12.300	N00014-16-1-3055	186,144	—
		Multi-Dimensional Site-Specific and Correlative Studies of High-Strength High-Toughness Naval Steels		12.300	N00014-15-1-2443-P00002	149,455	—
		Multiscale Fabrication via Multiphoton Direct Laser Writing		12.300	N00014-18-1-2651	44,858	—
		Multiscale Modeling of Thermoplastic Elastomers for Enhanced Blast Properties through Microstructural Design		12.300	N00014-14-1-0434 P00002	28,353	—
		Nanomanufacturing for Enhancing the Human-Machine Interface: Roll-to-Roll, High Speed Printing of Multifunctional, Distributed Sensor Networks on Flexible Plastic Substrates	251	12.300	A002181204/N00014-11-1-0690 9	70,942	—
		Nanomaterials Inspired from the Bacterial Adhesome and Mechanome		12.300	N00014-16-1-3175 P00003	257,853	—
		Narrow-Linewidth Tunable Laser Source for Probing Excitons and Polaritons in Layered Hybrid Light-Matter Devices		12.300	N00014-18-1-2135	321,287	—
		Operating Microscope System for Translational Research in Regenerative and Transplant Medicine		12.300	N00014-17-1-2319	6,833	—
		Optimizing nanoscale precipitates in Al alloys by microalloying with transition metals		12.300	N00014-16-1-2402 P00003	196,077	—
		Overcoming Noise and Delay in Mobile Sensor Networks		12.300	N00014-13-1-0331-P00002	(11)	—
		Plasmonic-Dielectric Metamaterials for Enhanced Spectroscopy and Controlled Chemistry		12.300	N00014-17-1-3024	83,654	—
		Properties and Methods for Distributionally Robust Optimization with Decision Dependent Uncertainty		12.300	N00014-18-1-2097 P00001	19,557	—
		Screening For and Preclinical Evaluation of Drugs for Hearing Loss		12.300	N00014-18-1-2508	4,808	—
		Stochastic Optimization for Energy Efficient Outpost Modeling		12.300	N00014-15-1-0046/P00002	5,967	5,967
		Surface and Interface Engineering of van der Waals Nanoelectronic Heterostructures		12.300	N00014-17-1-2993 P00002	165,916	—
		The microbiome and responsiveness to stress: Countermeasure strategies for improving resilience to sleep and circadian disruption.	231	12.300	1553361 Mod 4 // N00014-15-1-2809	155,433	—
		Theoretical Bounds on Imaging Through Scattering Media		12.300	N00014-15-1-2735 P00002	246,191	58,858
		Three-dimensional tomographic studies supporting physically based modeling of Li-ion batteries		12.300	N00014-17-1-2688	156,424	—
		Towards Flexible Sheet Cameras	50	12.300	1(GG010550) // N00014-16-1-2152 Amd 5	418	—
		Towards Intelligent Agents that Learn to Reason and Communicate		12.300	N00014-17-1-2092 P00003	140,902	—
		Ultrasensitive Multi-Octave and Multi-dimensional Spectral Sensing by Single Element Detection and Compressive Sensing		12.300	N00014-16-1-2715 P00002	178,216	—
		Understanding Atomic Scale Structure in Four Dimensions to Design and Control Mesoscale Morphologies for Oxidation Resistant Alloys		12.300	N00014-16-1-2280-P00007/N00014-16-1-2280	1,297,163	535,770
						10,048,525	814,278
		Agile Fabrication of Sheet Metal Components with Assured Properties (Agile 1)	11	12.630	0007A-6 Mod 1 // N00014-14-14-2-0002	195,832	—
		The Mutual Influence of Sacred Values and Social Responsibilities in Governance and Conflict Management: A Dynamic Interplay between Leaders, Devoted Actor Networks, General Populations, and Time.	144	12.800	Agmt 12/6/2017 // FA9550-14-1-0030 P00007	63,870	—
		Novel Methods for Stochastic Data-Driven Nonconvex Optimization		12.910	N660011824026-P00002	132,747	—
		BISC: Bioelectronic Interfacing to Sensory Cortex with massive, fully implanted, flexible, wireless CMOS surface recording and stimulating arrays	50	12.RD	5(GG012664) Amd 3 // N66001-17-C-4002	178,315	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients	
Department of Defense (continued)		Data-driven Discovery of Novel Thermoelectric Materials	167	12.RD	1267//N66001-15-C-4036	\$ (140)	—	
		Improved Infrared Imaging with Variable Resolution Achieved via Post-Processing	156	12.RD	Agmt 10/18/2017 // N00253-17-C-0024	49,930	—	
		Office of Naval Research Basic Research Challenge- Enhancing Intuitive Decision Making Through Implicit Learning	59	12.RD	P.O. 13-0005311 Release 4 // N00014-13-C-0160	(337,333)	—	
		Theory-Driven Protocols for Replacing Elemental Composition of Strategic Materials	167	12.RD	P.O. 12/10/N00014-14-C-0050	3,581	—	
		Widely Tunable Surface Emitting Quantum Cascade Lasers	150	12.RD	Agmt 3/7/2018 // N68936-17-C-0063	63,011	—	
Department of Defense Total						42,496,564	4,204,354	
Department of Education		Foreign Language and Area Studies Fellowships (FLAS) under Title VI Higher Education Act of 1965	238	84.015	2015-01858-01 Mod. 3 // P015B140048	104,428	—	
		Proposal for Funding a Comprehensive National Resource Center and Foreign Language and Area Studies Fellowships under Title VI Higher Education Act of 1965	238	84.015	076415-15459 03 // P015A140048	107,321	—	
						211,749	—	
		Enhancing Middle School Mathematics Achievement through Spatial Skills Instruction	155	84.305	60046917//R305A150365-02	(21,982)	—	
		Teaching Perceptual and Conceptual Processes in Graph Interpretation		84.305	R305A120531-15-7	(1)	—	
						(21,983)	—	
	Institute of Education Sciences		Advanced State Specific Design Parameters for Randomized Field Experiments	229	84.305	5898-NU-02//R305D140019	(9,261)	—
			An RCT Institute for Established Researchers		84.305	R305B170016	99,499	—
			CALDER – State and Local	10	84.305	01023-03230 Mod. 4//R305C120008	2,437	—
			Center for Interactive Knowledge Utilization	231	84.305	1551539 Mod 2//R305C140008	486,792	—
		Contexts Inside and Outside of School Walls as Predictors of Differential Effectiveness in Preschool Professional Development		84.305	R305A160013 -17	201,955	117,821	
		Enhancing Middle School Mathematics Achievement through Spatial Skills Instruction	230	84.305	011275-002//R305A170640-17 A1/A2	96,581	—	
		Exploring the Spatial Alignment Hypothesis in STEM Learning Environments	288	84.305	S-00014999 // R305A170165	46,327	—	
		Further Development of Effect Size Estimators for Single-Case Designs: Extensions to Trend and Diverse Outcome Metrics		84.305	R305D170041 – 17A	191,538	—	
		Multidisciplinary Program in Educational Sciences		84.305	R305B140042 – 17 Mod 4	983,579	—	
		Post Doctoral Research Training Fellowship in Education Sciences		84.305	R305B100027 – 14	110,841	—	
		Proposal to Conduct Annual Workshops on Better Quasi-Experimental Design and Analysis		84.305	R305B140029 – 16	297,309	235,239	
		RAP Club: Improving Mental Health and School Performance in Urban Eighth Graders	122	84.305	200317335//R305A160082	10,285	—	
		State Longitudinal Data Systems Public-Use Project	229	84.305	5897-NU//R3050140045-03	180,211	—	
						2,698,093	353,060	
		NCSER-EIEL Goal 3: An Efficacy trial of J-EMT: Enhanced Milieu Teaching Language Intervention plus Joint Attention, Engagement and Regulation Intervention for Toddlers with Autism	278	84.324	3403-019297 // R324A150094-18 Amd 3	346,669	—	
	Training-Induced Language and Literacy Improvement in Children with Cochlear Implants	76	84.324	R01834 // R324A160193	331,194	—		
					677,863	—		
Department of Education Total						3,565,722	353,060	
Department of Energy		A Comprehensive Web Infrastructure for Standardizing, Storing, and Launching Density Functional Calculations of Materials and Chemical Compounds	47	81.049	Agmt 8/1/16//DE-SC0015106	330,268	—	
		A Scintillating Xenon Bubble Chamber for Dark Matter Detection		81.049	DE-SC0012161 0004	186,486	—	
		Antiferromagnetism and Superconductivity		81.049	DE-FG02-05ER46248 0014	115,424	—	
		Approaches to Integrated Photochemical Systems for Solar Energy Conversion		81.049	DE-FG02-99ER14699-0019	346,832	—	
		Argonne-Northwestern Solar Energy Research (ANSER) Center		81.049	DE-SC0001059/0008	1,477,026	250,900	
		Bose-Einstein Condensation of Magnons and Potential Device Applications		81.049	DE-SC0014424-0003	158,328	—	
		Center for Bio-Inspired Energy Science (CBES)		81.049	DE-SC000989 0006	3,047,874	962,908	
		Center for Geologic Storage of CO2	238	81.049	074974-16734// DE-SC0012504	56,204	—	
		Collaboration with Photosynthetic Antenna Research Center (PARC)	285	81.049	WU-HT-11-05-MOD-9 Amd 9 // DE-SC0001035	119,539	—	
		COOLR: A New System for Dynamic Thermal-Aware Computing		81.049	DE-SC0012531/0001	707	—	
		Coordination-Chemistry-Derived Materials Featuring Nanoscale Porosity and Selective Chemical Separation Capabilities		81.049	DE-FG02-08ER15967-0008	207,885	—	
		Dark Matter and Track Triggering with the CMS Experiment		81.049	DE-SC0015973 0002	256,379	—	
		Design of Next Generation Thermoelectrics		81.049	DE-SC0014520-0002	713,913	—	
		Dynamic Visualization and Control of Emergent Phases in Complex Oxide Heterostructures	162	81.049	5076-NU-DOE-2375//DE-SC0012375-02	(1,168)	—	
		EFRC/UMN: Inorganometallic Catalysts	251	81.049	A004527502 // DE-SC0012702 Amd 05	472,795	—	
		Electrolyte-Mediated Assembly of Like-Charged Colloids		81.049	DE-SC0018093	229,568	—	
		Electronic Structure Theories of Singlet Fission and Multiple Exciton Generation		81.049	DE-SC0010265 0004	120,406	—	
		Electrostatic Driven Self-Assembly Design of Functional Nanostructures		81.049	DE-FG02-08ER46539-0009	237,133	—	
		Epitaxial Multifunctional Oxide Heterostructures		81.049	DE-FG02-06ER46346 0012	101,660	—	
		Establishing a Clostridia foundry for biosystems design by integrating computational modeling, systems-level analyses, and cell-free engineering technologies		81.049	DE-SC0018249-P0001	515,673	—	
		Fundamental Studies of Light-Induced Charge Transfer, Energy Transfer, and Energy Conversion with Supramolecular Systems		81.049	DE-FG02-87ER13808/0033	198,142	—	
		Geophysical Feedbacks between Fluid-Assisted Sediment Fracture, Compaction and Faulting		81.049	DE-SC0017615	179,813	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Department of Energy (continued)		Granular Constraints and Size Effects in Polycrystalline Shape Memory Alloys		81.049	DE-SC0010594 0003	\$ 146,962	70,495
		High Pressure Synthesis of New Magnets, Featuring Diamagnetic Sources of Anisotropy		81.049	DE-SC0018092	113,163	—
		Hybrid Halide Perovskites: Advancing Optoelectronic Materials	226	81.049	KK1508/DE-SC0012541	(47,666)	—
		Hybrid Metal Halides: Advancing Optoelectronic Materials	226	81.049	KK1804 // DE-SC0012541	72,732	—
		Institute for Environmental Catalysis		81.049	DE-FG02-03ER15457 0015	1,520,353	—
		Kinetics and Thermodynamics of Metal and Complex Hydride Nanoparticles		81.049	DE-FG02-07ER46433 Mod. 0009	(6,150)	—
		Light-Driven Charge Transfer in Face-to-Face Donor-Spacer-Acceptor Supramolecular Systems		81.049	DE-FG02-96ER14684-0020	42,995	—
		Missing links in biological methane and ammonia oxidation		81.049	DE-SC0016284-0002	228,427	—
		Nanoengineering of Complex Materials		81.049	DE-FG02-00ER45810/0020	360,366	—
		Nanoporous Materials Genome: Methods and Software to Optimize Gas Storage, Separations, and Catalysis	251	81.049	A003127002 Amd 6 // DE-SC0008688	200,032	—
		New Methods for Atomic Structure Determination of Nanoscale Materials		81.049	DE-FG02-01ER45945 0018	95,949	—
		Nonlinear Optimization and Applications		81.049	DE-FG02-87ER25047/0030	117,745	—
		PGM-free Engineered Framework Nano-Structure Catalysts	91	81.049	DE-E0008077	283,684	—
		Probing Coherent States of Light and Matter in Two-Dimensional Semiconductors		81.049	DE-SC0012130-0004	146,489	—
		Properties, Electrochemical Activity, and Stability of Solid Oxide Cell Materials Under Extreme Conditions		81.049	DE-SC0016965	91,323	—
		Research in the Energy, Cosmic and Intensity Frontiers and Theoretical Physics at Northwestern University		81.049	DE-SC0015910 0002	803,458	—
		Scalable Data-Management, Analysis, and Visualization (SDAV)		81.049	DE-SC0007456	94,373	—
		Scalable, In-situ Data Clustering Data Analysis for Extreme Scale Scientific Computing		81.049	DE-SC0014330 0002	191,754	—
		Solid State Solar-Thermal Energy Conversion Center (S3TEC Center)	132	81.049	571003775 Amd 3 // DE-SC0001299	133,093	—
		Strong Field Coherent Dynamics and Control. From Alignment to High Harmonic Generation in Complex Systems		81.049	DE-FG02-04ER15612/0013	(95)	—
		Strong Interaction Studies with Medium Energy Probes		81.049	DE-FG02-87ER40344 0039	309,985	—
		Surface Plasmon Enhanced Chemistry		81.049	DE-SC0004752-0008	133,110	—
		The Evolution of Topologically Complex Structures: Coarsening of Dendritic Mixtures		81.049	DE-FG02-99ER45782-0019	102,896	—
		Ultrafast Creation and Manipulation of Emergent Phenomena and Novel Phases in Complex Oxides	162	81.049	5709-NU-DOE-2375 // DE-SC0012375	128,134	—
						14,333,999	1,284,303
		A Novel Lubricant Formulation Scheme for 2% Fuel Efficiency Improvement		81.086	DE-EE0006449-0008	19,871	—
		Rapid Freeform Sheet Metal Forming: Technology Development and System Verification	77	81.086	A10-PO14-164103/RQ13-235R07//DE-EE0005764	(63,671)	—
						(43,800)	—
		CB-C14 Alcohol Production as a Pathway to Hydrocarbon Fuels	65	81.087	619-2 // DE-EE0007728	85,672	—
		CHARACTERIZATION AND ACCELERATED LIFE TESTING OF A NEW SOLID OXIDE ELECTROLYSIS CELL		81.087	DE-EE0008079	158,279	—
		Transformative Materials for High-Efficiency Thermochemical Production of Solar Fuels		81.087	DE-EE0008089	144,407	—
						388,358	—
		Computational Design and Performance Prediction of Creep-Resistant Ferritic Superalloys	263	81.089	A15-0315-SOO1-A02//DE-FE0024054	5,774	—
		Scalable and Cost Effective Barrier Layer Coating to Improve Performance and Stability of SOFC Cathode	287	81.089	14-749-NU//DE-FE0023407	7,954	—
		Transformational SOFC Architecture (TSA)	80	81.089	F720161001s1 // DE-FE0027584	184,880	—
						198,608	—
		High-Pressure Elastic Properties of Minerals, Glasses and Superhard Materials	34	81.112	4-10469-03 Amd 6 // DE-NA002006 0009	58,876	—
		Electrically-Assisted Tubing Processes for Enhancing Manufacturability of Oxide Dispersion Strengthened Structural Materials for Nuclear Reactor Applications		81.121	DE-NE0008409-0001	176,211	—
		Solid Acid Fuel Cell Stack for Distributed Generation Applications	181	81.135	C2015.0008 // DE-AR0000495	14,265	—
		Advancing Predictive Capability for Brittle Failure Using Dynamic Graphs	128	81.RD	439358 // DE-AC52-06NA25396	3,334	—
		Alok Choudhary-Joint NU/Argonne Appointment	209	81.RD	Agmt 9/14/2017	19,605	—
		Alok Choudhary-Joint NU/Argonne Appointment (AMASE Project)	209	81.RD	EDSR 1/23/2018	13,080	—
		Argonne Joint Appointment – Hupp	209	81.RD	Agmt. 10/23/14	(12)	—
		Argonne Joint Appointment – Kanatzidis	209	81.RD	Agmt. 08/20/14	216,191	—
		Argonne Joint Appointment – Low	209	81.RD	Agmt 08/31/2017	85,643	—
		Argonne Joint Appointment – Poppelmeier	209	81.RD	Agmt 06/07/18	59,343	—
		Argonne Joint Appointment – Wasieleski	209	81.RD	Agmt 1/16/2018	60,150	—
		Bridging neutron total scattering and atom-probe tomography for resolving amorphous and nanocrystalline structures	277	81.RD	4000164554/DE-AC05-00OR22725	2,233	—
		Center for Electrochemical Energy Science – II	209	81.RD	4F-32002 M0007 // DE-AC02-06CH11357	667,268	—
		Center for Emergent Superconductivity (CES)	209	81.RD	3J-30081 // 3J-30081-0046A Rev. 0046E	90,536	—
	Concurrent Optimization of Component Capital Cost and Expected O&M	5	81.RD	XEJ-6-62151-01-1 Mod. 3 // DE-AC36-08GO28308	174,376	26,321	
	Cross-linked Polyhydroxyurethanes with Faster Stress Relaxation and Reprocessability	97	81.RD	NE00266389 // DE-NA0002839	6,050	—	
	Development of a New, Lightweight Alloy for Advanced Cylinder Heads in High-Efficiency, Light-Duty Engines	83	81.RD	DE-EE0006082 // POW TCS67912-001	30,973	—	
	Development of Heavy Element Wide Band Gap Semiconductors	209	81.RD	BOA 3J-30081 // 3J-30081-0066B	77,816	—	
	Dynamics of Active Self-Assembled Materials	209	81.RD	3J-30081/3J-30081-0053C & 0053D	6,733	—	
	Emine Begum Gulsoy-Joint NU/Argonne Appointment	209	81.RD	Agmt 9/23/15	37	—	
	Emine Begum Gulsoy-Joint NU/Argonne appointment second project	209	81.RD	Agmt 9/26/2017	12,850	—	
	Exploration of New Li-6 Containing Semiconductors	209	81.RD	3J-30081 // 3J-30081-0061B	59,742	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients		
Department of Energy (continued)		Fermi Joint Appointment – Eric Dahl	74	81.RD	Agmt 6/27/12 // DE-AC02-07CH11359 Rev 5	\$ 76,480	—		
		Firm-fixed price proposal for the reimbursement of funds to Northwestern University for the services of Postdoctoral Research Associate; Wave Ngampruetikorn	74	81.RD	PO No. 636083 // DE-AC02-07CH11359	169,253	—		
		Friction prediction modeling of Honed and LST treated ring and liner lubricated contact	209	81.RD	3J-30081 // 3J-30081-0064A	(595)	—		
		High Luminosity (HL) LHC CMS Detector Upgrade Project – Trigger & DAQ – Track Trigger	74	81.RD	PO NO. 637604 // E9936-8264-o2	14,175	—		
		High-performance I/O Research, Development, and Deployment for DataLib	209	81.RD	3J-30081 // 3J-30081-0071A	35,145	—		
		James Dombrowski-Joint NU/Argonne Appointment	209	81.RD	EDSR 5/11/18	4,107	—		
		James Rondinelli-Joint NU/Argonne Appointment	209	81.RD	Agmt 4/3/2017	(106)	—		
		Jennifer Dunn – Joint NU/Argonne Appointment	209	81.RD	Agmt 7/27/2017	65,253	—		
		Jennifer Dunn joint appointment/NAISE-funding for DRINC	209	81.RD	Agmt 4/13/18	23,526	—		
		Joint Appointment Agreement – Petriello	209	81.RD	Agmt. 09/11/18	128,044	—		
		Joint Appointment Agreement – Stair	209	81.RD	Agmt 9/13/2017	40,097	—		
		Joint appointment agreement for Hongxi Xing	209	81.RD	Agmt 8/31/2017	32,769	—		
		Joint Argonne Appointment – Pyosang Kim	209	81.RD	Agreement 4/17/2018	33,260	—		
		Joint Center for Energy Storage Research	209	81.RD	3F-31142 Mod. 12 // DE-AC02-06CH11357	143,227	—		
		Kinetic Modeling of the Catalytic Upgrading of Vapors from Biomass Pyrolysis	5	81.RD	AEV-6-62063-01//DE-AC36-08GO28308	26,216	—		
		Lei Fang – Joint NU/Argonne appointment	209	81.RD	58906-MA-105	512	—		
		Li Ion Battery X-ray Interface Studies	209	81.RD	3J-30081 / 3J-30081-0014A Rev. 0014E	22,853	—		
		Marco Trovato CMS LPC Distinguished Research Award 2017	74	81.RD	No. 634049//DE-AC02-07CH11359	14,570	—		
		MICCOM Water Electrode Studies	209	81.RD	3J-30081-0054A // Rev No. 0054C	22,611	—		
		Microstructural Studies of Nb3Sn Coatings for SRF Cavities	74	81.RD	PO No. 631010 Rev 1 // DE-AC02-07CH11359	139,722	—		
		Midwest Integrated Center for Computational Materials	209	81.RD	3J-30081-0056A//3J-30081-0056B	255,590	—		
		ML/DL and I/O Research, Development, and Deployment for RAPIDS	209	81.RD	3J-30081 // 3J-30081-0069A	18,388	—		
		Multi-objective Algorithm Optimization of Interfacial Structures	209	81.RD	3J-30081-0055A // 3J-30081-0055A Rev 0055D	41,144	—		
		Oliver Cossairt-Joint NU/Argonne Appointment	209	81.RD	Agmt. 06/26/18	21,239	—		
		Optimizing Superconductor Transport Properties	209	81.RD	3J-30081//3J-30081-0024A Rev 0024D	(2,694)	—		
		Oxide Dispersion Strengthened (ODS) Alloys	209	81.RD	3J-30081-0070A	12,886	—		
		Raman Spectroscopy of Catalysis	209	81.RD	3J-30081-0051A Rev. 0051I	42,128	—		
		Refractory Solar Selective Coatings	209	81.RD	3J-30081//3J-30081-0058A Rev 0058C	7,448	—		
		Small Worlds Project Development of algorithms and models for 3D Snapshot	209	81.RD	3J-30081 // 3J-30081-0050A Rev. No. 0050E	78,718	—		
		Holographic Interferometric Microscopy (3D-SIHM) Subproject	209	81.RD	3J-30081 // 3J-30081-0039A Rev. 0039C	63,166	—		
		Structural Characterization in Photocatalysis	209	81.RD	3J-30081//3J-30081-0043A Rev. 0043F	55,493	—		
		Student support for Matthew Kirschner	209	81.RD	3J-30081-0062A Rev. 0062E // 3J-30081	33,145	—		
		Support for Daikang Yan	209	81.RD	3J-30081-0060A-0060B // 3J-30081 Rev 0060C	31,716	—		
		Support for Ming-Feng Tu	209	81.RD	3J-30081-0063A Revision 0063B	42,216	—		
		Support for Pufan Liu	209	81.RD	3J-30081 // 3J-30081-0068A Rev. No. 0068D	56,942	—		
		Support for Saugat Kandel	74	81.RD	PO No. 641287 // DE-AC02-07CH11359	40,000	—		
		Support for Yue Zhang	209	81.RD	3J-30081-0057A Rev. 0057B-C//3J-30081	1,800	—		
		Supported Single-Site Catalysts for Selective Alkane Oxidation	209	81.RD	3J-30081//3J-30081-0013A Rev. 0013H	31,245	—		
		Synchrotron X-ray Studies of Nanostructured Polymer Films, Fibers and Composites	209	81.RD	Work Order No. 3J-30081-0067A Rev No. 0067B	31,702	—		
		Technology Demonstration and Model Assessment of Fit-To-Use Water Availability from Selective Desalination of Impaired Water for Cooling Tower Operation	74	81.RD	PO# 640728 // E9935-5264-02	34,090	—		
		Testing and Characterization for Pattern Recognition ASIC Development	158	81.RD	351306 Revision 1 // DE-AC05-76RL01830	3,000	—		
		Travel Support for Prof. Chaitanya Bandi	209	81.RD	3J-30081//3J-30081-0019H	34,460	—		
		Understanding Complex Oxide Surfaces in Reactive Environments	209	81.RD	31-30081-0031A 0031H/0031I	38,545	—		
		Understanding Complex Oxide Thin Film Synthesis	209	81.RD	4F-3232 M0003//DE-AC02-06CH11357	29,650	—		
		Understanding Roles of Ultrafast and Coherent Electronic and Atomic Motions in Photochemical Reactions	74	81.RD	PO No. 622384-1	(306)	—		
		US CMS Phase 2 Upgrade R&D – Endcap Calorimeter	209	81.RD	Agmt 9/13/2017	145,965	—		
		Wei-Keng Liao-Joint NU/Argonne Appointment	209	81.RD	Agmt 2/16/2018	760	—		
		Wei-Keng Liao-Joint NU/Argonne Appointment (AMASE Project)	209	81.RD	Agmt 10/12/2017	6,545	—		
		Youssef Nashed-Joint NU/Argonne Appointment	209	81.RD	Agmt 5/22/2018	69,413	—		
		Yudong Yao-Joint NU/Argonne Appointment	209	81.RD					
		Advanced Research Projects Agency-Energy							
				A Novel Hierarchical Frequency-Based Load Control Architecture	181	81.135	DE-AR0000702	605,620	125,304
				Distributed Electrochemical Production and Conversion of Carbon-neutral Ammonia	84	81.135	C2017.0013//DE-AR0000813	241,558	—
				Micro-scale Ultra-high Efficiency CPV/Diffuse Hybrid Arrays Using Transfer Printing	81	81.135	17-S32//DE-AR0000882	83,458	—
				Regrowth and Selective Area Growth of GaN for Vertical Power Electronics	289	81.135	GR101471 CON-8000 1218//DE-AR0000087	106,911	—
				Wide-angle planar microtracking microcell concentrating photovoltaics	162	81.135	5688-NU-EARPA-0626//DE-AR0000626	400,420	—
							1,437,967	125,304	
		National Energy Technology Laboratory		Intermediate Temperature Fuel Cell Stack	211	81.RD	PO2603659//Agmt 1215334//DE-AR0000498	(24,627)	—
		National Nuclear Security Administration		Integrated Computation Materials Engineering (ICME) Development of Carbon Fiber Composites for Lightweight Vehicles	77	81.086	RQ15-016R02 Mod 2//DE-EE0006867	730,124	—
				Actinide Center for Excellence	258	81.112	203186NU // DE-NA0003763	135,944	—
				Ternary Heavy Metal Halide Semiconductors for Y-Radiation Detection		81.113	DE-NA0002522	(4,781)	—
							Department of Energy Total	21,183,405	1,435,928

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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	Administration for Children and Families	The Northwestern University Two-Generation Child and Family Outcomes Study of CAP Tulsa's CareerAdvance® Program	52	93.093	Agmt 10/31/2017	\$ 174,439	—		
		The Northwestern University Two-Generation Study (NU2Gen) of Parent and Child Human Capital Advancement		93.093	90HG1002-01-01	61,355	33,611		
		The Northwestern University Two-Generation Study (NU2Gen) of Parent and Child Human Capital Advancement		93.093	90HG1002-02-00	247,686	61,035		
								483,480	94,646
		Expanding the Cycle of Opportunity: Simultaneously Educating Parents and Children in Head Start		93.600	90YR0073-04-00	(46,550)	—		
		Expanding the Cycle of Opportunity: Simultaneously Educating Parents and Children in Head Start		93.600	90YR0073-04-00	66,853	48,631		
		Expanding the Cycle of Opportunity: Simultaneously Educating Parents and Children in Head Start		93.600	90YR0073-05-01 Amd 1	257,849	133,117		
								278,152	181,748
		Illinois DCFS Implementation of Trauma Affect Regulation: Guide for Education and Therapy (TARGET) for Post Adoption and Guardianship Families		191	93.652	Agmt Signed 10/12/16 // 90CO1122-04	18,624	—	
		Evidence-informed Practices in Early Childhood Home Visiting: Prevention, Identification and Treatment of Substance Abuse in Families		134	93.RD	HHSP233201500035I//50525S05679	10,599	—	
	Administration for Community Living	Advanced Rehabilitation Research and Training (ARRT) Program		93.433	90AR5010-02-00	9,120	—		
		Advanced Rehabilitation Research and Training (ARRT) Program: Northwestern University Advanced Rehabilitation Research Training Application		93.433	90AR5019-04-00	134,061	—		
		Field Initiated Project Programs Motivational Interviewing and Physical Activity Change in Parkinson's Disease		169	93.433	81421//901F0093-01-00	19,043	—	
		Improving Electronic Written Communication in Aphasia		169	93.433	6317//901FRE0007-01-00	11,391	—	
		Interventions for Neurologic Communication Disorders		93.433	90AR5015-02-00	204,365	69,250		
		Machines Assisting Recovery from Stroke and Spinal Cord Injury for Reintegration into Society (MARS3)		169	93.433	CC 81765 CL 2910//90RE5010-03-00	4,505	—	
		Multi-site Clinical Trial of Hypoxia in Incomplete SCI		169	93.433	cc81478 6323//90SIMS0001-01-00	76,420	—	
		Northwestern University Advanced Rehabilitation Research Training Application		93.433	90AR5019-03-00	9,378	—		
		Northwestern University Policy Research Fellowship		93.433	90ARPO0001-02-00	31,161	—		
		Rehabilitation Science for Basic Scientists and Engineers: An Advanced Training Program		93.433	90AR5031-02-02	9,630	—		
		Rehabilitation Science for Basic Scientists and Engineers: An Advanced Training Program		93.433	90AR5031-03-00	153,702	—		
		Rehabilitation Strategies, Techniques, and Interventions		169	93.433	CC# 81353 3037//90ER5013-01-00	178,881	—	
								841,657	69,250
		Developing Optimal Strategies in Exercise and Survival Skills to increase Health and Function		169	93.443	CL3802, CC81039//90RT5027-01-00	47,574	—	
		Agency for Healthcare Research and Quality	Health Services Research Training Grant		228	93.225	FP037911//ST32HS000084-20	151,170	—
Northwestern University-University of Chicago HSR Postdoctoral Training Program				93.225	3T32HS000078-20S1	270,153	42,934		
						421,323	42,934		
Addressing the Needs of Individuals Early After Stroke: An Adaptation of the 14-Weeks to a Healthier You Program			93.226	1F32HS024366-01	6,453	—			
Dental prescribing of antibiotics and opioids: high use in the absence of evidence			237	93.226	16659//5R01HS025177-02	26,314	—		
Develop and Validate Health IT Safety Measures to Capture Violations of the 5 Rights of Medication Safety			50	93.226	4(GG012713-02)//1R01HS024538-02	17,492	—		
Development of SCRIPIS: Standardized Consent Redesign and Implementation Protocol for tPA in Stroke			93.226	5F32HS025330-02	73,855	—			
EHR Based Medication Complete Communication Strategy to Promote Safe Opioid Use			93.226	5R18HS023459-03	136,940	35,925			
Enhancing Stroke Prehospital and Emergency Evaluation and Delivery (E-SPEED)			93.226	1R18HS025359-01A1	31,185	—			
Evaluating the Implementation of a Multi-Component Quality Collaborative			93.226	5R01HS024516-03	282,137	6,997			
Examining Non-Visit-Based Antibiotic Use to Improve Safety and Limit Resistance Expansion, Implementation & Evaluation of Electronic Health Record-Integrated Patient-Reported Symptom Screening in a Comprehensive Cancer Center			93.226	1R18HS026170-01	7,181	—			
Health related quality of life and seizure medications after hemorrhagic stroke			93.226	5K18HS023437-02	980	290			
Identifying Opportunities to Reduce STI/HIV Disparities among Recent Offenders.			108	93.226	IN4681903NW//5R01HS023318-02	6,053	—		
Improving Outpatient Safety of Older Adults through Electronic Patient Portals			93.226	1R21HS024071-01 REVISED	49,966	—			
Improving the Quality of Pediatric Emergency Care Using an Electronic Medical Record			93.226	5R01HS020270-06	22,322	18,377			
In Situ Simulation for Adoption of New Technology to Enhance Safety in Rural EDs		93.226	1R18HS024027-03	146,159	55,334				
Innovative methods for modeling longitudinal medical costs		93.226	4R01HS020263-05	(34)	—				
Innovative methods for modeling longitudinal medical costs		93.226	4R01HS020263-05	6,630	6,630				
Midwest Small Practice Care Transformation Research Alliance		93.226	5R18HS023921-03	3,157,305	1,881,219				
Northwestern University – Patient-centered Intervention and Engagement Training		93.226	5K12HS023011-05	675,512	238,438				

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Parent Training in Pediatric Primary Care: A Self Directed Tablet Based Approach	237	93.226	Ag4/21/17/15012705sub1/R01HS024273	\$ 9,369	—			
		Physical Therapy Delivery Models for Long-Term Parkinsons Disease Management		93.226	5F32HS025077-02	67,457	—			
		Preventing Wrong-Drug and Wrong-Patient Errors with Indication Alerts in CPOE Systems		93.226	5R01HS024945-02	235,713	174,669			
		Promoting safe care transitions: Simulation-based mastery learning to improve communication in times of diagnostic uncertainty	204	93.226	080-31050-SZ7501/R18HS025651	134,305	—			
		Redesigning Systems to Improve Quality for Hospitalized Patients		93.226	1R18HS025649-02	200,674	31,190			
		Reducing the risk of preventable postpartum lower extremity nerve injuries		93.226	5R03HS025267-02	47,514	3,534			
		The Impact of Behavioral Health Treatment among Adolescent Offenders	108	93.226	5R01HS024296-02	12,262	—			
		Tools for Optimizing Medication Safety (TOP-MEDS)		93.226	4U19HS021093-05	99,850	93,213			
		Using Location-Based Smartphone Alerts within a System of Care Coordination		93.226	1R21HS025000-02	137,030	20,171			
							<u>6,152,814</u>	<u>2,849,880</u>		
			Measures to National Quality Forum – 2	137	93.RD	Agmt 04/30/17/HHSP233201600230A	33,057	—		
			The Comprehensive Unit-based Safety Program (CUSP) for Antibiotic Stewardship	122	93.RD	2003757786/HHSP233201500020I	117,855	—		
		Centers for Disease Control and Prevention		Developing and Disseminating Programs to Build Sustainable Lupus Awareness, Knowledge, Skills, and Partnerships	8	93.068	6NU58DP006138-02-02	18,148	—	
				Community Counts: Public Health Surveillance for Bleeding Disorders (Region #V-West, HTC #553)	90	93.080	ATHN2015-VW-1-553/ 1 NU27DD001155-03-00	17,515	—	
				Rural Cancer Prevention Center 2014-2019	241	93.135	3210000758-18-175/5U48DP005014-04	91,590	—	
				Chicago Center for Youth Violence Prevention	228	93.136	FP061138/IU01CE002712-01	234,857	—	
				Development and Evaluation of Sports Concussion Prevention Strategies	185	93.136	11679SUB/IU01CE002880-01	15,347	—	
								<u>250,204</u>	<u>—</u>	
					The roles of TIRs and HSPA5 uptake		93.262	5R01OH010469-04	374,332	153,794
					Prioritizing public health efforts to improve the care and quality of life for people with lupus	142	93.424	1782018/5NU38OT000225-05	13,437	—
	An Individually Tailored, Family-Centered Intervention for Childhood Obesity: Connecting Services in Pediatric Primary Healthcare, the Home, and the Community			17	93.535	18-277/U18P006255	274,013	—		
	An Individually Tailored, Family-Centered Intervention for Childhood Obesity: Connecting Services in Pediatric Primary Healthcare, the Home, and the Community.			17	93.535	16-995/IU18DP006255-01	(53,639)	—		
					<u>220,374</u>	<u>—</u>				
Centers for Medicare & Medicaid Services		Rural Cancer Prevention Center 2014-2019 (SIP-15-007)	241	93.542	3210000447-17-156/3U48DP005014-03S6	1,571	—			
		Evaluation Center Extension to Evaluate PrEP Implementation and Data to Care Services	41	93.940	CONTRACT PO #42045/236320/50105365/U62PS005021	37,159	—			
		Effect of ACA Medicaid Expansion on Diabetes: Diagnosis, Treatment, Patient Compliance, and Health Outcomes		93.945	5U18DP006120-04	416,320	87,412			
		Illinois Perinatal Quality Collaborative (ILPQC)	105	93.946	76380016E/5NU38DP005367-03-00	181,939	144,062			
		Intergovernmental Personnel Act Agreement for Theresa Rowe		93.RD	17PA1708457 mod 2	67,583	—			
			Development and Maintenance of Post-Acute Care Cross-Setting Standardized Patient Assessment Data	168	93.RD	9920170059/HHSM-500-2013-13014I	94,041	—		
		Food and Drug Administration		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	70	93.103	No.EL-1007-01-01/R01FD005396	12,477	—	
				Increasing the Quality and Efficiency of Clinical Trials	66	93.103	5R18FD005292-02 ADDENDUM	96,574	—	
				Increasing the Quality and Efficiency of Clinical trials	66	93.103	203-7585/5R18FD005292-04	23,752	—	
				Phase 2 Study of Intravenous Gallium Nitrate in the Treatment of Cystic Fibrosis	273	93.103	UWSC8836/2R01FD003704-03A1	14,225	—	
						<u>147,028</u>	<u>—</u>			
	Psychometric Evaluation of a New CABP PRO Instrument	102	93.RD	ICON Signed 03/26/18	630	—				
	The influence of brand and principal display panel (PDP) for safe consumer use of over-the-counter (OTC) drugs—Advancing the science		93.RD	HHSF223201510126C/0004	149,099	26,956				
Health Resources and Services Administration		Hemophilia Treatment Center (HRSA Award)	90	93.110	Agmt 10/31/16/H30MC24052	27,439	—			
		Racial and Ethnic Disparities in Autism Diagnosis and Educational Therapy Utilization: Quantifying the Contribution of Modifiable Mediators		93.110	7 R40MC30751-01-00	23,167	—			
						<u>50,606</u>	<u>—</u>			
		A joint CCHHS/Northwestern Preventive Medicine Residency with Integrative Health Care Training Program	96	93.117	01353-NoA-NWU03/6D33HP29245-01-01	27,477	—			
		Implementation of the Live Donor Champion Program	122	93.134	2003709195/I1R39OT31103-01	39,324	—			
		Promotoras de Donación: Leveraging Lay Educators to Increase Donor Registration in Older Hispanic Women	201	93.134	1R39OT29878-01-00	38,680	—			
						<u>78,004</u>	<u>—</u>			
			Ryan White HIV/AIDS Program Implementation Center for HIV Clinical Quality Improvement	95	93.145	5740-01/6U28HA30791-02-01	14,767	—		
			Affordable Care Act Teaching Health Center (THC) Graduate Medical Education (GME) Payment Program		93.530	T91HP215420502	259,857	(1,738)		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Affordable Care Act Teaching Health Center (THC) Graduate Medical Education (GME) Payment Program		93.530	6 T91HP215420603	\$ 2,735,022	1,254,995
						2,994,879	1,253,257
		Academic Units for Primary Care Training and Enhancement		93.884	6UH1HP29963-03-01	582,283	91,447
		Use of Social Media to Improve Engagement, Retention, and Health Outcomes along the HIV Care Continuum	99	93.928	AGREEMENT 3/10/16 // 1 H97HA288910100	18,790	—
		Better Health through Education and Transformation of Older Adult care in Illinois	178	93.969	4UQHP28715-02/6U1QHP287150101	6,222	—
		Illinois Perinatal Quality Collaborative (ILPQC) Title V	105	93.994	86380016F	121,240	—
		Building Data Infrastructure in the Safety Net to Conduct Patient-Centered Outcomes Research	6	93.RD	001C-06/HHS25201400001C	3,281	—
		Building Data Infrastructure in the Safety Net to Conduct Patient-Centered Outcomes Research	6	93.RD	001C-08/HHS25201400001C	6	—
National Institutes of Health		AHA Tobacco Regulatory Science and Addiction Center (A-TRAC)	252	93.077	65105010617-NWU//P50HL120163	(2,844)	—
		American Heart Association Tobacco Regulation and Addiction Center "A-TRACK"	9	93.077	FX-ATRAC-NWU-04/4P50HL120163-04	2,334	—
		American Heart Association Tobacco Regulation and Addiction Center "A-TRACK"	9	93.077	FX-ATRAC-NWU-05/5P50HL120163-05	104,165	—
						103,655	—
		Association of ALS to gene-environment mediated changes in HDL proteins		93.113	5R01ES022310-05	235,988	—
		Carbon Nanotube Structure-Activity Relationships for Predictive Toxicology	222	93.113	0521 G RAZ76 Amd 5 // 5R01ES022698-05	71,597	—
		Effects of air pollution and gestational diabetes on autism	125	93.113	OOS030239NUCS113726//1R56ES028121-0	4,807	—
		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	50	93.113	1(GG013015-01)//1R01ES027845-01A1	8,883	—
		Epigenetic Mechanisms of PM-Mediated CVD Risk	257	93.113	5104343/4R01ES020836-05	65,256	—
		Ex Vivo Female Reproductive Tract Integration In a 3D Microphysiologic System		93.113	3UH3TR001207-05S1	82,748	60,019
		Mechanisms of airborne particulate matter induced thrombosis	228	93.113	FP058473/7R01ES015024	10,320	—
		Mechanisms of Cadmium Induced Dysglycemia and Type 2 Diabetes Mellitus		93.113	1R01ES027011-02	427,883	—
		Mitigation of asbestos induced alveolar epithelial cell injury		93.113	4R01ES020357-05	4,353	—
		PCOS and androgen-related disease modeling and drug testing in Multi-organ Integrated Microfluidic Reproductive Platform		93.113	5UG3ES029073-02	1,121,347	148,755
		Protein Adducts as Measures of Exposure Throughout Childhood Development		93.113	5R21ES026776-02	211,173	—
		The role of alpha-T-catenin in the pathogenesis of occupational asthma		93.113	5F30ES024622-03	26,743	—
						2,271,098	208,774
		Cortico-striatal plasticity in the transition to chronic pain		93.121	4R01DE022746-05 REVISED	171,518	—
		Enamel matrix 3D organization and maturation stage ion flow	78	93.121	NWU025865-2565//5R01DE025865-02	29,082	—
		Evolution of Chemical, Structural, and Mechanical Properties of the Surface Zone in Caries Lesions: A Multimodal, Correlative Imaging Approach		93.121	1F31DE026952-01A1	23,838	—
		Impacting The Oral HPV Continuum: Prevention, Screening, And Early Detection	122	93.121	200334876//1R35DE026631-01	6,938	—
		Nanotechnology Strategies for the Growth of Bones and Teeth		93.121	5R01DE015920-10	(49)	(49)
		The role of amorphous intergranular phases in the development of caries lesions		93.121	5R01DE025702-03 REVISED	450,717	—
						682,044	(49)
		A randomized, double-blind, placebo-controlled study of 4-hydroxymoxifen topical gel in women with mammographically dense breasts	268	93.135	00004892/HHSN261201200034I	38,615	—
		A randomized, double-blind, placebo-controlled study of 4-hydroxymoxifen topical gel in women with mammographically dense breasts -fixed pricing	268	93.135	00004887/HHSN261201200034I	6,744	—
		Effect of Aspirin on Biomarkers of Barrett's Esophagus After Successful Eradication of Barrett's Esophagus with Radiofrequency Ablation	268	93.135	Sub#00003350//HHSN261201200034I	509	—
		Effect of Aspirin on Biomarkers of Barrett's Esophagus After Successful Eradication of Barrett's Esophagus with Radiofrequency Ablation	268	93.135	Sub#00003339//HHSN261201200034I	150	—
						46,018	—
		Embedding Pharmacogenotyping in an Integrated Health System for the Underserved Genomic Medicine at Northwestern: Discovery and Implementation	107	93.172	IN4687739NU//5U01HG007762-03	37,382	—
		Health Care Provider responses to receiving unsolicited genomic results	44	93.172	5U01HG008673-04	930,265	—
		Interactive Multimedia Consent for Biobanking	239	93.172	GENFD0007484300/1R01HG010004-01A1	7,412	—
		VGER, the Vanderbilt Genome-Electronic Records Project	278	93.172	1001514516//5R01HG008348-03	111,876	—
						4,103	—
						1,091,058	—
		A Family-Genetic Study of Language in Autism	93.173	5R01DC010191-08	598,681	135,360	—
		Ability of older adults to benefit from dynamic pitch for speech recognition in noise	93.173	5F32DC014629-02	2,338	—	
		Acoustic and Perceptual Effects of WDRC Amplification	93.173	5R01DC006014-13	268,372	84,536	—
		Atrophy and resting state connectivity in primary progressive aphasia	93.173	5 K23 DC014303-04	220,755	—	
		Attention-dependent neural oscillations in the human olfactory system	93.173	5R00DC012803-05 REVISED	103,122	—	
		Auditory input to cerebellar unipolar brush cells	93.173	1R21DC016759-01A1	40,638	—	
		Can Consumers and Audiologists Detect Ear Disease Prior to Hearing Aid Use?	93.173	5R33DC013115-05	405,546	241,167	
		Cellular Mechanisms Underlying Corticocollicular Modulation in the Auditory System	260	93.173	0033928 (124432-1)//5R56DC031272-02	(3,488)	—
		Central auditory deficits associated with HIV infection and treatment	61	93.173	R924//5R01 DC009972-09	13,258	—
		Characterizing Variability in Hearing Aid Outcomes Among Older Adults		93.173	FDP2R01DC012289-06	454,494	126,467
		Connectome-guided high-definition tDCS for the treatment of tinnitus		93.173	7R21DC015880-03	74,775	—
		Core Center for Integrated Research on Human Communication Disorders		93.173	5P30DC012035-05 REVISED	372,331	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		CR CNS US-French Research Proposal Plastic Neural Circuits in Olfactory Learning		93.173	5R01DC015137-03	\$ 52,728	—	
		Defining molecular mechanisms in the SLC26 family of proteins		93.173	5R03DC014553-03 REVISED	90,490	—	
		Dynamic interaction among proteins in hair cells		93.173	2R56DC011813-06	326,217	—	
		Effects of hearing experience on audiovisual speech perception in children		93.173	1R56DC015492-01A1	186,659	55,343	
		Elucidating Mechanisms Underlying Odor-Mediated Memory Consolidation During Sleep and Wakefulness		93.173	5F31DC015374-03	41,139	—	
		fMRI Correlates of Speech and Voice Impairment in Parkinson's Disease		93.173	5F31DC015717-02	38,128	—	
		Genetic Determinants of Taste Preferences and Risk of Metabolic Disease		93.173	7R03DC013373-03	53,000	—	
		Glomerular domains and olfactory circuitry		93.173	5R03DC014565-03	118,959	—	
		Hearing in noise in early childhood: neurophysiological, cognitive, and linguistic mechanisms		93.173	5F31DC016205-02	36,742	—	
		Language in Primary Progressive Aphasia		93.173	5R01DC008552-12	846,365	4,201	
		Mapping and function of odorant receptors in the human olfactory system		93.173	3R01DC014426-04S1	134,725	—	
		Mechanisms Regulating Synaptic Function in the Developing Auditory System		93.173	5R03DC013841-03	118,622	—	
		Nanotechnological Regeneration of Spiral Ganglion Neurons with Human Stem Cells		93.173	5K08DC013829-05	225,247	—	
		Neurobiology of Language Recovery in Aphasia: Natural History and Treatment-Induced Recovery		93.173	5P50DC012283-05 REVISED	1,811,128	959,476	
		Neurolinguistic Investigations of Aphasia and Recovery		93.173	5R01DC001948-21 REVISED	451,119	—	
		Outer and Inner Hair Cell Development		93.173	1R01DC015903-01A1	670,043	—	
		Parent-toddler EEG neural synchrony as a window into social communication deficits in autism		93.173	1R21DC017210-01	19,355	—	
		Perceptual Coding and Modulation of Odor Objects in the Human Brain		93.173	5R01DC010014-09 REVISED	(1,622)	—	
		Perceptual Coding and Modulation of Odor Objects in the Human Brain	259	93.173	573503/7R01DC010014-10	41,928	—	
		Physiologically Derived DPOAE Measurement Methods		93.173	1F32DC016773-01	65,053	—	
		Principles of olfactory reward processing in the human brain		93.173	5R01DC015426-03	333,822	13,544	
		PROMIS-Deaf Profile: Inclusion of Deaf Patients in Disability and Outcomes Research	82	93.173	000025075/7R01DC014463-02	48,077	—	
		Proteome Biology of Noise Induced Hearing Loss		93.173	5R00DC013805-04 REVISED	105,322	—	
		Regulation of singular expression in Trace Amine-Associated Receptors		93.173	5F32DC015962-02 REVISED	53,026	—	
		Research and Mentoring on Swallowing Impairment and Respiratory-Swallow Coordination		93.173	5K24DC012801-06 REVISED	160,126	—	
		Sensory Interaction in Voice and Voice Disorders	276	93.173	AAC6717/7R01DC014519-04	9,796	—	
		Seventh International Brain Computer Interface Meeting		93.173	1R13DC016830-01	7,917	—	
		Spatiotemporal Mechanisms of Olfactory Processing in the Human Brain	259	93.173	573345/7-R01-DC-013243-06	29,982	—	
		Studies in Cochlear Hair Cell Transduction		93.173	5R01DC00089-45	(1,902)	—	
		Talker-Listener Alignment During Speech Production and Perception		93.173	5R01DC005794-09	(1)	—	
		The function of respiratory-linked local field potential oscillations in human olfactory and limbic brain regions		93.173	1R01DC016364-01A1	109,435	—	
		The role of parent phenotype in parent-mediated language interventions for autism		93.173	3R01DC014709-03S1	803,872	—	
		The Roles of Espins in Hair Cell Stereocilia		93.173	5R01DC004314-17 REVISED	451,089	—	
		The Whim to Worry about Language Study (W2W-L): Joint consideration of developmental patterning and neural substrates for enhancing early identification of language impairment		93.173	1R01DC016273-01A1	112,583	—	
		Trace Amine-Associated Receptors and Olfactory Behavior in Mammals		93.173	5R01DC013576-05	621,262	—	
		Type-2 inflammation mediates olfactory loss in Chronic Rhinosinusitis: mechanisms and therapeutic opportunities		93.173	1R01DC016645-01A1	25,762	—	
		Understanding the Benefits of Infrared Nerve Stimulators for Neural Interfaces		93.173	4R01DC011855-05	(38,215)	—	
		User-centered control of hearing aid signal processing	27	93.173	Agreement 8/14/2017 // 7R44DC013093-03	87,788	—	
							10,796,588	1,620,094
		A Mindfulness-Based e-Health Intervention to Improve Medication Adherence among Breast Cancer Survivors		93.213	1R34AT009447-01A1	16,165	—	
		A robust heterologous expression system of intact fungal secondary metabolite gene clusters for natural product discovery in Aspergillus nidulans	113	93.213	Agreement 6/27/18 // 2 R44 AT009158-02	11,633	—	
		Brain mechanisms for clinical placebo in chronic pain		93.213	4R01AT007987-05	(94,760)	—	
		Creating and Optimizing Mindfulness Measures to Enhance and Normalize Clinical Evaluation (COMMENCE)		93.213	5R01AT009539-02S1	530,583	204,659	
		Mass Spectrometric Studies of Thiotemplate Biosynthesis		93.213	5R01AT009143-15 REVISED	325,027	—	
		Mechanisms of Probiotic Analgesia		93.213	5R01AT007701-05	585,736	45,418	
		Positive Affect Regulation as Adjuvant to Integrative Therapies for Chronic Pain: Development of the LARKSPUR Clinic-Based Intervention		93.213	1R34AT009685-01	77,355	—	
							1,451,739	250,077
		Multidisciplinary Treatment for Obstructive Sleep Apnea and Insomnia		93.233	7R01HL114529-05	359,642	12,380	
		SIESTA (Sleep for Inpatients: Educating Staff to Act)	228	93.233	5R25HL116372/5R25HL116372-03	16,041	—	
		Strengthening circadian signals to enhance cardiometabolic function		93.233	5R01HL140580-02	229,308	—	
							604,991	12,380
		Z/2 – Suicide Prevention in Chinese Older Adults		93.242	5R34MH100393-03	30,834	11,581	
		Z/2 Targeted Sequencing and Functional Evaluation of Mutations in Schizophrenia	149	93.242	EH13-344-S2/5R01MH100915-04 REVISED	153,100	—	
		Z/3 Community psychosis risk screening: An instrument development study		93.242	5R01MH112545-02	140,020	—	
		A Family-Genetic Study of Autism and Fragile X Syndrome		93.242	4R01MH091131-05	389,956	78,939	
		Acute Estradiol Regulation of Excitatory Synapses in the Hippocampus		93.242	4R01MH095248-05 REVISED	7,077	—	
		Age-Related Histone Modification Effect on Antipsychotic Action		93.242	5R01MH109468-03 REVISED	376,020	—	
		Artificial Intelligence in a Mobile Intervention for Depression (AIM)		93.242	5R01MH100482-05	400,320	—	
		Behavioral Relevance of Active Dendritic Mechanisms of Integration and Plasticity		93.242	5R01MH101297-05 REVISED	348,789	—	
		Characterizing antidepressant-like effects of a novel peptide HCN channel inhibitor		93.242	1R21MH113262-01 REVISED	37,865	—	
Chloride homeostasis and GABA maturation in fragile X syndrome		93.242	5R21MH104808-02	(132,967)	—			

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Computerized Adaptive Testing of Suicidality in LGBT Young Adults	228	93.242	FP052801-C//5R01MH100155-05S1	\$ 49,995	—
		Connecting Patients and Therapists Using a Tech-Based Treatment Support System		93.242	5K08MH102336-04	145,960	—
		Contributions of Parallel Nigrostriatal Dopamine Circuits to Reward Learning and Habit Formation		93.242	4R00MH109569-04	253,709	—
		Cortico-Hippocampal Mechanisms of Context Memory		93.242	5R01MH108837-03	512,552	—
		Development of Sub 100 nm Resolution X-ray Nanotomography of Centimeter-Sized Tissues		93.242	1R01MH115265-01	90,300	—
		Dimensions of Early Temper Loss and Low Concern: Clinical Utility and Mechanisms		93.242	5U01MH028330-10	655,759	79,001
		Discovery of novel small molecule antidepressants		93.242	5R01MH106511-02 REVISED	78,454	—
		Discovery of novel small molecule antidepressants	278	93.242	VUMC64676//7R01MH106511-03	124,596	—
		Early Life Adversity, Biological Embedding, and Risk for Developmental Precursors of Mental Disorders		93.242	WU-19-11//1R01MH113883-01A1	53,346	—
		Evaluation of antidepressant-like effects of hippocampal HCN channel modulation		93.242	5R21MH104471-02	(8,506)	—
		Exercise and markers of medial temporal health in youth at-risk for psychosis		93.242	5R33MH103231-05	205,144	60,292
		Expanding College Student Mental Health with Stress Management Mobile Technologies		93.242	5K08MH112878-02	101,862	—
		Exploring Mepaladines as New Serotonin Receptor Antagonists		93.242	1R21MH115301-01A1	2,276	—
		From Inflexibility to Impairment: How Neurodevelopment of Executive Function and Parent-Child Neural Synchrony Influence the Transition from Normal to Abnormal		93.242	0046528 (126659-1)//5R01MH107540-03	24,426	—
		Generating an Earlier Science of When to Worry: A Neurodevelopmental, Transactional Approach to Characterizing Irritability Patterns Beginning in Infancy		93.242	5R01MH107652-03 REVISED	725,433	31,742
		Health Consequences of Food & Nutrition Insecurity for HIV+ Women & Their Infants		93.242	7K01MH098902-06	87,229	—
		Health consequences of water insecurity for HIV-infected mothers & their infants		93.242	5R21MH108444-03 REVISED	187,470	28,540
		High-Risk Psychosis Youth and Caregivers: Emotion in Interaction		93.242	5R21MH115231-02	133,117	—
		IGF1 and Depression		93.242	4R01MH094835-05	269,773	—
		Internet Psychotherapy for Treating Bipolar Disorder in Primary Care	260	93.242	0046483(126383-1)//1R34MH107541-03	2,421	—
		Interrogating and sculpting synapses and circuits for rapidly acting antidepressant effects		93.242	1R56MH113923-01	334,119	—
		LATIN-MH: Latin America Treatment and Innovation Network in Mental Health	81	93.242	2016.86612.002/SU19MH098780-05	35,786	—
		LifeSense: Transforming Behavioral Assessment of Depression Using Personal Sensing Technology		93.242	5R01MH111610-02	186,330	46,200
		LiveWell: A Mobile Intervention for Bipolar Disorder		93.242	5R01MH110626-03	724,089	158,778
		Mechanisms of Stress-Enhanced Aversive Conditioning		93.242	5R01MH078064-12 REVISED	503,823	—
		Molecular, anatomic, and functional characterization of midbrain dopamine neuron subtypes		93.242	5R01MH110556-02 REVISED	904,794	—
		Multidisciplinary Training Program in Digital Mental Health		93.242	1T32MH115882-01 REVISED	22,379	—
		Neural Habituation in Ultra High-Risk Youth		93.242	5R21MH110374-02 REVISED	200,409	22,841
		Neurohypophyseal regulation of midbrain dopamine systems.		93.242	1R01MH117111-01	1,509	—
		New Tools to Study Neurosteroid Estrogens		93.242	5R01MH113189-03	729,510	—
		Noninvasive Manipulation of Hippocampal-Cortical Brain Networks and Memory		93.242	5R01MH106512-04	599,907	57,267
		Noninvasive modulation of prefrontal contributions to the organization of episodic memories		93.242	5R21MH108863-02 REVISED	168,720	—
		Novel Methods for Evaluation and Implementation of Behavioral Intervention Technologies for Depression		93.242	1(GG008480)//1R01MH1094696-02	67,846	—
		NRSA F30 for Daniel W Fisher in support of: Role of HCN Channels in Major Depressive Disorder Etiology and Treatment	50	93.242	5F30MH109249-04	20,772	—
		Optimized dosing of repetitive transcranial magnetic stimulation for enhancement of hippocampal-cortical networks		93.242	1R01MH111790-03	464,738	—
		Perception and central coherence in autism: A family genetic eye-tracking study		93.242	5R03MH107834-02	55,234	—
		Plasticity of Auditory Cortical Circuits in Schizophrenia	260	93.242	0038377 (1245412-1)//5R01MH07533-15	111,665	—
		Positive affect skills for depression: Optimizing internet and mobile delivery		93.242	5R34MH101265-03	93,573	1,976
		Postsynaptic roles of ankyrin		93.242	5R01MH107182-04 REVISED	461,211	—
		Preclinical and Patient Studies of Affective Disorders in Serbia		93.242	5R21MH098793-02	(1,721)	—
		Primary Care Internet-Based Depression Prevention for Adolescents	237	93.242	2011-06905-05-04-6564//5R01MH90035-	20,216	—
		Recording Neural Activities onto DNA	169	93.242	CC 81347 3024//R01MH103910	(429)	—
		Regularity in Parenting: a Biopsychosocial Model for Transmission of Depression		93.242	5F31MH105092-02 REVISED	38	—
		Risk for Bipolar Disorder: Reward-Related Brain Function & Social Rhythms	201	93.242	360955-NW Amd 5 // 4R01MH077908-9	22,460	—
		SchizConnect: Large-Scale Schizophrenia Neuroimaging Data Mediation & Federation		93.242	4U01MH097435-04 REVISED	210,608	178,860
		Simulated Clinician Assessment for Cognitive Behavioral Therapy Skills	186	93.242	5065-NU//R01MH112625	23,444	—
		Simultaneous eye tracking and hippocampal IEEG to identify oscillatory signals of memory		93.242	1R21MH115366-01	125,615	—
		Small GTPase signaling in spines		93.242	5R01MH071316-14 REVISED	407,888	33,127
		Stepped Telemental Health Care Intervention for Depression		93.242	4R01MH095753-05	306,624	—
		Symptom Dimensions of Threat-And Reward-Related Neurocircuitry	222	93.242	0875 G SAS07 Amd No. 4 // 5R01MH100177-05	327,372	—
Synaptic and dendritic dysfunction in psychiatric disorders		93.242	5R01MH097216-07	909,128	41,052		
Systematic Functional Interpretation of Regulatory Variants in Schizophrenia	149	93.242	EH15-150-S1//5R01MH106575-03	121,869	—		
Tech-Based Depression and Anxiety Treatment for Youth in High Risk Environments		93.242	4K08MH094441-05	541	—		
The NewTics Study: A novel approach to pathophysiology and cause of tic disorders	285	93.242	WU-17-444//1R01MH104030-01A1	129,880	—		
The role of glutamate receptors in compulsive and perseverative behavior		93.242	4R01MH099114-05	(156,128)	—		
The role of glutamate receptors in compulsive and perseverative behavior		93.242	2R01MH099114-06A1	332,613	—		
Training Program in Neurobiology of Information Storage		93.242	4T32MH067564-15	177,294	—		
Training Program in Neurobiology of Information Storage		93.242	2T32MH067564-18 REVISED	21,938	—		
Transformation of the stress response into motor behavior by the external globus pallidus	267	93.242	0012774A//5R01MH112768-02 REVISED	202,773	—		
Virtual Reality Job Interview Training to Enhance Supported Employment for Adults with SMI		93.242	1R01MH110524-01	(2,987)	—		
Virtual Reality Job Interview Training to Enhance Supported Employment for Adults with SMI	250	93.242	3004704106//R01MH110524	174,190	—		
					14,485,970	830,196	
College Alcohol Assessment and Intervention Training Simulation	186	93.273	Amend. 005//5R44AA022265-03	(700)	—		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Efficacy of Couples-Based HIV Prevention in Vulnerable Young Men	93.273	5R01AA024065-03		\$ 522,490	36,862
		Newborn Phosphatidylethanol Screening to Detect Fetal Alcohol Exposure in Uruguay	93.273	5U01AA023176-03		542,559	242,989
		Role of Alcohol Disparities in HIV Risk among Sexual Minority Youth	93.273	5R01AA024409-03 REVISED		359,205	—
						1,423,554	279,851
		A Multilevel Network Model of Drug Use and HIV Racial Disparities in Men	93.279	5K08DA037825-04		161,904	—
		A New Approach to Integrating Primary and Secondary HIV Prevention in Young Male Couples	93.279	1DP2DA042417-01		411,992	—
		A Systems-level Approach to Studying HIV/AIDS Susceptibility and Substance	93.279	4R01DA033773-05		221,137	6,503
		Center for chronic pain and drug abuse	93.279	1P50DA044121-01A1		52,128	—
		Center for Prevention Implementation Methodology for Drug Use and HIV (Ce-PIM)	93.279	3P30DA027828-08S1		1,316,120	226,000
		Cognitive-Affective Substrates of Smoking: Targets for Maternal Behavior Change	93.279	3K23DA037913-04		196,966	—
		Different Components of Nicotine-Induced Upregulation of Nicotinic Receptors	228	93.279	FP052975//1R01DA035430-03	45,261	—
		Diversity Supplement: Implementation of Evidence-Based Preventative Parenting Programs	17	93.279	15-737//R01DA0033991	618	—
		Drug Abuse, Incarceration, Health Disparities in HIV/AIDS	93.279	5R01DA028763-05		(3,199)	—
		Efficacy of Internet-based HIV prevention	93.279	4R01DA035145-05		359,876	77,117
		Enhancing Sustainment of State and Other Systems-wide Advances in the Implementation of Treatments for Opioid Use Disorders	193	93.279	61867865-128280//7R01DA037222-03 REVISED	4,427	—
		Evaluating the Effectiveness of an eHealth EBI for Latino Youth in Primary Care	249	93.279	667381//5R01DA040756-03	21,563	—
		fMRI-based biomarkers for multiple components of pain	231	93.279	1554072//4R01DA035484-05	8,474	—
		Identifying nicotine, withdrawal mechanisms hidden within habenular complexity	93.279	5R01DA040626-02		325,952	—
		KiiDS: Knowing about Intervention Implementation in Detention Sites	72	93.279	T811257//5U01DA036233-05	12,127	—
		Measuring Coalition Capacity to Foster Program Sustainment	262	93.279	63501087//5R34DA037516-03 REVISED	54,185	—
		Methamphetamine and Parkinson's disease: converging mechanisms of pathogenesis	93.279	5K99DA039253-02		66,231	—
		Multilevel Influences on HIV and Substance use in a YMSM Cohort	93.279	3U01DA036939-05S1		1,873,559	3,826
		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	5R01DA042711-02 REVISED		643,237	53,110
		Neural mechanisms of context-dependent stimulus generalization in humans	93.279	1R03DA040668-01A1		172	—
		New Inactivators of GABA Aminotransferase for Addiction and Epilepsy	93.279	5R01DA033604-08		404,213	32,765
		Nicotinic acetylcholine receptor function in the mesolimbic dopamine system	93.279	5R01DA035942-05		341,101	—
		Nicotinic receptor gene editing vectors	93.279	5R21DA045507-02		182,097	—
		NRSA F32 for Brian Feinstein in Support of: Dyadic influences on HIV risk behavior and substance abuse among young men who have sex with men and their partners	93.279	5F32DA042708-02 REVISED		22,129	—
		Photoactivatable ligands for nicotinic optopharmacology	93.279	1R21DA044460-01A1		8,348	—
		RCT of an integrative intervention for non-treatment-seeking meth users	225	93.279	82444ec//5R01DA033854-05	4,858	—
		Substance Use, Stress, and HIV Influences on Systemic Inflammation Among Young Men Who Have Sex with Men	93.279	1F32DA046313-01 REVISED		26,153	—
		System-Level Implementation to Reduce Excess Opioid Prescribing in Surgery	93.279	5R34DA044752-02		178,010	2,650
		ULUC Neuroproteomics and Neurometabolomics Center on Cell to Cell Signaling	238	93.279	074103-15022//5P30DA018310-05	202,139	—
		Understanding and reducing HIV risk behavior and substance use among self-identified bisexual adolescent men	93.279	1K08DA045575-01		79,526	—
		Vulnerability to Drug Use & HIV: Advancing Prevention for Rural African Americans	234	93.279	RR376-428/4945376 Amd 6 // 2P30DA027827-06	112,382	—
						7,333,686	401,971
		A Formalism for Customizing and Training Intelligent Assistive Devices	93.286	5R01EB019335-03		40,757	3,875
		A Multi-Scale Modeling Construct of Knee Mechanics following ACL Reconstruction	169	93.286	CL 4346 CC 81345 //5U01EB015410-02	80,896	—
		Antifouling Peptide Mimetic Polymers	93.286	4R01EB005772-08		253,434	20,338
		Antigen Loaded Particles for Tolerance Induction	250	93.286	Sub#3003565891//5R01EB013198-09 REVISED	462,362	—
		Center of Excellence for Mobile Sensor Data-to-Knowledge (MD2K)	248	93.286	5-40604//5U54EB02040-04	203,717	—
		Computational methodologies for safety assessment of MRI in patients with deep brain stimulation implants	93.286	7R03EB024705-02		7,859	—
		Design-driven engineering of robust mammalian sense-and-respond functions	93.286	1R01EB026510-01		5,230	—
		Enhancing Biomedical Engineering Senior Design at Northwestern University	93.286	5R25EB013060-05		(7)	—
		High-throughput molecular-specific cell nanotechnology for cancer screening	93.286	4R01EB016983-04		216,269	12,671
		Interdisciplinary Graduate Education in Movement and Rehabilitation Sciences	93.286	5T32EB009406-08		200,506	—
		In-vivo characterization of pancreatic field carcinogenesis using spatially resolved reflectance measurements via a fiber optic probe	93.286	5F31EB022414-02		33,612	—
		Microconnectomics of neocortex: a multiscale computer model	195	93.286	1120566-75050/5U01EB017695-04	119,952	—
		Neurodegenerative and Neurodevelopmental Subcortical Shape Diffeomorphometry Software	122	93.286	2003341343//R01EB020062	78,800	—
		Patient-adjustable MRI technology for high-resolution imaging of deep brain stimulation	93.286	4R00EB021920-02		14,251	—
		Preclinical Investigation of a Bioengineered Vascular Graft	93.286	4R01EB017129-04		136,260	80,001
		Protein-Releasing Microporous Scaffolds for Cell Replacement Therapy	250	93.286	3003655776//5R01EB009910-09	112,981	—
		Rapid Pediatric Cardiovascular MRI without Contrast Agent or Anesthesia	93.286	5R21EB024315-02		113,779	5,459
		SCH: Interface Monitoring System to Promote Residual Limb Health	93.286	5R01EB019337-03		416,672	331,801
		Shape Control and Transport Properties of DNA-Copolymer Micelles	122	93.286	2002586569 Amd 2//5R01EB018358-02-REVISED	77,386	—
		Steroid-Based Contrast Agents for Magnetic Resonance Imaging of Endocrine Diseases	93.286	5R01EB014806-04		(333)	—
		Tissue-dynamics Imaging for Therapeutic Efficacy in Ovarian Cancer	165	93.286	4102-77270//5R01EB016582-03	128,792	—
		Transarterial Immunomodulatory Embolization: A novel approach to cancer therapy	93.286	3R21EB022291-02S1		239,955	45,609
		Unassisted Blood Pressure Monitoring Using Arterial Tonometry and Photoplethysmography	93.286	5U01EB020589-02		135,190	—
		Understanding Real-Life Falls in Amputees using Mobile Phone Technology	169	93.286	CC# 81920 CL3719//5R01EB019406-03	(1)	—
						3,078,339	499,754
		2017 LGBTQ Health Conference: Bridging Research and Practice	93.307	1R13MD011360-01		702	—
		A Pragmatic Trial of An Adaptive eHealth HIV Prevention Program for Diverse Adolescent MSM	93.307	5U01MD011281-03 REVISED		2,118,871	359,694

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		African American Cardiovascular pharmacogenetic CONSorTium (ACCOuNT): discovery and translation		93.307	5U54MD010723-03 REVISED	\$ 1,281,788	609,428
		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	1R01MD012236-01A1	19,766	—
		ELLAS: Environment, Leiomyomas, Latinas and Adiposity Study	250	93.307	3004650350//7R01MD011570-02	33,467	—
		Ethics in HIV Prevention Research Involving LGBT Youth		93.307	5R01MD009561-04 REVISED	349,931	50,549
		Genomic Analysis of Enhanced Response to Heart Failure Therapy in African Americans	260	93.307	0041119 (124864-3)//1R01MD009118-02	7,961	—
		Genomic Analysis of Enhanced Response to Heart Failure Therapy in African Americans (GRAHF)	260	93.307	0041119(124864-6)//R01MD009118-02	7,587	—
		Health disparity in pharmacogenomics: African American SNPs and drug metabolism		93.307	5R01MD009217-06	440,802	—
		Integrating Text Messages into the Mothers and Babies Course to Address Depression in Low-Income Women and their Partners		93.307	5R21MD011320-02	200,705	48,424
		Latino vs. Non-Latino Disparities in Advance Care Planning & End-of-Life Care	121	93.307	183120-02//5R01MD007652-05	46,018	1,667
		Reducing Assessment Barriers for Patients with Low Literacy		93.307	3R01MD010440-02S2	494,164	76,049
		The Price of Debt: The Unequal Burden of Financial Debt and Its Impact on Health	245	93.307	S20140000026205// 5R01MD007723-03	17,867	—
		Understanding Patterns of Healthy Aging Among Men who Have Sex with Men	260	93.307	0047269(126836-2)//5R01MD010680-04	71,719	—
		Understanding socioeconomic disparities in perinatal risk: The role of epigenetic and transcriptional regulation in the placenta		93.307	5R01MD011749-02	151,482	—
		Using epigenomic subtyping to understand the racial differences in lymphoma	228	93.307	FP064397//R21MD011439	43,049	—
						5,285,879	1,145,811
		A New High-Throughput Technology to Reveal the Dynamic Functional States of RNAs		93.310	7DP2GM110838-02	447,680	203,067
		A Phase 2a Multi-Center Study of 18F-FDG PET, Safety, and Tolerability of AZD0530 in Mild Alzheimer's Disease	262	93.310	CTAFYN067//4UH3TR000967-02	58,437	—
		A systems-level study of signaling networks and differentiation	228	93.310	FP060024 Amd 1 // 1R01EY025957-01A1	115,765	—
		Center for 3D Structure and Physics of the Genome	247	93.310	PO No. WAO0620170 // OSP2017053 Amd 1 // 5U54DK107	141,087	—
		Genetic mapping of visual circuits	93.310	93.310	3DP2EY027983-01 S1	430,478	—
		Identifying Mechanisms Governing T Cell Diversity	93.310	93.310	1DP2A136599-01	343,846	—
		National Research Mentoring Network for a Diverse Biomedical Workforce	271	93.310	10045839-07//5U54GM119023-04	31,160	—
		National Research Mentoring Network for a Diverse Biomedical Workforce	274	93.310	706K661//5U54GM119023-03	36,819	—
		Recording Neural Activities onto DNA	259	93.310	573341//7-R01-MH-103910-06	422,895	—
		Regulatory Circuits Controlling Regenerative Growth	93.310	93.310	1DP2ED024365-01	533,635	—
		Sub-micrometer x-ray tomography for neuroanatomy	93.310	93.310	5U01MH109100-03	731,631	193,023
						3,293,233	396,090
		A National Center for Digital Health Informatics Innovation.	157	93.350	1011902_NWU//U24TR002306	516,815	—
		Blood Tests to Screen for Colon and Pancreatic Cancer	228	93.350	FP065282-E//1UL1TR002389-01 REVISED	2,763	—
		Improving Patient Reported Outcome Data for Research through Seamless Integration of the PROMIS Toolkit into EHR Workflows	93.350	93.350	5U01TR001806-03 REVISED	1,094,401	858,006
		Northwestern University Clinical and Translational Science Institute (NUCATS)	93.350	93.350	5KL2TR001424-04	604,536	—
		Northwestern University Clinical and Translational Science Institute (NUCATS)	93.350	93.350	5TL1TR001423-04 REVISED	525,252	355,623
		Northwestern University Clinical and Translational Science Institute (NUCATS)	93.350	93.350	5UL1TR001422-04	6,071,983	330,875
		University of Pittsburgh Clinical and Translational Science Institute (CTSI) ACT Administrative Supplement	260	93.350	0055353(130910-17)//5UL1TR001857-03	29,677	—
						8,845,427	1,544,504
		EHR-Based Health Literacy Strategy to Promote Medication Therapy Management	93.361	93.361	5R01NR012745-05	(1,099)	—
		EHR-based Universal Medication Schedule to Improve Adherence to Complex Regimens	93.361	93.361	5R01NR015444-02	592,862	312,187
		Hippo/PCl Hippocampal Predictors of Cognitive Impairment in Breast Cancer Patients	93.361	93.361	4R01NR014182-05	139,827	1,500
	Interventions for Symptom Management in Older Patients with HAND	225	93.361	8729ac//5R01NR015223-05	32,845	—	
	Life Enhancing Activities for Family Caregivers of People with Dementia	225	93.361	9487ac//5R01NR015223-05	23,133	—	
	More than a Movement Disorder: Applying Palliative Care to Parkinson's Disease	231	93.361	FY17.782.003//1R01NR016037-01A1	4,913	—	
	Morning Light Treatment at Home to Improve Glucose Metabolism in People at Increased Risk for Type 2 Diabetes		93.361	7R21NR016377-02	170,447	53,717	
	Quality of Life in Caregivers of Traumatic Brain Injury: The TBI-CareQOL	250	93.361	3002557849//4R01NR01365805	52,083	—	
	Use of simulation to improve ventricular assist device self-management		93.361	5R21NR016745-02 REVISED	205,959	—	
	User-Centered, Web-based Portal to Support Regimen Adherence in Transplant	72	93.361	T539496//R21NR014544	20,692	—	
	Video Information Provider for HIV-Associated Non-AIDS (VIP-HANA) Symptoms	50	93.361	1(GG012114-01)//5R01NR015737-03	21,373	—	
					1,263,055	367,404	
	Annual International Science of Team Science Conference		93.389	5R13TR000046-05	1,247	1,247	
	A population-based approach to single CTC analysis in metastatic breast cancer	204	93.393	080-27000-S27101//1R01CA207468-01A1	45,382	—	
	Adapting patient navigation to promote cancer screening in Chicago's Chinatown		93.393	5R01CA163830-06	398,015	208,042	
	Aldo-keto reductase family 1 member B10 AKR1B10 in pancreatic carcinogenesis		93.393	4R01CA164041-05	110,712	1,288	
	Apigenin restores TSP-1 expression in UVB-irradiated keratinocytes	268	93.393	3001001876//7R01CA172669-005	27,932	—	
	Behavioral Activation and Varenicline for Smoking Cessation in Depressed Smokers		93.393	5R01CA184211-05	688,453	316,672	
	Communicate and LEarn About youR Variant of Uncertain Significance (CLEAR VUS)		93.393	5R03CA194643-02 REVISED	34,726	9,449	
	Comparative Effectiveness of Genomics Assay for Active Surveillance Failure Prediction in African American Men: the Impact of genetic ancestry and socioeconomic status		93.393	5R21CA202552-02 REVISED	66,323	20,350	
	Core Essential Genes in Primary Effusion Lymphoma Cell Lines		93.393	5R21CA210904-02	126,381	—	
	Culturally Adapted Cognitive Behavioral Stress and Self-Management (C-CBSM) Intervention for PC		93.393	3R01CA206456-03S1	503,695	212,442	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Disease Beliefs and Cognition: Effect on Diabetes Management in Older Breast Cancer Survivors	100	93.393	0255-3801-4609//1R01CA214491-01A1	\$ 160,325	—
		Evaluating the protective effect of a tissue selective estrogen complex (TSEC) in women with newly diagnosed ductal carcinoma in situ		93.393	5R01CA218436-02	441,541	208,780
		Exploring a new therapeutic approach through targeting epigenetic enzymes in ALL		93.393	5R00CA188293-04	189,954	—
		Extended Duration Varenicline for Smoking Among Cancer Patients: A Clinical Trial	259	93.393	568912//4R01CA165001-05	23,889	—
		Feasibility of OncoMed to Improve Self-Management and Adherence to Oral Anticancer Medications		93.393	1R21CA226671-01A1	5,193	—
		Functional Dissection of the K27M Histone Mutation In Gliomagenesis		93.393	5R01CA197313-03	339,774	—
		Herpesvirus Gene Expression in Transformed Cells		93.393	5R01CA021776-38 REVISED	179,756	14,439
		Histone Modification and Transcription Elongation in Human Cancer		93.393	5R50CA211428-03	178,115	—
		HPV and the DNA Damage Response		93.393	5R01CA142861-07	355,997	—
		In Vivo Model of Epstein-Barr Virus Latency		93.393	5R01CA073507-20	424,870	—
		Inhibition of pancreatic carcinogenesis via targeting c-Raf and sEH		93.393	5R01CA172431-05 REVISED	159,414	30,562
		Kaposi's Sarcoma-associated Herpesvirus Mimics of Cellular microRNAs		93.393	5R01CA180813-05 REVISED	347,833	—
		Methylomic biomarkers for magnesium deficiency and colon neoplasia prevention	278	93.393	VUMC 57993//5R01CA202936-04	136,319	—
		Minimally Invasive Colorectal Cancer Risk Stratification with Nanocytology: Targeting Underscreened Populations		93.393	R33CA225323	51,785	—
		Mutations of Chromatin and its Modifying Machinery in Malignancies	29	93.393	5R35CA197569-04	898,694	—
		Progesterone Signaling and Blockade in Human Breast Tumorigenesis and Prevention		93.393	5R01CA192124-04	486,721	—
		PROMIS AYA/Optimizing Health Related Quality of Life Measurement in Adolescent and Young Adult Oncology: A PROMISING Solution	284	93.393	WFUHS114162//R01CA218398	35,986	—
		Prostate Cancer Susceptibility: The ICPG Study	135	93.393	64853091 NOR-181797-02//5U01CA089600-13	4,606	—
		Reducing the Effects of Active Surveillance Stress, Uncertainty and Rumination thru Engagement in Mindfulness Education (REASSURE ME)		93.393	5R01CA193331-03 REVISED	518,218	370,488
		Regulation of Human Papillomavirus Gene Expression		93.393	5R01CA059655-25 REVISED	264,867	—
		Role of NF90 in Prostate Cancer		93.393	1R01CA227919-01A1	2,263	—
		Role of the Ndc80 Loop Domain and Cdt1 in Kinetochore Microtubule Attachments		93.393	5R00CA178188-05	89,206	—
		ROS and HIFa as molecular targets for chemoprevention in Sirt3 -/- breast cancers		93.393	4R01CA168292-05	260,807	—
		SIRT3 is a Mitochondrial Tumor Suppressor in ER/PR Positive Mammary Tumors		93.393	5R01CA152799-05	(11,495)	—
		Structural Cell Biology of DNA Repair Machines	221	93.393	7336107 Mod. 1 // 2P01CA092584-16	54,567	—
		The National Person-Centered Assessment Resource (PCAR)		93.393	3U2CA166878-04S1	475,286	185,198
		Training primary care physicians to perform melanoma opportunistic surveillance		93.393	5R21CA182725-02	13,902	7,078
		Transcriptional Elongation Control in Development and Disease		93.393	3R01CA214035-17S1	752,366	—
		Using Text Messaging to Increase HPV Vaccination among Young Sexual Minority Men		93.393	5R21CA208329-02	99,429	32,679
						8,941,807	1,617,467
		(POD5) imaging systemic tissue injuries induced by anticancer drugs		93.394	5R01CA185214-04 REVISED	301,400	—
		A comparison of interventions to teach patients skin self-examination		93.394	5R01CA154908-07 REVISED	479,223	240,839
		Biophotonics to Couple Pancreatic with Upper GI Screening via Ultrathin Endoscopy		93.394	5R01CA183101-04 REVISED	438,055	240,273
		Catheter-Directed Image-Guided Delivery of Cytostatic and Cytotoxic Combination Therapy to Liver Tumors		93.394	1R01CA218659-01A1	86,262	—
		Detection of 5-hmC as a Novel Screening Biomarker for Pancreatic Cancer		93.394	5R21CA187869-02	122,833	—
		Development of 5hmC and 5mC biomarkers in cell-free circulating DNA for sensitive colon cancer detection and prognosis	228	93.394	FP064995//U01CA217078	97,382	—
		Epigenomic markers of circulating cell-free DNA and treatment outcome in multiple myeloma	228	93.394	FP066297-02-PR-B//1R01CA223662-01A1	6,389	—
		Identification of Long Non-coding RNAs as Novel Biomarkers for Heterogeneous Glioblastomas		93.394	5R21CA209345-02	110,851	—
		Molecular Target Variation Across Environments and at Margins of Glioblastoma		93.394	7R01CA176659-06	77,522	—
		MRI-Guided Dendritic-Cell-Based Vaccine Immunotherapy for Pancreatic Cancer		93.394	5R01CA209886-03	410,383	—
		MRI-Guided Irreversible Electroporation Ablation for Liver Tumors		93.394	5R01CA196967-04	336,243	—
		MRI-Monitored Delivery of Sorafenib-Eluting Microspheres for Liver Tumors		93.394	5R01CA181658-04 REVISED	444,245	—
		Nanoscale/Molecular analysis of Fecal Colonocytes for Colorectal Cancer Screening		93.394	4R01CA165309-05	532,372	277,085
		Optical Nanoscale Analysis of Buccal Cells: Transforming Lung Cancer Screening		93.394	5R01CA155284-04 REVISED	(158)	—
		Optical Nanoscale Analysis of Buccal Cells: Transforming Lung Cancer Screening		93.394	5R01CA155284-04 REVISED	42,946	42,861
		Risk-stratification of Prostate Cancers via Field Carcinogenesis Nanocytology		93.394	5R01CA200064-03	632,294	344,210
		Systemic RNA interference to reactivate p53 tumor suppression		93.394	5R01CA208783-02 REVISED	434,523	—
		Targeted MRI contrast agents for differential diagnosis of prostate cancer	36	93.394	RES11975//5R01CA211762-02	10,741	—
		Transforming the diagnosis and care of patients with CTCL using TCR sequencing	31	93.394	114835//5R01CA203731-03	73,412	—
		Tumor immune and glycan biomarkers for progressive prostate cancer		93.394	1R01CA212409-01A1	353,361	57,253
				4,990,179	1,202,521		
2017 Society for Integrative Oncology (SIO) 14th Annual International Conference		93.395	1R13CA224869-01	5,000	—		
Alliance for Clinical Trials in Oncology (Alliance) Executive Officer	31	93.395	110408//5U10CA180821-05	184,159	—		
Alliance for Clinical Trials in Oncology Operations Center	31	93.395	110408//5U10CA180821-04	148,503	—		
An Epigenetic Strategy for Restoring Carboplatin Sensitivity in Ovarian Cancer		93.395	5R01CA182832-05 REVISED	262,387	145,341		
CDK4/6 Inhibitor Therapy for Glioblastoma Multiforme	85	93.395	410676_GR40751-NU4424006//R01CA10594	53,554	—		
COG NCTN Radiation Oncology Reviewer Work Order	45	93.395	950080215//U10CA180886	(544)	—		
COG NCTN Scientific Leadership Work Order	45	93.395	950080217-XX//U10CA180886	1,133	—		
Dignity Therapy for Elderly Cancer Outpatients: 3 Arm Nurse or Chaplain Led Trial	233	93.395	UFDS00011459//R01CA200867(2)	145,273	—		
Discovery of Selective MAP2K4 Inhibitors to Target Metastasis		93.395	5R01CA188015-03 REVISED	196,053	53,650		
Dys-regulation of the MnSD4-Ac-ROS-HIF2a axis promotes IR / Cisplatin resistance phenotype		93.395	5R01CA214025-02 REVISED	423,685	13,005		
Early Therapeutics and Rare Cancer Vice Chair Role	157	93.395	9009627_NWU//5U10CA180888-04	11,142	—		
ECOG-ACRIN NCI Community Oncology Research Program (NCORP) Research Base Grant	69	93.395	1UG1CA189828-01-NWU1//UG1CA189828-04	165,514	—		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		ECOG-ACRIN NCORP Research Base: Cancer Care Delivery Research (CCDR)	69	93.395	1UG1CA189828-01-NWU2/UG1CA189828-04	\$ 32,051	—
		ECOG-ACRIN Nursing Committee	69	93.395	U10CA180820-01-NWU3	4,545	3,607
		ECOG-ACRIN Operations Center (PI Committee)	69	93.395	U10CA180820-01-NWU2	14,387	—
		EMR Adverse Drug Event Detection for Pharmacovigilance	247	93.395	WA00356827/RFA2015095	30,353	—
		Exploiting synthetic-lethal interactions to target triple-negative breast cancer		93.395	5R00CA175700-05	110,738	—
	Exploring the Potential of Dual Kinase JAK 1/2 Inhibitor Ruxolitinib (INC424) with Reduced Intensity Allogeneic Hematopoietic Cell Transplantation in Patients with Myelofibrosis	100	93.395	AGMT-4/9/15//SP01CA108671-08	12,763	—	
	High Density Lipoprotein Nanoparticles for siRNA Delivery		93.395	4R01CA167041-05	9,325	5,448	
	Institutional Membership-Alliance for Clinical Trials in Oncology	4	93.395	Fully-executed 11/13/13	29,053	—	
	Loss of Mitochondrial Sirt3, Decreased MnSOD Activity, and IR Induced Genomic Instability		93.395	5R01CA152601-09 REVISED	344,977	—	
	MPD Research Consortium	100	93.395	0254-4051-4609//ZP01CA108671-10A1	74,001	—	
	NKG2D superagonist co-stimulation to enhance adaptive immunotherapy of cancer		93.395	7R01CA208246-02	256,472	—	
	NRG Oncology Foundation, Inc. Member Institution Purchased Service Agreement (PSA)	151	93.395	Agmt Signed 9/5/14	26,776	—	
	Phase II trial of mTORC1/mTORC2 inhibitor AZD2014 for sporadic meningioma	131	93.395	229149 AZD2014/1R01CA201130-01A1 REVISED	7,167	—	
	Radiation induced cancer risk reduction as a function of dose protraction: interspecies comparison		93.395	5R01CA221150-02	211,532	—	
	Randomized Trial of Incentives for Research Participation	259	93.395	567849/5R01CA197332-03	23,897	—	
	Reducing Cancer Transcriptional Heterogeneity through Regulation of Chromatin Structure		93.395	1R01CA228272-01	20,733	—	
	Retrospective NCI Phantom-Monte Carlo Dosimetry for Late Effects in Wilms Tumor		93.395	5R01CA219013-02	371,612	285,538	
	S1602 BIQSFP (2): A Randomized Trial to Evaluate the Influence of BCG Strain Differences and T Cell Priming with Intradermal BCG Before Intravesical Therapy for BCG-Naive High-Grade Non-Muscle Invasive Bladder Cancer	157	93.395	9009627-009_Northwestern/3U10CA180	16,382	—	
	Separating autoimmunity and anti-tumor immunity		93.395	7R01CA191317-04	508,986	14,145	
	Small molecule CXCR4 modulators as molecular probes for studying AML		93.395	5R01CA189074-03	446,388	—	
	Statin Intervention to Slow the Time to Hepatocellular Carcinoma Recurrence in Cirrhotics Awaiting Liver Transplantation	37	93.395	1427448/1R01CA218466-01	44,168	—	
	Targeting BET Bromodomain in Pancreatic Cancer		93.395	5R01CA186885-04S1	181,116	9,354	
	Targeting EZH2 in Germinal Center Derived B-Cell Lymphoma	233	93.395	UFDSP00012107/R01CA187109/16122063	11,134	—	
	Targeting Lipid Unsaturation in Ovarian Cancer Stem Cells		93.395	1R01CA224275-01A1	4,551	—	
	Targeting Ovarian Cancer Stem Cells through Selective Inhibition of ALDH1A1	108	93.395	IN4684739NWU/1R21CA198409-02	8,055	—	
	Tele-based Psychosocial Intervention for Symptom Management & HRQOL in Men Living with Advanced Prostate Cancer		93.395	4R01CA157809-05	72,842	—	
	The Role of Cidofovir and Structural Analogs as Adjuvant Therapy for Glioblastoma	196	93.395	571003 B.02/5R01CA184283-03	33,518	—	
	Therapeutic Targeting of Malignant Glioma Stem Cells		93.395	5R35CA197725-05	1,207,457	15,646	
	Using SMART Design to Improve Symptom Management Strategies Among Cancer Patients	141	93.395	RC105782NU//5R01CA193706-03	58,934	—	
					5,769,762	545,734	
	An in vivo Metastasis Sensor	250	93.396	3003585711 // 5R01CA173745-06 03	146,963	—	
	Arsenic Trioxide activated pathways in malignant cells		93.396	4R01CA121192-10	159,303	—	
	B7H1 Mediated Immunosuppression in Glioma		93.396	4R01CA164714-05	262,146	—	
	Bayesian Network Models for Genetics and Metabolomics Studies of Fetal Programming		93.396	1R03CA211318-01	11,977	—	
	Bioinformatic Analysis of Next Generation Sequencing Data from Cancer Cells		93.396	1R50CA221848-01	177,135	—	
	CD73 and Tumor Immunity		93.396	5R01CA149669-06	(28,423)	—	
	Cohesin Mutations in Acute Myelogenous Leukemia	24	93.396	0169-81148/R01CA204231-01	11,476	—	
	Development of novel therapies for megakaryocytic malignancies		93.396	5R50CA211534-03	138,646	—	
	DISE – a natural cancer surveillance mechanism – a new road to cancer therapy		93.396	5R35CA197450-04	858,366	—	
	Dissect regulation of RNA translation in human cancers		93.396	4R00CA207865-03	215,610	—	
	Elucidating the stress response regulatory networks that enable malignancy		93.396	5R00CA175293-04S1	176,909	—	
	Galp13 and pancreatic cancer progression		93.396	1R01CA217907-01A1	68,751	—	
	Genomics and bioinformatics analysis to understand castration-resistant prostate cancer		93.396	5R50CA211271-03	147,814	—	
	Identification and targeting of mechanisms specific to glioma stem cells in glioblastoma		93.396	1 R01 CA214928-01A1	17,719	—	
	Identifying a network of microRNAs and genes that regulate breast tumor metastasi		93.396	3R00CA160638-05S1	224,436	—	
	Influence of AKT pathway on progesterone receptor function in endometrial cancer		93.396	4R01CA155513-05	74,932	—	
	Integrating Epigenomic and Nuclear Receptor Signaling in Castrate Resistant Prostate Cancer		93.396	5R01CA196270-03	462,588	—	
	Interferon-Induced SLFNs and Tumorigenesis		93.396	5R01CA161796-05	(2,073)	—	
	Interplay between ER and TGF-β in carcinogenesis		93.396	7R01CA202948-03	101,751	—	
	Linking Oncogenic Signaling to Tumor Metabolism		93.396	5R00CA194192-04	233,970	—	
	Mechanisms of Leukemogenesis in Down Syndrome		93.396	4R01CA101774-14	(8,181)	—	
	Mechanisms of Leukemogenesis in Down Syndrome		93.396	2R01CA101774-16	316,031	—	
	Mitochondrial metabolism and ROS regulate cancer		93.396	5R35CA197532-03	1,140,703	—	
	Mnk Pathways and IFN-responses in Malignant Cells		93.396	5R01CA155566-05	(606)	—	
	Modulation of Oncogenic Signaling in Glioblastomas		93.396	4R01CA159811-05	119,245	—	
	Multidisciplinary Integrative Genomic Approach to Distinguish Lethal from Indolent Prostate Cancer in Men of European and African Ancestry	122	93.396	2002911519//5U01CA196390-03	18,158	—	
	Prostate Cancer Recurrence: models and mechanisms		93.396	5R01CA167966-05	(5,164)	—	
	Quantitative analyses of tumor cell extravasation	132	93.396	94701//5-U01CA202177-03	65,797	—	
	Regulation of Desmosomal Cadherins in Oral Cancer		93.396	4R01CA122151-10	107,747	—	
	Role of Oncogenic Kinase Fmn-1 in Prostate Cancer		93.396	5R01CA123484-10 REVISED	179,437	—	
	Signal Transduction of Type 1 Interferons in Malignant Cells		93.396	5R01CA077816-19	112,333	—	
	Sirt2 Directs Kras IR Cell Resistance and Tumorigenesis		93.396	5R01CA182506-05	431,868	—	
	Target MIC shedding to revive anti-tumor immunity		93.396	7R01CA204021-03	14,426	—	
	Targeting a Treg deubiquitinase in antitumor immune therapy		93.396	1R01CA232347-01	48,163	—	
	Targeting hyaluronan synthesis and signaling with BET inhibitors in pancreatic cancer		93.396	5R21CA220625-02	116,765	—	
	Targeting interplay between KLF4 and PRMT5 in carcinogenesis		93.396	5R01CA202963-03	159,539	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		The role of deubiquitinating enzyme USP33 in Slt-Robo signaling in lung cancer	93.396	5R01CA175360-05 REVISED		\$ 505,029	187,159	
		The role of GPSM3 in tumor-promoting emergency myelopoiesis	93.396	5R01CA208354-02 REVISED		423,613	—	
		The role of ICSBP in the pathogenesis of chronic myeloid leukemia	93.396	5R01CA174205-05 REVISED		271,381	—	
		The Role of NOV (CCN3) in Prostate Cancer Progression	93.396	5R01CA172384-05 REVISED		82,752	—	
		Triad1 regulates myelopoiesis and functions as a leukemia suppressor	93.396	5R01CA195642-04 REVISED		470,131	—	
		WEE1 inhibition and tumor immunity	93.396	1R01CA222963-01A1		17,070	—	
						8,046,233	187,159	
		Apigenin restores TSP-1 expression in UVB-irradiated keratinocytes	268	93.397	3001001952/7R01CA172669-05		71,400	—
		ECOG/FSTRF PSA for ECOG Clinical Trial Protocols	79	93.397	Agmt 8/13/12 / U01CA021115		28,745	—
		Epigenomic Biomarkers of HIV-Associated Cancers in Nigeria		93.397	5U54CA221205-02		558,550	172,705
		GMaP Region 4: Building Research & Diversity Scholarship through the Cancer Disparities Research Network	111	93.397	Sub# 12305-52/3P30CA006927-50SB		(409)	—
		Improving Quality of Life among Hispanic/Latino Breast, Colorectal & Prostate Cancer Survivors: A Randomized Control Trial of Patient Navigators Using the LIVESTRONG Cancer Navigation Services Program	267	93.397	158815/158532/U54CA153511		10,424	—
		Nucleic Acid-Based Nanoconstructs for the Treatment of Cancer		93.397	5U54CA199091-03		2,474,908	33,726
		Spatio-Temporal Organization of Chromatin and Information Transfer in Cancer		93.397	5U54CA193419-04 REVISED		2,046,688	627,211
		SPORE for Translational Approaches to Brain Cancer		93.397	1P50CA221747-01A1		28,917	—
		SPORE in Prostate Cancer		93.397	5P50CA180995-04		3,241,723	1,566,681
		The Chicago Collaborative to Promote and Advance Cancer Health Equity		93.397	5U54CA203000-04		1,470,082	56,484
		The Robert H. Lurie Comprehensive Cancer Center		93.397	3P30CA060553-22S1		5,916,693	6,502
		The Robert H. Lurie Comprehensive Cancer Center		93.397	3P30CA060553-24S3		402,502	—
							16,250,223	2,463,309
		A Highly Specific, Tissue-Permeable Inhibitor of Gli Transcription Factors	93.398	5F31CA186761-04 REVISED			38,298	—
		Alternative Splicing of Amyloid Precursor-Like Protein 2 during the Epithelial-Mesenchymal Transition and Cancer Metastasis	93.398	5F30CA196118-04 REVISED			45,553	—
		Behavioral and Psychosocial Research Training in Cancer Prevention and Control	93.398	5T32CA193193-03			500,450	—
		Cancer Nanotechnology Training Program	93.398	5T32CA186897-03			243,929	—
		Carcinogenesis Training Program	93.398	4T32CA009560-30			(864)	—
		Carcinogenesis Training Program	93.398	5T32CA009560-32			360,209	—
		Chromatin dysregulation generated by recurrent point mutation in histone methyltransferase, MMSET, drives progression of lymphoid malignancies	93.398	5F30CA203292-04 REVISED			31,866	—
	Clinical bacterial isolate engineered as an immunotherapy for prostate cancer	93.398	5F30CA203472-03 REVISED			46,177	—	
	Defining the Role of Ptn1 and CDK-mediated Smad3 Phosphorylation in Triple Negative Breast Cancer Migration and Metastasis	250	93.398	1F31CA206259-02		(5,985)	—	
	Designing with Dissemination in Mind: Optimization of a mHealth Physical Activity Intervention for Breast Cancer Survivors	93.398	5K07CA196840-04			161,093	—	
	Desmosomal Cadherin Regulation of Pro-inflammatory Cytokine Production in Melanogenesis	93.398	1F32CA210498-01			(39)	—	
	Development of a Novel Statewide Learning Collaborative to Increase Lung Cancer Guideline Adherence and Improve Cancer Care Delivery	93.398	5K07CA216330-02			158,277	—	
	Fellowship for Chelsey Spriggs: The Role of The Fanconi Anemia Pathway in Human Papillomavirus Infection	93.398	5F31CA192801-03			(85)	—	
	Functional Study of Mammalian Set1A/COMPASS Methyltransferase in Stem Cells and Development	93.398	5F31CA228149-02			43,734	—	
	Investigating catalytic and non-catalytic roles for Trir/COMPASS in regulating enhancer function during Drosophila development	93.398	1F31CA213928-01 REVISED			742	—	
	Investigating the epigenetics of enhancer function in Cancer	93.398	5F99CA222988-02			38,110	—	
	Overcoming Temozolomide Resistance using MGMT-targeting Spherical Nucleic Acids	93.398	5F30CA174058-05 REVISED			3,300	—	
	Profiling Glycosyltransferase Activities on the Epithelial-Mesenchymal Transition in Breast Epithelial Cells using peptide arrays and mass spectrometry	93.398	5F30CA196185-03 REVISED			45,705	—	
	Role of desmoglein 1 in regulating redox and growth factor signaling in head and neck cancer	93.398	5F30CA192788-03			41,109	—	
	Targeted discovery of anti-proliferative natural products using genomics and metabolomics	93.398	5F32CA221327-02			57,113	—	
	The Effect Of Cohesin Mutations In Hematologic Malignancies	93.398	5F31CA216976-02			38,124	—	
	The function of Ubiquitin-Specific Peptidase 22 (USP22) on T regulatory cell function. NRSA for Elena Montauti	93.398	1F31CA220801-01A1 REVISED			23,603	—	
	The role of glioblastoma derived activated leukocyte cell adhesion molecule in peripheral monocyte PD-L1 induction and immunosuppression	93.398	5F30CA206413-03			44,949	—	
	The role of the hippocampal-prefrontal network in cancer-related cognitive impairment: a multimodal cross sectional study	93.398	1F31CA210719-02			34,500	—	
	The role of tumor derived exosomes in bone metastasis of prostate cancer	93.398	1F30CA225133-01 REVISED			20,628	—	
	The Role of ZEB1 Mutations in Cutaneous T Cell Lymphoma	93.398	5K08CA191019-05 REVISED			141,101	—	
	Therapeutic and Sustained Cytokine Delivery at the Tumor Site Using Engineered Mononuclear Cells	93.398	5F30CA203325-03 REVISED			42,959	—	
	Tissue Factor/Protease-Activated Receptor 2 in IDH1 wild-type and IDH1 mutant gliomas	93.398	1F32CA216996-01A1 REVISED			26,734	—	
	Training Program in Oncogenesis and Developmental Biology	93.398	5T32CA080621-14			337,567	—	
	Training Program in Signal Transduction and Cancer	93.398	3T32CA070085-20S1			(5,393)	—	
	Training Program in Signal Transduction and Cancer	93.398	5T32CA070085-22			221,848	—	
	Treating cognitive impairments in cancer patients via systematic light exposure	93.398	5K07CA184145-05			160,123	—	
						2,895,825	—	
	30th Annual MR Angiography Meeting	93.837	1R13HL144016-01			10,000	—	
	4D Flow MRI for characterization of brain arteriovenous malformations	93.837	1F30HL140910-01			265	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		4D Flow MRI-based assessment of atrial fibrillation		93.837	5F30HL137279-02	\$ 46,815	—
		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	1R61HL139852-01	46,437	—
		A novel implementation and social network strategy for acute pulmonary illnesses		93.837	5K23HL118139-05	3,598	—
		A Novel, Patient-Centered Prognostic Tool for Adults with Critical Illness		93.837	1F32HL140824-01 REVISED	9,956	—
		A synthetic heparin derivative that targets collagen to repair damaged vasculature after balloon angioplasty	48	93.837	965-SUB // 3U54HL119810-05S1	41,278	—
		A Systems Science Approach to Understanding Racial/Ethnic Disparities in Obesity		93.837	5K01HL133531-03	151,211	—
		AAA Geometric Surrogates – Geometric Surrogates for Clinical Management of Abdominal Aortic Aneurysms	266	93.837	1000001715/1R01HL121293-04	13,929	—
		Acute Coronary Syndrome Quality Improvement in Kerala (ACS QUIK)		93.837	5R00HL107749-05	8,176	5,292
		Adolescent Family Stress and Early Cardiovascular Risk: Psychosocial and Behavioral Pathways		93.837	5F32HL134276-03	55,694	—
		Aortic Plaques and Stroke: Cardiovascular Therapy of Retrograde Embolization Risk Associations Among Apolipoprotein A1 Structural Variants and High-Density Lipoprotein Function		93.837	5R21HL132357-02	158,458	—
		AsthmaNet Clinical Trials	162	93.837	5K23HL138601-03	144,606	—
		AsthmaNet Clinical Trials	162	93.837	NWUHL098115 // 5U10HL098115	(401,833)	—
		Atrial arrhythmias and Ca2+ waves in HF: simulation and experimental studies		93.837	NWUHL098115 // 5U10HL098115	337,061	264,071
		Atrial fibrillation burden, vascular disease of the brain, and cardiac MRI in MESA		93.837	5R01HL119095-05	637,319	179,237
		BEST-CLI: Trial to Compare Best Endovascular versus Best Surgical Therapy in Patients with Critical Limb Ischemia (BEST)	143	93.837	UWSC8533/1R01HL127659-01	123,165	—
		Beyond PECAM: Mechanisms of Transendothelial Migration		93.837	Agr. 8/7/14 // U01HL107407	30,197	—
		Cardiomyocyte Integrin-Matrix Interactions Regulate Cardiac Fibrosis		93.837	2R01HL064774-16 REVISED	356,791	—
		Cardiomyocyte TGF-beta: a novel therapeutic target for preventing cardiac fibrosis in humans		93.837	5F32HL131301-02	47,506	—
		Cardiomyopathy Genomes Project		93.837	1K08HL141659-01	21,370	—
		Cardiovascular Regenerative Medicine		93.837	5R01HL128075-04	349,842	(1,595)
		CEREBRAL AUTOREGULATION MONITORING TO REDUCE BRAIN INJURY FROM CARDIAC SURGERY		93.837	5P01HL108795-05	(3,744)	—
		Channelopathies and Cardiomyopathies Among Sudden Deaths in the Young		93.837	5R01HL092259-10	276,659	35,393
		Characterizing HIV-related Diastolic Dysfunction	66	93.837	5U01HL131914-03 REVISED	851,875	71,988
		Chicagoand Metropolitan AsthmaNet Consortium		93.837	223700/U10HL084904	29,140	—
		Childhood Origins of CHD Disparities: Neural & Immune Pathways		93.837	5U10HL098096-07	120,690	83,710
		Chronic Obstructive Pulmonary Disease in Non-Smokers	50	93.837	5R01HL122328-04 REVISED	710,188	54,341
		Colony Stimulating Factor-1 in Graft Vascular Disease	3	93.837	5(GG011046-01)/1R01HL130506-03	49,832	—
		Community Translation of the South Asian Healthy Lifestyle Intervention (SAHELI)		93.837	310904/5R01HL127700-04	2,979	—
		Comparing and Combining Bortezomib and Mycophenolate in SSC Pulmonary Fibrosis		93.837	1R01HL132978-02	709,453	148,574
		Comprehensive Cardiac Structure-Function Analysis in Heart Transplantation		93.837	5R34HL122558-03	142,996	—
		CXCR4-c-Kit Signaling and BM Progenitor Cell Recruitment in the Ischemic Heart		93.837	5R01HL117888-05 REVISED	628,835	—
		Decrypting Variants of Uncertain Significance in Long-QT Syndrome		93.837	5R01HL113541-04	(32,312)	—
		Decrypting Variants of Uncertain Significance in Long-QT Syndrome		93.837	5R01HL122010-04	1,157,710	635,637
		Decrypting Variants of Uncertain Significance in Long-QT Syndrome		93.837	5R01HL122010-05	35,826	—
		Defining regulatory regions for cardiomyopathy genes		93.837	1F30HL142187-01 REVISED	7,628	—
		Determinants of Midlife & Longitudinal Change in Cognitive Function: CARDIA Study	125	93.837	200103-05/5R01HL122658-03	19,401	—
		Determinants, Trajectories, and Consequences of Abnormal Cardiac Mechanics		93.837	5R01HL107577-07	563,215	96,346
		Development of combination immunotherapies for atherosclerotic inflammation		93.837	1DP2HL132390-01	598,215	—
		E2F1 in BM progenitor cell differentiation and cardiovascular repair		93.837	1R01HL131110-01A1 REVISED	(29,851)	—
		E2F1 in BM progenitor cell differentiation and cardiovascular repair	214	93.837	000514985-001/7R01HL131110-03	102,599	—
		Effortocytosis Directed Inflammation Resolution and Repair in the Hypoxic Heart		93.837	5R01HL122309-05 Revised	351,077	—
		Efficacy of Potassium Nitrate In Heart Failure with Preserved Ejection Fraction	259	93.837	569507/5R01HL121510-03	117,046	—
		Examination of the Functional Role of Sca1+ Vascular Progenitor Cells following Vascular Injury.		93.837	5F32HL129651-02	57,994	—
		Exercise in Genetic Cardiovascular Conditions	289	93.837	Yale 2.23.2017/R01HL125918	8,072	—
		Exploiting Tie2 Activation for the Treatment of Vascular Diseases		93.837	5R01HL124120-04	327,329	—
		Favorable Cardiovascular Health and the Compression of Morbidity in Older Age		93.837	5R01HL118289-03	408,773	19,244
		Femoral Plaque Composition, Oxidative Stress, and Coronary Events		93.837	5R01HL109244-04	(1)	—
		Fox Transcription factors in lymphatic vessel development		93.837	5R01HL126920-04	385,479	5,278
		Function of the Ubiquitin-Specific Peptidase 22 (USP22) in Acute Myeloid Leukemia		93.837	5F31HL136107-02 Revised	30,806	—
		Functional Cardiovascular 4D MRI in Congenital Heart Disease		93.837	4R01HL115828-05	149,253	75,745
	Functional Cardiovascular 4D MRI in Congenital Heart Disease		93.837	2R01HL115828-06A1	146,680	—	
	Genotype-Phenotype Discordance in Long QT Syndrome	36	93.837	RES126034 Amd 2/R01HL124245	93,236	—	
	HCMR – Novel Predictors of Outcome in Hypertrophic Cardiomyopathy	102	93.837	Study# 2222/0003/1U01HL117006-01A1	10,049	—	
	Heart Failure Clinical Research Network Coordinating Center – HIV/CHART	66	93.837	203-7618/5U10HL084904-12	78,249	—	
	Heart Failure Clinical Research Network Coordinating Center – HIV: HFN-HIV Core Lab: The NHLBI Heart Failure Network HIV Study Echocardiography Core Lab	66	93.837	203-8360/5U10HL084904-11 REVISED	17,801	—	
	Hemodynamic Loading of the Left Ventricle and Aorta in Aortic Valve Disease		93.837	5K25HL119608-05	103,183	—	
	High Resolution and Functional MRI Assessment of Intracranial Atherosclerotic Plaque		93.837	5R21HL130969-02	111,629	12,391	
	Identifying risk factors for subclinical myocardial disease in HIV infection	122	93.837	2002507820/5R01HL126552-04	42,202	—	
	Implementation science to improve cardiovascular outcomes among liver transplant recipients		93.837	1K23HL136891-02	178,286	—	
	Improve PAD Performance with METformin. The PERMET Trial		93.837	5R01HL131771-02	779,283	70,483	
	Individual response to vitamin D treatment	273	93.837	UWSC9381/5R01HL096875-06	63,549	—	
	Integrative Epigenetic Analysis and Ex Vivo Generation of Megakaryocytes from Umbilical Cord Blood		93.837	5F31HL134331-02	37,060	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		INVESTED -- : Influenza Vaccine to Effectively Stop Cardio Thoracic Events and Decompensated heart failure (INVESTED)	31	93.837	SUB 5.22.17/SU01HL130163-02	\$ 35,672	—
		Joint Effect of Malpractice Risk and Financial Incentives on Cardiac Testing	84	93.837	14-M49-Mod#4//5R01HL113550-05	188,643	—
		Low Intensity Exercise intervention for peripheral artery disease: The LITE Trial Lymphatic Conference		93.837	5R01HL122846-04 REVISED	715,616	110,545
		Mapping electrogram morphology recurrence for atrial fibrillation ablation	88	93.837	1R13HL136113-01	19,741	—
		Maternal-Offspring Metabolites: Family Intervention Trial (MOMFIT)		93.837	1R41HL127907-01A1 NU//1R41HL127907	12,362	—
		Mechanical circulatory support: Measures of adjustment and quality of life		93.837	3U01HL114344-05S1	274,148	21,405
		Mechanisms of sulfonylurea receptor mediated cardiomyopathy		93.837	5R01HL130502-03 REVISED	611,708	205,143
		Mechanistic insights into HIV-mediated heart failure with preserved ejection fraction		93.837	5R01HL122109-04 REVISED	385,957	192,819
		Mechanistic insights into the deleterious effects of SIRT2 in the heart under stress conditions		93.837	1R01HL140973-01	182,787	—
		Mediators of Atherosclerosis in South Asians in America	225	93.837	1R01HL138982-01A1	183,533	—
		Metabolic Pathways Underlying the Contrasting Sodium-BP and DASH/OmniHeart-BP Relationships		93.837	8696sc//R01HL093009	206,364	—
		Metabolomics-Measured Urinary Metabolites/Diet & BP, 17 Random Samples		93.837	5R01HL135486-02 REVISED	433,288	176,995
		Methods to Improve Personalized Cardiovascular Disease Prevention Across the Life Course		93.837	5R01HL084228-08	(28)	(28)
		MMP Responsive Nanoparticles for Treating Acute Myocardial Infarction		93.837	5R01HL136942-02 REVISED	187,378	—
		Modeling the role of the genome in chemotherapy induced cardiotoxicity using iPSC	224	93.837	97966869 // R01HL139001-01	109,934	—
		Modulating senescence in induced pluripotent stem cell-derived endothelial cells for vascular disease modeling and therapy		93.837	5R00HL121177-04	110,578	—
		Modulation of Macrophage Function through Alternative Splicing in Cardiometabolic Diseases		93.837	5F32HL137292-02	62,542	—
		Molecular mechanisms of Foxc-mediated angiogenesis		93.837	7K08HL135348-02	11,685	—
		MRI of Diffuse Left Ventricular Fibrosis in Atrial Fibrillation		93.837	1R01HL141129-01	36,791	—
		MtDNA variant modifiers of cardiopulmonary responsiveness to physical activity	233	93.837	5R01HL116895-05 REVISED	347,072	—
		Myosin binding protein H-like and its role in cardiomyopathy		93.837	UFDSP00010117//R01HL121023	10,494	—
		Neonatal Long QT Syndrome and Sudden Infant Death		93.837	5F32HL131304-03 REVISED	60,090	—
		Nonenhanced 3T QISS MR Angiography of the Peripheral Arteries	149	93.837	5R01HL083374-08	98,948	—
		Non-Invasive Biosensors To Detect Cardiovascular Changes In Heart Failure	86	93.837	EH15-107_S2//5R01HL130093-02	56,852	—
		Non-invasive detection of heart transplant rejection with MRI		93.837	RG884-G2 Amd 1 // R01HL130619	128,916	—
		Northwestern University Molecular and Translational Cardiovascular Training Program		93.837	5F31HL117618-05 REVISED	25,991	—
		Novel Vehicles for Targeted Cardiovascular Repair		93.837	5T32HL134633-02	158,502	—
		NRSA F32 for Matthew DeBerge in support of: Efferocytosis Regulation by Hypoxia and Reperfusion After Myocardial Infarction		93.837	4R01HL116577-04	417,997	280,436
		nuMOM2b Health Health Study Capitation Funding Memorandum of Understanding (MOU)	174	93.837	5F32HL127958-03	35,690	—
		Oxidative stress contributes to atrial fibrillation by causing remodeling of the autonomic nervous system		93.837	0214047//U10HL119991	37,787	—
		PAI-1 and Vascular Senescence		93.837	1R01HL140061-01	297,469	—
		PAI-1 and Vascular Senescence		93.837	5R01HL051387-21	340,720	20,841
		Pathophysiological Significance of Atrial Fibrillation Electrogram Patterns		93.837	2R01HL051387-22	19,213	—
		Patient Level Prediction of Clinical Outcomes and Cost-Effectiveness in SPRINT (Optimize-SPRINT)	50	93.837	5R01HL125881-04	356,664	90,935
		Precision Medicine for Dilated Cardiomyopathy in European and African Ancestry	155	93.837	4(GG011659-01)//1R01HL139837-01	31,899	—
		PRE-DETERMINE: Biologic Markers and MRI SCD Cohort Study	31	93.837	60064759//5R01HL128857-03 REVISED	23,954	—
		Pregnancy as a Window for Future Cardiovascular Health		93.837	116706//2R01HL091069-06	104,953	—
		Pregnancy as a Window for Future Cardiovascular Health		93.837	3U10HL119992-03S1	18,630	—
		Pregnancy as a Window for Future Cardiovascular Health		93.837	3U10HL119992-03S1	(25,587)	(28,220)
		Pregnancy as a Window to Future Cardiovascular Health: Adverse Pregnancy Outcomes	174	93.837	4U10HL119992-04	123,067	98,826
		Pregnancy as a Window to Future Cardiovascular Health: Adverse Pregnancy Outcomes -- Heart Health Study	174	93.837	888-15-16-12//U10HL119991-01	116,432	—
		Pre-Procedural Evaluation of High-Risk Patients using Next-Generation Radial QISS	149	93.837	7-312-0214047-52577L//U10HL119991	13,985	—
		PROgenitor Cell Release Plus Exercise to Improve Functional Performance in PAD		93.837	EH17-147-S1//1R01HL137920-01A1	13,301	—
		Progression of Coronary Atherosclerosis in MACS	122	93.837	5R01HL107510-05	(925)	—
		Projection Imaging of Peripheral Vascular Calcifications	149	93.837	2002350097//5R01HL25053-02	16,753	—
		Prox1 in Mammalian Lymphangiogenesis		93.837	EH14-410-S2//5R21HL126015-04 Revised	29,505	—
		Pseudomonas Genomic Signatures Associated With Persistence in Cystic Fibrosis		93.837	5R01HL073402-15	(82,036)	—
		Quantitative MRI for the assessment of subclinical CAD in T2DM		93.837	5R01HL073402-17	527,346	—
		Rapid Real-Time Cardiovascular MRI for Detecting Coronary Artery Disease		93.837	5R21HL129930-02	48,421	—
		Redox Regulation of Vascular cGMP Signaling in Neonatal Lungs		93.837	5K01HL121162-04	165,724	—
Regulating fibrosis and growth through latent TGFbeta binding proteins		93.837	5R01HL138578-02	248,874	13,742		
Regulation of cardiac metabolism and heart failure by tristetraprolin		93.837	5R01HL109478-08	336,343	95,691		
REPRIEVE A5332 and A5333s	131	93.837	1R01HL140938-01A1	33,436	—		
RESEARCH TRAINING IN CVD EPIDEMIOLOGY AND PREVENTION		93.837	5F31HL132552-03	44,267	—		
Respiratory and Metabolic Adaptation to Hypoxia		93.837	Mod. 4/PS#225707//U01HL123336-05	53,189	—		
Risk Factors for Ischemic Stroke	31	93.837	5T32HL069771-15 REVISED	263,441	—		
Role of SNRK in cardiac metabolism and development of heart failure		93.837	5R01HL035440-30	384,008	70,686		
Role of Valve-Mediated Hemodynamics on Bicuspid Aorticopathy		93.837	113896//5R01HL08851-07	22,676	—		
Sarcoglycan in Myopathy and Muscle Membrane Stability		93.837	5R01HL127646-03 REVISED	414,300	5,770		
Social and Cultural Influences on Cardiovascular Risk in South Asians		93.837	5R01HL133504-02 REVISED	407,265	102,713		
Sorafenib In Hepatopulmonary Syndrome	259	93.837	5R01HL061322-19	354,378	—		
Statistical methods for estimating relative intensity physical activity and its association with cardiometabolic disease		93.837	5R01HL120725-04	408,895	258,597		
Statistical methods to correct for measurement error in self-reported dietary data from lifestyle intervention trials		93.837	SUB#567266//5UM1HL116886-03 REVISED	(20,184)	—		
					110,644	21,069	
					345,047	31,726	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		TAM-Kinases in Transplant		93.837	1R01HL139812-01	\$ 242,707	—	
		Targeting Depression and Nicotine Dependence to Promote Cardiovascular Health		93.837	5F31HL129494-02 REVISED	38	—	
		TELMisartan plus EXercise to improve functioning in PAD: The TELEX Trial		93.837	5R01HL126117-04 REVISED	729,791	136,758	
		The Cleveland Clinic Innovation Accelerator	48	93.837	857-548 Amd 1 // U54HL119810-05	8,412	—	
		The Role of CD99L2 in Leukocyte Transendothelial Migration in vitro and in vivo		93.837	5F31HL131355-03	39,499	—	
		The Role of Gut Microbiota in Neointimal Hyperplasia After Vascular Injury		93.837	5K08HL130601-03	170,041	—	
		The role of p21-activated Kinase (Pak1) in Atrial Fibrillation	178	93.837	1409180//5R01HL128330-03	85,154	—	
		The Role of Plasminogen Activator Inhibitor-1 in the Development and Progression of Obesity		93.837	1F32HL129895-02	7,672	—	
		The Roles of Endothelial PECAM and the LBRC in Leukocyte Transmigration		93.837	5R01HL046849-27	462,617	—	
		The WHI Strong and Healthy SitenT Atrial fibrillation Recording study (WHISH STAR)	193	93.837	61526610-125216//1R01HL136390-01	10,832	—	
		Tissue sodium, inflammation, and blood pressure in MESA	278	93.837	VUMC 59440//5R01HL133860-02	375,289	—	
		Training Grant in Circadian and Sleep Research		93.233	5T32HL007909-20 REVISED	446,112	93,723	
		Transition from Risk Factors to Heart Failure: Prevalence, Pathogenesis, and Phenomics	284	93.837	WFUHS114489//R01HL127028	492,764	—	
		Vascular Surgery Scientist Training Program		93.837	5T32HL094293-08	305,897	—	
		Vimentin-mediated regulation of the inflammasome in acute lung injury		93.837	5R01HL128194-03 REVISED	422,308	—	
							26,085,228	3,756,307
		2018 Meeting of the American Association of Sarcoidosis and Other Granulomatous Disorders (AASOG)		93.838	1R13HL142300-01		5,000	—
		5-Hydroxytryptophan Regulation of Endothelial Cell Signals for Lung Inflammation		93.838	4R01HL111624-04		(2,591)	—
		A Systems Biology Approach to Mapping Aging in the lung		93.838	5F32HL136111-02		65,247	—
		Addressing Psychological Risk Factors Underlying Smoking Persistence in COPD Patients		93.838	5K23HL138165-02		107,873	—
		Approaches to Genetic Heterogeneity of Obstructive Sleep Apnea	259	93.838	570229//1R01HL134015-02		69,352	—
		Azithromycin and the airway microbiome in asthma	228	93.838	FP064388-02//1R34HL136991-01A1		3,138	—
		Chicago Metropolitan Asthma Consortium for severe/exacerbation-prone asthma	228	93.838	FP066077-A//1UG1HL139125-01		85,097	—
		Chitinase1 as a biomarker and therapeutic target in scleroderma lung disease	32	93.838	00000755//5R01HL115813-04		44,267	—
		CNS Pathways Integrating Respiratory and Metabolic Control		93.838	5R01HL122921-04		468,359	—
		Differential role of tissue-resident and monocyte-derived alveolar macrophages in the development of pulmonary fibrosis		93.838	1R56HL135124-01		117,263	—
		Glucocorticosteroid Action In Inflammatory Disease		93.838	5R37HL068546-35		422,584	—
		Glycobiology of Inflammatory Lung Diseases	122	93.838	2002969467//5P01HL107151-07		248,280	—
		High carbon dioxide impairs lung repair		93.838	5K08HL125940-04		144,573	—
		Hypercapnia and Suppression of Anti-viral Host Defense		93.838	1R56HL131745-01		19,649	—
		Hypercapnia and Suppression of Anti-viral Host Defense		93.838	5R01HL131745-02		407,744	—
		Integrated analysis of autonomic biomarkers in prematurity-related ventilatory control: determination of neurorespiratory maturation and predictors of co-morbidity risk	14	93.838	901513-NU//5U01HL133704-02		12,798	—
		Losartan Effects on Emphysema Progression Trial (LEEP)	12	93.838	5U01HL128954-03		9,894	8,200
		LUBAC Mediated Epithelial Signaling During Influenza A Infection		93.838	5F31HL132454-03		37,717	—
		Lung Function Decline and Disease Risk from Young Adulthood to Middle Age		93.838	5R01HL122477-05		618,696	388,539
	Macrophage Modulation of Lung Fibrosis		93.838	5R01HL134375-02 REVISED		644,512	—	
	Mechanisms of Hydrocortisone Regulation of the Perinatal Pulmonary Vasculature		93.838	5K08HL124295-02		147,449	136,080	
	Metabolic Regulation of Pulmonary Vascular Remodeling		93.838	5R01HL122062-04		312,213	115,447	
	miR-17-92 Haploinsufficiency Influences Alveolar and Vascular Endothelial Development	14	93.838	901527-NU//1K08HL140152-01		12,926	—	
	Multi-Level Understanding of Social Contributors to SES Disparities in Asthma		93.838	4R01HL108723-05		(40,172)	—	
	Multi-Level Understanding of Social Contributors to SES Disparities in Asthma		93.838	4R01HL108723-05		31,623	1,335	
	Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) – CleanUp	260	93.838	9012549(130129-26)//5U01HL128954-03		9,024	—	
	Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) – Insight	260	93.838	9012549(130129-26)//5U01HL128954-03		3,608	—	
	Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) – Retline	260	93.838	9012549(130129-21)//5U01HL128954-03		3,681	—	
	Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) (Insight)	55	93.838	001-Amend1//5U01HL128954-03		2,853	—	
	Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) (RETHINC)	55	93.838	002//5U01HL128954-03		2,895	—	
	Ohio Consortium Clinical Center for the NHLBI Prevention and Early Treatment of Acute Lung Injury (PETAL) Clinical Trials Network	48	93.838	989-SUB//5U01HL123009-05		36,167	—	
	Pathophysiology of Acute Lung Injury		93.838	5P01HL071643-14		2,377,858	—	
	PETAL Network: VIOLET-Vitamin D to Improve Outcomes by Leveraging Early Treatment	48	93.838	869-SUB//5U01HL123009		8,185	—	
	Pulmonary Complications in a Birth Cohort after a Randomized Trial of Exposure to Antenatal Corticosteroids: the ALPS Follow-Up Study	84	93.838	1-AF-28//2R01HL098354-04		18,368	—	
	Pulmonary Complications in a Birth Cohort after a Randomized Trial of Exposure to Antenatal Corticosteroids: the ALPS Follow-Up Study	84	93.838	Agmt 6/71//R01HL098354		9,191	—	
	Pulmonary Microvascular Blood Flow and Cor Pulmonale Parvus in Emphysema/COPD	50	93.838	7(GG007619-04)//5R01HL093081-08		5,288	—	
	Pulmonary microvascular perfusion in the Multi-Ethnic Study of Atherosclerosis	50	93.838	5(GG010919-03)//5R01HL077612-11		124,574	—	
	PVDOMICS: Pulmonary Vascular Disease Phenomics Program (U01HL125177)	48	93.838	851-SUB//5U01HL125177-04		10,574	—	
	Regulation of Inflammation and Acute Lung Injury by the Transcription Factor Miz1		93.838	5R01HL114763-04		38,650	—	
	Regulatory T cell Uhrf1 and DNA methylation in repair of acute lung injury		93.838	5K08HL128867-04		176,452	—	
	Role and Regulation of Sodium, Potassium ATPase in Lung		93.838	5R37HL048129-23		266,087	—	
	Role of the Na K ATPase Beta 1 subunit in alveolar epithelial integrity		93.838	4R01HL113350-04		55,815	23,691	
	Self-management behaviors among COPD patients with multi-morbidity	100	93.838	0255-8783-4609//5R01HL126508-03		140,387	—	
	Self-management behaviors among COPD patients with multi-morbidity	100	93.838	0255-8784-4609//5R01HL126508-04		30,699	—	
	The deleterious effects of hypercapnia on the lungs		93.838	5R01HL085534-12 REVISED		471,790	—	
	The Role of Placental Maternal Vascular Underperfusion in Neonatal Pulmonary Hypertension		93.838	1R01HL139798-01		96,966	—	
	The role of SIRT3 inducers in preventing alveolar epithelial cell death and lung fibrosis		93.838	5F32HL134222-02		42,494	—	
	Training Program In Lung Sciences		93.838	5T32HL076139-14		492,253	—	
	Wnt/beta-catenin signaling and innate immunity in pulmonary fibrosis		93.838	1R56HL127245-01A1		184,807	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Wnt-beta-catenin cross interactions in alveolar macrophages and epithelial cells in persistence of SSC-ILD		93.838	1R01HL134800-01A1	\$ 494,291	—
						9,096,448	673,292
		1/2 CATHETER-DIRECTED THERAPY FOR CHRONIC DVT(C-TRACT TRIAL)	285	93.839	WU-18-261/UG3HL138325	2,170	—
		Aberrant megakaryopoiesis in the myeloproliferative neoplasms.		93.839	5R01HL112792-06	624,665	47,883
		Defining the Role of IQGAP1 in Leukocyte Transmigration in vitro and in vivo		93.839	5F30HL134202-03	49,645	—
		EHR Anticoagulants Pharmacovigilance	247	93.839	WA00406335-RF52015140/5R01HL125089-02	67,571	—
		Generating Human Cord-Blood-Derived Functional Megakaryocytes and Platelets	237	93.839	7800 Amd 2 // R01HL130760-03 / R01HL130760	110,988	—
		Membrane-Cytoskeletal Remodeling in Platelet Biogenesis		93.839	5K08HL114871-03	105,236	—
		Multiscale Modeling of Myelodysplastic Syndromes	282	93.839	FP00000825_SAA03/7R01HL128173-02	208,973	—
		Vascular-Targeting Genomic and Genetic Strategies for Acute Chest Syndrome	107	93.839	IN4687826NW/2R01HL111656-06	4,297	—
						1,173,545	47,883
		"RISK" The nervous joint: New concepts in the development of osteoarthritis.	178	93.846	16100402-Sub01/1R61AR073576-01	45,181	—
		3-D printed hyperelastic bone composites for bone regeneration and spine fusion		93.846	1R01AR069580-03	355,991	32,376
		A Multi-Center Prospective Study of Quality of Life in Adult Scoliosis	285	93.846	WU-10-154 Amendment 04 //1R01AR055176-02	3,120	—
		A Regulatory Checkpoint in the Pathogenesis of Inflammatory Arthritis		93.846	5R01AR064349-05 REVISED	251,360	—
		AAD-PEPR: Asthma and Atopic Dermatitis Validation of PROMIS Pediatric Instruments		93.846	1U19AR069526-01 REVISED	668,205	236,383
		Adipokine Modulation of Fibrosis: Novel Scleroderma Pathway		93.846	5R03AR066343-03 REVISED	47,521	—
		Algorithms to Identify Systemic Lupus from Electronic Health Record Data		93.846	1R21AR072263-02	174,094	—
		Association of genetic and antibody signatures with SLE clinical course	214	93.846	000504653-SC002/5R01AR064820-03	58,189	—
		Biomarkers and Pathogenesis of Systemic Sclerosis (NIAMS: CORT)	30	93.846	4500001925/5P50AR060780-05	(17,793)	—
		Breaking down barriers: defining the role of EphA2 in building epidermal tight junctions in atopic dermatitis		93.846	1K01AR072773-01A1	5,566	—
		Cadherin clusters and actin filaments		93.846	5R01AR070166-02	357,128	—
		Caspase 8: A Novel Suppressor of Dendritic Cell-Mediated Autoimmunity		93.846	5K01AR064313-05	54,681	—
		Causes and Roles of Hypercellularity in Preclinical Rheumatoid Arthritis	31	93.846	11T944/5R01AR07171-02	3,267	—
		Central Pain Mechanisms, Pain Intensity and Drug Response in Rheumatoid Arthritis		93.846	7R01AR064850-06	275,688	86,102
		Contribution of Adipocytes and Adipose Secreted Factors to Fibrosis in Systemic Sclerosis		93.846	1K08AR070285-02	40,910	—
		Core Center for Clinical Research at Northwestern University		93.846	Require5P30AR072579-02	644,566	—
		Desmoplakin Assembly and Function in Epidermis (R37 MERIT Extension Application R37AR043380)		93.846	5R37AR043380-23	509,267	—
		Development of a Novel RA/Atherosclerosis Mouse Model		93.846	5R01AR064546-05	285,344	—
		EphA/Ephrin – A Signaling in Epidermal Differentiation and Disease		93.846	4R01AR062110-05	236,781	—
		EphA/Ephrin-A Signaling in Epidermal Differentiation and Disease		93.846	5R01AR062110-04	(5)	—
		Evolving Adaptive and Effector Mechanisms from Pre-RA Through Established Disease	232	93.846	FY17.099.001/5UH2AR067681-03	427,904	95,104
		Failed Regeneration in the Muscular Dystrophies: Inflammation, Fibrosis and Fat – Admin Core	233	93.846	UFDSP0011905/U54AR052646	6,653	—
		Function of Desmoglein 1/Pemphigus Foliaceus Antigen		93.846	4R01AR041836-24	1,302	—
		Function of Desmoglein 1/Pemphigus Foliaceus Antigen		93.846	5R01AR041836-26	505,845	—
		Gene expression signatures for treatment response in systemic sclerosis	38	93.846	Agr. 10/06/2015/5R44AR061920-03	12,213	—
		Glycosphingolipids Mediate Diabetic Wound Healing Impairment		93.846	5R01AR068375-03	439,367	—
		Human Rheumatoid Arthritis in Mice		93.846	5R03AR061593-03	(6,781)	—
		Impaired osteoblast and osteocyte maturation in the pathogenesis of renal osteodystrophy	222	93.846	1652GWA093/1R21AR073977-01	2,553	—
		Inflammasome adaptor and effectors in Cryopyrinopathies and crystal arthropathies		93.846	5K01AR066739-04 REVISED	105,239	—
		Inflammatory arthritis: mechanistic insights into initiation and progression		93.846	5R01AR070025-02	454,563	—
		Inter-junctional signaling in epithelial junctional complex		93.846	2R56AR044016-20	(605)	—
		Inter-junctional signaling in epithelial junctional complex		93.846	5R01AR044016-22	474,215	—
		Knee OA: Predictors and Outcomes of Physical Inactivity-Activity Transitions		93.846	4R01AR054155-09	275,688	22,335
		Long-term Significance of Pre-radiographic Lesions in Persons at Risk for Knee OA		93.846	5R01AR065473-05	2,086,993	552,226
		Lupus Intervention Fatigue Trial (LIFT)		93.846	1R01AR071091-01A1	9,968	—
		Mapping Modifiers of Cardiomyopathy in Muscular Dystrophy	233	93.846	UFDSP00011909/U54AR052646	288,019	—
		Mechanisms Underlying Heterotopic Ossification		93.846	5R01AR066539-04	373,194	—
		Molecular biomarkers of improvement for patients with systemic sclerosis in an open label trial of mycophenolate mofetil	61	93.846	R284/1R21AR068035-02	57,564	—
		Molecular Pathways of Pain Generation in Osteoarthritis	178	93.846	10012005-Sub01-Amend01/5R01AR060364-07	47,321	—
		NIAMS Multidisciplinary Clinical Research Center in Rheumatology		93.846	5P60AR064464-05	915,145	24,905
		Noninvasive tools for assessing muscle structure and function		93.846	5R01AR071162-03	697,865	246,978
		Northwestern University Skin Disease Research Core Center		93.846	5P30AR057216-10	573,302	—
		Novel Role for A20 in Fibrosis Susceptibility		93.846	1R21AR074292-01	19,529	—
		OAI Ancillary: Prediction of Incident and progressive OA from imaging biomarkers	216	93.846	238323/R01AR066601	19,156	—
		Osteoarthritis Progression and Sensory Pathway Alterations	178	93.846	12052504-NU/5R01AR064251-05	68,823	—
		Post Graduate Program in Cutaneous Biology		93.846	4T32AR060710-05	34,279	—
		Postdoctoral Rheumatology Training		93.846	4T32AR007611-15	3,149	—
		Postdoctoral Rheumatology Training		93.846	5T32AR007611-17	185,153	—
		Quantifying Underuse and Overuse of Knee Replacement		93.846	5R21AR069867-03 REVISED	177,447	78,986
		Regulation of the Profibrotic Mechanisms of MACRO+ Myeloid Cells in Scleroderma		93.846	1R21AR073371-01	37,862	—
		Regulators of Epidermal Gene Expression		93.846	5R00AR065480-04	202,425	—
		SBIR Phase II – Radical Therapeutics	182	93.846	Agmt 03/27/18/2R44AR065886-02A1	4,034	—
		Sedentary Behavior Characteristics, Sedentary Profiles, and Subsequent Functional Loss		93.846	5R21AR068500-02	11,404	7,381
		Selective Inhibition of CYP26A1 in the Skin for the Treatment of Ichthyosis	63	93.846	NIAMS//1R41AR069416-01A1	75,113	—
		Simultaneous Targeting of IRE1a in B Cells and Macrophages for Lupus Therapy		93.846	5R01AR066634-05	371,082	63,715
		Study of Physical Activity Rewards and Telephonic Active Coaching or SPARTAC	31	93.846	115219/SU34AR069187-02	34,287	—
		Supramolecular nanofibers for recombinant growth factor-free spine fusion		93.846	1R01AR072721-01A1	60,364	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Synthetic Oleananes: Innovative Treatment of Fibrosis		93.846	5R03AR065800-03	\$ (12,055)	—
		The pathogenic mechanism of anti-phosphatidylethanolamine antibodies		93.846	1R21AR071705-01A1	13,348	—
		The Vasculitis of Kawasaki Disease		93.846	5R21AR068041-02	(381)	—
		The Vasculitis of Kawasaki Disease		93.846	5R21AR068041-02	26,239	26,096
		Topical Delivery of siRNA Nanoconjugates: Suppressing Epidermal Hyperplasia		93.846	5R01AR060810-04	20	—
		Translation of novel and repurposed drugs to address the acute and late effects of mustard exposure	36	93.846	RESS12302//U01AR071168-01A1 REVISE	13,755	—
		Validation of PROMIS Measures in Children with Brain Tumors		93.846	5R01CA174452-04 REVISED	43,475	1,400
		Vasculitis Clinical Research Consortium (VCRC)	259	93.846	572644//5U54AR057319-15	2,369	—
						13,142,855	1,473,987
		10/22 Diabetes Prevention Program Outcomes Study (DPPOS) Phase 3- Research Project		93.847	5U01DK048380-25 REVISED	360,780	—
		A Culturally Targeted Transplant Program to Increase Live Donation in Hispanics		93.847	5R01DK104876-03 REVISED	751,281	411,638
		A Multi-Center Group to Study Acute Liver Failure	270	93.847	GMO-161131//5U01DK058369-17	76,649	—
		A Novel Approach to Phosphorus Lowering in Patients with Chronic Kidney Disease	279	93.847	08649005-319676//5U01DK97093-05	21,710	—
		A Phase 2a Study to Evaluate the Safety and Tolerability of OCR-002 (ormithine 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	270	93.847	GMO-170910//5U01DK058369-18	1,159	—
		Acute Liver Failure Study Group 13C-Methacelin Breath Test for the Prediction of Outcome in Acute Liver Failure	270	93.847	GMO160216//5U01DK058369-18	1,159	—
		Altered Microbiome of Chronic Pelvic Pain		93.847	5R01DK103769-03	431,059	155,174
		An Assessment of Liver Disease in HIV-infected and HIV/HBV Co-infected Tanzanians		93.847	5K23DK095707-05 REVISED	73,925	20,941
		Antifibrotic Actions of SARA		93.847	1R01DK105055-02	416,973	82,624
		Barrier integrity, microbiome and HIV target cell interactions in the human male genital tract pre and post circumcision		93.847	5R01DK108434-02	271,677	26,722
		Basic Science Training Grant in Urology		93.847	5T32DK062716-13	96,464	—
		Cholestasis and the Unfolded Protein Response		93.847	5R01DK093807-04	(13,321)	—
		Cholestasis and the Unfolded Protein Response		93.847	5R01DK093807-06	399,902	—
		Circadian control of nutrient-sensing and fuel utilization in skeletal muscle		93.847	5K01DK105137-03	62,708	—
		Circadian Control of Nutrient-Sensing Pathways Through Clock-HIF Interactions in Skeletal Muscle		93.847	1R03DK116012-01	38,552	—
		Circadian Genes and Adipose Function: Impact of Chronotype, Obesity and Race	228	93.847	FP056568//5R01DK103014-04	18,930	—
		Clinical Islet Transplantation: Data Coordinating Center	239	93.847	1001443305//5U01DK070431-11	(14,357)	—
		Collaborative Islet Transplant Registry (CITR)	71	93.847	CITR Agmt 4/22/2013	(12,611)	—
		Community Translation of a Lifestyle Intervention to Improve Health in Diabetes		93.847	5R18DK083941-06	(1)	—
		Control of islet beta specific Pdx-1 and MafA transcription	278	93.847	UNIV59587//5R01DK050203-20	144,771	—
	Coordinating Pragmatic Primary care Population management for Obesity (C3PO)		93.847	1R34DK114773-01A1	7,818	—	
	Defining bacterial virulence, cAMP and PKA in necrotizing enterocolitis		93.847	5K08DK106490-04	138,515	113,400	
	Development, cellular plasticity and homeostasis of the exocrine pancreas		93.847	5R01DK106266-05	418,484	—	
	Diabetes Risk Education and Communication Trial (DIRECT) for Primary Care Patients with Prediabetes		93.847	5R34DK113541-02 REVISED	257,382	40,068	
	Disordered Tissue Biomechanics as a Driver of Esophageal Disease		93.847	1P01DK117824-01	107,876	—	
	EDIC Hypoglycemia-Arrhythmia Study	36	93.847	RESS12561//2U01DK094157-07 REVISED	20,258	—	
	EDIC Skeletal Health Study	36	93.847	RESS12878//2U01DK094157-07 REVISED	23,191	—	
	Effect of Barrier Function on HIV Interactions in the Glans after Circumcision		93.847	5R21DK105865-02	151,159	—	
	Effectiveness of Physiologic Testing in PPI Non-Responders		93.847	5R01DK092217-05	318,554	129,850	
	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	36	93.847	3500-07249//1DP3DK114812-01	4,101	—	
	Epidemiology of Diabetes Interventions and Complications (EDIC)	36	93.847	RESS12231//2U01DK094157-07 REVISED	153,521	—	
	Epidemiology of Diabetes Interventions and Complications (EDIC)	36	93.847	RESS11132//4U01DK094157-06S1	(22,305)	—	
	Expanding live donor kidney transplantation through advocacy training and social media	122	93.847	2003447902//R01DK111966	128,063	—	
	F32 for Joseph Stephen Uzarski in Support of: Delineating Determinants of Renal Tubulogenesis in an ECM-based Co-culture Model		93.847	5F32DK103499-03 REVISED	11,105	—	
	FGF23 and Cardiovascular Disease in CKD	66	93.847	2036138//R01DK081374-11	100,466	—	
	Functional Retinal Imaging to Monitor Pharmacotherapies in Diabetic Retinopathy		93.847	1DP3DK108248-01 REVISED	418,943	—	
	GATA1 Mutation in Defective Erythropoiesis		93.847	4R01DK101329-05	329,529	—	
	Genetics and Evolution of Fetal Human Fat Accretion During Development		93.847	5R01DK090820-05	471,344	135,725	
	Genetics and Genomics of Maternal Glycemia During Pregnancy		93.847	5R01DK097534-05	464,602	111,688	
	Genomic Basis for the Circadian Regulation of B-cell Function and Glucose Homeostasis		93.847	1F30DK116481-01	38,883	—	
	Health and Economic Impacts of Coverage Requirements and Health System-Community Coordination for Diabetes Prevention		93.847	5R18DK110741-02	386,804	13,501	
	Health literacy intervention to improve diabetes outcomes among rural primary care	217	93.847	50961//1R01DK107572-02A2	130,508	—	
	Home sleep and circadian phase: mediators of racial disparities in diabetes risk		93.847	7R01DK095207-06	190,633	29,629	
	Hyperglycemia and Adverse Pregnancy Outcome (HAPO) Follow Up Study		93.847	4U01DK094830-05 REVISED	525,914	9,277	
	Impact of Emerging Health Insurance Designs on Diabetes Complications	93	93.847	AH000527//5R01DK100304-04	9,370	—	
	Impact of phosphate and FGF23 reduction on intermediate end points in CKD		93.847	5R01DK102438-05	490,818	287,046	
	Impact of Pulse Rate on Swallowing Impairment Assessment and Radiation Exposure	138	93.847	MUSC16-102-8A028 // 5R01DK098222-05	16,306	—	
	Improving Diabetes Risk Assessment and Screening in Minority-Predominant Community Health Center Patients		93.847	1R21DK112066-01	181,318	30,724	
	Integration of Feeding Time and Glucose Metabolism by the Circadian Gene Network		93.847	5R01DK090625-07	471,765	25,902	
	Interplay of Dietary Lipid and Circadian Dysregulation in Metabolic Syndrome		93.847	5R01DK100814-05	306,116	—	
	Investigation of FFAR2 as a novel regulator of pancreatic beta cell function		93.847	5F31DK102371-02	(10)	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Kidney Therapeutics: Translating Discoveries into Prevention, Treatment and Cures for Kidney Diseases		93.847	1P30DK114857-01A1	\$ 19,932	—
		Large-scale nutrigenetics and genomics in a tractable metazoan model	247	93.847	OSP2018042//1R01DK115890-01	237,594	—
		Lipoteichoic acid mediated immune modulation of chronic pain		93.847	5R01DK108127-03	404,335	—
		Lysosomes in neonatal enterocytes and their pathologies		93.847	5R01DK111032-03	182,472	—
		Mast cells in male pelvic pain and lower urinary tract dysfunction		93.847	5R01DK083609-08	365,646	—
		Maternal Obesity and Gestational Diabetes: Impact on Metabolome		93.847	5R01DK095963-03	—	(1)
		Maternal Obesity and Gestational Diabetes: Impact on Metabolome		93.847	4R01DK095963-04	214,216	179,189
		Mechanism of autophagy activation in the prevention of type 2 diabetes		93.847	1R01DK113170-01A1	332,540	—
		Mechanisms of Salmonella Clearance by Neutrophils in the Intestinal Lumen		93.847	1R03DK116663-01	12,646	—
		Med1 in Liver Metabolism, Regeneration and Cancer		93.847	5R01DK097249-05	255,445	—
		Methylomics of prenatal GDM: Natural history & lifestyle intervention in children	161	93.847	1R01DK100790-50363-S2//5R01DK100790-04	206,667	—
		Microenvironmental Signaling Cues to Model Glomerular Endothelial Cell and Podocyte Interactions		93.847	5F31DK108544-02	33,461	—
		Molecular and Genetic Mechanisms of Fatty Liver Disease		93.847	1R56DK105824-01A1	888	—
		Molecular Mechanisms of Epithelial Contribution to Esophageal Inflammation and Tissue Repair		93.847	1R01DK116988-01	134,651	—
		Multifunctional Printed Scaffolds for Enhancing Hepatocyte Viability and Function		93.847	5K01DK099454-05	123,215	—
		Nephrolithiasis and Kidney Failure: the Rare Kidney Stone Consortium	135	93.847	NWU-182824/P065461505/U54DK083908	35,103	—
		Neutrophil interactions with apical ICAM-1 regulate intestinal epithelial homeostasis		93.847	5K01DK101675-05	147,641	—
		Nonhuman Primate Model of Bladder Regeneration Using Autologous Bone Marrow Cells		93.847	5R01DK109539-02 REVISED	1,045,313	212,325
		Novel Diagnostics and Therapeutic Targets for Calcification in CKD		93.847	5R01DK110087-02	569,777	339,960
		Nuclear Repressors in Genomic Control of Healthful Obesity		93.847	5R01DK108987-03 REVISED	321,480	—
		NUKIDs: Scientist Training Program in Kidney Disease		93.847	5T32DK108738-03 REVISED	97,515	—
		NW University Program in Endo Diabetes and Hormone Action		93.847	5T32DK007169-36	37	—
		NW University Program in Endo Diabetes and Hormone Action		93.847	5T32DK007169-39	305,019	—
		Omega-3 derived epoxy fatty acids and sEH in pancreatitis-induced carcinogenesis		93.847	5R01DK107767-03 REVISED	575,201	16,648
		Optimization and control of hepatocyte activity via biofunctional modification		93.847	5K08DK101757-05	165,383	—
		OPT-IN: Optimizing Intensive Lifestyle Intervention for Weight Loss		93.847	4R01DK097384-05	112,017	3,203
		Pathogenesis of Diabetic Nephropathy		93.847	4R01DK060635-15	134,137	—
		Pathogenesis of Diabetic Nephropathy		93.847	2R01DK060635-16	98,367	—
		Pelvic Pain and Depression		93.847	5U01DK082342-09	934,673	23,081
		PERL: A multicenter clinical trial of allopurinol to prevent GFR loss in T1D	123	93.847	100062/2UC4DK101108-02	224,482	—
		PERL: A multicenter clinical trial of allopurinol to prevent GFR loss in T1D	123	93.847	1987203-6 AMEND 1UC4DK1101108-01 REVISED	18,916	—
		Phenotype of urinary symptoms and relationships with genotype, sleep and obesity		93.847	4U01DK097779-06	432,179	50,666
		Pilot Studies Targeting Mineral Metabolism in CKD		93.847	5U01DK099930-07	431,666	38,425
		Predicting Newborn and Childhood Adiposity: An Integrated Omics Approach		93.847	1R01DK117491-01	10,279	—
		Pregnancy-Related Risk Factors and Glucose Intolerance in Women during Midlife	125	93.847	RNG5200279-05/R01DK106201	28,101	—
		Prevention of Type-2 Diabetes: The Circadian System as a Novel Target for Long-Term Maintenance of Weight Loss	228	93.847	FP035726-02-H/SP30DK020595-40	37,827	—
		Promoting Utilization of Kidneys by Improving Patient Level Decision Making		93.847	5R21DK108104-02	129,645	—
		Promotora Intervention for Metabolic and MentalHealth (PRIME2)		93.847	5R03DK109243-02 REVISED	82,292	28,507
		Regulation of FGF23 by DMP1 in Health and in Chronic Kidney Disease (CKD)		93.847	5R01DK101730-03	556,682	—
		Regulation of FGF23 in Chronic Kidney Disease (CKD) by iron and inflammation		93.847	5R01DK102815-04	442,834	96,740
		Regulation of Ulcerative Colitis by mast cells and histamine		93.847	5K08DK097721-04	187,692	136,080
		Residual Beta Cell Function in Patients with Long-Term Type 1 Diabetes	36	93.847	RES509477//DP3DK104438	605	—
		Role of HNF4a in the regulation of FGF23 in health and disease		93.847	1R01DK114158-01A1	188,685	—
		SenseWhy: Overeating in Obesity Through the Lens of Passive Sensing		93.847	1K25DK113242-01A1	84,346	—
		Sensorimotor Impairments in Men with Chronic Prostatitis/Chronic Pelvic Pain Syndrome: Relationship of resting state brain activity to pelvic floor muscle activation	262	93.847	85596622//R01DK110669-02	38,745	—
		SMART Weight Loss Management		93.847	5R01DK108678-03 REVISED	875,543	5,371
		T cells in Chronic Pelvic Pain		93.847	3R01DK094898-03S1	(70)	—
		T cells in Chronic Pelvic Pain		93.847	4R01DK094898-04	95,475	—
		Testing a medication risk communication and surveillance strategy: The EMC2 Trial		93.847	5R01DK103684-04	533,231	261,038
		The Circadian System as a Neuronal Regulator of Feeding Time and Body Weight Setpoint		93.847	1R01DK113011-01A1	17,383	—
		The effects of capsinoids on brown adipose tissue recruitment and activation in obesity		93.847	5R01DK112281-03	229,093	84,625
		The genetic identity of the primary cilia ion channels of kidney collecting duct cells and their regulation by intraluminal calcium		93.847	5R00DK106655-04 REVISED	283,067	—
		The mechanics of symptom generation in dysphagia		93.847	5R01DK079902-09	273,135	—
		The Role of an RNA Binding Protein, Tristetrapolin, in Hepatic Glucose Metabolism and the Development of Diabetes		93.847	5F30DK109608-02 REVISED	2,015	—
		The role of emergency granulopoiesis in the pathogenesis of Fanconi Anemia		93.847	5R01DK098812-04 REVISED	270,053	—
		The role of microenvironment in esophageal epithelial homeostasis		93.847	5R00DK094977-05	234,746	—
		The Role of PAI-1 and Circadian Disruption in the Pathogenesis of NASH		93.847	4K08DK095992-05	128,891	—
The roles of pleckstrin-2 as a functional node in erythropoiesis		93.847	5R01DK102718-04	362,618	77,543		
Training Grant in Gastrointestinal Physiology and Psychology		93.847	3T32DK101363-05S1 REVISED	261,799	—		
Transition from Acute to Chronic Pelvic Pain in a Murine Model of Chronic Prostatitis		93.847	1K01DK114395-01A1	7,826	—		
Transplant Regimen Adherence for Kidney Recipients by Engaging Information Technologies: The TAKE IT Trial		93.847	5R01DK110172-02 REVISED	379,464	17,629		
Transplant Surgery Scientist Training Program		93.847	3T32DK077662-10S2	(2,061)	—		
Transplant Surgery Scientist Training Program		93.847	5T32DK077662-12	236,273	—		
Trypase – PAR2 axis involved in urinary voiding dysfunction		93.847	5F32DK104544-03 REVISED	14,676	—		
Urinary Knowledge Study (U-KNOW)	129	93.847	206423//5R01DK104842-02	15,994	—		
Urinary Renin Angiotensin System in Diabetes		93.847	5R01DK104785-03 REVISED	209,401	—		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Vitamin D and type 2 diabetes (D2d study)	206	93.847	5008752-SERV//4U01DK098245-04	\$ 153,470	—
		Vitamin D and Type 2 Diabetes (D2d)	205	93.847	5015643-SERV//2U01DK098245-06	26,130	—
						23,946,938	3,194,938
		(CREST-2) Trial: Carotid Revascularization and Medical Management for Asymptomatic Carotid Stenosis Trial	136	93.853	NWU-187276-02//5U01NS080168-03	14,118	—
		A Novel Pharmacological Treatment for Neuropathic Pain	16	93.853	Agmt 3/31//1R44NS100173-01 REVISED	31,467	—
		A Primate Model of an Intra-Cortically Controlled FES Prosthesis for Grasp		93.853	5R01NS053603-10	(242)	—
		A primate model of an intra-cortically controlled FES prosthesis for grasp		93.853	5R01NS053603-12 REVISED	490,874	—
		A randomized, double-blind, placebo-controlled trial of urate-elevating inosine treatment to slow clinical decline in early Parkinson disease ("Inosine Phase 3")	131	93.853	Agmt 4/24//17//5U01NS090259-03	75,628	—
		A role for beta-arrestins in mGluR-dependent plasticity		93.853	5R21NS088916-02	(1,677)	—
		A wearable myoelectric computer interface to reduce muscle co-activation in acute and chronic stroke		93.853	5R01NS099210-03	294,201	36,111
		AMPK, metabolism and ALS		93.853	5R01NS096746-04 REVISED	267,005	—
		An epigenomic approach to identifying noncoding mutations in epilepsy		93.853	5R00NS089858-05	305,454	—
		Assessing Aberrant Motor Learning in Parkinsons Disease	166	93.853	41880-A Amd //1R21NS083578-01A1	(87)	—
		ARtrial Cardopathy and Antithrombotic Drugs in prevention After cryptogenicstroke (ARCADIA) "study"	230	93.853	010785-133385//1U01NS095869-02	41	—
		Autophagy Regulation of Glioblastoma Tumorigenesis and Responses to Therapy		93.853	5R01NS095634-04	439,360	—
		B7-H1 Expressing Macrophages Mediate Immunosuppression in Glioma		93.853	5R00NS078055-05	(11,065)	—
		Biomimetic Somatosensory Feedback through Intracorticalmicrostimulation		93.853	5R01NS095251-03	903,680	465,175
		BRAF Mutation in Malignant Astrocytoma Origin, Evolution, and Response to Therapy		93.853	5R01NS080619-05	205,029	41,285
		Cajal-Retzius cells and neuronal signaling in postnatal cortical networks		93.853	5R01NS064135-09 REVISED	386,832	—
		Cellular and Molecular Role of CXCR4 signaling in Painful Diabetic Neuropathy		93.853	1R01NS104295-01	298,939	—
		Cellular dissection of herpes simplex encephalitis with IPS cells	176	93.853	5R01NS072381-09	187,692	—
		Cellular plasticity and equilibrium in GBM progression		93.853	5R01NS096376-02 REVISED	418,643	20,000
		Cerebral Small Vessels in Motor and Cognitive Decline		93.853	5R01NS085002-05 REVISED	590,190	—
		Chemokine Signaling in Diabetic Neuropathy		93.853	5K08NS079482-05 REVISED	109,415	—
		Circadian Dysfunction, Encephalopathy, and Cognitive Outcomes after Critical Illness		93.853	5K23NS092975-04	179,364	—
		Clinical Coordination Center for STEADY-PD3		93.853	5U01NS080818-04	1,203,779	775,390
		Clinical Research Sites for the Network of Excellence in Neuroscience Clinical Trials (NEXT Sites)		93.853	5U10NS077271-07	231,654	—
		Clinical Research Sites for the Network of Excellence in Neuroscience Clinical Trials (NEXT Sites)		93.853	1U24NS107213-01	12,380	—
		Clinical Trial Readiness for SCA1 and SCA3	98	93.853	AGMT00000 775//1U01N104326-01	2,765	—
		Coding properties of Vibrissal-Responsive Trigeminal Ganglion Neurons		93.853	5R01NS093585-04 REVISED	245,005	—
		Combined Approach to the Genetic Basis of Epilepsy		93.853	5R01NS053792-18 REVISED	387,365	55,630
		Concordance of TDP-43 Inclusions with Cortical Atrophy and Clinical Phenotype		93.853	5R01NS085770-05	330,858	—
		Cytoshesins, ARF GTPases and Neurodegeneration		93.853	7R21NS093439-03	83,244	—
		Deciphering the Roles of Kainate Receptors in Developing CNS Circuits		93.853	1R01NS105502-01A1	30,390	—
		DEFUSE 3: Endovascular ThErapy Following Imaging Evaluation for ISchemic StrokE 3	230	93.853	010085-110021//1U01NS092076-01A1 R	2,726	—
		Dendritic Organization of Synaptic Input to CA1 Hippocampal Place Cells during Spatial Navigation		93.853	5F31NS098666-02 REVISED	38,518	—
		Designing brain machine interfaces to drive plasticity and enhance recovery after brain injury		93.853	5R01NS094748-03	361,513	94,557
		Determinants of Neurodegenerative Decline in Primary Progressive Aphasia		93.853	4R01NS075075-05	8	—
		Determining How Defective Nucleo-Cytoplasmic Trafficking Leads To Neurodegeneration In C9orf72-Related ALS And FTD		93.853	1R01NS104219-01A1 REVISED	156,849	—
		Developing novel treatment strategies for Spinocerebellar ataxia type 1		93.853	5R21NS099962-02 REVISED	232,994	—
		Development of mouse models for ALS5 and SPG11		93.853	5R21NS096572-02 REVISED	138,072	—
		Development of Novel MR Imaging for Ischemic Stroke Evaluation	228	93.853	FP063797-1//R01NS093908	44,521	—
		Differing Neuronal Mechanisms Mediating Locomotion and Spasms After Spinal Cord Injury	215	93.853	S002/2R01NS047567-13A1	146,855	—
		Dopaminergic and Muscarinic Signaling in the Striatum		93.853	5R01NS034696-22	463,120	—
		Dopaminergic Neurotransmission in a Model of DOPA-responsive Dystonia	72	93.853	T733841//5R01NS088528-04	108,122	—
		Effect of Unilateral and Bilateral STN Stimulation on Eye-Hand Coordination		93.853	5R01NS092950-03	270,570	17,171
		Electrical and Mechanical Properties of Motor Units in a Mouse Model of ALS		93.853	5R01NS077863-05	(110)	—
		Electrical and Mechanical Properties of Motor Units in a Mouse Model of ALS		93.853	5R01NS077863-05	41,451	41,382
		Elp1 function in Familial Dysautonomia		93.853	1R56NS086626-01A1	(1,178)	—
		Elucidating Motor Pathways Involved in Hand Impairment Post Stroke		93.853	5F31NS105486-02	36,938	—
		Epigenetic Regulation of Nerve Injury	274	93.853	761K946//R01NS100510-01A1	26,960	—
		Evaluation of glucocerebrosidase pathway biomarkers in Parkinson Disease	100	93.853	0255-1042-4609//U01NS094148	65,421	—
		FTLD Clinical Research Consortium	225	93.853	F8568sc//5U54NS092089	18,514	—
		Functional Development of Motor Networks		93.853	5R01NS067299-09	383,312	—
		Functional Segregation Within the Whisker-Barrel Neocortex	285	93.853	WU-16-153-MOD-1//5R01NS091439-02	200,414	—
		Functions of filamin in brain development and diseases		93.853	5R01NS087575-03	92,085	—
		GABAergic Signaling in the External Globus Pallidus		93.853	5R01NS069777-07	408,232	41,123
		Galectin Modulation of Glutamate Receptors and Neuronal Function		93.853	5R01NS090598-05 REVISED	180,742	—
		General Motor Control Mechanisms and Disease Training Program		93.853	5T32NS041234-15 REVISED	(33,454)	—
		General Motor Control Mechanisms and Disease Training Program		93.853	2T32NS041234-16A1 REVISED	47,515	—
		Genetic Modifiers of Childhood Epilepsy		93.853	5R01NS084959-05	387,217	—
		Genetic tools to study CNS development and function		93.853	5R21NS092034-02	(42,803)	—
		Glioblastoma Phenotype Modulation Through miRNA Control of Wnt Signaling		93.853	5R01NS093843-04	442,011	19,117
		HCN channel trafficking in epilepsy		93.853	5R01NS099934-09 REVISED	25,941	—
		Hippocampal microcircuits regulating neurogenesis		93.853	5R21NS103138-02 REVISED	178,195	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Identification of new LAT-1 transporter substrates for drug delivery	254	93.853	17-022-02 // 1R15NS099981-01A1	\$ 9,190	—
		IDO1 and immunotolerance in glioblastoma.		93.853	5R01NS097851-03	389,345	—
		IL13Ra2 targeted T-cell therapy for glioma		93.853	7R21NS089802-03	(10,104)	—
		IL13Ra2 targeted T-cell therapy for glioma		93.853	7R21NS089802-03	63,825	63,368
		Immune Modifying Microparticles for Acute Treatment of Spinal Cord Injury		93.853	5F30NS093811-03 REVISED	44,382	—
		Immunoregulation and Pathology of Chronic-Relapsing EAE		93.853	4R01NS026543-27	(32,328)	—
		Impact of direct dopaminergic neuromodulation of the subthalamic nucleus in health and in experimental Parkinson's disease		93.853	5F31NS100357-02	38,021	—
		Induced Pluripotent Stem Cell Core for NINDS Investigators		93.853	4P30NS081774-05	(940)	—
		Information Processing in the Thermo-sensory System of Drosophila Melanogaster		93.853	5F31NS093873-03	30,139	—
		Integration of synaptic excitation and inhibition in the deep cerebellar nuclei		93.853	5F31NS092329-03 REVISED	4,678	—
		Intranasal Stem-Cell Based Therapy of Glioblastoma		93.853	5R01NS087990-05 REVISED	463,568	8,392
		Intrinsic Plasticity and Information Storage in Cerebellar Purkinje Cells	228	93.853	FP038885/R01NS62771	15,405	—
		Investigating the role of extremely long-lived mitochondrial proteins in mammalian neurons		93.853	1F32NS106812-01A1	9,877	—
		Investigation of ALS caused by mutant CHCHD10		93.853	5R01NS099638-03	526,188	71,170
		Investigation of Histone H3 Post-Translational Modifications in Pediatric Brainstem Glioma		93.853	5K08NS097624-03	164,416	113,400
		Ionic currents and spiking in cerebellar nuclear neurons		93.853	5R37NS039395-17	402,228	—
		Ionic Currents and Spiking in Cerebellar Nuclear Neurons		93.853	4R37NS039395-18	106,407	—
		Kainate Receptors in Signaling Between Hippocampal Mossy Cells and Granule Cells		93.853	1R21NS09040-01	(7,955)	—
		LRP4 signaling in neuromuscular junction formation	36	93.853	RESS13371//2R01NS082007-07	2,149	—
		LRRK2-mediated molecular and synaptic events in the striatum		93.853	5R01NS097901-03	343,133	—
		L-type channels as pharmacological targets for the treatment and prevention of febrile seizures		93.853	5R21NS096424-02 REVISED	114,288	—
		Lysosomal Dysfunction due to PGRN Mutations		93.853	5F99NS105182-02	30,422	—
		Magnetic-vortex microdiscs for glioma therapy		93.853	7R01NS077388-05	60,715	—
		Maternal Outcomes and Neurodevelopmental Effects of Antiepileptic Drugs	72	93.853	T652681//4U01NS038455-15	112,132	—
		Mechanical Signals and Trigeminal Ganglion Neuron Responses During Whisking		93.853	5F31NS090872-03 REVISED	9,494	—
		Mechanisms of Distorted Inputs in Chronic Spinal Injury		93.853	5R01NS089313-05 REVISED	128,057	—
		Mechanisms of Early Recurrence in Intracranial Atherosclerotic Disease (MyRIAD)	249	93.853	SPC-000246//5R01NS084288-05	33,808	—
		Mechanisms of Early Recurrence in Intracranial Atherosclerotic Disease (MyRIAD)	249	93.853	662706//5R01NS084288-05	15,802	—
		Mechanisms Underlying Tau45-230-Induced Neuronal Degeneration		93.853	5R01NS090993-04	355,313	—
		Metabolic Control of Immune Suppression in Gliomas		93.853	5R01NS093903-04	578,819	(6,412)
		MicroRNAs and Perinatal Hypoxia-Ischemia		93.853	5R01NS086945-04	274,902	170,646
		Minimally Invasive Surgery plus rt-PA for ICH Evacuation	122	93.853	2001995429//U01NS080824-02	75,551	—
		Molecular basis of Scapulothoracic SMA and Charcot-Marie-Tooth disease type 2C		93.853	5R01NS078287-04	(330)	—
		Molecular Mechanisms Integrating Circadian Timing and Photic Signaling		93.853	1R01NS106955-01A1	67,707	—
		Molecular Mechanisms of CRAC Channel Gating		93.853	5F31NS101830-02 REVISED	43,053	—
		Motor Cortical Function During Motor Learning with a Brain-Machine Interface		93.853	5F31NS092356-03 REVISED	58	—
		Mouse model studies of TMEM230-linked Parkinson's disease		93.853	5R01NS099623-03	532,280	61,238
		MyCog – Rapid detection of cognitive impairment in everyday clinical settings		93.853	5UG3NS105562-02	477,567	—
		Myoelectric Computer Interface to Reduce Muscle Co-Activation after Stroke		93.853	5R21NS084069-02	(1,530)	—
		Myoferlin in muscle membrane fusion and repair		93.853	5R01NS047726-12	5,913	—
		Myoferlin in muscle membrane fusion and repair		93.853	2R01NS047726-13A1	251,396	—
		Network for Emergency Care Clinical Trials: Strategies to Innovate EmRGency Care Clinical Trials Network (SIREN) – Network Clinical Center (Hub) (U24)	137	93.853	MCW Signed 11/09/17//1U24NS100648-0	3,249	—
		Neural Stem Cell Carriers for Glioblastoma Immunotherapy		93.853	5R21NS101150-02	369,902	—
		Neurogenetic Approaches to Study Directed Behavior in Drosophila		93.853	5R01NS086859-05 REVISED	383,839	—
		Neuroimaging Biomarkers in Parkinsonism: Differentiating Subtypes and Tracking Disease Progression	233	93.853	UFDSP00011947//U01NS102038	335,776	—
		NeuroNEXT Clinical Trials	131	93.853	Master Agrmnt 2/27/12// U10NS077271	(5,612)	—
		New Directions in Biology and Disease of Skeletal Muscle		93.853	1R13NS106917-01 REVISED	14,071	—
		NN104 / ZZ-3K3A-201: A multi-center, Phase 2 study using a continual reassessment method to determine the safety and tolerability of 3K3A-APC, a recombinant variant of human activated protein C (APC), in combination with tissue plasminogen activator (tPA)	131	93.853	NN104//U01NS088312	1,500	—
		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)	131	93.853	4U44NS090616-02	21,883	—
		NN106: Prospective Phase II Study of Cytochrome C Oxidase Activity as a Novel Biomarker in Subjects With Newly Diagnosed Primary Glioblastoma Multiforme	131	93.853	1 U01NS093663-01A1	3,771	—
NN108: Topiramate as a disease altering therapy for Cryptogenic Sensory Peripheral Neuropathy (CSPN)	131	93.853	Agmt Signed 02/27/12//U01NS095388	1,081	—		
Novel Therapies for Epilepsy Using Biodegradable Immune-Modifying Nanoparticles		93.853	5R21NS094999-02	35,014	—		
NRSA F31 for Daniel Ohm in Support of: Concordance between cortical atrophy and histopathology in PPA with AD pathology		93.853	5F31NS095652-02 REVISED	37,398	—		
NRSA F31 for Natalie Mara Frederick in support of: Understanding the role of dystonia gene Thap1 in the nervous system		93.853	5F31NS095461-02 REVISED	40,156	—		
NRSA F31 for Sitapath Batasubramanian Sharma in support of: Micro-RNAs 29b and 21 in Traumatic Brain Injury		93.853	1F31NS105451-01A1 REVISED	16,849	—		
NRSA Fellowship for Warren Alexander McGee in support of: TDP-43-regulated microRNAs and TDP-43 Proteinopathy		93.853	5F30NS090983-04 REVISED	38,981	—		
NRSA Postdoctoral F32 Misregulation of ER membrane dynamics by alpha-synuclein in Parkinsons disease		93.853	5F32NS101778-02	56,888	—		
Pallidostriatal Signaling in Parkinson's Disease		93.853	1F32NS098793-01 REVISED	15,365	—		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Pilot Project: Communication Bridge: Web-based speech-language therapy for individuals with dementia	225	93.853	9788sc/5U54NS092089-03	\$ 24,537	—
		POINT: Platelet-Oriented Inhibition in New T1A	71	93.853	Agreement signed 11/9/10 // 1U01NS026835-01A1	29,168	—
		Postsynaptic functions of neuronal adhesion molecules: focus on Cntnap2		93.853	5R01NS100785-02	566,683	—
		Probing Somatosensory Representations in the Cuneate Nucleus of Awake Primates	228	93.853	FP060211//R01NS095162	230,903	—
		Radiation + Temozolomide Induced Mutation and Malignant Progression of GBM	93.853	93.853	5R01NS095642-03 REVISED	358,528	—
		Radiographic markers of clinical function in Cervical Spondylotic Myelopathy	93.853	93.853	5K23NS091430-02 REVISED	179,106	4,297
		Rational derivation of DA neuron subtypes from iPS cells for improved modelling of Parkinson's disease	93.853	93.853	5R01NS096240-03 REVISED	650,009	—
		Regulating fibrosis and muscle growth in the muscular dystrophies	93.853	93.853	5P01NS072027-06	23,231	—
		Regulation of CD4+ T cell-mediated Demyelination Following Oligo Ablation	93.853	93.853	1R01NS099334-02	430,234	108,396
		Regulation of Gliotransmission by Store-Operated Calcium Channels	93.853	93.853	5F30NS090817-03 REVISED	38,361	—
		Regulation of neural progenitor cell migration by store-operated CRAC channels	93.853	93.853	5R01NS094011-04 REVISED	464,068	—
		Research Education Program for Trainees in Neurology	93.853	93.853	5R25NS070695-09	133,661	—
		Reverse Engineering Motor Unit Discharge	273	93.853	UWSC8225*(BPO2840)/5R01NS085331-03	224,015	—
		Rhythmicity and Synchrony in the Basal Ganglia	93.853	93.853	3P50NS047085-15S1	1,102,837	40,228
		Role of PCDH12 in neural circuit formation during brain development and disease	93.853	93.853	5R00NS089943-04	239,257	—
		ScanImage: Flexible Software for Laser Scanning Microscopy in Neuroscience	280	93.853	R24NS086549-NU Amd 2	33,120	—
		Sensorimotor processing, decision making, and internal states: towards a realistic multiscale circuit model of the larval zebrafish brain	94	93.853	138078-5105175 // 1U19NS10465301 REVISED	38,953	—
		Spatiotemporal Integration of Mechanical Information in the Rat Brainstem	93.853	93.853	5F31NS092335-03 REVISED	26,389	—
		Store-Operated Channels in the Nervous System	93.853	93.853	5R01NS057499-11 REVISED	470,899	—
		Stretch Reflex Contributions to Multijoint Coordination	170	93.853	Agmt 1/31/2018 // 5R01NS- 0538139-09 REVISED	31,273	—
		Stroke Trials Network – Regional Coordinating Stroke Centers	93.853	93.853	5U10NS086608-05	322,593	67,312
		Subcortical auditory processing in sports-related concussions and contact/collision sports	93.853	93.853	1R01NS102500-01A1	185,613	—
		SUDEP Translational Research Alliance – SUTRA	36	93.853	RES512393//5U01NS090407-04	102,321	—
		Synaptic Circuit Organization of Motor Cortex	93.853	93.853	5R01NS061963-10	263,898	—
		Synaptic Circuit Organization of Motor Cortex	93.853	93.853	2R01NS061963-11A1	33,337	—
		Synaptic physiology in the zebrafish cerebellum during swimming and learning	93.853	93.853	5F31NS095476-03 REVISED	39,525	—
		Synaptic Regulation of Innate Freezing by the Fastigial Nucleus of the Cerebellum	93.853	93.853	1F32NS106720-01 REVISED	23,315	—
		Synaptic Transmission, Plasticity, and Integration in the Subthalamic Nucleus	93.853	93.853	5R37NS041280-20	345,965	—
		Targeting convergent modulatory systems to regulate striatal synaptogenesis	93.853	93.853	5F32NS103243-02	56,768	—
		Targeting histone demethylase activity for the treatment of pediatric brainstem glioma	93.853	93.853	5R01NS093079-04	351,524	—
		Targeting the NMDA receptor-mediated disruption of autonomous subthalamic nucleus activity to ameliorate physiological and motor symptoms in a mouse model of Parkinson's Disease	93.853	93.853	5F31NS090845-03 REVISED	10,528	—
		The effects of a-synuclein accumulation on proteome composition, stability and aggregation	93.853	93.853	1R21NS107768-01	24,645	—
		The Human Motor Output Map	93.853	93.853	5R01NS098509-03	417,674	149,693
		The Interaction of IDO and TREGs Leads to Immunosuppression in Glioma	93.853	93.853	5R00NS082381-05	(1,544)	—
		The Loss of Independent Joint Control of the Upper Limb in Spastic Hemiparetic CP	93.853	93.853	2R01NS058667-05	45,170	—
		The Neural Control of Internal Joint State	93.853	93.853	5R01NS086973-05	315,578	36,969
		The role of amyloid precursor protein in HIV-1 replication and associated neurodegeneration	93.853	93.853	5R01NS099064-02 REVISED	429,154	—
		The role of a-synuclein accumulation in lysosomal hydrolase trafficking and function	93.853	93.853	5R01NS092823-04	383,095	—
		The role of ATP13A2/PARK9 in secretion of exosomes and alpha synuclein	93.853	93.853	5R37NS096241-03	512,864	60,415
		The Role of Glioma Metabolism in Promoting Tumor Immunosuppression	93.853	93.853	5F32NS098737-02 REVISED	63,505	—
		The Role of Lysosomal Glucocerebrosidase in Synucleinopathies	93.853	93.853	5R01NS076054-06	(3,665)	—
		The Role of Tumor Induced PD-L1 Expression on Myeloid Cells in GBM on Expansion of Regulatory T Cells and Systemic Immunosuppression	93.853	93.853	5R01NS076054-08	406,639	—
		The role of UCHL1 on the health and stability of upper motor neurons	93.853	93.853	1F32NS101884-01	50,780	—
		The role of UCHL1 on the health and stability of upper motor neurons	93.853	93.853	5R01NS085161-05	257,044	—
		The Stroke Hyperglycemia Insulin Network Effort (SHINE) Trial	272	93.853	GC12107-149595/U01NS069498	78,112	—
		The Stroke Hyperglycemia Insulin Network Effort (SHINE) Trial	272	93.853	GB10253-155953/5U01NS069498-07	4,966	—
		Tissue Factor as a Key Determinant of IDH1 Mutant versus IDH1 Wild-type Glioma Thrombosis and Malignancy	93.853	93.853	5R01NS102669-02	361,795	—
		Training in Neurotherapeutics Discovery and Development for Academic Scientists	219	93.853	4R25NS077582-05	763	—
		Training in Neurotherapeutics Discovery and Development for Academic Scientists	219	93.853	201602366-02/5R25NS099170-02	28,722	—
		Training Program in the Neuroscience of Human Cognition	93.853	93.853	5132NS047987-10	—	—
		TRAINING PROGRAM IN THE NEUROSCIENCE OF HUMAN COGNITION	93.853	93.853	5132NS047987-12	272,382	—
		TRPC3 channels as pharmacological targets for the treatment of ataxia	93.853	93.853	5R21NS090346-02 REVISED	188,869	—
		Understanding the cellular basis of Movement Disorders	93.853	93.853	5R01NS082351-05	305,505	—
		Validation of the HD-HRQOL (Huntington Disease Health Related Quality of Life)	250	93.853	3002420992//5R01NS077946-04	23,016	—
		(CTOTC-12/ ARTEMIS) Safety of Donor Alloantigen Reactive Tregs to Facilitate Minimization and/or Discontinuation of Immunosuppression in Adult Liver Transplant Recipients	225	93.855	4U01A1104347-04/9320sc	64,833	—
		A Development-Specific Mechanism of Pathogenesis in HSV Encephalitis	93.855	93.855	5F30A1116106-03 REVISED	42,862	—
		A Master Role of Symmetric Arginine Dimethylation in Lupus Autoantibody Response	93.855	93.855	1R21A1131087-01A1	43,912	—
		A novel mouse model to monitor inflammasome activation in vivo	93.855	93.855	5R21A1120618-02	(7,871)	—
		A Phase IV Open-Label Pharmacokinetic Study of Minoxidil for Injection Following a Single Infusion in Critically-Ill Adults (ACUMIN) DMID Protocol Number: 16-0011	66	93.855	225440//5UM1A1104681-05	327	—
		A Prospective Trial of Elemental Diet in Adults with Eosinophilic Gastrointestinal Diseases (EGIDs)	46	93.855	135407//U54A1117804	117,973	—
	A surface-exposed region of the UL37 protein that is essential for alphaherpesvirus neuroinvasion	93.855	93.855	5F32A1116044-03 REVISED	(298)	—	
	Accessory Virulence Factors of Pseudomonas aeruginosa	93.855	93.855	5R01A1118257-03	319,880	—	
						30,423,538	2,556,053

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards
Year ended August 31, 2018

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)		ACTG Data Management Committee Chair	31	93.855	SUB: 110009/5UM1A1068636-12	\$ 20,484	—
		ACTG Executive Committee Support	31	93.855	110007/5UM1A1068636-12 REVISED	7,409	—
		ACTG LOC Protocol A5320 Vice-Chair	31	93.855	110236 A5320/5UM1A1068636-12	3,657	—
		ACTG LOC Protocol Co-Chair for Protocol A5322	31	93.855	110229 A5322/5UM1A1068636-12 REVISED	14,203	—
		ACTG Research Group DMC Committee Chair	31	93.855	110009/5UM1A1068636-11	4,820	—
		Activate Silent and Cryptic Intact Fungal SM Gene Clusters through FAc for Novel Antibiotics Discovery	113	93.855	Agmt 8/30/16-001 // 2R44A1118086-02	170,612	—
		Aging and Fracture Risk Among HIV-infected and HIV-uninfected Men	122	93.855	2001586404/R01A1093520	(15)	—
		AIDS Clinical Trial Group Network Protocol Funds	31	93.855	Mod 1 //2UM1A1068636-10	143,311	—
		AIDS Clinical Trial Group Network Protocol Funds – Cost Reimbursement	31	93.855	111672/5UM1A1068636-12	220,190	—
		AIDS Clinical Trials Group – Protocol A5353 Support	31	93.855	110237/5UM1A1068636-12	9,836	—
		AIDS Clinical Trials Group – Protocol Chair Support A5322	31	93.855	110237/5UM1A1068636-12	6,549	—
		Allergy Guidelines Assessment Parent Survey	175	93.855	DAIT-SACCC-03-NW/5UM2A1117870-03	43,685	—
		Alloantigen Delivery Via ECDI-Fixed Cells for Tolerance to Monkey Islet Grafts	251	93.855	N002854801//1U01A11102463-01	(12,303)	—
		ALPHA-HERPESVIRUS TRANSPORT IN AXONS	93.855	93.855	5R01A1056346-14	274,833	55,381
		An 'omics' approach towards influenza A replication and pathogenesis	100	93.855	0254-3244-4609/4U19A1106754-05	352,279	—
		An Open-Label Population Pharmacokinetic Study of Minocycline for Infection Following a Single Infusion in Critically-ill Adult Subjects	66	93.855	203-8439//5UM1A1104681-05	43,728	—
		Anti-TSLP (AMG 157) plus antigen-specific immunotherapy for induction of tolerance in individuals with cat allergy CATNIP	23	93.855	FY141TN011//1UM1A1109565-05	20,013	—
		Autoantibody mediated pathogenesis in chronic rhinosinusitis with nasal polyps: mechanisms and consequences	93.855	93.855	1R01A1134952-01	55,148	—
		Binding Antibody FcMediated Antiviral Functions Across Humans and Non-human Primates	66	93.855	2035489/5P01A1120756-03	7,771	—
		Biomarkers for Highly Virulent Pseudomonas aeruginosa Strains	93.855	93.855	5R21A1129167-02 REVISED	164,175	—
		CARD-only protein regulation of cytosolic Pattern Recognition Receptor signaling	93.855	93.855	1R01A1140702-01	21,087	—
		Cervical/Vaginal Mucus and Microbiodes	93.855	93.855	5R33A1094584-05	(791)	—
		Chicago Clinical Trials Unit	93.855	93.855	5UM1A1069471-12 REVISED	1,333,860	528,180
		Chicago WIHS Consortium V (WIHS-V)	96	93.855	50615-324-ANUJ2-AI034993/5U01A1034993	42,197	—
		Chicago Women's Interagency HIV Study (WIHS V)	96	93.855	50612-324-ANUJ1-AI034993	35,156	—
		Chronic Rhinosinusitis Integrative Studies Program (CRISP)	93.855	93.855	4U19A1106683-05	1,668,598	713,793
		Clinical Evaluation of a New Highly Sensitive Multiplex qPCR for Detecting tuberculosis and Non-tuberculous Mycobacteria	93.855	93.855	1R03A1137674-01	25,772	—
		Consortium of Eosinophilic Gastrointestinal Disease Researchers: OMEGA	46	93.855	PO 3100545485 135408-CT1-OMEGA/5U54A1117804-04	48,051	—
		Control of E1 oligomerization regulates E1 function in papillomavirus DNA replication	49	93.855	55890312//R01A1114897-04	3,648	—
		CTOT-11 Long-term Safety Follow-up: Retrospective, Multicenter Study to Determine Up to 5 Year Clinical Outcomes in Subjects Previously Randomized in the CTOT-11 Study (CTOT-23)	31	93.855	BWH 09/22/16//U01A1063594	3,550	—
		Defense-in-depth against mucosal HIV clade C invasion	202	93.855	PO 39802/2P01A1048240-12A1	466,433	—
		Defining the Siderophore of Stenotrophomonas maltophilia, an Emerging, Multi-Drug Resistant Pathogen	93.855	93.855	1R21A1125968-01A1	156,243	—
		Dengue Human Immunology Project Consortium (DHIPC)	100	93.855	0255-8633-4609/5U19A1118610-04	473,966	—
		Development of a Designer Proline-rich antimicrobial peptide Chaperone protein inhibitor (DPC) for treating multi-drug resistant wound infections	18	93.855	Agmt 04/09/2019//1R41A1136072-01	34,521	—
		Development of Immune-Modulated HIV Vaccines	93.855	93.855	1K22A1118421-02	87,857	—
		Development of Lipid-based Nanoparticle Vaccines Against Mycobacterium tuberculosis	93.855	93.855	1R21A1131035-01	259,543	—
		Development of Novel Anti-Biofilm Compounds for Treating Chronic Wounds	2	93.855	AS//2R44A1092952-02A1	57,251	11,155
		Discovery and validation of avermectin resistance loci in free-living and parasitic nematodes	93.855	93.855	5R21A1121836-02	93,154	—
		Distinct mast cell responses in male and female SJL mice underlie sex dimorphic EAE susceptibility	93.855	93.855	5R01A1128292-02	480,168	—
Diverse Functions of p38a MAPK in T Helper Differentiation	93.855	93.855	5R03A1125813-02	31,893	—		
Do Early Maternal Antibodies Facilitate Oral Transmission of HIV in Infants?	202	93.855	15-04442-003/5R01DE023049-06	52,628	—		
Donor-Alloantigen-Reactive Regulatory T Cell Therapy in Liver Transplantation (deLaT)	225	93.855	10526sc/5U01A1110658-04	83,269	—		
Drug at the Right Place & Concentration: Optimizing Combination Vaginal Ring PrEP	3	93.855	31103B // 5U19A1103461-06	89,179	—		
Drug at the Right Place and Concentration: Optimizing Sustained PrEP Agents	3	93.855	PO659386-31103A // 5U19A1103461-06	30,384	—		
Drug at the Right Place and Concentration: Optimizing Sustained PrEP Agents	3	93.855	31103A Amd. 7//5U19A1103461-06	74,447	—		
Effectiveness, Safety and Value of Integrating Molecular Diagnostics into the Post-Transplant Management of Kidney Transplant Recipients – The Next Frontier of Biomarker Research	93.855	93.855	1R34A1118493-01 REVISED	11,090	9,440		
Efficacy of Ustekinumab (Anti-IL_12/23) followed by Abatecept (CTLA4-Ig) for the treatment of Psoriasis Vulgaris	23	93.855	FY181TN093/5UM1A1109565-05	12,046	—		
Elucidating a novel regulator of inflammation: the TLR4-Inhibitory Complex (TIC)	93.855	93.855	1R21A1131179-01A1	102,861	—		
EoE Clinical Study 2: Consortium of Eosinophilic Gastrointestinal Disease Researchers	46	93.855	PO 3100545486 135409/5U54A1117804-04	61,137	—		
Ethical and Sociocultural Implications of Genetic Testing in Transplantation	93.855	93.855	5R03A1126090-02	59,369	—		
Fluomics: The Next Generation	100	93.855	0255-A131-4609//1U19A1135972-01	56,507	—		
Food Allergy Outcomes Related to White and African American Racial Differences (FORWARD)	93.855	93.855	5R01A1130348-02	613,297	336,173		
Function of Vibrio vulnificus MARTX toxin during early gut infection	93.855	93.855	4R01A1098369-05	61,101	—		
Group 1 CD1-restricted Autoreactive T cells in Inflammatory Disease	93.855	93.855	1R21A1117238-01	4,107	—		
Harnessing MUC16-IgG interactions to Enhance HIV Vaccine Function	93.855	93.855	5R01A1125171-03	620,021	178,225		
High vs. Standard Dose Flu Vaccine in Adult Stem Cell Transplant Recipients	278	93.855	VUMC62778//U01A132004-01	47,344	—		
HIV and Tuberculosis Transmission and Future Trends in the African Population	273	93.855	UWSC8429 / K01A1095060	(81)	—		
HIV Research for Prevention 2016: Vaccine, Microbiode and ARV-based Prevention Science (HIV R4P)	93.855	93.855	1R13A1122959-01	1,060,127	—		
HOPE in Action: A clinical trial of HIV-to-HIV deceased donor kidney transplantation	122	93.855	2003649393/1U01A1134591-01	628	—		
Hormones in allergic disease	93.855	93.855	5R01A1127783-02	474,073	—		
Host-Pathogen Interactions in a Failing Global lineage of MTBC.M.africanum	212	93.855	USTTBNU/1R01A11110386-02-2016	31,937	—		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Identification of the Initial Targets of Transmission		93.855	5R01AI094595-05 REVISED	\$(28,838)	
		Identification of the Initial Targets of Transmission		93.855	5R01AI094595-05 REVISED	15,503	1,192
		Identification of the Initial Targets of Transmission		93.855	5R37AI094595-07	707,383	251,368
		Identifying Kawasaki Disease-Specific Antibodies and Antigens		93.855	1R21AI140029-01	207,993	—
		Immunology and Molecular Pathogenesis Training Program		93.855	3T32AI007476-20S1	(1,571)	—
		Immunology and Molecular Pathogenesis Training Program		93.855	5T32AI007476-22	295,860	—
		Immunosuppressive Drug Withdrawal from Liver Transplant Recipients on Tacrolimus versus Sirolimus	23	93.855	FY17TN165/SUM1A109565-04	8,286	—
		IMPAACT Network Leadership and Operations Center (LOC) Grant – CRS 4001 PF	14	93.855	915377-NU/PTCL102002438850/UM1A1068632	55,035	—
		Impact of CCR5 Blockade in HIV+ Kidney Transplant Recipients	225	93.855	92548c/SU01A118594-03	32,550	—
		Implementation strategies for a new point-of-care test for early infant diagnosis	122	93.855	2002785688 Amd 3 // R01A1116324	(481)	—
		Influenza virus receptors on human airway epithelial cells	184	93.855	5-53557/5R01A1114730-04	143,747	—
		Initiators, biomarkers and mechanisms of epithelial dysfunction and immune pathogenesis in chronic rhinosinusitis and aspirin exacerbated respiratory disease (AERD)		93.855	1R01A1137174-01	170,210	—
		Innate Immune Surveillance of HIV-1 During Transmission and Systemic Infection	183	93.855	60088-12935-NWU/1R01A1127302-02	133,617	—
		Integrating Mechanistic Insights from Diverse Models to Prevent CMV Reactivation following Transplantation		93.855	5P01A1112522-04	2,514,266	37,541
		Keeping it LITE: Exploring HIV Risk in Vulnerable Youth with Limited Interaction	96	93.855	50041-324-ANU01//1UG3AI133676-01	29,319	—
		Lipid Regulation of the Development of Responsiveness to Allergen in Neonates and Infants		93.855	1U01A1131337-01	512,044	6,544
		Mechanisms of Gonococcal Pili Antigenic and Phase Variation		93.855	5R37AI033493-24	176,879	—
		Mechanisms of Gonococcal Pili Antigenic and Phase Variation		93.855	4R37AI033493-25	298,591	—
		Mechanisms of MCMV reactivation in immunodeficient transplant recipients		93.855	5R01A1112911-04	315,024	—
		Mechanistic Studies of Patatin-like Toxins		93.855	5R01A1053674-13	64,908	—
		Modeling concurrent cytomegalovirus infection and transplantation tolerance		93.855	5R01A1114824-02	302,190	—
		Molecular mechanism of V. vulnificus MARTX toxin in pathogenesis and food safety		93.855	5R01A1092825-07	608,707	32,221
		Molecular Mechanism of V. Vulnificus MARTX Toxin in Pathogenesis and Food Safety		93.855	5R01A1092825-05 REVISED	(1,093)	—
		Molecular Regulation of Systemic Inflammation		93.855	5R01A1120625-03	617,740	—
		Mucosal mechanisms of altered HIV susceptibility in adolescents	249	93.855	SPC-000886/7R01A128782-03	11,788	—
		Mucosal mechanisms of altered HIV susceptibility in adolescents	273	93.855	UWSC9610/5R01A1128782-02	62,088	—
		Multicenter AIDS Cohort Study		93.855	5U01A1035039-26	4,449,577	380,693
		Neurotropic herpesvirus envelopment and microtubule-mediated transport	3	93.855	310227/5R01A1125244-02	172,366	—
		Next-Generation Phylodynamics-targeted Partner Service Models for Combined HIV Prevention	228	93.855	FP066835-A/1R01A1136056-01	103,492	—
		Northwestern University Allergy Immunology Research Program (NUAIR)		93.855	5T32AI083216-09	298,935	96,315
		Northwestern University Infectious Diseases Education and Science (NI/Deas)		93.855	5T32AI095207-07 REVISED	107,162	—
		Novel long-acting microbicide and contraceptive intrauterine system	67	93.855	S140181-2 Amd. 3 // 5R01A112009-04	36,362	—
		Novel Proteoform Biomarkers of Acute Rejection in Liver Transplant Recipients		93.855	1R21A1135627-01	61,720	—
		Optimizing clinical use of Polymyxin B: Teaching an old drug to treat superbugs	250	93.855	3004163905/5R01A1119446	65,680	—
		Optimizing the diagnosis of pediatric Clostridium difficile infection	14	93.855	901507-NU/5K23AI23525-02	27,729	—
		Pathogenesis of Jellongvirus	234	93.855	RR211-536/S001474/1R01A1128924-01A1	140,237	—
		Pathogenesis of Rebound SIV/HIV Viremia After Antiretroviral Therapy		93.855	5P01A1131346-02	1,201,045	334,977
		Patient-Oriented Research on Hospital-Acquired Pathogens		93.855	4K24AI104831-05	98,981	6,508
		Phenotypic and functional plasticity of mast cells in homeostasis and allergy		93.855	5F30AI129237-02 REVISED	35,559	—
		Pig-to-Monkey Islet Xenotransplantation	251	93.855	N004761502//U01A1120130-04	45,978	—
		Post-transcriptional regulation of Crp in Yersinia pestis		93.855	5R21A1111018-02	117,019	—
		Poxvirus manipulation of the host cell protein synthesis machinery		93.855	3R01A1127456-02S1	387,145	—
		Probing the Functions of KLF2 Downregulation		93.855	5R21A1119137-02	103,591	—
		Proteomic Predictors of Chronic Kidney Disease in Liver Transplant Recipients		93.855	5R21A1113916-02	68,706	—
		Protocol ITN056ST: Evaluation of Donor Specific Immune Senescence and Exhaustion as Biomarkers of Operational Tolerance Following Liver Transplantation in Adults	23	93.855	FY18TN158/SUM1A109565-05	231,524	—
		REDD1 dissociates the therapeutic and adverse effects of glucocorticoids in skin		93.855	5R01A1125366-02	317,648	—
		Regulation of Allergic Inflammation by Histamine		93.855	5R01A1076456-10	259,992	—
		Regulation of cytosolic pattern recognition receptor signaling in macrophages		93.855	4R01A109009-04	252,694	—
		Regulation of cytosolic pattern recognition receptor signaling in macrophages		93.855	2R01A109009-06A1 REVISED	134,730	—
		Regulation of food allergy and anaphylaxis by IL 33		93.855	5R01A1105839-05	294,606	—
		Regulation of HPV Replication by Sirtuin Deacetylases		93.855	5R21A1133984-02	171,187	—
		REPRIEVE A5332 Women's Ancillary Study	31	93.855	5R01A1123001-02/BWH AGMT 11/23/16	40	—
		Role of CTCF in HPV replication and viral DNA looping		93.855	5R21A1120492-02	117,768	—
		Role of mTOR in inflammatory monocytes in HIV infection		93.855	1F30AI131937-01A1	50,969	—
		Role of Thymic Stromal Lymphopoietin in Chronic Rhinosinusitis		93.855	5R01A1104733-04	412,428	—
		Roles of Early Life Colonization and Environmental Antigens on Childhood Asthma		93.855	1R21A1121742-01	196,210	16,034
		S. aureus and Regulatory T cells in the Failure of Oral Tolerance		93.855	5K23AI100995-05 REVISED	22,680	22,680
		Structural and Functional Studies of gp42 and HLA Class 2 in EBV Entry		93.855	5R01A1076183-15	362,377	64,949
		Structure and Function of EBV Protein Complexes that Trigger Epithelial Cell Entry		93.855	1R01A1137267-01	119,416	—
		Studies of human B cell responses and antibody production during chronic airway inflammation		93.855	1R56AI131239-01A1	300,988	—
		Successful Clinical Response in Pneumonia Therapy (SCRIPT) Systems Biology Center		93.855	1U19AI135964-01	888,081	—
		Sustained Long Acting Prevention Against HIV Program Operation		93.855	5UM1A1120184-04	2,620,813	1,063,943
		T regulatory cell responses during viral infection		93.855	1R21A1132848-01A1	38,066	—
		Targeting Siglec-8/F to Treat Eosinophil and Mast Cell Related Disorders		93.855	5R01A1072265-11	172,052	—
		Telomere Length and Molecular Mechanisms of Aging among HIV-infected Individuals on ART	31	93.855	1165293/SUM1A1068636-11	14,646	—
		The HIV Care Continuum Among Recent Offenders	108	93.855	IN4689683NW/5R01A1114435-02	16,948	—
		The Influence of Early Integration Events on HIV Latency and Reactivation Potential		93.855	1K22AI136691-01	14,252	—
		The non-canonical role of the CRISPR Cas2 nuclease in infection by Legionella pneumophila		93.855	5R21A1123462-02	141,420	—
		The regulation and function of CD1d-restricted T cells		93.855	5R01A1043407-18	310,960	—
		The Role of Group 1 CD1-restricted T Cells in Infectious Disease		93.855	5R01A1057460-14	506,744	38,077

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		The Role of MHC class Ib in T cell development and infectious disease		93.855	4R01AI040310-19	\$ 66,551	—	
		The role of non-classical MHC class I molecules in immune responses to Mycobacterium tuberculosis infection		93.855	1R01AI141083-01	116,590	—	
		The roles of Sirt1, a deacetylase, in immune tolerance and autoimmunity		93.855	5R01AI079056-09	183,462	—	
		The roles of Synoviolin in immune tolerance and autoimmunity		93.855	5R01AI108634-04	215,025	—	
		The Structure and Function of the Influenza Virus Genome		93.855	4R01AI020201-33	92,107	—	
		Third Coast Center for AIDS Research		93.855	5P30AI117943-04 REVISED	1,849,999	355,344	
		Tocopherol regulation of the development of responsiveness to allergen early in life		93.855	5R01AI127695-02	488,896	14,137	
		Tolerogenic delivery of donor antigens for cardiac allograft protection	274	93.855	2U01AI102456-06REVISED//773K161	5,724	—	
		Translational Research Training in Infectious Diseases		93.855	4T32AI095207-05 REVISED	(9,569)	—	
		Type II Secretion and Legionella pneumophila Infection		93.855	5R01AI043987-19	235,412	—	
		US Prevalence, Distribution and Determinants of AdultT and childhood Food Allergy (UPDATE-FA)	14	93.855	901526-NU//1R21AI135702-01	57,691	—	
		Using siglecs and their ligands to treat allergic diseases SALTAD		93.855	1U19AI136443-01	243,622	65,207	
		UTI Immune Modulation by LPS Structure		93.855	5F31AI106357-05 REVISED	(38)	—	
		Virulence Mechanisms of the Emerging Pathogen Stenotrophomonas maltophilia		93.855	5R21AI117082-02	412	—	
		ZIP Immunology Consensus Substudy	100	93.855	0255-8661-4609//5U19AI118610-03	35,332	—	
						<hr/>	<hr/>	<hr/>
						37,135,915	4,620,077	
			Regulation of Bacterial Aggregation During Host Colonization		93.856	5R21AI117262-02 REVISED	(486)	—
			A Computational Biology Approach to Mapping Nucleosomes in Stem Cells		93.859	5R01GM107177-04 REVISED	122,033	—
			A Quantum Dot Probe for Nanosecond-Timescale Imaging of Fast Biological Processes		93.859	1R21GM127919-01	40,330	—
			Activation Mechanisms of Store-Operated Calcium Channels		93.859	5R01GM114210-04 REVISED	342,157	—
			Activities of Nucleoprotein Complexes Visualized in Single-Molecule Experiments		93.859	4R01GM105847-04	142,879	—
			Algorithms for Glyco-Proteome Detection		93.859	5R01GM115739-02	363,784	—
			Analysis of lamin-chromatin interactions and their regulation of chromosome organization and gene expression	34	93.859	5-10742-01//R01GM106023	281,424	—
			Analysis of Novel Virus-Induced RNAs		93.859	5R01GM111652-04	300,858	—
			Analyzing the role of chromatin compaction in nuclear mechanics, structure, and function		93.859	1K99GM123195-01A1	35,403	—
			Anesthesia-induced learning deficiency and brain hypoxia	149	93.859	EH16-011-S1 Amd 3//5R01GM112715-03	37,267	—
			Assembly and epigenetic inheritance of the human centromere		93.859	5R01GM111907-05	336,431	—
			Biological Transition Metals		93.859	2R01GM111097-46A1	26,515	—
			Biosynthetic and Biomimetic Investigations into Roseophilin		93.859	5F31GM119368-02 REVISED	21,390	—
			Biosynthetic studies on an unusual amino acid monomer deriving the discovery of novel natural products through genome mining		93.859	5F32GM122397-02	51,700	—
			Biotechnology Predoctoral Training Program		93.859	5T32GM008449-25	371,420	—
			Capturing Transient Protein Structures on Multiple Spatial and Temporal Scales		93.859	5R01GM115761-04	294,633	—
			Carbene Catalysis Strategies for Organic Synthesis		93.859	5R01GM073072-13	615,434	92,892
			Cellular and Molecular Basis of Disease Training Program		93.859	2T32GM008061-36	750,485	—
			Cellular and Molecular Basis of Disease Training Program		93.859	2T32GM008061-36	126,792	—
			Center for the Structural Biology of Cellular Host Elements in Egress, Trafficking, and Assembly of HIV (CHEETAH Center)	271	93.859	10044932-10//2P50GM082545-11	257,096	—
			Characterization of pmoD		93.859	5F32GM119191-03	57,491	—
			Characterization of the antiviral and nuclear regulatory functions of FEZ1 & NEK1		93.859	5R01GM101975-05S1	199,524	—
			Chemistry of Life Processes Predoctoral Training Program		93.859	5T32GM105538-05 REVISED	279,036	—
			Chemistry of Life Processes Predoctoral Training Program		93.859	2T32GM105538-06	1,326	—
			Cobalt-Cobalt-Substituted Hemoglobins and Myoglobin		93.859	3R01GM111097-46S1	545,565	—
			Control and Function of Ndr1/LATS Signaling Systems		93.859	5R01GM084223-09 REVISED	214,419	—
			Cryo ptychography combined with x-ray fluorescence analysis of metals in cells		93.859	2R01GM104530-06 REVISED	266,025	14,420
			Cytoskeletal mechanisms of oocyte polarity		93.859	5R01GM124029-02	267,534	—
			Defining the molecular and cellular mechanism of epigenetic transcriptional memory		93.859	5R01GM118712-02	287,156	—
			Development of dictyBase, an online informatics resource		93.859	5R01GM064226-16	527,877	—
			Developmental Dynamics of Ciliated Epithelia		93.859	3R01GM089970-09S1	349,598	—
			Direct Determination of the Distribution of Fitness Effects of Spontaneous Mutations in Caenorhabditis Elegans	233	93.859	UFDSP00010414 // R01GM107227-03	82,865	—
			Dissecting chromatin and lamin contributions to nuclear structure and function		93.859	5F32GM112422-02	31,649	—
			Dissecting functional cooperativity among subunits in a catalytic ribonucleoprotein	155	93.859	60045478 Amd 001 // R01GM120582	123,586	—
			DNA zip codes and the spatial organization of the yeast genome		93.859	4R01GM090484-09	(47,853)	—
			DNA zip codes and the spatial organization of the yeast genome		93.859	5R01GM080484-11	367,187	—
			Dynamics and allostery in protein-RNA regulation	155	93.859	60060542 Amd 001 // R01GM120923	37,541	—
			Eukaryotic Post-Translational Modifications		93.859	5R01GM067193-12	2,940	—
			Excitability in Dictyostelium Development		93.859	5K25GM098875-06	65,477	—
			Exploration of Novel Silyl Derived d1 Synthone Equivalents		93.859	5F31GM116532-03 REVISED	28,027	—
			Genetic Analysis of Beneficial Bacterial Colonization	274	93.859	790K182//R35GM119627	211,625	—
			Global Characterization of Protein Palmitoylation in Trypanosomes		93.859	4R01GM102689-04	13,510	—
			High Throughput Screening for Small-molecules Facilitating Prion Study		93.859	5R01GM110046-03	152,932	—
			Information Processing by Post-Translational Modification	94	93.859	152213 S081815.0003 Amd 3 // 5R01GM105375-04	50,045	—
			Integrated Empirical and Translational Research to Diversify the Scientific Workforce		93.859	5R35GM111818-03 REVISED	558,032	16,540
			Integrative informatics approach to develop safe glucocorticoid therapies		93.859	5R01GM112945-04	358,591	—
			Investigating The Functional Role Of Zinc Fluxes During Sperm Activation		93.859	5F31GM117971-02 REVISED	15,500	—
			Investigating the molecular mechanism of mitochondrial tethering		93.859	5R01GM120303-02 REVISED	273,157	—
			Investigation into the Dynamic Zn Proteome during Mammalian Oocyte Maturation		93.859	5F32GM115052-03	38,526	—
			Mechanism of Nuclear Signaling and cell-cell adhesion by catenins		93.859	5R01GM076561-09S1	(76,235)	—
			Mechanistic investigation of long non-coding RNAs in Drosophila oogenesis		93.859	1F32GM122349-02	58,663	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Medical Scientist Training Program		93.859	2T32GM008152-31	\$ 1,396,270	—
		Mentoring for Success: Developing Fundamental Skills for Biomedical Research		93.859	5R25GM079300-12 REVISED	511,949	—
		Metalloenzymes and metal homeostasis		93.859	5R35GM118035-03 REVISED	440,738	—
		Metalloregulation by MerR and Fur Protein Families		93.859	5R01GM038784-29 REVISED	336,778	—
		Microbial Succession and Adaptive Immune Responses in the Premature Infant		93.859	5R01GM108494-05	114,323	72,068
		Microtubule motors and generation of cell polarity		93.859	5R01GM052111-20	438,553	—
		Modeling scientific workforce dynamics using social network analysis	94	93.859	152451.5080935.04033//5U01GM112623-04	205,678	—
		Molecular Biophysics Training Program at Northwestern University		93.859	5T32GM008382-26	260,151	—
		Molecular Mechanisms of Basolateral Targeting in Polarized Epithelial Cells		93.859	5R01GM070736-12	307,976	—
		Molecular Regulation of Radial Intercalation		93.859	1R01GM113922-01A1	269,797	—
		National Infrastructure for Standardized and Portable EHR Phenotyping Algorithms	121	93.859	17040580//ZRO1GM105688-06	124,451	—
		National Infrastructure for Standardized and Portable EHR Phenotyping Algorithms	121	93.859	16081299-03//R01GM105688-05	23,937	15,493
		National Resource for Translational and Developmental Proteomics		93.859	5P41GM108569-04	1,165,696	62,493
		Neural Crest Ontogeny and the Control of Stem Cell Attributes		93.859	5R01GM116538-04	372,805	—
		New Methods and Strategies for the Concise Synthesis of Bioactive Polycyclic Molecules		93.859	1R01GM124089-01A1	44,410	—
		Non-coding RNAs and their mechanisms and functions		93.859	5R35GM118144-03	547,025	—
		Northwestern University Interdepartmental Neuroscience Postbaccalaureate Research Education Program		93.859	5R25GM121231-02	209,942	5,646
		Pharmacological Inhibitors of Nedd4 ubiquitin ligase as anticancer therapeutics	235	93.859	R-17-0021 // 7R01GM115632	(59)	—
		Prion-mediated protein aggregation/co-aggregation and cellular consequence		93.859	1R01GM126318-01A1	14,889	—
		Probing Cellular Membrane Processes by Single Particle Orientation and Rotational Tracking	87	93.859	SP00012129-01//1R01GM115763	66,465	—
		Regulation and Function of Intermediate Filaments in Cell Mechanics		93.859	5P01GM096971-05	(2,433)	(2,436)
		Regulation and Function of Intermediate Filaments in Cell Mechanics		93.859	3P01GM096971-05S1	482,253	246,838
		Regulation of chromosome segregation during oocyte meiosis		93.859	1R01GM124354-01A1	138,548	—
		Regulatory Roles of Zinc Fluxes in Metalloprotein Occupancy and Cell Cycle Progression		93.859	5R01GM115848-04	195,246	—
		RNA Ligation Pathways in Mammalian Unfolded Protein Response		93.859	5R01GM120307-00	298,608	—
		SampleStream: A Radically Simplified Platform for Protein Sample Preparation	114	93.859	Agmt 2/15/2018 // 1R43GM121130-01A1	12,140	—
		Selective inhibition of nitric oxide synthase for multiple indications		93.859	5R01GM049725-23	594,480	56,625
		Social signals that regulate C. elegans development		93.859	1R01GM126125-01A1	8,374	—
		Specific inhibition of transcription factors with Cobalt-Schiff Base Complexes		93.859	5R01GM121518-02	342,957	—
		Src kinase phosphoregulation of the human mitotic kinesin, Eg5		93.859	4R01GM107209-04	13,455	13,405
		Structural and biophysical studies of DNA topoisomerases		93.859	2R01GM051350-21A1	177,118	—
		Structural and biophysical studies of proteins, nucleic acids, and their complexes		93.859	5R35GM118108-02	405,596	—
		Structural mechanism of membrane remodeling during herpesvirus nuclear egress	206	93.859	100169-00001//R01GM111795	22,242	—
		Structure and function of desmosomal cadherins	50	93.859	1(GG011995-01)//1R01GM118584-01A1	116,490	—
		Structure and Function of Mammalian Copper Transporters		93.859	5R01GM115211-02	338,770	—
		Structure and Specificity in Metal Ion Homeostasis		93.859	5R01GM085818-17	(229)	—
		Tailoring liposomal spherical nucleic acid nanoparticles for biological and therapeutic potency		93.859	5F31GM119392-02 REVISED	24,711	—
		Targets for Design of Drug Combinations that Select against Antibiotic Resistance		93.859	5R01GM113238-04 REVISED	238,808	153,693
		Team Dynamics, Networks, & Assembly (Team DNA)	222	93.859	1295 G UA135//5R01GM112938-03 REVISED	163,474	—
		Team Dynamics, Networks, & Assembly (Team DNA)	222	93.859	1295 G TA411-1//5R01GM112938-03 REVISED	217,132	—
		The Dictyostelium Stock Center		93.859	5R01GM087371-09 REVISED	295,469	—
		The role of innate immunity in the traumatic brain injury-induced immune suppression syndrome		93.859	5K08GM117341-04	213,635	—
		The role of the microtubule regulators Kif4 and EB1 in HIV-1 infection – Project 2	50	93.859	1(GG010108-17)//5P01GM105536-05	537,540	—
		Tissue morphogenesis: A study of molecular machines and cell mechanics		93.859	4R01GM098077-04	(134)	—
		Tube size control by Src and Yorkie/YAP		93.859	5R01GM108964-04 REVISED	113,412	—
		Virus Imaging Core P50 GM082545 CHEETAH	271	93.859	10027535-02//5P01GM082545-10	(13,766)	—
		Zinc Regulation of Germline and Embryo Development in Caenorhabditis elegans		93.859	5F31GM112478-03	(4,375)	—
						21,640,642	747,677
		A Cognitive Test Battery for Intellectual Disabilities	219	93.865	201402548-02//1R01HD076189-01A1	5,124	—
		A preschool biomarker for literacy		93.865	4R01HD069414-05	143,976	—
		Application of Targeted Reinnervation for People with Transradial Amputation	169	93.865	CC#81930 CL4098//5R01HD081525-04	4,791	—
		Assessing microenvironment and endothelial cell instruction of testis function		93.865	1F31HD089693-02	48,970	—
		Bilateral Priming Plus Task Specific Training for Severe Upper Limb Hemiparesis		93.865	5R01HD091492-02	220,083	104,723
		Career Development in Women's Health (CDWH)		93.865	5K12HD055884-09	(47,851)	—
		Center for Reproductive Health After Disease		93.865	5P50HD076189-05 REVISED	665,968	71,452
		Characterizing the Epigenetic GATA Switch in Endometriosis		93.865	5R03HD082558-02	(2,768)	—
		Cognitive Architecture of Bilingual Language Processing		93.865	5R01HD059858-05	(81)	—
		Cognitive Architecture of Bilingual Language Processing		93.865	2R01HD059858-07	308,039	—
		Constraint induced movement therapy for walking in individuals post stroke	169	93.865	CC# 81388 CL4442//1R01HD082216-03	4,490	—
		Cortical Priming to Optimize Gait Rehabilitation Post Stroke	237	93.865	7201//5R01HD075777-05	35,409	—
		Cortical thickness, subcortical deformation, and structural covariance networks in youth with perinatally-acquired HIV: associations with HIV disease severity and cognition		93.865	5F30HD090842-02	23,724	—
		Cortisol, Socioeconomic Status, and Genetic Influences on Cognitive Development	264	93.865	UTA16-000087 Amd. 1 // 1R01HD083613-01A1	(4,598)	—
		Deubiquitinating Enzymes as Targets for Male Contraception	14	93.865	901501-NU Amd 01//5U01HD084046-04	41,463	—
		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	1R21HD094073-01	105,299	—
		Development of a serum biosignature for ectopic pregnancy	259	93.865	564595//R01HD076279-04	75,126	—
		Development of a standardized measure of social-communication abilities for children with neurodevelopmental disorders	225	93.865	10364sc//1R01HD093012-01A1	41,554	—
		Effect of a patient-centered decision app on TOLAC: An RCT	225	93.865	8231sc//5R01HD078748-03	187,744	—
		Effect of Injury Severity and Location on Spasms Post SCI		93.865	5K01HD084672-03	108,882	—
		Effect of Neural Constraints on Movement in Stroke		93.865	4R01HD039343-15	183,071	28,571

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Endometriosis and Retinoids		93.865	5R37HD038691-19	\$ 690,276	—	
		Engineering Career Development Center in Movement and Rehabilitation Sciences		93.865	4K12HD073945-05	181,675	179,368	
		Genes, Androgens and Intrauterine Environment in PCOS		93.865	3P50HD044045-15S1	340,095	146,796	
		High-performance, low-cost, passive prosthetic knees optimized to replicate physiological gait in multiple mobility scenarios	132	93.865	S4528-PO176307//1R03HD092676-01		2,314	—
		Homeostatic to reactive hyaluronan matrices in ovarian reproductive aging		93.865	1R01HD095726-01		110,064	—
		How Housing Vouchers Affect Biology & Health	122	93.865	200326202 // U01HD076957		83,970	—
		Improve dynamic lateral balance of humans with SCI	169	93.865	CL5253//1R01HD083314		4,743	—
		Infant attention in the context of language		93.865	1F32HD095580-01		4,067	—
		Influence of rapid sensory feedback on motor learning following stroke		93.865	1F32HD094552-01 REVISED		48,092	—
		Integrative Genomics, Epigenomics and Bioinformatics Analyses of Human Uterine Fibroids		93.865	1R01HD089552-03		627,960	99,296
		Intensive Rehabilitation Research Grant Writing Workshops in the United States	138	93.865	MUSC14-024//5T15HD074546-07		10,668	—
		Intensive Rehabilitation Research Grant Writing Workshops in the United States	138	93.865	MUSC18-033-8D222//2R25HD074546-07		5,289	—
		Interdisciplinary Engineering Career Development Center in Movement and Rehabilitation Sciences		93.865	5K12HD073945-07		182,180	110,228
		Intimate Partner Violence in Sexual Minority Female Adolescents and Young Adults	230	93.865	010314-003//5R01HD086170-02		473,003	—
		Linking language and cognition in infancy: Entry points and developmental change		93.865	5R01HD083310-04 REVISED		330,417	—
		Manipulating cGMP Pathway to Impact Vascular Development in Neonatal BPD and ROP		93.865	5R21HD077336-02		(100)	—
		Maternal-Fetal Medicine Units Network – The Northwestern Study Center		93.865	5UG1HD040512-19		273,680	49,712
		Meeting Gestational Weight Gain Guidelines: Development of a Group Intervention During Pregnancy for Low-Income Racial/Ethnic Minority Obese Women and Their Providers		93.865	5K23HD076010-04		23,267	—
		MFUM Network Capitation Agreement	84	93.865	Agmt 4/25/14//U10HD036801		640,593	216,468
		Molecular Basis of Altered Drug Metabolism During Pregnancy	237	93.865	16572//1R01HD089455-01-A1		208,928	—
		Motor impairment related changes in muscles properties in chronic stroke		93.865	5R01HD084009-04		309,217	40,094
		Motor Learning in a Customized Body-Machine Interface for Persons with Paralysis	169	93.865	CC#61750//R01HD072080		99,993	—
		Multieethnic Fine-Mapping of Polycystic Ovary Syndrome Susceptibility Loci		93.865	1R01HD085227-01A1		105,118	93,611
		Neuromuscular Mechanisms Underlying Poor Recovery from Whiplash Injuries		93.865	5R01HD079076-05		279,813	—
		Oncofertility Consortium Annual Conference		93.865	5R13HD063248-07		15,104	—
		OPRC clinical project: Comprehensive evaluation of the safety and utility of pravastatin in prevention of preeclampsia in high-risk pregnant women	269	93.865	17-044//5U54HD047891-12 REVISED		(2,497)	—
		OPRC clinical project: Comprehensive evaluation of the safety and utility of pravastatin in prevention of preeclampsia in high-risk pregnant women	269	93.865	18-83997-13//5U54HD047891-13 REVISED		10,194	—
		Optimizing Medication Management for Mothers with Depression during Pregnancy (OPTI-MOM)		93.865	5U54HD085601-04		878,496	90,471
		Pathophysiology and Rehabilitation of Neural Dysfunction		93.865	3T32HD007418-25S1		(7,587)	—
		Pathophysiology and Rehabilitation of Neural Dysfunction		93.865	2T32HD007418-26		259,646	—
		PEd Screen: Pediatric Sepsis EHR Registry, Clinical Outcomes, and Predictive Model		93.865	5R01HD087363-02 REVISED		512,375	439,584
		Pediatric HIV/AIDS Cohort Study: Understanding Maternal HIV Disease through Pregnancy and the Postpartum Period and its Role in Child Health Outcomes Sub-study	207	93.865	TUL-HSC-555811-17/18//U01HD052104		35,712	—
		Pharmacokinetics of Risperidone Across Pregnancy		93.865	5K23HD087529-02		153,777	—
		Pharmacologic strategies to use the levonorgestrel implant in HIV-infected women	255	93.865	34-2009-2031-001//5R01HD085887-03		14,819	—
		Phonetic echoes of cognitive disruptions in speech production		93.865	5R21HD077140-02		(649)	—
		Phonetic echoes of cognitive disruptions in speech production		93.865	5R21HD077140-02		29,006	29,006
		Prevalence and Correlates of School-Based Medicaid-Funded Services for Children with Autism Spectrum Disorder	269	93.865	17-073//5P2CHD065702-08		16,029	—
		Preventing the Intergenerational Transmission of Antisocial Behavior: Successful Child Socialization Strategies in Families with a Parental History of Incarceration		93.865	1R21HD092671-01A1 S1		33,397	—
		Probing Mediator 12 function in uterine fibroids		93.865	5R21HD082761-02		(837)	—
		Psychosocial Intervention, Maternal Inflammation, and Birth Outcomes: Centering vs Routine Prenatal Care (PIINC)	149	93.865	EH17-256-S2//1R01HD092446-01A1		3,225	—
		Regulation of NOD-like receptors in juvenile influenza A virus infection	271	93.865	10034012-CHIC//SK12HD047349-14		57,409	51,030
		Remediating Academic and Non-Academic Skills Deficit among Disadvantaged Youth	228	93.865	FP053702-3//P01HD076816		36,727	—
		Research Career Development in Obstetrics and Gynecology		93.865	5K12HD050121-14		318,160	—
		Rural African American Young Adults' Pathways to Psychosocial and Physical Health	234	93.865	RR376-410/4708620 Amd 3 // 2R01HD03058820A1		99,854	—
		Semi-autonomous Robotic Powered Wheelchair Functionality	110	93.865	Agmt 8/24/16 // 1R43HD085317-01		17,266	—
		Targeted problem reactivation and incubation during slow-wave sleep		93.865	5R03HD087111-02		53,775	—
		The Chicago Longitudinal Study (CLS) Health Screening Examination	251	93.865	A00540470//2R01HD034294-23		165,472	—
		UBR7 is a novel chromatin directed E3 ubiquitin ligase		93.865	7R21HD078945-02		(9,498)	—
		UBR7 is a novel chromatin directed E3 ubiquitin ligase		93.865	7R21HD078946-02		(17,428)	(17,428)
		Understanding Diverging Profiles of Academic and Physical Health Outcomes in African American Youth		93.865	1R01HD093718-01		22,322	—
		Uterine Leiomyoma Research Center Program		93.865	5P01HD057877-09		1,058,899	68,014
							<u>10,936,895</u>	<u>1,800,996</u>
		2nd Kloster Seeon Meeting on BACE Proteases in Health and Disease		93.866	1R13AG054189-01		2,097	—
		7th Intern Conf on AD and Related Disorders in the Middle East		93.866	1R13AG055285-01		35,819	—
		A test of the calcium hypothesis of Alzheimers disease		93.866	1R21AG060267-01		164	—
		A Universal Medication Schedule to Promote Adherence to Complex Drug Regimens		93.866	5R01AG046352-04		575,670	177,336
		Alterations in BMP Signaling in the Aging Brain		93.866	1R56AG050542-01A1		(10,822)	—
		Alterations of Sleep and Circadian Timing in Aging		93.866	5P01AG011412-19		831,057	—
		Alzheimer's Disease Cooperative Study – A4	262	93.866	75689162//U19AG010483-25R		1,205	—
		Alzheimer's Disease Core Center		93.866	3P30AG013854-23S2		1,895,924	—
		Alzheimer's Disease Neuroimaging Initiative (ADNI3)	262	93.866	79634993//WEI2015-01/2U19AG02490411		153,569	—
		Application of Economics & Social Psychology to Improve Opioid Prescribing Safety (AESOPS) Trial	262	93.866	96347693//1R21AG057395-01		39,846	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		ARMADA: Advancing Reliable Measurement in Alzheimer's Disease and cognitive Aging.		93.866	3U2CAG057441-02	\$ 1,326,948	381,251
		BACE1 as a Therapeutic Target for Alzheimer's Disease		93.866	5R01AG022560-15	126,221	—
		Behavioral Economics Applications to Geriatrics Leveraging EHRs (BEAGLE)		93.866	5R21AG057383-02	140,535	—
		C. elegans Model for Neurodegenerative Diseases of Aging		93.866	5R37AG026647-13	118,288	—
		Cardiovascular and HIV/AIDS Effects on Brain Structure/Function and Cognition	260	93.866	00507941(128001-e)/5R01AG034852-06	109,104	—
		Cell aging and vimentin glycation: Effects on the cytoskeleton and cell mechanics		93.866	5R21AG048219-02	112,170	—
		COCOA to improve walking performance in Peripheral Artery Disease: the COCOA-PAD Study		93.866	5R21AG050897-02 REVISED	300,644	42,748
		Collaborative Care for the Older Injured Patient: A Trauma Medical Home	107	93.866	1N4688176NWI/5R01AG0542493-02	47,033	—
		Communication Bridge: A person-centered Internet-based intervention for individuals with primary progressive aphasia		93.866	1R01AG055425-02	535,235	49,981
		Comparative Effectiveness of Customary F&S vs Fit and Strong Plus	237	93.866	7950/5R01AG039374-06	8,305	—
		Connectomic Imaging in Familial and Sporadic Frontotemporal Degeneration	259	93.866	571660/5U01AG052943-02	150,737	—
		Determinants of neurodegenerative decline in the aphasic variant of Alzheimer's disease		93.866	9R01AG056258-06 REVISED	367,794	5,610
		Developing a Longitudinal Resource for Genetic Research in Behavioral and Health Sciences	274	93.866	482K930/1R01AG041868-02	2,847	—
		Developing a Longitudinal Resource for Genetic Research in Behavioral and Health Sciences	274	93.866	636K694/4R01AG041868-04	(2,375)	—
		Development of a non-fibrillar amyloid-beta oligomer selective positron emission tomography imaging diagnostic for Alzheimer Disease	1	93.866	Agmt 3/5/17/1R41AG054337-01	14,043	—
		Disordered Proteostasis as a Driver of Disease in the Aging Lung		93.866	5P01AG049665-04	1,974,905	485,882
		Effects of a Dedicated Nurse Liaison Intervention for Geriatric Patients in the Emergency Department		93.866	1R03AG050945-01A1	99,199	—
		Estradiol reduces mitochondrial oxidant stress in SNc DA neurons		93.866	5F32AG058396-02	51,341	—
		Exceptional Cognitive Aging: Neuropsychologic, Anatomic and Pathologic Correlates		93.866	5R01AG045571-05	496,357	—
		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	37,497	—
		F31 for Stephanie Anne Kiehl in Support of: Cognitive, Motor, and Emotional Markers of Self-reported Cognitive Concerns		93.866	1F31AG051350-02 REVISED	34,402	—
		Functional Properties of the Lateral Entorhinal Cortex in Learning and Aging		93.866	5F31AG055331-02 REVISED	41,493	—
		Genetic Epidemiology of Caffeine and Cognitive Decline		93.866	5K01AG053477-03	101,817	—
		Hepatocyte growth factor to Improve Functioning in PAD: the HI-PAD Study		93.866	1R21AG056903-01	119,578	12,714
		High-throughput multi-modal analysis of natural variation in C. elegans healthspan	259	93.866	572177 / 1R21AG053638-01A1	103,951	—
		Identification of Heterogeneity within the High-Cost PatientPopulation: A Growth Mixture Modeling Approach		93.866	1F31AG055235-01A1	28,692	—
		Improving Quality & Equity of Emergency Care Decisions (IQED)	262	93.866	1052335943/1R21AG057400-01 REVISED	6,998	—
		Integrative Analysis of Longitudinal Studies of Aging	157	93.866	908468_NUJ/4P01AG043362-05	162,315	—
		Integrative Pathways to Health and Illness	274	93.866	618K166//P01AG020166	(843)	—
		Integrative Pathways to Health and Illness	274	93.866	634K352/1U19AG051426-01A1	35,726	—
		LEAF 2.0: Randomized trial of a technology-based positive emotion intervention for informal caregivers of individuals with Alzheimer's disease		93.866	1R01AG058613-01	529	—
		LitCog III: Health Literacy and Cognitive Function among Older Adults		93.866	5R01AG030611-11 REVISED	675,067	79,955
		Living Well With Later Life Multimorbidity: A Biopsychosocial Approach	165	93.866	4102-56030/1R01AG041750-01A1	17,211	—
		Long-Term Nicotine Treatment of Mild Cognitive Impairment	262	93.866	81622655/6R01AG047992-02	13,347	—
		Long-term Outcomes of Knee OA in the OAI Cohort	225	93.866	10477sc	20,427	—
		Molecular and cellular mechanisms of the UNC5C netrin receptor in Alzheimer's disease pathogenesis		93.866	1R01AG057727-01A1	28,659	—
		Molecular Neuropathology and Mechanisms of BACE1 Elevation in Alzheimer's Disease		93.866	5R01AG030142-09	327,205	—
		MRI of Left Atrial Hemodynamic Disorders in Atrial Fibrillation		93.866	3R21AG055954-02S1	132,557	—
		National Alzheimer's Coordinating Center	273	93.866	1U19SC7728/5U01AG016976-20	39,513	—
		National Health Literacy Mapping to Inform Healthcare Policy	257	93.866	5050165/5R01AG46287-04	18,994	—
		NMDA RECEPTOR MODULATORS AS NOOTROPIC THERAPIES IN AGING BRAIN	16	93.866	Agmt 3/3/17/1R43AG051299-01	49,638	—
		Noninvasive Stimulation to Improve Hippocampal-Dependent Memory in Older Adults		93.866	5R01AG049002-04	394,067	—
		Non-Invasive Treatment of Abdominal Aortic Aneurysm Clinical Trial (N-TA3CT)	255	93.866	36-5360-2141-101/4R01AG037120-04	23,890	—
		NRSA F30 Fellowship for Anil Ramesh Wadhvani in support of: Cell autonomous mechanisms of Apolipoprotein E isoform-dependent neurodegeneration		93.866	1F30AG051327-01A1 REVISED	37,458	—
		Optimal Older Donor and Recipient Matching to Enhance Liver Transplant Outcomes		93.866	1R21AG049385-02	31,098	—
		Personality and Well-being Trajectories in Adulthood		93.866	5R01AG018436-17	529,743	105,327
		Physical Exercise to Prevent Disability (The Life Study)	233	93.866	1FDSF00010684/U01AG022376	(5,900)	—
		Physiological role of naturally-occurring amyloid beta oligomers		93.866	1R21AG060203-01	20,320	—
		Preclinical Alzheimers Disease Drug Development of Novel MAPK Inhibitors		93.866	4U01AG043415-05	137,741	—
		Preclinical development of a selective attenuator of neuroinflammation for MCI/AD	241	93.866	3200001251-16-257/5U01AG050636-03	364,122	—
		PREDICT-ADFTD: Multimodal Imaging Prediction of AD/FTD and Differential Diagnosis		93.866	5R01AG055121-02	164,851	22,115
		Predoctoral and postdoctoral training program in aging and dementia		93.866	4T32AG020506-15	39,958	—
		Predoctoral and postdoctoral training program in aging and dementia		93.866	5T32AG020506-17	434,343	—
		Preparation for End-of-Life Decision Making in Mild Alzheimer's Disease	72	93.866	T897810/1R01AG057714-01 Revised	16,183	—
		Quantifying age-related changes in shoulder muscle coordination in healthy adults		93.866	1F31AG057137-01A1 REVISED	4,429	—
		Reducing High-Risk Geriatric Polypharmacy via EHR Nudges	168	93.866	9920180010/R21AG057396	46,057	—
		Regulation of Peripheral Proteostasis		93.866	1RF1AG057296-01	881,250	—
		Regulation of tau expression in Alzheimer's disease and aging	100	93.866	0255-15514609/5R01AG0504008-03	130,759	—
		RESveratrol To Improve Outcomes in older people with PAD (the RESTORE Trial)		93.866	5R21AG047510-02	(5,813)	—
		Role of BMP Signaling in the Aging Brain		93.866	1R01AG054429-02	397,760	—
		Role of CK2 in NMDAR trafficking during development and in Alzheimer's disease		93.866	5R00AG041225-04 REVISED	126,231	—
		Sex Differences in Central Stress Response and Alzheimer's Disease Neuropathology		93.866	1RF1AG057884-01	205,600	—
		Sirtuins: novel determinants and therapeutic target in systemic sclerosis		93.866	1R56AG054207-01	288,609	—
		Slow Outward Currents and Learning in Aging Hippocampus		93.866	5R37AG008796-27 REVISED	620,490	—
		Sporadic Alzheimer's Disease modeled with diabetes and high cholesterol in rabbit		93.866	1R56AG050492-01A1	171,945	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Stellate Ganglion Blockade for the Management of Vasomotor Symptoms		93.866	5R01AG049924-02	\$ 449,634	116,785	
		Stress and Sexuality Divergent Neuropathy in Alzheimer's Disease		93.866	1R56AG053491-01	274,761	123,380	
		Sustaining quality of life of the aged: Heart transplant or mechanical support?		93.866	5R01AG047416-04	629,723	321,198	
		Synaptic substrates of age-dependent memory deficits		93.866	2RF1AG017139-15	652,666	195,536	
		Testing Tele-Savvy, an On-Line Psychoeducation Program for Informal Alzheimer's Caregivers	72	93.866	I745243//1R01AG054079-01	23,356	—	
		The ENRIGISE Study	233	93.866	UFDSP00011851/U01AG050499	116,590	—	
		Therapeutic Effect of Intranasal Insulin on Cognition, Function, and AD Biomarker	224	93.866	42756369//TRF1AG041845-02	3	—	
		Therapeutic Effects of Intranasally-Administered Insulin (INI) in Adults with Amnesic Mild Cognitive Impairment (AMCI) or Mild Alzheimer's Disease (AD)	262	93.866	CTAINI067//RF1AG041845	85,439	—	
		UCLA Older Americans Independence Center (Administrative Supplement)	222	93.866	1558 G VA507//5P30AG028748-12	24,826	—	
							18,810,822	2,119,818
		A clinically applicable model of retinal oxygen metabolism		93.867	5R21EY027502-02 REVISED	257,036	—	
		Activation of the Angiopoietin-Tie2 Pathway to Treat Ocular Hypertension and Glaucoma		93.867	5R01EY025799-03	744,533	234,160	
		Ca2+ channels in retinal photoreceptors	239	93.867	W000941480//R01EY026617-01A1	75,272	—	
		Critical Period Plasticity and Binocular Matching in the Visual Cortex		93.867	5R01EY020950-08 REVISED	106,374	—	
		Deciding Where to Look Next: Frontal Eye Fields Role during Natural Viewing		93.867	5F31EY025532-03 REVISED	30,186	—	
		Diabetic Retinopathy Clinical Research Network Chair Grant		93.867	5U10EY023207-05	392,899	195,057	
		Function of Basal Synapses at Mammalian Photoreceptors		93.867	5R01EY012141-20 REVISED	89,031	—	
		Homeobox Gene Six3 in Forebrain and Visual System Development		93.867	7R01EY012162-17 REVISED	(29,124)	—	
		Investigating nanoscale neuronal damages in early glaucoma towards clinical optical detection		93.867	1R01EY029121-01	47,540	—	
		Investigating oxygen metabolism in diabetic retinopathy		93.867	5R01EY026078-03	464,239	242,843	
		Light responses and microcircuitry of two novel amacrine cell types in the mouse retina		93.867	5F32EY025930-03	54,340	—	
		Long-term Follow-up of Patients Who Participated in the Multicenter Uveitis Steroid Treatment Trial (MUST Trial Follow-up Study)	122	93.867	2003214618//U10EY014660	(466)	—	
		Macular Edema Treatment Trials Associated with MUST (META-MUST)	122	93.867	Sub#2002749092//5U10EY024527-04	1,275	—	
		Mechanisms of anterior segment development and corneal neovascularization		93.867	2R01EY019494-01A1	14,015	—	
		Mechanisms underlying the formation of the cornea and ocular surface epithelium		93.867	1R01EY028304-01A1	93,552	—	
		Microvasculature in Colon Field Carcinogenesis: Clinical-Biological Implications	29	93.867	BMC ID 6610//R01CA224911-01A1	13,434	—	
		Multidisciplinary Visual Sciences Training Program		93.867	5T32EY025202-04 REVISED	146,425	—	
		Natural dynamics of attention in primate prefrontal cortex		93.867	5F32EY027185-02 REVISED	50,765	—	
		Neural Mechanisms of Fixation Choice While Searching Natural Scenes		93.867	5R01EY021579-06	271,368	—	
		Novel Antiangiogenic Peptides for Treatment of Exudative AMD	274	93.867	676K001//R24EY022883	(145)	—	
	Novel Antiangiogenic Peptides for Treatment of Exudative AMD	274	93.867	770K873 // 4R24EY022883-05	315,743	—		
	Novel circuit mapping strategies to reverse engineer the retina		93.867	1DP2EY026770-01	599,540	—		
	Oxygen delivery and metabolism in diabetic retinopathy using visible-light optical coherence tomography		93.867	5F30EY026472-03 REVISED	40,060	—		
	Role of Host Cell Factors in Herpes Simplex Virus (HSV) Keratitis		93.867	5R01EY023877-03 REVISED	506,118	—		
	Signal Processing in the Inner Retina		93.867	5R01EY018204-10 REVISED	86,091	—		
	The Mechanical Basis of Primary Open Angle Glaucoma		93.867	5R01EY019696-09	829,576	614,595		
	The Retinal Microenvironment in Diabetic Retinopathy		93.867	5R01EY021165-05	(1)	—		
	The Role of MicroRNAs in Corneal Epithelial Homeostasis		93.867	5R01EY019463-08	530,598	—		
	The Roles of Autophagy in Limbal/Corneal Epithelia		93.867	1R01EY028560-01	90,808	—		
	Understanding Diabetic Eye Disease in the Underserved Using Health Data Exchange		93.867	5R21EY024050-02	(33)	—		
						5,821,047	1,286,655	
	A New Generation Clinical Decision Support System	260	93.879	0038305 (124684-1)//5R01LM011663-04	136,104	—		
	A Novel Graph Processing Architecture to Ascertain & Monitor Care Coordination		93.879	5K01LM011973-03	30,304	—		
	Bayesian Generative Methods for Extracting and Modeling Relations in EHR Narratives		93.879	1R21LM012618-02	146,139	—		
	Enhancing clinical trials participation through library partnerships		93.879	5G08LM012688-02	76,936	—		
	Implementing and Evaluating a Machine Learning Tool for Entity Resolution in Drug Use and Sexual Contact Networks of YMSM		93.879	5R21LM012578-02	138,928	16,564		
	Improving Physician Adoption of Pharmacogenomic Clinical Decision Support via Implementation Science Methodologies		93.879	5F31LM012492-02	38,565	—		
	Informatics Platform for Mammalian Gene Regulation at Isoform-level		93.879	5R01LM011297-06	334,962	—		
	Multidimensional Computer Adaptive Testing for Patient Reported Outcomes		93.879	5R01LM011962-04	359,751	75,996		
	Predocutorial Training Program in Biomedical Data Driven Discovery (BD3)		93.879	5T32LM012203-04	240,107	—		
						1,501,796	92,560	
	Diabetic Retinopathy Clinical Research Network	120	93.988	Agmt 12/13/12 // U10 EY14231	51,843	—		
	Building Research And Innovation in Nigeria's Science – (BRAINS)	242	93.989	SP0031902-60041063//1D43TW010134-03	115,743	—		
	Developing Innovative Interdisciplinary Biomedical Engineering Programs in Africa		93.989	5D43TW009374-05	320,186	98,773		
	EHR Anticoagulants Pharmacovigilance	246	93.989	S511000040313//7R01HL125089	20,790	—		
	Expanded Multidisciplinary NeuroAIDS Research Training to Improve HIV Outcomes in Nigeria		93.989	2D43TW009606-06	29,451	—		
	Fogarty Global Health Training Fellowship Program	94	93.989	5101817-116559//5D43TW010543-02	22,530	—		
	HIV and Mycobacterial Disease in Mali		93.989	5D43TW010350-03	347,020	164,479		
	Multidisciplinary NeuroAIDS Research Training to Improve HIV Outcomes in Nigeria		93.989	2D43TW009608-06	105,035	42,372		
	Northwestern and Jos University Research Training Program in HIV and Malignancies		93.989	5D43TW009575-04	309,763	64,103		
	Support of Training and Mentoring in Nigeria for Academics (STAMINA)	240	93.989	IJNWU-STAMINA-NU 03//5DW43TW010130-03	122,996	—		
	Tobacco Cessation Strategies Among Acute Coronary Syndrome Patients in Kerala, India	278	93.989	VUMC 5883//SR25TW009337-06	529	—		
	University of Ibadan MEPI Junior Faculty Research Training Program (UI-MEPI-J)	236	93.989	7/25/29/NU-02//D43TW010140-02	164,258	—		
						1,558,301	369,727	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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Department of Health and Human Services (continued)		A real-time, cost-effective, accurate UV measurement and prevention system to reduce skin cancer incidence in consumers.	286	93.RD	AGMT 3/14/18//1R44CA224658-01	\$ 57,386	—		
		Ad5.hAC6 Gene Transfer for CHF	279	93.RD	08082-NU SUB//CRB-HLB1-S-10-00076	474	—		
		Asthma Cohort Support Contract		93.RD	HHSN275201300013C	690,489	23,562		
		Cancer Prevention Agent Development Program: Early Phase Clinical Research Center for Structural Genomics of Infectious Diseases		93.RD	HHSN261201200035//HHSN26100007	2,545,367	830,009		
		Combined Top Down and Bottom Up Proteomics of CompRef Cancer Samples	126	93.RD	HHSN272201200026C	1,039,661	1,037,893		
		Coronary Artery Risk Development in Young Adults (CARDIA) Study – Chicago Field Center		93.RD	13XS108 Mod 06//HHSN261200800001E	3,022	—		
		Coronary Artery Risk Development in Young Adults (CARDIA) Study-Chicago Field Ctr		93.RD	HHSN268201800003I	84,968	—		
		EMR Dataset (Eskenazi Health EMR Dataset)	107	93.RD	HHSN268201300027C	552,161	578		
		Evaluation of Clinical Samples from DENVax Clinical Trial	21	93.RD	Agr. 4/19/2016 //HHSN27601500744P	3,897	—		
		Exact neurobiological correlates of key aspects of behavior in real-time		93.RD	465426//HHSN272201200003//HHSN27200011	16,951	—		
		Exact neurobiological correlates of key aspects of behavior in real-time		93.RD	HHSN271201700289P	23,000	—		
		Exact neurobiological correlates of key aspects of behavior in real-time		93.RD	HHSN271201800190P	18,553	—		
		Exact neurobiological correlates of key aspects of behavior in real-time		93.RD	HHSN271201800279P	20,981	—		
		Folic Acid and Zinc Supplementation Trial (FAZST)	271	93.RD	10028957-03//HHSN27520100007C	4,743	—		
		IPA Agreement 8/2016		93.RD	AGREEMENT 8/18/16	74,055	—		
		Jackson Heart Study Field Center NHLBI-HV-13-10	252	93.RD	66102690414-04NWU//HHSN268201300047C	34,343	—		
		Melanoma Early Detection RCT with Smartphones, Cognitive Computing & Family Social Support	281	93.RD	HHSN261201700003C	12,792	—		
		Multi-Ethnic Study of Atherosclerosis (MESA) Chicago Field Center Subcontract	273	93.RD	UWSC8539//HHSN268201500003I	680,215	—		
		Multi-Site Study of the Efficacy of Speech Perception Training for Hearing-Aid Users	51	93.RD	CDT-2013-6 Amd 4 // R33DC011174-02	4,617	—		
		Pediatric Trials Network-CO_25 (SCAMP)	66	93.RD	203-93-152//HHSN275201000003I	24,782	—		
		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 Protocol Implementation	239	93.RD	HHSN272201600016C	418,700	162,477		
		Protocol IRC002 "A Randomized, Open-Label, Phase 2, Multicenter Safety and Exploratory Efficacy Study of Investigational anti-Influenza Immune Plasma for the Treatment of Influenza"	188	93.RD	HHSN261200800001E/11XS088	2,553	—		
		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	188	93.RD	CRB-SSS-S-15-004659//HHSN2612008000	8,118	—		
		Role of Valve-Mediated Hemodynamics on Bicuspid Aortopathy	232	93.RD	FY19.954.001//7R01HL133504-03	72,427	—		
		Structural Genomics Centers for Infectious Diseases		93.RD	HHSN272201700060C	3,267,252	1,953,233		
		Structure and Function of the SS18-SSX-containing mSWI/SNF (BAF) Complex Unveiling New							
		SurvivorConcierge: Extending Cancer Survivorship Care Beyond the Clinic Using a Smartphone-enabled Monitoring, Navigation and Tailored Intervention Program	281	93.RD	HHSN261201500013C	7,776	—		
		Targeting KRas Switch I with highly specific bacterial endopetidase	159	93.RD	17-40-BIAN//HHSN261200800001E	4,321	—		
		Top Down Proteomics of KRas Proteoforms	126	93.RD	17X183 // HHSN261200800001E	135,172	—		
		Office of Minority Health							
				Addressing Lupus Health Disparities Adapting Culturally-Competent Community-Based Education Models Through Local and National Collaborative Partnerships	93.137	1 CPIMP151087-01-00		(9,702)	—
				Clinical Trials Awareness Modules for the Lupus Conversations Academic-Community Partnership	93.137	1CPIMP181168-01-00		19,854	—
								10,152	—
		Office of the Assistant Secretary for Health							
				National Lupus Outreach and Clinical Trail Education Program (Lupus program)-LUPUS CONVERSATIONS Project	93.137	1CPIMP171141-01-00		262,666	110,112
				Re-Entry Community Linkages (RE-LINK)	93.137	5 CPIMP161134-03-00		406,250	—
								668,916	110,112
		Office of the Director, National Institutes of Health							
				Biochemical Basis of Chromatin Folding and Chromosome Condensation	278	93.310	5DP5OD024587-02	380,908	—
				Data and Research Support Center Linkage Pilot	100	93.310	VUMC65034/5U2C-OD023196-02	14,191	—
				ECHO Consortium on Perinatal Programming of Neurodevelopment	100	93.310	0255-2292-4609/5UG3OD023337-02	30,124	—
				ECHO PRO Research Resource: A Developmentally-based Measurement Science Framework for Assessing Environmental Exposure and Child Health		93.310	1U24OD023319-01 REVISED	2,509,539	354,172
				Environmental Contributors to Child Health Originating from the National Fetal Growth Study (ECCHO-NFGS)	138	93.310	MUSC16-087-8C267//5UG3OD023316-02	393,179	—
				Illinois Precision Medicine Consortium (IPMC)		93.310	1UG3OD023189-01 REVISED	4,624,380	3,490,534
				Infrastructure: Illinois Precision Medicine Consortium (IPMC)		93.310	10T2OD026857-01 REVISED	571,624	—
		Lifecourse Approach to Developmental Repercussions of Environmental Agents on	262	93.310	94743768//UG3OD023287	84,125	—		
		Metabolic and Respiratory health (LA DREAMERS)	278	93.310	VUMC607246/5U2C-OD023196-02	216,305	—		
		Precision Medicine Initiative Cohort Program Coordinating Center (U2C)		93.310	4DP2OD008717-02	(2,797)	—		
		Self-Organization of the Human Genome		93.310					
		The role of steady state broadly neutralizing antibody tissue levels in preventing distal site SHIV replication	93.310	5K01OD024882-02 REVISED		185,594	1,543		
		TOP2A effects on transcription in gliomas: implications for personalized therapy	93.310	7DP5OD021356-03		498,313	—		
						9,505,485	3,846,249		
		Amyloid Beta Oligomer Induction of Alzheimer's Disease in Nonhuman Primates	180	93.350	Agmt 2/16/18 // 1R43OD023025-01A1	46,310	—		
		Animal Models for SCN2A Neurodevelopmental Disorders		93.351	1R21OD025330-01	13,844	—		
		Echo Acoustic Liquid Handler for High Throughput Analysis Lab		93.351	1S10OD023681-01A1	549,800	—		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		PAGES (Progressing through the Ages: Global Climate Change, Evolution, and Societal Well-being)	238	93.351	076638-15799 Amd 01 // 1 R25 OD020203	\$ 36,525	—
		Science Club Summer Camp: Training Teachers and Youth in Authentic STEM Practice		93.351	5R25OD020222-02	(97,885)	—
		Understanding the mechanism(s) of systemic antibody delivery, distribution, and localization to mucosal sites in the in vivo macaque model		93.351	1K01OD026571-01	3,984	—
	Substance Abuse and Mental Health Services	Science Club Summer Camp: Training Teachers and Youth in Authentic STEM Practice		93.859	8R25GM129223-04	323,738	59,610
		APA/SAMHSA Fellowship for Lisette Rodriguez-Cabezas in Support of: APA/Substance Abuse and Mental Health Services Award	13	93.243	Award Letter 4/5/16 // 5T06SM060562-06	3,537	—
		Pilot Evaluation of Crisis Support over Messenger (CSOM)	173	93.243	Agmt 2/7/18	45,875	—
						49,412	—
Department of Health and Human Services Total						345,583,946	49,333,373
Department of Homeland Security		Development of a Real-Time Decision Support System for Proactive Response, including Recourse Planning, under Uncertain Active Cascading Emergencies	17	97.061	18-409 // 2017-ST-061-QA001-01	50,086	—
		Undergraduate Research Assistant for A Real-Time Decision Support System for Proactive Response, including Recourse Planning, under Uncertain Active Cascading Emergencies	17	97.061	ASUB00000017//2017-ST-061-QA001-01	7,900	—
						57,986	—
	Chalcogenide semiconductors for g-ray detection from earth abundant elements	147	97.077	14DNARI00006-05-00	404,363	—	
	Novel Compound Semiconductor Radiation Detectors		97.RD	SUB-01//HSHQDC-14-R-B0009	(34,047)	—	
Department of Homeland Security Total						428,302	—
Department of Housing and Urban Development		Juvenile Reentry Assistance Program (JRAP)	42	14.897	CONTRACT NO. 11841	19,082	—
Department of Housing and Urban Development Total						19,082	—
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	176,436	—
		Office of Justice Programs	Northwestern Juvenile Project: Archiving Data, Part I		16.540	2012-JR-FX-0005	(4,828)
		Trajectories of Delinquency and the Juvenile Justice Systems Response		16.541	2013-JF-FX-0057	32,015	—
		Field-generated Innovations to address elder abuse, neglect and financial exploitation		16.582	2017-VF-GX-K136	134,159	—
		Metropolitan Family Services Legal Aid Society Needs Assessment	140	16.582	Agreement 4/19/17//2012-VF-GX-K022	2,818	—
						136,977	—
	Evaluating a Cognitive Behavioral Approach for Improving Life Outcomes of Underserved Young Women: A Randomized Experiment in Chicago	228	16.726	FP064531 // 2016-JU-FX-0002	29,031	—	
Department of Justice Total						369,631	—
Department of Labor		Islands of Labor: Reservation Labor Markets and American Indian Well-Being	20	17.RD	NU-2017-001//DOL-OPS-15-C-0060	32,728	—
Department of Labor Total						32,728	—
Department of State		U.S. Educational Partnerships	15	19.RD	Agmt 9/26/2017//S-IS400-16-GR-0042	96,146	—
Department of State Total						96,146	—
Department of the Interior	United States Geological Survey	Impacts of stormwater-induced road salt runoff on soil and water quality in urban greenspaces	238	15.805	079901-16311-01 // G16AP00051	7,286	—
Department of the Interior Total						7,286	—
Department of Transportation	Federal Highway Administration	2017 Dwight David Eisenhower Transportation Fellowship Program (DDETFP)		20.215	693JJ31845043	4,848	—
		The Dwight David Eisenhower Transportation Fellowship Program (DDETFP)		20.215	693JJ31845009	26,345	—
	Active Transportation and Demand Management (ATDM) Analytical Methods for Urban Streets Analysis, Modeling, and Simulation (AMS) Testbed Development and Evaluation to Support Dynamic Mobility Applications (DMA) and Active Transportation and Demand Management (ATDM) Programs	127	20.RD	P010177604/DTFH61-12-D-00050	132	—	
	Developing Analysis, Modeling, and Simulation (AMS) Tools for Connected and Automated Vehicle (CAV) Applications	26	20.RD	105952SB1M	(1,616)	—	
		127	20.RD	P010198023 NO.R5 // DTFH6116D00030	52,479	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients		
Department of Transportation (continued)		Development of an Analysis/Modeling/Simulation (AMS) Framework for V2I and CV Environment	127	20.RD	P010198023 R2 // DTFH6116D00030	\$ 107,518	—		
		Estimation of Travel Time Distributions Along User-Defined Travel Paths	127	20.RD	P010198023 NO. R4 // DTFH6116D00030	110,258	—		
		Fundamentals of Travel Time Reliability Guide	127	20.RD	P010198023 R1 // DTFH6116D00030	21,921	—		
		Integrated Modeling for Road Condition Prediction (IMRCP) Phase 3	127	20.RD	10#2 P0#10203492 /D5FH6116D00053	35,457	—		
		Role of Calibration in Quantitative Alternatives Analysis	127	20.RD	P010203492 R1 // DTFH6116D00053	69,269	—		
		Task Integrated Modeling for Road Condition Prediction – Phase 2	127	20.RD	P010178562 Mod //DTFH61-12-D-00045	667	—		
		Tools for Tactical Decision-Making/Advancing Methods for Predicting Performance	127	20.RD	13-014/P010160797 R1/DTFH61-12-D-00020	1,616	—		
		Tools for Tactical Decision-Making/Advancing Methods for Predicting Performance	127	20.RD	P010198023 NO. R3 // DTFH6116D00030	49,990	—		
		Department of Transportation Total						478,884	—
		Department of Veterans Affairs	Edward Hines, Jr. VA Hospital	Elisa Gordon VA IPA – Spark Seed Funding	64.018	Agmt 04/25/18		9,980	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Elisa J. Gordon	64.018			578/151		13,282	—		
Intergovernmental Personnel Act (IPA) Assignment Agreement for Elisa Jill Gordon: VA Innovators Network Accelerator Program	64.018			IPA Agmt Signed 07/14/17 (578/151)		2,593	—		
Department of Veterans Affairs (continued)		Intergovernmental Personnel Act (IPA) Assignment Agreement for Jennifer Kahn	64.018	IPA Agmt Signed 05/31/2017 (578/151)		5,805	—		
		Intergovernmental Personnel Act (IPA) for Geoffrey Brown	64.018	IPA Agmt – 578/151		74,814	—		
						8,707	—		
						115,181	—		
	Jesse Brown VA Medical Center	Intergovernmental Personnel Act (IPA) Assignment Agreement for Damiano Fantini	64.018	IPA Agmt Signed 08/28/2017		33,913	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for David Z. Ivancic	64.018	IPA Agmt. Signed 11/09/17		69,588	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Elena Livia Sima, FY17	64.018	IPA Agmt. Signed 04/12/2017		61,478	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Elspeth Beauchamp	64.018	IPA Agmt. Signed 09/27/2016		74,880	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Ewa Kosciuczuk	64.018	Agmt. signed 10/13/2017 (537/151)		30,582	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Hao Wang	64.018	IPA Agmt Signed 10/06/2016		(22,114)	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Hao Wang	64.018	IPA Agmt. Signed 05/09/18 (537/151)		16,465	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Iman Sarami	64.018	IPA Agmt Signed 11/09/17		2,194	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Linda India	64.018	IPA Agmt. Signed 11/09/17		8,300	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Meng Shang	64.018	IPA Agmt Signed 11/09/2017		40,200	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Michael Cavanaugh	64.018	IPA Agmt Signed 01/25/18		24,676	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Michael Dixon	64.018	Agmt Signed 11/07/2017		56,586	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Monica Chi	64.018	IPA Agmt Signed 11/13/2017		35,252	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Salvatore Condello (FY17)	64.018	IPA Agmt. Signed 09/19/2017 (YR 02)		87,506	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Saul Soberanes	64.018	IPA Agmt. Signed 11/27/2017		54,411	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Seek-Jo Kim	64.018	IPA Agmt Signed 04/12/2017		50,320	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Shantel Olivares: Molecular Mechanisms of Nonalcoholic Fatty Liver Disease	64.018	IPA Agmt Signed 11/09/2017		51,929	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Vera Shively	64.018	IPA Agmt. Signed 07/05/2016		6,031	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Weiqi Huang	64.018	IPA Agmt. signed 12/06/17 (537/151)		22,924	—		
		Intergovernmental Personnel Act (IPA) Assignment Agreement for Yanni Yu	64.018	Agmt Signed 07/26/18		28,619	—		
		IPA for Paul Cheresh	64.018	IPA Agmt Signed 11/13/2017		70,792	—		
		VA IPA for Kazumi Ebine	64.018	537/151		69,288	—		
								873,820	—
	VA Salt Lake City Health Care System	Quality Enhancement Research Initiative (VA SLC Health Care System IPA Agreement for William Thompson)	64.018	IPA Agmt signed 02/10/17		11,682	—		
						1,000,683	—		
Department of Veterans Affairs Total						1,000,683	—		
Environmental Protection Agency		The Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air): Next Stage	273	66.509	UWSC10113/838300001-0	30,081	—		
		Building Energy Efficiency in the U.S. Industrial Sector	101	66.RD	13MGB00001-101/EP-BPA-12-H-0012	43	—		
						30,124	—		
Environmental Protection Agency Total						30,124	—		
National Aeronautics and Space Administration		A Novel Approach to the Common Envelope Evolution	187	43.001	TM6-17005X/INAS8-03060	27,034	—		
		A simulation pipeline for the study of kilonovae light curves and r-process nucleosynthesis in compact binary mergers	256	43.001	180042/80NSSC18K0565	24,681	—		
		Biologic and Resource Analog Investigations in Low Light Environments (BRAILLE)	25	43.001	BMSA-006 // 80NSSC17M0054	21,998	—		
		Bringing Gravitational Wave Astronomy to Light: Chandra X-ray Localization of LIGO-Virgo GW Sources	187	43.001	G07-18033X/INAS8-03060	29,020	—		
		Continued Chandra Observations of GW170817 (Proposal 19408644-C)	187	43.001	DD8-19101A/INAS8-03060	6,075	—		
		Continued X-Ray Monitoring of GW170817 with Chandra	187	43.001	DD7-18096A // INAS8-03060	5,044	—		
		Energetics and Environment of Hydrogen-poor Core-Collapse SNe	187	43.001	heG05-16064A/INAS8-03060	(105)	—		
Late-time X-rays to map the Zoo of Engine-driven Stellar Explosions	187	43.001	G07-18057X // INAS8-03060	15,446	—				

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients	
National Aeronautics and Space Administration (continued)		Late-time X-rays to map the Zoo of Engine-driven Stellar Explosions	187	43.001	G08-19044X // NAS8-03060	\$ 10,806	—	
		Life Underground	262	43.001	65904754 Amd. 4 // NNA13AA92A	68,289	—	
		Mapping the Zoo of engine driven explosions with late-time X-rays	187	43.001	G05-16059A//NAS8-03060	(9,037)	—	
		Probing Plasma Properties in Supernova Remnants observed by XMM-Newton	162	43.001	5841-NU-NASA-F03G//NNX15AF03G	11,254	—	
		Probing the Energetics and Environments of Hydrogen-poor Core-Collapse SNe	187	43.001	G06-17053A//NAS8-03060	38,692	—	
		Source of energy and pre-explosion progenitor evolution of Super-Luminous SNe	187	43.001	G06-17052A//NAS8-03060	11,332	—	
		Source of Energy and pre-explosion progenitor evolution of Super-Luminous Supernovae	187	43.001	G07-18046A//NAS8-03060	9,735	—	
		Source of Energy and pre-explosion progenitor evolution of Super-Luminous Supernovae	187	43.001	G08-19047A//NAS8-03060	8,024	—	
		The Balloon-Borne Large Aperture Telescope for Polarization – BLASTPol	259	43.001	573659 // 80NSSC18K0481	85,333	—	
		The Late-time X-ray Behavior of Short Gamma-ray Bursts: Implications for Energetics and Rates	187	43.001	G08-19025X //NAS8-03060	1,931	—	
		The Triggering Mechanisms and Accretion Modes of AGN: New Cosmological Simulations to Interpret Chandra Surveys	187	43.001	TM7-18007X//NAS8-03060	21,799	—	
		The unprecedented metamorphosis of SN2014C: from a H-stripped explosion to a strongly interacting supernova	187	43.001	G06-17054A//NAS8-03060	23,190	—	
						410,541	—	
		Multiple Undergraduate Research Projects	238	43.008	2015-05200-09/078131-15789)-AB425-03//NNX154AAI05H	105,743	—	
		Combining Statistical Samples of Resolved-ISM Simulated Galaxies with Realistic Mock Observations to Fully Interpret HST and JWST Surveys	190	43.RD	HST-AR-14562.001-A//NAS5-26555	35,193	—	
		Fast Light Enhanced Active Gyroscopes, Accelerometers and Fiber-Optic Sensors	64	43.RD	Agmt 5/30/16 // NNX16CM03C	100,190	—	
		G.O. Program to Characterize Magnetic Fields in Nearby Interstellar Clouds	33	43.RD	RSA No. 1594471 // NNN12AA01C	28,000	—	
		HI and Low Metal Ions at the Intersection of Galaxies and the CGM	190	43.RD	HST-AR-15045.004-A // NAS5-26555	11,537	—	
		Identifying Globular Clusters Hosting Large Numbers of Black Holes	190	43.RD	HST-AR-14555.001-A//NAS5-26555	44,198	—	
		Investigating the Gas within the Planck Galactic Cold Clumps	190	43.RD	HST-AR-14292.001-A	16,094	—	
		Joint HAWC+ALMA study of magnetic fields in Ophiuchus	213	43.RD	SOFIA 05-0133 01 // NAS2-97001	53,669	22,108	
		Magnetic Field Structure in Perseus at 0.01 pc Scale	213	43.RD	SOF 05-0081 Santos // NAS2-97001	113,136	—	
		Metallicity and Azimuthal Angle Diagnostics of Inflows and Outflows: Interpreting HST Measurements of Circum-Galactic Gas Flows	190	43.RD	HST-AR-14293.001-A//NAS5-26555	18,704	—	
		Modeling the Origins of Sub-subgiant Stars	190	43.RD	HST-AR-13910.001-A//NAS5-26555	13,785	—	
		Preparation and Characterization of Sn- and Sb-based Zintl Phases as Promising Thermoelectric Materials	33	43.RD	1536068-002//NNN12AA01C	252,824	—	
		Project AMIGA: Mapping the Circumgalactic Medium of Andromeda	190	43.RD	HST-GO-14268.022-A	16,196	—	
		Sofa Wide-Field Far-IR Polarimetry and Fine-Structure-Line Imaging with the HAWC+ Upgrade	33	43.RD	Subk No. 1478794 Mod 14 // NNN12AA01C	84,690	—	
		Toward the Next Breakthrough: Detecting the Electromagnetic Counterparts to Gravitational Waves	190	43.RD	HST-HF2-51390.001-A // NAS5-26555	107,302	—	
		Tracing Galactic Outflows to the Source: Spatially Resolved Feedback in M83 with COS	190	43.RD	HST-GO-14681.011-A//NAS5-26555	466	—	
		Underlying Hosts of Highly-Kicked? Determining the Nature of Host-less Short Gamma-ray Bursts with HST	190	43.RD	HST-GO-14685.007-A // NAS5-26555	32,170	—	
	NASA Ames Research Center		Effects of Spaceflight on Gastrointestinal Microbiota in Mice: Mechanisms and Impact on Multi-System Physiology		43.007	NNX15AL05G 000010	547,814	121,456
	NASA George C. Marshall Space Flight Center		HAWC+ Observations of two Galactic center Molecular clouds: G0.13-0.13 and G359.44-0.10	213	43.RD	SOFIA 05-0037 // NAS2-97001	7,000	—
			The Columnar to Equiaxed Transition and Dendrite Fragmentation		43.003	NNX17AD48G 000002	90,963	—
			Microstructure Evolution in Freeze-Cast Materials		43.007	80NSSC18K0196-P00001	16,862	—
	NASA Goddard Space Flight Center		Continued NuSTAR monitoring of the unprecedented metamorphosis of SN2014C		43.001	NNX17AI13G	43,993	—
		Correcting and Coating Thin Walled X-ray Optics via a Combination of Controlled Film Deposition and Magnetic Smart Materials		43.001	NNX17AE10G-000001	114,781	—	
		Deciphering Kepler's Planetary Systems		43.001	NNX14AD21G 000005	96,252	—	
		Detailed mapping of extreme mass loss with coordinated NuSTAR-XMM observations		43.001	NNX17AC09G	20,000	—	
		Detailed mapping of extreme mass loss with coordinated NuSTAR-XMM observations		43.001	NNX17AC44G-000002	36,522	—	
		Detailed Mapping of Extreme Mass-Loss From Evolved Massive Stars With Swift		43.001	80NSSC18K0575	35,436	—	
		Dynamical Modeling of Dense Star Clusters with a Parallel Monte Carlo Code		43.001	NNX14AP92G-000005	129,754	—	
		Energy and Environment of Hydrogen-poor Core-Collapse SNe		43.001	NNX16AT58G	31,489	—	
		Energy and Geometry of Jet-driven Explosions in the Local Universe		43.001	80NSSC17K0052	32,834	—	
		Energy source and pre-explosion progenitor evolution of Super-Luminous Supernovae		43.001	NNX17AD89G	23,756	—	
		Explosion mechanisms and energy sources powering super-luminous supernovae		43.001	NNX16AT51G	8,869	—	
		Explosion mechanisms and energy sources powering super-luminous supernovae		43.001	NNX16AT81G	5,434	—	
		Late-time X-ray Behavior of Short Gamma-Ray Bursts: Implications for Energetics and Rates		43.001	80NSSC18K0189	4,550	—	
		Lipid Biomarkers of the Deep Subsurface Biosphere		43.001	NNX15AM08G 000002	63,253	—	
		Low Frequency Gravitational Wave Astrophysics		43.001	NNX13AM10G/000003	6,985	—	
		Probing the Mass-Loss History of Massive Stars with Swift		43.001	NNX17AD82G	33,075	—	
		Supernova Remnant Observations and Dark Matter Searches with Micro-X		43.001	80NSSC18K1445	129,211	—	
		Supernova Remnant Observations with Micro-X		43.001	NNX16AL94G-000001	505,443	29,085	
		The Balloon-borne Large Aperture Submillimeter Telescope – BLAST	259	43.001	560958 Amd 6 // NNX13E50G	22,047	—	
		The Physical Nature of Circum-Galactic Gas		43.001	NNX15AB22G-000002	110,291	—	
		The Strontium Isotope Composition of Neoproterozoic Carbonates: Implications for the Carbon Cycle and the Evolution of the Biosphere		43.001	80NSSC17K0245	127,646	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients	
National Aeronautics and Space Administration (continued)		The unprecedented metamorphosis of SN2014C: from a H-stripped explosion to a strongly interacting SN		43.001	NNX17AG80G	\$ 31,063	—	
		Convective Effects on Solid/Liquid Interface Dynamics in the Freeze-Casting Process		43.008	NNX16AI78A	1,612,684	29,085	
		Further Development of Aperture: A Precise Extremely large Reflective Telescope Using Re-configurable Elements		43.009	NNX16AL31G-000001	73,336	45,606	
		Compact Robust Integrated PPM Laser Transceiver Chip Set with High Sensitivity, Efficiency, and Re-Configurability		43.012	NNX16AE02G 000003	242,513	133,458	
		Efficient and Scalable Fabrication of Solid Oxide Fuel Cells via 3D-Printing		43.012	80NSSC17K0192-P00001	240,069	42,968	
						60,002	—	
						300,071	42,968	
	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	62	43.002	501237SG138 Amd 2 // NNX16AQ48G	76,469	—	
		CREWS: Crew Recommender for Effective Work in Space		43.003	NNX15AM32G 000008	307,322	134,997	
		HERO Twin Astronaut Study Consortium (TASC) Project: Metagenomic Sequencing of the Bacteriome in GI Tract of Twin Astronauts		43.003	NNX14AH26G-000005	36,498	—	
		SCALE: Shared Cognitive Architectures for Long-term Exploration		43.003	80NSSC18K0221	334,232	—	
		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	320,839	—	
						998,891	134,997	
		NRI: Collaborative Research: Integrating Physics Models and Control Methodologies for Enhanced Legged Locomotion on Yielding Terrain		43.007	NNX15AR24G 000007	144,072	—	
National Aeronautics and Space Administration Total						5,555,113	529,678	
National Foundation of the Arts and Humanities	Institute of Museum and Library Services	Engaging Engineering Experts: Facilitating Family STEM Learning in Museums and Libraries Through Narrative Storytelling and Object-Based Inquiry Activities	129	45.312	517350-NWU//MG-77-16-0118-16	24,821	—	
		Getting to know their data doubles: An inquiry into student perceptions of privacy issues associated with academic library participation in learning analytics	107	45.312	IN-4370124-NU // LG-96-18-0044-18	3,329	—	
						28,150	—	
	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	55,769	—	
		Tools for Listening to Texts-in-Performance		45.169	HAA-258799-18	14,948	—	
National Foundation of the Arts and Humanities Total						98,867	—	
National Science Foundation		3D Braided Composite Structures - Experimental Characterization and Modeling of Fracturing Behavior		47.041	CMMI-1435950	17,519	—	
		3D Near Field e-Writing with Submicron Resolution		47.041	CMMI-1404489	43,431	—	
		Advancing Dynamic Relief Response: Integration of New Data Streams and Routing Models		47.041	CMMI-1265786	2,180	—	
		An Optimal Design of Experiments Approach for Reliable Risk Assessment with Error-prone Electronic Medical Records		47.041	CMMI-1436574	95,497	—	
		CAREER: Engineering Non-Growth Metabolism for High-Yield Biochemical Production		47.041	CBET-1452549-003	130,008	—	
		CAREER: Functional Imaging to Prevent Blindness		47.041	CBET-1055379	1	—	
		CAREER: Mechanics of Geomaterials Exposed to Multi-Physical Perturbations: Innovating Science, Training and Education through Fundamental Principles		47.041	CMMI-1351534-005	125,643	—	
		CAREER: Prediction of multiscale emergent dynamics in decentralized cell populations		47.041	CBET-1653315	75,449	—	
		CAREER: Rational design of a biomimetic nanomaterial library to probe mechanisms behind virus-induced immunopathology		47.041	CBET-1453576	130,442	—	
		CAREER: Tuning passive prosthetic leg dynamics to create low-cost, robust devices that can replicate physiological gait in multiple activities of daily living		47.041	5710004259/CBET-1653758	30,690	9,028	
		CBET-EPSRC A Game-Changing Approach for Tunable Membrane Development: Novel Covalent Organic Framework Active Layers Supported by Solvent Resistant Materials		238	47.041	087147-16468 // CBET-1706219	80,317	—
		CDI-Type I: Discovery of Novel Biochemical Pathways		47.041	CBET-0835800	(338)	—	
		Collaborative Research: Analysis and Solution Methods for Function Robust Optimization Models		47.041	CMMI-1361942	53,992	—	
		Collaborative Research: Concurrent Design of Quasi-Random Nanostructured Material Systems (NMS) and Nanofabrication Processes using Spectral Density Function		47.041	CMMI-1662435	6,905	—	
		Collaborative Research: EAGER: Explore the Theoretical Framework of Engineering Knowledge Transfer in Cybermanufacturing Systems		47.041	CMMI-1833195	29,857	—	
		Collaborative Research: Electrorotational fluid instabilities		47.041	CBET-1704996	82,360	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Collaborative Research: Elucidation and Evaluation of Strategies to Mitigate Secondary Reactions in Cellulose Pyrolysis for Enhanced Production of Hydrolysable Anhydrosugars		47.041	CBET-1435228	\$ 27,351	—
		Collaborative Research: Engineering Polymer Nanodielectric Systems using a Descriptor-based Design Methodology		47.041	CMMI-1334929	(1,400)	—
		Collaborative Research: Ergodic Trajectories in Discrete Mechanics		47.041	CMMI-1334609	(201)	—
		Collaborative Research: Formation and Stability of Eutectic Nanostructures in Laser-Irradiated Particle Suspensions		47.041	CMMI-1663196	6,755	—
		Collaborative Research: GOALI: Modeling and optimizing patient-flow dynamics in hospitals and hospital networks		47.041	CMMI-1763100	853	—
		Collaborative Research: Integrated Measurement and Predictive Modeling of Adsorbate Coverage and Compositional Effects on Catalytic Activity		47.041	CBET-1264963	(3)	—
		Collaborative Research: Model-Based Multidisciplinary Dynamic Decisions in Design		47.041	CMMI-1537641	93,412	—
		Collaborative Research: Quantitative Analysis of Liposome Deformation at Nanoscale Using Resistive Pulse Sensing in Solid State Nanopores		47.041	CMMI-1740011	77,923	—
		Collaborative Research: Workshop on Acquiring and Sharing Data within the CMMI Research Community		47.041	CMMI-1654469	10,419	—
		Computational Discovery and Analysis of Catalytic Routes to Bio-based Renewable Chemicals	119	47.041	Agmt 3/10/2017 // 400-72-04-33-15F1 Amd 2	36,057	—
		Control of Hybrid Locomotion with Impacts		47.041	CMMI-1436297	100,403	—
		CPS: Synergy: An Integrated Simulation and Process Control Platform for Distributed Manufacturing Process Chains		47.041	CMMI-1646592-002	57,669	—
		Curved Waterjet-Guided Laser Micro-Manufacturing		47.041	CMMI-1234491	(298)	—
		Cutting and Shuffling: A New Dynamical Systems Paradigm for Mixing		47.041	CMMI-1435065	69,154	—
		Data-driven multiscale damage and failure prediction		47.041	CMMI-1762035	988	—
		Design and exploration of high-temperature steels for electric power generation applications		47.041	CMMI-1462850	76,329	—
		Diffraction-grating coupled surface emitting Terahertz quantum cascade laser source for high power, room temperature continuous wave operation		47.041	ECCS-1607838	117,082	—
		EAGER: MOVCD Growth of beta-(Al,In,Ga)2O3 for Transistor Applications		47.041	ECCS-1748339	90,013	—
		EAGER: Optical Coherence Elastography (OCE): A novel tool for rapid, non-destructive, spatially resolved quantification of mesoscale biofilm mechanical properties		47.041	CBET-1701105	43,765	—
		EFRI 2-DARE: Scalable Growth and Fabrication of Anti-Ambipolar Heterojunction Devices		47.041	EFRI-1433510	393,653	136,700
		EFRI CEE: Macro-genomic engineering via modulation of chromatin nanoenvironment		47.041	EFMA-1830961	711	—
		EFRI-BioFlex: Miniature, Low-cost Fiber-optics Technology for Measurement of Tissue Structure at Sub-diffractive Length Scales: A Platform for Cancer Screening		47.041	EFRI/EFMA-1240416-004	265,709	—
		Electric Field Guided Micro Additive Manufacturing Process		47.041	CMMI-1463411	54,844	—
		Electromechanical Properties and Deformation of Biomembranes		47.041	CMMI-1748049	87,652	—
		Engineering a recombinant methane monooxygenase to convert methane to methanol for the production of fuels and chemicals	164	47.041	PNU-001/1634743	73,557	—
		Engineering a secretion-based, high-liter protein production process in bacteria		47.041	CBET-1706125	79,428	—
		Engineering Research Center for Innovative and Strategic Transformation of Alkane Resources – CISTAR	165	47.041	4101-83478 // 1647722-EEC	218,316	—
		Exploiting Network Structure in Routing Problems: Applications to School Bus Routing		47.041	CMMI-1727744	168,800	—
		Exploring local confinement of ultrafast light to enable nondestructive acoustic metrology at the nanoscale		47.041	ECCS-1611356	112,631	—
		Feedback-based radiofrequency ablation system for user-defined three-dimensional ablation geometries	109	47.041	Agmt 8/9/2016//IP-1622842	(86)	—
		Fractal Mechanics of Stretchable Piezoelectrics for Mechanical Energy Harvesting		47.041	CMMI-1400169	106,787	—
		Friction in Full View		47.041	CMMI-1400618	64,158	—
		Functionalities Emerging in Adaptive Brain Networks through Selective Synchronization of Neurons by Targeted Feedback		47.041	CMMI-1435358	51,316	—
		GOALI/Collaborative Research: Reliable Prediction of Endurance Life of Ultra-High-Strength Aerospace Rolling-Element Bearings		47.041	CMMI-1434834	54,408	—
		GOALI: Computer Simulation Analytics		47.041	CMMI-1537060	87,476	—
		GOALI: Models and Methods for Marathon Course Design using Multi-Objective Approaches		47.041	CMMI-1405231	23,493	—
		GOALI: Strength Loss in Clays During Earthquake and Other Cyclic Loading		47.041	CMMI-1434876	94,875	—
		Green Simulation: A Methodology for Reusing the Output of Past Computer Simulation Experiments		47.041	CMMI-1634982	36,211	—
		Hot Extrusion of High-Strength Aluminum Alloys with Rotary Porthole Dies		47.041	CMMI-1743691	49,918	—
		I-Corps: Clinical Workforce Schedule Optimization Technology		47.041	IIP-1764312	37,815	—
		IDR: Engineering Electroactive-Polymer-Based Phononic Crystals as a Sustainable Energy Source		47.041	CMMI-1130948	(610)	—
		Investigating the impact of tumor heterogeneity on sustained low dosage immunotherapy via a peritumoral immunotheranostic hydrogel		47.041	CBET-1806007	10,969	—
		iSee: A Smart Device based Depression Behavior Monitoring and Analytics Service for College Students	141	47.041	RC106479NU//1632051	5,455	—
		Magnetic microrollers as a platform for active transport	145	47.041	F0278-01 // CBET-1706562	9,662	—
		Magnetically Controlled- Laser Induced Plasma Micro-Machining (MC-LIPMM)		47.041	CMMI-1563244	25,553	—
		Managing Downstream Patient Flow Processes Using Improved Coordination and Staffing		47.041	CMMI-1335585	19,539	—
		Market Expectations, Long Term Risk, and Stochastic Spectral Theory		47.041	CMMI-1536503	59,267	—
		Molecular Organization and Transport in Synthetic and Biological Nanopores		47.041	CBET-1403058	74,412	—
		Monolithic Nanofabrication: A Bottom-up Approach for Manufacturing Nanotextured Surfaces		47.041	CMMI-1462633 001	26,395	—
		Multidimensional Network Analysis for Analyzing and Predicting Complex Customer-Product Relations in Engineering Design		47.041	CMMI-1436658	89,829	—
	Neuroprotective Engineering Based on Innate Responses to Stroke		47.041	CBET-1403036	93,277	—	
	NNC: Soft and Hybrid Nanotechnology Experimental (SHYNE) Resource		47.041	ECCS-1542205	916,349	302,641	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Northwestern University Planning Grant: IU/CRC for Industry/University metal deFOrmation Center for US (iuFOCUS)		47.041	IIP-1624823	\$ (475)	—	
		NRI: Task-Based Assistance for Software-Enabled Biomedical Devices		47.041	CBET-1637764	62,351	—	
		On-demand Generation of Diamond-like-carbon Layers for Efficient Lubrication of Mechanical Systems		47.041	CMMI-1662606	46,961	—	
		PFI: AIR-TT SAFE (Situational Awareness for Events): A Data Visualization System		47.041	IIP-1640736	69,649	—	
		PFLAIR – TT: BaTiO3 Photonic Crystal Electro-optic Devices for 50 GHz Applications		47.041	IIP-1500222 001	12,709	—	
		PFI-BIC – Smart CROwdsourced Urban Delivery (CROUD) System		47.041	IIP-1534138	311,338	111,193	
		PFI-BIC: A Smart, "Always-on" Health Monitoring System		47.041	IIP-1534120-002	430,391	314,431	
		PFI-AIR: Technology Translation – Highly Sensitive Eye-safe Flash LIDARs based on Nanoinjection Detectors		47.041	IIP-1500314 001	(48)	—	
		Process Modeling and Enhancements of Laser-Induced Plasma Micro-Machining (LIP-MM)		47.041	CMMI-1335014	63,670	—	
		Processing of Advanced Foam Scaffolds for Iron-Air Battery Applications		47.041	CMMI-1562941	104,404	—	
		RAPID: Addressing Geographic Disparities in the National Organ Transplant Network		47.041	CMMI-1743886	59,606	—	
		RAPID: Adaptive management of geotechnical construction in urban areas		47.041	CMMI-1603060	10,730	—	
		Robust Multi-Criteria Optimization With Application to Radiation Therapy		47.041	CMMI-1463489	119,831	—	
		SampleStream: A Sample Preparation Platform for Biologics	114	47.041	Agmt 8/15/2017 // IIP-1721594	59,043	—	
		Service Systems with Outbound Work and Blending		47.041	CMMI-1436518	39,486	—	
		SNM: Collaborative Research: 3D Nanomanufacturing by Imprint and Strain Engineering via a peritumoral immunotheranostic hydrogel	122	47.041	2003142248 Amd 2 // 1635443	238,942	—	
		SNM: Customized Inkjet Printing of Graphene-Based Real-time Water Sensors	275	47.041	1727846//183405339/AAC5754	105,265	—	
		SNM: Robust Scalable Nanomanufacturing of Photonic Structures		47.041	EEC-1530734	383,236	108,888	
		Soil Slip Versus Flow Failure in Rain-infiltrated Slopes: Using Principles of Geomechanical Stability to Enhance Spatially Distributed Models for Shallow Landslides		47.041	CMMI-1324834	(44)	—	
		Spectroscopic photon localization microscopy for super-resolution molecular imaging		47.041	CBET-1706642 001	190,896	—	
		Stability and Optimality Properties of Sequential Action Control for Nonlinear and Hybrid Systems		47.041	CMMI-1662233	34,618	—	
		Strong and Multifunctional Geopolymer Composites: A Multi-Scale Study		47.041	CMMI-1829101	34,237	—	
		SusChEM: Integrated Materials and Process Systems Development for Sustainable Carbon Capture		47.041	CBET-1604890	130,537	—	
		SusChEM: Using theory-driven design to tailor novel nanocomposite oxides for solar fuel production		47.041	CBET-1438721	176,242	—	
		Terahertz source frequency comb based on difference frequency generation from a mid-IR quantum cascade laser		47.041	ECCS-1505409	132,147	—	
		Two-compartment microfluidic bioreactor with functionalized PEG hydrogels to promote platelet production in culture		47.041	CBET-1265029	(880)	—	
		Unlocking Efficiencies in Earthmoving for Future Infrastructure: Modeling Plowing and Cutting Processes in Soils		47.041	CMMI-1742849	93,870	—	
		UNS: Controlling mixing and segregation of granular media using unsteady flows		47.041	CBET-1511450	51,974	—	
							8,071,079	982,881
		3he in Confinement		47.049	DMR-1602542	134,960	—	
		A Sheaf-Theoretic Approach to M5-Brane Geometry		47.049	DMS-1708503	75,375	—	
		Accretion and Star Formation Induced by the Galactic Center Supermassive Black Hole Sgr A*		47.049	AST-1517246 002	125,901	—	
		Advanced Algorithms for Colloids with Induced Many-Body Interactions		47.049	DMR-1610796-001	132,376	—	
		Algorithms for Nonlinear Nonconvex Optimization under Uncertainty		47.049	DMS-1522747	49,005	—	
		Allosterically Regulated Supramolecular Capsules and Receptors Assembled via the WLA		47.049	CHE-1709898	98,865	—	
		Amenable and recurrent actions of finitely generated groups		47.049	DMS-1352173-004	64,736	—	
		An Atom-Probe Tomography and Lattice Kinetic Monte Carlo Study of Phase Separation in Ni-Al-Based Alloys from the Atomic Scale Up to Link with Continuum Theories		47.049	DMR-1207539/ Amd 003	(29)	—	
		Analysis on Manifolds		47.049	DMS 1502632 003	437,294	—	
		Arakelov geometry, Shimura varieties, and L-functions of motives		47.049	DMS-1702019	48,930	—	
		ATD: A Mixture Modeling Framework for Statistical Identification of Multiple Genomes in Metagenomics Samples		47.049	DMS-1043080	68	—	
		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	166,043	—	
		Bioengineering Single Crystal Growth		47.049	DMR-1506399-002	90,701	—	
		Biouptake of Mercury: Speciation and Processes at the Cell Surface		47.049	CHE-1306804	(3,331)	—	
		Black Holes in Dense Star Clusters		47.049	AST-1716762	46,644	—	
		CAREER: Complexity of Disordered Systems		47.049	DMS-1653552	104,291	—	
		CAREER: Ligand Engineering of Structure and Electronic Function in Complex Metal Oxyfluorides		47.049	DMR-1454688 004	156,062	14,790	
		CAREER: Planet Formations in the Age of Kepler		47.049	AST-1352369	61,887	—	
		CAREER: Synthesis and Studies of One-Dimensional Magnets Supported by Bulky, Redox-Active Benzoquinonoid Bridging Ligands		47.049	DMR-1351959 004	96,184	—	
		CAREER: Synthesis of molecular electronic-spin based qubits enabled by new empirically derived design principles		47.049	CHE-1455017	115,971	—	
		CAREER: The Physics of Stellar Feedback and Star Formation Regulation in Galaxies		47.049	AST-1652522	54,706	—	
		CAREER: Theories for Magnetic Properties of Lanthanide and Actinide Complexes		47.049	CHE-1351598	134,751	—	
		CCI Phase II: Center for Sustainable Nanotechnology	274	47.049	630K475 Amd 3 // CHE-1503408	187,119	—	
		CDS&E: Organization and Dynamics of Charged Molecules in Heterogeneous Media		47.049	DMR-1611076 No. 001	162,034	—	
		CEMRI: Multifunctional Nanoscale Material Structures		47.049	DMR-1121262 Amd 009	1,157,369	44,945	
		Center for Sustainable Polymers	251	47.049	A004088505 Amd. 1 // CHE-1413862	246,013	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Charge Transfer as a Probe of the Permeability of Organic Adlayers on Colloidal Semiconductor Quantum Dots		47.049	CHE-1400596	\$ 2,319	—
		Coherent and Incoherent Control in Material Systems		47.049	CHE-1465201	7,847	—
		Cohomological and singularity invariants via Hodge modules and derived equivalences		47.049	DMS-1405516-002	11,815	—
		Collaborative Research: Algorithms for Large-Scale Stochastic and Nonlinear Optimization		47.049	DMS-1620022	119,650	—
		Collaborative Research: Axion Resonant InterAction DetectioN Experiment (ARIADNE)		47.049	PHY-1626505	6,403	—
		Collaborative Research: Axion Resonant InterAction DetectioN Experiment (ARIADNE) – a continuation proposal		47.049	PHY-1806671	27,950	—
		Collaborative Research: CDS&E: FIRE: Physically-Predictive Cosmological Simulations of Galaxy Formation with Resolved Feedback		47.049	AST-1412836	24,463	—
		Collaborative Research: Controlled Disorder and Topological Defects in Magnetically Frustrated Thin Film Metamaterials		47.049	DMR-1507058	25,200	—
		Collaborative Research: Designer Glass Ceramics		47.049	DMR-1600837	73,212	—
		Collaborative Research: Enhancing Access to Radio Spectrum for Real-time Monitoring and Control		47.049	AST-1547328	86,419	—
		Collaborative Research: Factorization Homology and the Cobordism Hypothesis		47.049	DMS-1508040-002	66,182	—
		Collaborative Research: Factorization Homology, Deformation Theory, and Duality		47.049	DMS-1812057	51,781	—
		Collaborative Research: Fluctuating Hydrodynamics of Suspensions of Rigid Bodies		47.049	DMS-1418672	6,104	—
		Collaborative Research: High-Throughput Quantification of Solid State Electrochemistry for Next Generation Energy Technologies		47.049	DMR-1505103 004	159,929	—
		Collaborative Research: Integrated Computational and Experimental Studies of Solid Oxide Fuel Cell Electrode Structural Evolution and Electrochemical Characteristics		47.049	DMR-1506925-002	103,422	—
		Collaborative Research: Investigating Structural Dynamic Coherences of Transition Metal Complexes in Photochemical Processes		47.049	CHE-1363007	(15)	—
		Collaborative Research: NanoMine: Data Driven Discovery for Nanocomposites		47.049	DMR-1310292	(4,542)	—
		Collaborative Research: Predictive theory, synthesis and characterization of a new type of transparent conductor without doping		47.049	DMR-1806912	6,018	—
		Collaborative Research: Size Effects on Magneto-Mechanics of Ni-Mn-Ga Fibers		47.049	DMR-1207282	(158)	—
		Collaborative Research: Size-Effect Driven Nanoparticle Ferromagnetism		47.049	DMR-1508323 002	54,572	—
		Collaborative Research: The SuperCDMS SNOLAB Experiment		47.049	PHY-1809730	8,485	—
		Collaborative Research: Tolerance-Enforced Simulation of Stochastic Processes		47.049	DMS-1720433	4,875	—
		Collaborative Research:CDS&E: Mining Physically Predictive Cosmological Simulations		47.049	AST-1715216	52,537	—
		Collaborative Research:Ultrafast Excited State Electron and Nuclear Coherences in Transition Metal Dimer Complexes and Their Roles in Photochemistry		47.049	CHE-1665021	62,462	—
		Collective dynamics of particles at fluid interfaces		47.049	DMS-1716114	90,535	—
		Complex algebraic dynamics and geometry		47.049	DMS-1600718-001	160,759	—
		Conference: Manifolds and Groups: Towers of Covers; September 7th - September 12th, 2015, Ventotene, Italy		47.049	DMS-1522981-001	13,600	—
		Dark Matter and Neutrino Physics with Cryogenic Detectors		47.049	PHY-1550658-002	2,405	—
		Deposition, Equilibrium Structure and Mechanical Response of Polyelectrolyte Complexes		47.049	DMR-1710491	143,574	—
		Design and Synthesis of Non-equilibrium Systems		47.049	CHE-1308107	(112,596)	—
		Deterministic and Stochastic Models of Water Limited Ecosystems: Implications of Pattern Formation, Bifurcations, Model Reduction, and Data	228	47.049	FP063753 // DMS-1639761 Amd 1	65,437	—
		DMREF/Collaborative Research: Computationally Driven Targeting of Advanced Thermoelectric Materials		47.049	DMR-1333335 002	38,152	—
		DMREF: Collaborative Research: Accelerating Thermoelectric Materials Discovery via Dopability Predictions		47.049	DMR-1729487-001	68,670	—
		DMREF: Collaborative Research: Structure Genome of Metal-Insulator Transitions		47.049	DMR-1729303	64,410	—
		DMREF: Collaborative Research: Synthesis, Characterization, and Modeling of Complex Amorphous Semiconductors for Future Device Applications		47.049	DMR-1729016	141,295	—
		DMREF: Collaborative Research: Tackling disorder and ensemble broadening in materials made of semiconductor nanostructures		47.049	DMR-1629383	39,935	—
		DMREF: Simulation-Driven Design of Highly Efficient MOF/Nanoparticle Hybrid Catalyst Materials		47.049	DMR-1334928	(519)	—
		DMREF: Simulation-Driven Design of Highly Efficient MOF/Nanoparticle Hybrid Catalyst Materials		47.049	DMR-1334928	6,979	6,608
		Donor-Acceptor Energy Transfer in the Presence of Photonic and Plasmonic Structures		47.049	CHE-1760537	24,607	—
		Doping in Non-Planar Heterostructures		47.049	DMR-1308654 Amd 002	(337)	—
		Dynamical aspects of Ramsey's theory		47.049	DMS-1700147	40,374	—
		Dynamics with a Combinatorial Bent		47.049	DMS-1800544	52,177	—
		Dynamics with a combinatorial flavor		47.049	DMS-1500670	24,007	—
		EAGER: Bulk Nanostructured Metals from Twinned Nanowires		47.049	DMR-1747776	45,722	—
		Elliptic and parabolic PDEs on manifolds		47.049	DMS-1709544	71,595	—
		EMSW21-RTG: Applied Mathematics Training Program for Interdisciplinary Research in Science & Engineering		47.049	DMS-0636574/005	(4,853)	—
		Geometric Analysis on complex manifolds		47.049	DMS-1610278-002	74,230	—
		Global Harmonic Analysis		47.049	DMS-1506591-001	87,315	—
		Gravitational-Wave Astrophysics: Getting Ready for the Advanced LIGO Era		47.049	PHY-1307020/002	6,512	—
		Gravitational-Wave Inference from Binary Compact Objects		47.049	PHY-1607709 0002	156,687	—
		GROW: strengthening the mathematical workforce		47.049	DMS-1619748	29,809	—
		High-precision QCD Meets High-performance Computing		47.049	PHY-1520916-002	60,900	—
		High-Pressure Synthesis of Missing Pnictide Superconductors		47.049	DMR-1801632	34,823	—
		High-throughput Computational Discovery of New Nanoporous Materials for Energy Storage		47.049	DMR-1308799	(246)	—
		Hodge theory and birational geometry		47.049	DMS-1700819	87,661	—
		Homotopy theory of foliations and diffeomorphism groups		47.049	DMS-1810644	14,615	—
		Interest Rate Modeling at the Zero Lower Bound: Applications of Diffusions with Sticky Boundaries		47.049	DMS-1514698	57,069	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Interfacial ordering in aqueous solutions: X-ray scattering studies		47.049	DMR-1612876	\$ 128,129	—
		Investigation of High Strain-Rate Deformation and Failure of FCC and BCC Nanostructures		47.049	DMR-1408901-003	71,775	—
		IREES: Nanomaterials undergraduate Research in Germany (NanoRING)		47.049	IA-1460031	37,052	—
		Joint US-Africa Materials Advanced Studies Institute		47.049	DMR-1539724	27,769	—
		JUAMI (Joint Undertaking for Africa Materials Institute)		47.049	DMR-1756245	12,520	—
		Kahler manifolds with curvature lower bound		47.049	DMS-1709894	49,122	—
		Knots, Sheaves, and Mirrors		47.049	DMS-1406024	85,791	—
		Linear Partial Differential Equations on Singular Spaces		47.049	DMS-1600023	64,479	—
		Manipulating Multi-Spin Dynamics in Systems Targeting Organic Spintronics		47.049	CHE-1266201	(1,045)	—
		Mathematical Modeling of Biomembranes		47.049	DMS-1312935	654	—
		Measuring gravity at the micron scale with laser-cooled trapped microspheres: a continuation		47.049	PHY-1806686	39,247	—
		Microlocal Sheaves, Symplectic Geometry and Applications in Representation Theory		47.049	DMS-1710481	16,303	—
		Midwest Dynamical Systems Seminar		47.049	DMS-1600654	11,714	—
		Midwest Probability Colloquium 2017-2019		47.049	DMS-1744209-001	16,099	—
		Midwest Topology Seminar		47.049	DMS-1413786	3,917	—
		Midwest Topology Seminar		47.049	DMS-1747457	8,761	—
		Moduli of Galois representations and applications		47.049	DMS-1802037	11,916	—
		Moduli Spaces of complex dynamical systems		47.049	DMS-1517080	209	—
		Molecular Ion Entanglement Detection by Single-Molecule Fluorescence		47.049	PHY-1404455-002	29,048	—
		Molecular Plasmonics: Single Molecule and Ultrafast Surface-Enhanced Raman Spectroscopy		47.049	CHE-1506683	109,502	—
		MRSEC: Center for Multifunctional Materials		47.049	DMR-1720139	993,792	30,140
		MRSEC: Center for Nanoscale Science		162	5204-NU-NSF-0620-1// DMR-1420620	80,103	—
		Nanoscale Curvature Effects on the Properties of Anisotropic Nanomaterials		47.049	CHE-1507790	144,887	—
		New Lewis Bases for Chemical Catalysis		47.049	CHE-1665141	122,985	—
		New Stereoselective Fragment Coupling Reactions for Organic Synthesis		47.049	CHE-1361173	151,848	—
		Nonequilibrium States of Topological Quantum Fluids and Unconventional Superconductors		47.049	DMR-1508730-003	68,677	—
		Nonlinear Optical Surface Studies of Iron and its Oxides		47.049	CHE-1464916	81,514	—
		Nonlinear PDEs and complex geometry		47.049	DMS-1406164	11,404	—
		Northwestern University Quantitative Biology Center (NUQuB)		47.049	DMS-1764421	99,863	—
		Nucleic Acid Nanostructures and their Cellular Transport Mechanisms		47.049	DMR-1822422	82,683	55,139
		OP: Coherence and Energy Transfer Processes in Lattice Plasmon Lasers		47.049	DMR-1608258	150,381	—
		Organo-f-Element Chemistry: Integrated Synthetic, Mechanistic, and Catalytic and Thermochemical Studies		47.049	CHE-1464488	227,000	—
		Oxide Surfaces, From Bulk to Nanoparticles		47.049	DMR-1507101 001	97,852	—
		Predictive Computational Modeling of Two-Dimensional Materials: Defects and Morphologies		250	3003700315 // DMR-1509033 Amd 2	78,559	—
		Properties and Applications of the Microlocal Category		47.049	DMS-1612437	47,759	—
		Quantum Information and Quantum Computation for Chemistry: Challenges and Opportunities		47.049	CHE-1655187	12,800	—
		Quantum Interference and Coherence Effects on Charge Transport in Organic Semiconductors		47.049	DMR-1710104	100,641	—
		REU Site: Preparing a Diverse Workforce through Interdisciplinary Astrophysics Research		47.049	AST-1359462-003	29,270	—
		REU Site: Preparing a Diverse Workforce through Interdisciplinary Astrophysics Research		47.049	AST-1757792	68,167	—
		RTG: Interdisciplinary Training in Quantitative Biological Modeling		47.049	DMS-1547394	352,866	—
		Shape and Dimensional Precision in Polymeric Nanostructures		47.049	DMR-1508731/003	214,588	—
		Singularities and Smoothness in Geometric Partial Differential Equations		47.049	DMS-1809011	43,031	—
		Size Effect on the Evolution of Kirkendall Pores in Ti-Coated Ni Wires		47.049	DMR-1611308	82,569	—
		Solid State Chemistry of Complex Chalcogenides		47.049	DMR-1708254	202,432	—
		Solid-State Oxides and Oxide-Fluorides		47.049	DMR-1307698	(665)	—
		Solid-State Oxides and Oxide-Fluorides		47.049	DMR-1608218	162,929	—
		Solution-Processed Monodisperse Nanoelectronic Heterostructures		47.049	DMR-1505849	80,527	—
		Spectrum Sharing in the Shadow of Uncertainty: Risk, Incentives and Investment		47.049	AST-1343381	248,890	95,028
		Spin Dynamics of Photogenerated Multi-Spin Systems		47.049	CHE-1565925	166,868	—
		Statics and Dynamics of Spatially and Dimensionally Constrained Oxides		47.049	DMR-1507810-001	99,862	—
	Structures and excited state dynamics of self-assembled photonic structures.		47.049	CHE-1465045	180,464	—	
	SuperCDMS SNOLAB: Calibration, Commissioning, and Beyond		47.049	PHY-1708153	112,500	—	
	Supernova Progenitors, Stellar Remnants, and their Binary Companions		47.049	AST-1517753	138,396	—	
	Surfaces of Secondary Organic Aerosol Particles		47.049	CHE-1607640	164,950	—	
	SusCHEM: Visible Light-Driven Reduction of Carbon Dioxide using Heavy Metal-Free Colloidal Quantum Dots as Sensitizers		47.049	CHE-1664184	116,157	—	
	Synthesis and Properties of Complex Crystalline and Glassy Metal Chalcogenides		47.049	DMR-1410169	(39,000)	—	
	The Center for Chemistry at the Space-Time Limit (CaSTL)		220	2014-3122 Amd No 4//CHE-1414466	425,031	—	
	The Massive Black Hole at the Center of the Galaxy and its Immediate Environment		47.049	AST-1109753/002	(587)	—	
	The Midwest Probability Colloquium		47.049	DMS-1449300	2,388	—	
	The Science and Fundamental Understanding of the Radio Frequency Surface Resistance of Nitrogen Doped SRF cavities		47.049	PHY-1734332	68,780	—	
	Total Tomography of III-V Non-Planar Heterostructures		47.049	DMR-1611341	148,687	—	
	Toughness and Friction of Model Polyelectrolyte Gels		47.049	DMR-1410968	(2,355)	—	
	Toward physically-predictive modeling of massive black hole growth and feedback in galaxy formation		47.049	AST-1517491 002	157,711	—	
	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		244	17-009589 D Amd. 1 // AST-1636621	74,808	—	
	Voltage-dependent interfacial structure and properties of room temperature ionic liquids: operando X-ray studies		47.049	CHE-1665255	36,211	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Workshop on Multidisciplinary Complex Systems Research		47.049	DMS-1647351	\$ 2,703	—
		Workshops: Homotopy Harnessing Higher Structures		47.049	DMS -1833295	6,619	—
						13,106,665	246,650
		Australia cretaceous climate and tectonics: oceanic anoxic events and cooling within the I. cretaceous greenhouse at SHL	50	47.050	71(GG009393) // OCE-1450528-2	10,789	—
		CAREER: South Greenland's Holocene Climate History Reconstructed Using Three Paleolimnological Approaches		47.050	PLR-1454734	174,085	—
		CO2 evasion from the Greenland ice sheet		47.050	PLR-1304686/002	13,713	—
		Collaborative Research: Assessing the Impact of Small, Canadian Arctic River Flows (SCARFs) to the Freshwater Budget of the Canadian Archipelago		47.050	PLR-1304675	98	—
		Collaborative Research: NSF/EAR-BSF: Coupled Sand and Clay Motion, Bed Morphodynamics, and Porewater Exchange		47.050	EAR-1734300	90,669	—
		Collaborative Research: Evolution of the Midcontinent Rift as a Rift/Lip Hybrid		47.050	EAR-1550108	65,623	—
		Critical Zone Observatory Network for Intensively Managed Landscapes	238	47.050	072212-14695	60,783	—
		EAGER: FEW: Life cycle comparison of water, energy, nutrient, and carbon requirements of urban and conventional food production strategies		47.050	EAR-1541891	27,138	—
		EarthCube IA: Collaborative Proposal: Advancing biogeoscience community standards and cyberinfrastructure via Critical Zone domain engagement in synthesis science		47.050	ICER-1540938	(2,331)	—
		ELT Collaborative Research: Perturbation of the Marine Food Web and Extinction During the Oceanic Anoxic Event at the Cenomanian/Turonian Boundary		47.050	EAR-1338312-005	48,477	—
		Hazards SEES Type 2: From Sensors to Tweeters: A Sustainable Sociotechnical Approach for Detecting, Mitigating, and Building Resilience to Hazards	260	47.050	0036115 (011529-3) // OCE-1331463	34,922	—
		Hydration State of the Transition Zone and Lowermost Mantle		47.050	EAR-1452344-002	146,075	—
		INSPIRE Track 1: Earthcasting fluvial systems: Physical, ecological, and biogeochemical dynamics		47.050	EAR-1344280	154,823	47,772
		The Ca and Sr (radiogenic and stable) isotope geochemistry of weathering in Iceland		47.050	EAR-1613359	111,083	—
						935,947	47,772
		A Low-Cost Integrated Agent-based Modeling and Physical Computing Platform		47.070	IIS-1438813	3,080	—
		AF: Small: Collaborative Research: Boolean function analysis meets stochastic design		47.070	CCF-1814706	36,515	—
		AF: Small: Non-revelation Mechanism Design		47.070	CCF-1618502	103,415	—
		AtF: Collaborative Research: Algorithms for Probabilistic Inference in the Real World		47.070	CCF-1637585	15,350	—
		AtF: Mechanism Design and Machine Learning for Peer Grading		47.070	CCF-1733860	112,241	—
		BD Spokes: SPOKE: MIDWEST: Collaborative: Advanced Computational Neuroscience Network (ACNN)	107	47.070	BL-4831218-NWUC//IIS-1636893	2,622	—
		BD Spokes: SPOKE: MIDWEST: Collaborative: Integrative Materials Design (IMaD): Leverage, Innovate, & Disseminate		47.070	IIS-1636909	11,403	—
		BIGDATA: EAGER: Catalyzing Research in Multimodal Learning Analytics		47.070	IIS-1832234	134,011	—
		CAP: Collaborative Research: Building a Network to Advance Collaborative Research on Young Children's Learning through Public Media Assets		47.070	IIS-1239599	12,289	—
		CAP: Collaborative Research: Building Capacity for Political and Cultural Perspectives to Strengthen the Learning Sciences		47.070	IIS-1555805	7,245	—
		CAREER: Advancing Online Social Support for Older Adults with Disabilities		47.070	IIS-1551574/002	85,770	—
		CAREER: Beyond Worst-Case Analysis: New Approaches in Approximation Algorithms and Machine Learning		47.070	CCF-1652491 001	37,015	—
		CAREER: Coherent Computational Imaging: Micro Measurements in a Macro World		47.070	IIS-1453192	63,431	—
		CAREER: Energy-Efficient and Energy-Proportional Silicon-Photonic Manycore Architectures		47.070	CCF-1453853 002	85,842	—
		CAREER: Robot Learning from Motor-Impaired Instructors and Task Partners	169	47.070	81454 Letter 7/12/16 //IIS-1552706	78,867	—
		CAREER: SOISTICE: Software Synthesis with Timing Contracts for Cyber-Physical Systems		47.070	CCF-1834701	12,539	—
		CAREER: Understanding and addressing geographic inequalities in location-aware technologies		47.070	IIS-1707296 002	32,830	—
		CAREER: Web Information Extraction: Scaling and Integration		47.070	IIS-1351029 005	93,172	—
		CC*DN1 CI Engineer: Integrating Campus Cyberinfrastructure and Research Computing at Northwestern University		47.070	ACI-1541457	41,049	—
		CHS: Large: Collaborative Research: TextureShop: Tools for the Composition and Display of Virtual Texture		47.070	IIS-1518602 003	269,416	—
		CHS: Medium: Collaborative Research: Understanding online creative collaboration over multidimensional networks		47.070	IIS-1514427	78,712	—
		CHS: Small: Assessing the Role of Platform Algorithms in Shaping News Attention		47.070	IIS-1717330	138,538	—
		CHS: Small: Collaborative Research: Pathways to Community Success: Advancing a Comparative Science of Online Collaborative Organization		47.070	IIS-1617468	60,826	—
		CHS: Small: Collaborative Research: RUI: Human-centered Semantic Relatedness		47.070	IIS-1707319	82,248	—
		CHS: Small: Collaborative Research: The Presentation of Self in Networked Life		47.070	IIS-1617387 001	68,597	—
		CHS: Small: Coordination of Opportunistic Actions to Produce Globally Effective Behaviors for Physical Crowdsourcing		47.070	IIS-1618096	59,101	—
		CHS: Small: Robust Interactive Audio Source Separation		47.070	IIS-1420971	113,422	—
		CI-EN: Collaborative: Run Your Research with Redex		47.070	CNS-1405756 001	12,524	—
		CIF: Small: Many-user Information Theory: A New Paradigm		47.070	CCF-1423040	112,386	—
		CIF21 DIBs: PD: Ontology-enabled Polymer Nanocomposite Open Community Data Resource Collaborative Research: Chameleon: A Large-Scale, Reconfigurable Experimental Environment for Cloud Research	172	47.070	A12761 Amd 01 // ACI-1640840	14,388	—
		Collaborative Research: Designing Digital Rails to Foster Scientific Curiosity around Museum Collections		47.070	CNS-1419138	164,105	—
		Collaborative Research: Personalized Benchmarks for HPC Applications		47.070	IIS-1550051	(179)	—
		Collaborative Research: Responses of the Rodent Vibrissal-Trigeminal System to Air Currents		47.070	ACI-1535112	3,002	—
				47.070	IIS-1208118	(1,401)	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		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	\$ 100,689	—
		Collaborative Research: SI2-SSI: Software Framework for Electronic Structure of Molecules and Solids		47.070	ACI-1550481	147,412	—
		Computer Science for All: Researcher Practitioner Partnerships Workshops (CS for All: RPP), Chicago and Los Angeles		47.070	CNS-1821362	175,878	—
		CPS: Breakthrough: Collaborative Research: A Framework for Extensibility-Driven Design of Cyber-Physical Systems		47.070	CCF-1834324	14,773	—
		CPS: Synergy: Collaborative Research: Learning Control Sharing Strategies for Assistive Cyber-Physical Systems	169	47.070	CC# 81394 CL 4811 // 1544741	58,106	—
		CPS: Synergy: Collaborative Research: Mutually Stabilized Correction in Physical Demonstration		47.070	CNS-1329891	167,874	—
		CRII: CHS: Automatically Praising Learning Process to Promote the Growth Mindset in Computer Science		47.070	IIS-1755628	33,774	—
		CRII: CHS: Early Detection of Collective Misconceptions with Network-aware Machine Learning Tools		47.070	IIS-1755873	36,725	—
		CRII: CHS: Remote Paper Prototype Testing for Mobile Applications		47.070	IIS-1464315	75,085	—
		DIP: Collaborative Research: CRAFT: An Online Learning Platform for Scaffolding the Crowd Feedback Loop for Design Innovation Education		47.070	IIS-1530837	68,504	—
		DIP: Digital Studios for Social Innovation Networks		47.070	IIS-1530833	180,356	—
		DIP: Modeling in Levels		47.070	IIS-1441552	195,302	—
		EAGER: Developing Partnership Structures to Collaboratively Grow Urban STEM Hubs		47.070	IIS-1824536	109,101	—
		EAGER: PUF-Locked Circuit Obfuscation for Counterfeit and Piracy Prevention		47.070	CNS-1651695 001	43,625	—
		EXP: Advancing Early STEM Learning through Haptic Feedback Displays		47.070	IIS-1522921	160,756	—
		EXP: Agile Research Studios: Scaling Cognitive Apprenticeship to Advance Undergraduate and Graduate Research Training in STEM		47.070	IIS-1623635	59,634	—
		EXP: Collaborative Research: Engaging Interdisciplinary Students in Innovation Education Through Crowd-Based Technology		47.070	IIS-1217225	(13,363)	—
		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	50,097	—
		Future Technology to Preserve College Student Health and Foster Wellbeing (StudentHealth)		47.070	IIS-1545751	2,005	—
		GENI Multi-Service Exchange (SDX)		47.070	Agmt 9/28/16 Mod 3 // CNS-1536090	63,075	—
		GENI Spiral 4: Prototype GENI Multi-Services Network Exchange (GMNE)	22	47.070	BEN Ref ID 14303 PO #9500012297/CNS-1346688	(3,866)	—
		GPU-Enabled General Relativistic Simulations of Misaligned Black Hole Accretion Systems	22	47.070	OAC-1611605	8,459	—
		HCC: Medium: Collaborative Research: Force Feedback for Fingers		47.070	IIS-1302422	(650)	—
		HCC-SMALL: A Joint Action Approach to Understanding and Supporting Interpersonal Attention in Virtual Organizations		47.070	IIS-1217143/005	(7,964)	—
		ICES: SMALL: Mechanism Design With Information-Sensitive Agents		47.070	CCF-1216006	(484)	—
		III: Small: Collaborative Research: Algorithms for Query by Example of Audio Databases		47.070	IIS-1617497	56,049	—
		III: Small: Collaborative Research: Automatically Generating Contextually-Relevant Visualizations Relatedness		47.070	IIS-1702440	27,930	—
		III: Small: Quantifying Multifaceted Perception Dynamics in Online Social Networks	106	47.070	SA17-0018-S0011/1618244	35,360	—
		INSPIRE: Glitch Zoo: Teaming Citizen Science with Machine Learning to Deepen LIGO's View of the Cosmos		47.070	IIS-1547880-002	240,387	158,585
		IRNC: RXP: StarLight SDX – A Software Defined Networking Exchange for Global Science Research and Education		47.070	ACI-1450871	382,003	85,090
		NeTS: SMALL: Broadband Service Reliability: Characterization And Improvement		47.070	CNS-1619317	94,549	—
		NeTS: Small: Collaborative Research: Leveraging Personalized Internet Services to Combat Online Trolling		47.070	CNS-1615837	34,514	—
		NeTS: Small: Endpoint User Profile Control		47.070	CNS-1319086	(72)	—
		NeTS: Small: Mashup Content Harvesting for an Open Internet		47.070	CNS-1526052	154,720	—
		NRI: Autonomous Synthesis of Haptic Languages		47.070	IIS-1426961	280,745	—
		NRI: Electropresence imaging for underwater telepresence and manipulation		47.070	IIS-1427419-005	180,896	27,129
		NSCI SI2-SSE: The N-jettiness software framework for precision perturbative QCD calculations in particle and nuclear physics		47.070	OAC-1740142	33,986	—
		NSFSaTC-BSF: CORE: Small: The Utilitarian Implications of Privacy Protections		47.070	CNS-1718670	80,822	—
		RI: Small: Collaborative Research: Information-driven Autonomous Exploration in Uncertain Underwater Environments		47.070	IIS-1717951	548	—
		RI: Small: Contextual Mining and Learning for Video Scene Understanding		47.070	IIS-1217302/001	27,654	—
		RI: Small: Modeling and Learning Visual Similarities under Adverse Visual Conditions		47.070	IIS-1619078	58,582	—
		RI: Small: Dynamic In-Hand Robotic Manipulation		47.070	IIS-1527921	196,846	—
		SaTC: STARSS: ICM: Invariant Carrying Machine for Hardware Assurance		47.070	CNS-1441695	100,781	—
		SCH:INT: Collaborative Research: High-throughput Phenotyping on Electronic Health Records using Multi-Tensor Factorization		47.070	IIS-1417819	111,915	—
		SHF: Small: Collaborative Research: ALETHEIA: A Framework for Automatic Detection/Correction of Corruptions in Extreme Scale Scientific Executions		47.070	CCF-1619253	31,390	—
		SHF: Small: Collaborative Research: Designing a Programming Language for Patient-Oriented Prescriptions		47.070	CCF-1526109	149,977	—
		SHF: Small: Greybox Computing: An Associative Computing Methodology with Instruction Directed Power and Clock Management		47.070	CCF-1618065-001	119,718	—
		SHF: Small: Thermal Monitoring in 3D Integrated Circuits with Bimetallic Thin Film Thermocouples		47.070	CCF-1422489/001	82,129	—
		SHF: Medium: Collaborative Research: Scalable Algorithms for Spatio-temporal Data Analysis		47.070	CCF-1409601	165,662	—
		Student Support for 2017 International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2017)		47.070	IIS-1745399	28,073	—
		Sustained-Petascale in Action: Blue Waters Enabling Transformative Science and Engineering	238	47.070	067846-17001/1238993	3,167	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		TWC SBE: Medium: Collaborative: Incentive Compatible Wireless Security		47.070	CNS-1314620	\$ 67,485	—
		TWC: Medium: Collaborative: Neuroscience Meets Computer Security: Designing Systems Secure Against Coercion Attacks		47.070	CNS-1228357	4,017	—
		TWC: TTP Option: Medium: Collaborative: Identifying and mitigating trust violations in the smartphone ecosystem		47.070	CNS-1408790	132,404	—
		WiFiUS: Collaborative Research: Ultra-low latency and High Reliability for Wireless IoT		47.070	CNS-1701921	20,871	—
		Workshop: Doctoral Consortium for HCOMP 2017		47.070	IIS-1748375	8,234	—
		XPS: EXPL: CCA: Merging Parallel Run-times and Operating Systems		47.070	CCF-1533560 001	102,906	—
		XPS: FULL: FP: Design and Synthesis of New Energy-efficient Self-healing Computing Electronics with Real-time Configurability		47.070	CCF-1533656	195,811	—
						7,079,113	270,804
		Biophysical Studies of Metalloenzymes		47.074	MCB-1515981 001	334,623	—
		CAREER: Uncovering Quantitative Design Principles of RNA Regulators for Synthetic Biology		47.074	MCB-1650040 002	115,577	82,486
		CEIN: Predictive Toxicology Assessment and Safe Implementation of Nanotechnology in the Environment	222	47.074	0521 G RA112-005 Amd. 4/ DBI-126	87,700	—
		Collaborative Research: EAGER: Customized cell biosensors for interrogating cancer cell physiology		47.074	MCB-1745753	34,330	—
		Collaborative Research: A New Twist on Muscle Contraction		47.074	IOS-1456623	125,323	—
		Collaborative Research: Bilateral BBSRC-NSF/BIO: Synthetic Biology for Lignin Utilization		47.074	MCB-1614953	105,333	—
		Collaborative Research: Glycoengineering Without Borders: Bacterial Cell-Free Glycoprotein Synthesis		47.074	MCB-1413563	113,906	—
		Collaborative Research: IDBR: Type A: The Nanosizer: A New Tool For the Photochemical Fabrication of Bioactive Nanoarrays		47.074	DBI-1353682	(8,900)	—
		Collaborative Research: Repurposing the translation apparatus for mirror image polypeptide synthesis		47.074	MCB-1716766	19,812	—
		Collaborative Research: Uncovering the Role of Sirtuins in Linking Food Availability and Stress Tolerance Through Multi-Scale Signaling Networks in Mussels		47.074	IOS-1557495	32,552	—
		CRCNS: Functional imaging and computational models of place field integration in pyramidal cell dendrites		47.074	IOS-1516235-001	266,741	—
		Dissecting the anatomy of regulatory divergence		47.074	IOS-1708518	106,231	—
		EAGER: Toward engineering a synthetic enhancer in Caenorhabditis elegans		47.074	MCB-1748307	43,113	—
		IDBR: Development of Higher Eigenmode Ultrasound Bioprobe for Sub-Cellular Biological Imaging		47.074	DBI-1256188	52,988	—
		IDBR: Type A: Directly Integratable Photoacoustic Microscopy with Established Optical Microscopy for Comprehensive Sub-cellular Biological Imaging		47.074	DBI-1353952/002	17,164	—
		Regulation of Nuclear Receptor Function during Drosophila Development	243	47.074	27790-Z4573001/IOS-145714	46,401	—
		Reticulosplinal Execution of Innate Decision-Making		47.074	IOS-1456830	275,058	—
		REU Site: Synthetic Biology (SynBREU)		47.074	DBI-1757973	61,204	—
		Synthetic Biology of Yeast	218	47.074	00009607 // 1330914	102,166	—
		The Response of Primary Mesenchyme Cells to VEGF		47.074	IOS-1456837	228,444	—
		The Vibrissotactile Natural Scene		47.074	IOS-1558068	133,891	—
		Understanding the Mechanism of Import for Bacterial Transporters		47.074	MCB-1121872	9,111	—
					2,302,768	82,486	
	Biological links between rhythm and reading		47.075	BCS-1430400	79,483	—	
	CAREER: Comparative Statics and Dynamic Models		47.075	SES-1151410/003	42,649	—	
	CAREER: Crime Victimization Patterns in American Cities		47.075	SES-1840443	68,479	—	
	CAREER: Leadership for Virtual Organizational Effectiveness		47.075	SES-1738297	13,330	—	
	CAREER: Social Networks, Labor Markets and Agricultural Technology Adoption in Developing Countries		47.075	SES-1254380-005	45,222	8,304	
	Collaborative Research: Dynamic Mechanisms without Transfers		47.075	SES-1530608	78,102	—	
	Collaborative Research: Econometric Methods for Models with Clustered Data and Covariate-Adaptive Randomization		47.075	SES-1530534	41,281	—	
	Collaborative Research: Equilibria in Health Exchanges: Adverse Selection, Reclassification Risk, and Dynamic Contracting		47.075	SES-1260949	24,819	22,395	
	Collaborative Research: Media Characters: The Unhidden Persuaders in Food Marketing to Children		47.075	BCS-1251345	8,477	—	
	Collaborative Research: Mind Mapping Consumers and Activists' Response to NGO-Corporate Partnerships		47.075	SES-1359610 001	40,278	—	
	Collaborative Research: NCS-FO: Sleep's role in determining the fate of individual memories		47.075	BCS-1533512	235,890	—	
	Collaborative Research: SBE Alliance: Great Lakes Alliance for the Social and Behavioral Sciences (GLASS)		47.075	SES-0750621/003	(324)	—	
	Collaborative Research: State Variation in Mass Incarceration Reforms.		47.075	SES-1655382	49,078	—	
	Collaborative Research: Time-Sharing Experiments for the Social Sciences (TESS): Proposal for Renewed Support, 2016-2019		47.075	SES-1628057	455,266	260,215	
	CompCog: Reading as a rational process of visual information gathering		47.075	BCS-1734217	115,865	—	
	Connectome mapping algorithms with application to community services for big data neuroscience	107	47.075	BL-4831222-NU/BCS-1734853	13,389	—	
	Consequences and Context of Stunting in the Bolivian Amazon	234	47.075	SUB0000853/BCS-1519120	7,770	—	
	Constructions of Traditional Medicine during Decolonization and the Global Cold War		47.075	SES-1456984	11,112	—	
	Coordination and Information Design		47.075	SES-1730483	93,464	—	
	Dissertation Grant: Social Science's Use of Controlled Field Experiments		47.075	SES-1556343	8,282	—	
	DNA Examiners: Judgment and Influence		47.075	SES-1356899	4,919	—	
	Doctoral Dissertation Improvement Award: The Effect of War On The Transformation of Social Hierarchies		47.075	BCS-1546972	651	—	
	Doctoral Dissertation Improvement Award: The Role of Heritage in Community Organization		47.075	BCS-1630141	12,717	—	
	Doctoral Dissertation Improvement: Conceptualizing the Adaptive Significance of Brown Adipose Tissue in Cold Climates		47.075	BCS-1455804	566	—	
	Doctoral Dissertation Research in DRMS: Where Does Innovation Come From? Exploring the Dynamic Processes of Organizing and Managing Social Entrepreneurship and Innovation		47.075	SES-1730079	24,748	—	
	Doctoral Dissertation Research in DRMS: Who's at Stake? Nonhuman Agency Concepts and Cultural Resource Conflict Among Indigenous and Mainstream Actors in Panama		47.075	SES-1427035	(75)	—	
	Doctoral Dissertation Research: Why adapt? Phonotactic learning as non-native language adaptation		47.075	BCS-1728173	4,323	—	
	Doctoral Dissertation Research: An evaluation of sedimentary lipid hydrogen isotopes as an Arctic precipitation proxy		47.075	BCS-1634118	11,307	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		Doctoral Dissertation Research: Cultural and Social Dimensions of Anti-Mullerian Hormone Screening Technologies		47.075	BCS-1823543	\$ 1,286	—	
		Doctoral Dissertation Research: Exclusion and the Social Construction of Citizenship		47.075	BCS-1424025	8,280	—	
		Doctoral Dissertation Research: Intergenerational impacts of culture change-The role of traditional foods in shaping the cardiometabolic health of Alaska Native people		47.075	BCS-1613340	3,562	—	
		Doctoral Dissertation Research: Organizational Emergence in the Era of Racial Risk: The Black Guerrilla Family and the Aryan Brotherhood in California		47.075	SES-1703056	8,114	—	
		Doctoral Dissertation Research: Population Shifts and Suburban Governance		47.075	BCS-1528569	227	—	
		Doctoral Dissertation Research: Social Evaluations in Organizational Philanthropy		47.075	SES-1637182	9,007	—	
		Doctoral Dissertation Research: Standardizing Persecution in US Asylum Adjudications		47.075	SES-1702602	4,374	—	
		Doctoral Dissertation Research: The Intergenerational Consequences of Incarceration		47.075	SES-1628126	5,586	—	
		Doctoral Dissertation Research: The Online Processing of NP-Ellipsis and the Mechanisms of Antecedent Retrieval		47.075	BCS – 1749580	1,225	—	
		Doctoral Dissertation Research: The Regeneration of Human Settlements amidst Ruins after Episodes of Societal Collapse		47.075	BCS-1806248	4,561	—	
		Early environments, epigenetics, and inflammation during pregnancy		47.075	BCS-1440564	22,812	22,753	
		Econometric Tools for Analysis of Derivatives Data		47.075	SES-1530748	96,635	—	
		Fiduciary Duty, Financial Regulation, and the Market for Retirement Products		47.075	SES-1824463	1,477	—	
		INSPIRE: Gradient Symbolic Computation	122	47.075	2001900798 // BCS-1344269-001	3,090	—	
		Investigating the Origin and Development of Analogical Processing		47.075	BCS-1423917	15,376	—	
		Manipulating and classifying memory processing during sleep		47.075	BCS-1461088 002	66,085	47,045	
		Motor exploration and motor learning during child development	141	47.075	RC107136NU/1654929	8,595	—	
		NCRN-SN: Census Bureau Data Programs as Statistical Decision Problems		47.075	SES-1129475	10,370	—	
		NCS-FO: Collaborative Research: Understanding the neural basis for sensorimotor control loops using whisker-based robotic hardware platforms		47.075	BCS-1734981	137,294	—	
		NSF Intergovernmental Personnel Act (IPA) Assignment – Fay Lomax Cook		47.075	SMA(SBE)-1451416-006	311,532	—	
		NSF/ISE-BSF: Integration of kinesthetic and tactile information in perception, action, and learning	169	47.075	81464/CL52961/1632259	119,047	—	
		Spatial Intelligence Learning Center	201	47.075	330161-18110-7343-And 5/SMA-1041707	206,419	—	
		Surviving the Terminal Classic Maya Collapse: Settlement and Household Archaeology at Aventura, Belize		47.075	BCS-1732129	47,698	—	
		The Development of Relational Processing in Infancy		47.075	BCS-1729720	150,899	—	
		The Effect of School Finance Reforms on the Distribution of Spending, Academic Achievement and Adult Outcomes		47.075	SES-1324778	(6,226)	—	
		The International Cognitive Ability Resource		47.075	SMA-1419324	15,735	—	
		WORKSHOP: Enhancing robustness and generalizability in the social and behavioral sciences		47.075	BCS-1647219	(7,607)	—	
						2,736,521	360,712	
			A Whole-School Model for Integrating Computational Thinking in High School Science and Mathematics		47.076	DRL-1640201 003	565,679	40,802
			An investigation of the impact of culture and experience on reasoning about complex ecological phenomena among students from diverse backgrounds		47.076	DRL-1713368	135,196	—
			CAREER: Blocks, Stickers, and Puzzles: Rethinking Computational Literacy Experiences in Informal Environments		47.076	DRL-1451762 003	162,616	—
			Collaborative Proposal: Learning Linkages: Integrating Data Streams of Multiple Modalities and Timescales in American Indian Educational and Professional Success in STEM		47.076	DRL-1418020	2,724	—
			Collaborative Research: Adapting and Implementing a Geospatial High School Course in Career and Technical Education Clusters in Urban Settings		47.076	DRL-1759360	71,821	—
			Collaborative Research: Advancing Early STEM Learning Opportunities Through Tinkering and Reflection		47.076	DRL-1515788-002	200,308	—
			Collaborative Research: AGEIP Transformation Alliance: CIRTL AGEIP – Improved Academic Climate for STEM Dissertators and Postdocs to Increase Interest in Faculty Careers		47.076	HRD-1647146	15,060	—
			Collaborative Research: Cognitive and Neural Indicators of School-based Improvements in Spatial Problem Solving		47.076	DRL-1420599	154,261	—
			Collaborative Research: Engaging Introductory Astronomy Students in Authentic Research through Citizen Science		47.076	DUE-1525725	52,406	20,013
			Collaborative Research: Group-Based Cloud Computing for STEM Education Project		47.076	DRL-1614745	243,371	36,338
			Collaborative Research: IUSE: EHR – Enhancing and Expanding Experiential Learning Modules across Disciplines and Institutions		47.076	DUE-1504952	63,434	—
			Collaborative Research: Mechanisms of Visuospatial Thinking in STEM		47.076	DRL-1661264 002	208,908	—
			Collaborative Research: Mixing Learning Experiences for Computer Programming Across Museums, Classrooms, and the Home Using Computational Music		47.076	DRL-1612619	85,798	—
			Collaborative research: Neural and cognitive strengthening of conceptual knowledge and reasoning in classroom-based spatial education		47.076	DRL-1661089	63,428	—
			Collaborative Research: Using Educational DVDs to Enhance Young Children's STEM Education		47.076	DRL-1252121	199,326	—
			Doctoral Dissertation Research: A Geospatial Analysis of Alpine Glacial Variability		47.076	BCS-1812764	4,080	—
			EAGER: MAKER: A Cultural Framework for Equity in Maker Practices		47.076	DRL-1723750	87,023	—
			EAGER: MAKER: The Design and Engineering of Scientific Instrumentation as a Pathway for Introducing Making into High School Science Classrooms		47.076	DRL-1623550-01	118,061	—
			FUSE Studio: A New, Interest-Driven Model for Engaging Youth in STEM and Career Development Through Challenges and Partnership with Industry		47.076	DRL-1433724/001	201,476	—
			FUSE Studios: An Alternative Infrastructure for STEM Learning and Interest Development		47.076	DRL-1348800	26,576	4,098
			Graduate Research Fellowship Program (GRFP)		47.076	DGE – 1842165	345,001	—
			Graduate Research Fellowships Program (GRFP)		47.076	DGE-1324585 009	4,285,905	—
		GROW 2017: Strengthening women's representation in the mathematics workforce		47.076	DGE-1723805	14,550	—	
		I-Corps L: nScope- a Lab for Every Laptop		47.076	DUE-1644555	32,128	—	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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)		INSPIRE Track 1: Primary School Organizations as Open Systems: Strategic External Relationship Development to Promote Student Engagement in STEM Topics		47.076	DRL-1344266/003	\$ 11,843	6,728
		Learning Ethnographies of New Engineers: A New Approach to Understanding the Transition from School to Work		47.076	DRL-1252372	114,514	51,961
		Learning Labs: Using Videos, Exemplary STEM Instruction and Online Teacher Collaboration to Enhance Elementary Math and Science Practice and Classroom Discourse	198	47.076	2015-02//1417757	65,438	—
		Methods to Protect Privacy in State Longitudinal Data Systems Research Files	229	47.076	5968-NU 02 // DGE-1437953	129,400	—
		MOOC-Supported Learning Communities for Future STEM Faculty: Multiple Paths to Advance Evidence-based Teaching Across the Nation	141	47.076	RC103138NW//DUE-1347605	14,121	—
		NRT-DESE: Training in Data-Driven Discovery – From the Earth and the Universe to the Successful Careers of the Future		47.076	DGE-1450006-003	336,930	—
		Preparing Future Faculty to Improve STEM Education: Broadening the National Impact of the CIRT Network SPReAD: Broadening implementation of an innovative STEAM learning environment: Scaling up FUSE Studios through two models of partnership engagement with industry and schools	274	47.076	795K406//1726625	4,274	—
		Supporting Scientific Practices in Elementary and Middle School Classrooms		47.076	DRL-1657438	527,081	36,188
		Using hyperlocal and networked strategies to support computer science education for middle grade students in Chicago		47.076	DRL-1020316 Amd 005	77,517	68,699
				47.076	DRL-1824551	320,066	—
				<u>8,960,841</u>	<u>264,827</u>		
		IRES: US-Dutch Research Collaboration in Cultural Heritage Science		47.079	IA-1460143	99,338	—
		PIRE: Computationally-Based Imaging of Structure in Materials (CuBISM)		47.079	OISE-1743748	429,940	—
				<u>529,278</u>	<u>—</u>		
		Collaborative Research: Three-dimensional Microstructural and Chemical Mapping of Solid Oxide Fuel Cell Electrodes: Processing, Structure, Stability, and Electrochemistry		47.082	DMR-0907639	(785)	—
		Rheo-X-Ray Investigation of Structure Development in Polymer Melts Under Uniaxial Extension Flow		47.082	DMR-0907068	(3,610)	—
				<u>(4,395)</u>	<u>—</u>		
		PIRE: Integrated Computational Materials Engineering for Active Materials and Interfaces in Chemical Fuel Production	238	47.083	2015-02361-02 // 1545907 01	85,755	—
		GHz Time-of-Flight Depth Sensing for Robotic Bin Picking	194	47.RD	Amtg. 08/31/17//1647888	37,233	—
				<u>43,840,805</u>	<u>2,256,132</u>	National Science Foundation Total	
Nuclear Regulatory Commission	United States Nuclear Regulatory Commission	Service Lifetime Extension of Nuclear Power Plants: Prediction of Concrete Aging and Deterioration Through Accelerated Tests, Nondestructive Evaluation, and Stochastic Multiscale Computations		77.009	NRC-HQ-60-14-G-0003 M0007	(23,763)	—
		Service Lifetime Extension of Nuclear Power Plants: Prediction of Concrete Aging and Deterioration Through Accelerated Tests, Nondestructive Evaluation, and Stochastic Multiscale Computations		77.009	NRC-HQ-60-14-G-0003 M0007	118,615	95,282
					<u>94,852</u>	<u>95,282</u>	
					<u>94,852</u>	<u>95,282</u>	
					Nuclear Regulatory Commission Total		
Scholarship Foundations	Vietnam Education Foundation	Vietnam Education Foundation Fellowship	85.802	Agmt 2/19/13	1,317	—	
		Vietnam Education Foundation Fellowship – Hoang Thai Nguyen	85.802	Letter 10/14/14	(8)	—	
					<u>1,309</u>	<u>—</u>	
					<u>1,309</u>	<u>—</u>	
					Scholarship Foundations Total		
Social Security Administration		Regulating Markets for Retirement Products: Evidence from Chile	28	96.007	5002110-S4 // 5 RRC08098402-08-00	41,113	—
					<u>41,113</u>	<u>—</u>	
					Social Security Administration Total		
U.S. Agency for International Development		Comparing HIV Mucosal Targets in US and Kenyan Populations	115	98.001	7503// AID-OAA-A-16-00032	254,854	—
		Next-generation products for prevention of HIV infection in women (Project NIX HIV)	67	98.001	NKS-17-001 // AID-OAA-A-17-00014	371,602	—
		Testing the Effectiveness of Tailored Non-Formal Education Interventions Promoting Critical Thinking and Emotional Literacy in the Middle East	250	98.001	3003719520 // AID-OAA-A-15-00075 02	116,367	—
					<u>742,823</u>	<u>—</u>	
		An osmotic pump vaginal insert for sustained delivery of anti-retrovirals	54	98.RD	MAPS2-15-056//AID-OAA-A-14-00010	(16,976)	—
		An osmotic pump vaginal insert for sustained delivery of anti-retrovirals	54	98.RD	MAPS2-15-056//AID-OAA-A-14-00010	66,973	63,197
		Preclinical Development of Longer Acting Topical Antiretroviral Delivery Systems	54	98.RD	MAPS2-14-029 //AID-OAA-A-14-00010	39,388	—
					<u>832,208</u>	<u>63,197</u>	
					U.S. Agency for International Development Total		
					<u>472,169,587</u>	<u>59,544,217</u>	
					Research and Development Cluster Total		

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

Cluster title/Federal grantor	Subagency	Project title	Pass-through ID number	CFDA	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Student Financial Assistance Cluster: Department of Education		Federal SEOG 2017-2018	84.007	P007A171246		\$ 2,186,241	—
		Federal Work-Study 2016-2017	84.033	P033A161246		365,783	—
		Federal Work-Study 2017-2018	84.033	P033A171246		3,062,324	—
		Federal Work-Study 2018-2019	84.033	P033A181246		88,602	—
		Federal Work-Study Administrative Cost Allowance FY18	84.033			80,000	—
						<u>3,596,709</u>	<u>—</u>
		Federal Perkins Loans – New Loans Issued during FY18	84.038			404,620	—
		Federal Perkins Loans – Outstanding as of 9/1/17	84.038			30,778,672	—
						<u>31,183,292</u>	<u>—</u>
		Federal Pell Grant 2016-2017	84.063	P063P161371		(1,838)	—
		Federal Pell Grant 2017-2018	84.063	P063P171371		6,447,368	—
						<u>6,445,530</u>	<u>—</u>
		Federal Direct Loan Program 2016-2017	84.268	P268K171371		(49,938)	—
		Federal Direct Loan Program 2017-2018	84.268	P268K181371		179,848,063	—
		Federal Direct Loan Program 2018-2019	84.268	P268K191371		6,095,443	—
						<u>185,893,568</u>	<u>—</u>
		Federal TEACH Grant 2017-2018	84.379	P379T181371		2,794	—
						<u>229,308,134</u>	<u>—</u>
					Department of Education Total	<u>229,308,134</u>	<u>—</u>
		Health Professionals Student and Primary Care - Outstanding as of 9/1/17	93.342			189,863	—
						<u>189,863</u>	<u>—</u>
					Department of Health and Human Services Total	<u>189,863</u>	<u>—</u>
						<u>229,497,997</u>	<u>—</u>
					Student Financial Assistance Cluster Total	<u>229,497,997</u>	<u>—</u>
Other Programs Corporation for National and Community Service	Corporation for National and Community Service	Jumpstart Northwestern	124	94.006	920200	(2)	—
		Jumpstart Northwestern	124	94.006	Agmt 9/20/2017 // 920200	63,524	—
						<u>63,522</u>	<u>—</u>
					Corporation for National and Community Service Total	<u>63,522</u>	<u>—</u>
Department of Commerce	National Institute of Standards and Technology	Development of Roadmap and Consortium for Innovation in Sheet Metal Forming	11.609	11.609	70NANB14H056	51,012	1,423
	United States Patent and Trademark Office	Enhancing Teaching of Standards and Standards Development In U.S. Universities	60	11.U01	Subcontract Agmt 1/4/16	192	—
		Research Conference on Innovation Economics 2016		11.U02	USPTO MOA No. 16147009-0000-001	63,042	—
						<u>114,246</u>	<u>1,423</u>
					Department of Commerce Total	<u>114,246</u>	<u>1,423</u>
Department of Defense	Air Force Office of Scientific Research	(SECAF 2030 S&T) Air Force 2030 Science and Technology Organizational and Process Study at Northwestern University	12.800	12.800	FA9550-18-1-0302	223,949	—
	Army	24th International Workshop on Oxide Electronics	12.431	12.431	W911NF-17-1-0307	7,500	—
	Navy	24th International Workshop on Oxide Electronics	12.300	12.300	N00014-17-1-2456	6,000	—
						<u>237,449</u>	<u>—</u>
					Department of Defense Total	<u>237,449</u>	<u>—</u>
Department of Education		Online Curriculum Consortium for Accelerating Middle School (OCCAMS)	154	84.206	Award 02/02/2017 // S206A150004	(3,967)	—
		Advancing and Scaling Science Education's New Terrain (ASSENT): Developing Systemic Leadership in Connecticut	53	84.366	Agmt 5/2/16// 648-100 12060-21592-2	(16,623)	—
						<u>(20,590)</u>	<u>—</u>
					Department of Education Total	<u>(20,590)</u>	<u>—</u>

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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	Centers for Disease Control and Prevention	Illinois Perinatal Quality Collaborative Partnership (LPQC) – Federal Flow-through	104	93.667	FCSWU04929/G17011LSOSR	\$ 24,270	—	
		Promoting Adolescent Health Through School-Based HIV-STD Prevention and School-Based Surveillance	43	93.079	15-0303-PRC2//5U87PS004162-03	23,864	12,318	
		Hepatitis C Community Alliance for Testing and Treatment in Chicago (HepCCATT)	228	93.270	FP058209-B//5NU51PS004607	72,354	—	
		Meeting the Needs of Early Childhood Systems to Integrate Evidence-Based Parenting Programs	19	93.424	33-18-8812//6NUM38OT000140-05-02	43,530	10,512	
Department of Health and Human Services (continued)		Assuring Comprehensive Prevention and Treatment for Families Affected by HIV to Eliminate Perinatal HIV Transmission in the United States	255	93.939	34-5311-3017-001//NU65PS923665	20,895	—	
		Evaluation Center Extension to Evaluate PrEP Implementation and Data to Care Services	41	93.940	CONTRACT PO #42045/236320/50105365//U62PS005021	147,639	5,203	
		Strengthening the Infrastructure of the Evaluation Center	41	93.940	CDPH032017//NU62PS003644-05-05	29,492	—	
					<u>177,131</u>	<u>5,203</u>		
Department of Health and Human Services	Centers for Medicare & Medicaid Services	Illinois Perinatal Quality Collaborative Working Together for Healthier Moms and Babies in Illinois		93.946	1NU58DP006360-02-00	183,500	63,048	
		The HIV Outpatient Study (HOPS) Activity to Abstract Data from Persons Receiving Ambulatory Care for HIV Infection in the United States (the "Prime Agreement")	39	93.U03	Agr. 11/19/2015 // 200-2015-63931	185,361	—	
	Substance Abuse and Mental Health Services	Great Lakes Practice Transformation Network	108	93.638	5345/L1CMS331444-02-00	4,304,727	3,084,085	
		MACRA-Provider Resource Network (M-PRN)	7	93.U04	SC-17-009//HHSM-500-2017- 00004	367,304	35,584	
	Center for Child Trauma Assessment and Service Planning	Center for Child Trauma Assessment and Service Planning		93.243	5U79SM061254-04	64,652	—	
		Center for Child Trauma Assessment, Services and Interventions		93.243	5U79SM080018-03	658,349	78,661	
		Lake County BHTCC	57	93.243	LC# 15058//H79SM061684	(1,149)	—	
					<u>721,852</u>	<u>78,661</u>		
	Department of Health and Human Services Total						<u>6,124,788</u>	<u>3,289,411</u>
	Department of Homeland Security		DHS Center of Excellence for Accelerating Operational Efficiency (CAOE) – Preaward Planning Meeting	17	97.077	Agmt 11/2/2017	11,738	—
Department of Homeland Security Total						<u>11,738</u>	<u>—</u>	
Department of Justice	Bureau of Justice Assistance	Center on Wrongful Convictions of Youth		16.746	2016-FA-BX-0001	136,761	—	
		Northwestern University Proposal for OVW 2014 Grant to Reduce Sexual Assault, Domestic Violence, Dating Violence, and Stalking on Campus		16.525	2014-WA-AX-0006	47,922	—	
Department of Justice Total						<u>184,683</u>	<u>—</u>	
Department of Labor	Occupational Safety and Health Administration	Northwestern university machine hazards and machine guarding training for students and young workers ages 16-24		17.502	SH-31214-17-60-F-17	139,038	—	
Department of Labor Total						<u>139,038</u>	<u>—</u>	
Department of State		Young African Leaders Initiative	118	19.009	FY17-YALI-BE-NWJU-04//SECAGD16CA1146	3,204	—	
		Young African Leaders Initiative	118	19.009	FY18-YALI-BE-NWJU-05	121,953	—	
						125,157	—	
		Establishment of a Center of Journalism Excellence	117	19.501	Agmt Signed 5/8/14	50,227	—	
Fulbright Pre-Departure Orientation 2017-2018	112	19.U05	FSC1801 NWU 4.23.18//S-ECAGD-18-CA-1024	124,462	—			
Department of State Total						<u>299,846</u>	<u>—</u>	
Department of Veterans Affairs	VHA Office of Informatics and Analytics	Intergovernmental Personnel Agreement (IPA) Assignment Agreement for Madhusudhana C. Reddy		64.018	Agmt 05/13/2016	3,369	—	
Department of Veterans Affairs Total						<u>3,369</u>	<u>—</u>	
National Aeronautics and Space Administration		Meteoritic Nanodiamond Analysis by Atom-Probe Tomography	285	43.001	WU-14-06-MOD-2//NNX13AF53G	(3,009)	—	
		Meteoritic Nanodiamond Analysis by Atom-Probe Tomography	285	43.001	PO#2928922C/WU-18-16//NNX16AD26G	33,881	—	
						<u>30,872</u>	<u>—</u>	
National Aeronautics and Space Administration Total						<u>30,872</u>	<u>—</u>	

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2018

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		Avalon Media System: Integrating audiovisual collections with research, digital preservation, and a sustainable developer community		45.312	LG-70-17-0042-17	\$ 345,101	133,450
		Beyond the Repository: Integrating Local Preservation Systems with National Distribution Services		45.312	LG-72-16-0135-16	<u>28,557</u>	<u>—</u>
						<u>373,658</u>	<u>133,450</u>
National Foundation of the Arts and Humanities (continued)	National Endowment for the Arts	Digging Deeper, Reaching Further: Libraries Empowering Users to Mine the HathiTrust Digital Library Resources	238	45.313	077281-15575//RE-00-15-0112-15	5,929	—
		National Endowment for the Arts Research Labs William Blake and the Age of Aquarius	278	45.024	UNIV59613 // DCA 2017-05 17-4400-7128	<u>67,745</u>	<u>53,912</u>
						<u>20,000</u>	<u>—</u>
	National Endowment for the Humanities	The American Indian Center of Chicago and Urban Native American Histories The Digital Berkeley Folk Music Festival Collection		45.149	PY-258677-18 PW-253873-17	<u>7,507</u>	<u>—</u>
					<u>111,987</u>	<u>—</u>	
		Caravans of Gold, Fragments in Time: Art, Culture, and Trans-Saharan Exchange		45.164	GE-250133-16	119,494	—
						<u>11,842</u>	<u>—</u>
					National Foundation of the Arts and Humanities Total	<u>598,668</u>	<u>187,362</u>
U.S. Agency for International Development		Partners in Hope Agreement May 2017	160	98.001	AID-OAA-A-15-00070	2,811	—
		Promoting Rule of Law in Georgia	68	98.001	AID-114-A-15-00004	<u>37,904</u>	<u>—</u>
		Juventud sin Prisión	171	98.U06	1/19/16//AID-523-A-15-00010	40,715	—
					<u>38,659</u>	<u>—</u>	
					U.S. Agency for International Development Total	<u>79,374</u>	<u>—</u>
					Other Programs Total	<u>7,867,003</u>	<u>3,478,196</u>
Maternal, Infant, and Early Childhood Department of Health and Human Services		Mothers and Babies Infrastructure	104	93.870	FCSWS04131	35,076	—
		Mothers and Babies Training and Technical Assistance	104	93.870	FCSXS04131	<u>7,106</u>	<u>—</u>
						<u>42,182</u>	<u>—</u>
	Health Resources and Services Administration	Florida Statewide Mothers and Babies Training 2018-19 Statewide Mothers and Babies Course Training	75 75	93.870 93.505	#15-23//1X10MC31134-01 D89MC2826//Agreement #15-23-FY1617	4,842	—
					<u>38,095</u>	<u>—</u>	
					Department of Health and Human Services Total	<u>85,119</u>	<u>—</u>
					Maternal, Infant, and Early Childhood Programs Total	<u>85,119</u>	<u>—</u>
CCDF Department of Health and Human Services	Administration for Children and Families	Improving Caregiver Quality through Observation and Individualized Instructional Feedback		93.575	90YE0159-02-00	8,071	—
						<u>8,071</u>	<u>—</u>
					Department of Health and Human Services Total	<u>8,071</u>	<u>—</u>
					CCDF Total	<u>8,071</u>	<u>—</u>
Medicaid Medical Assistance Program Department of Health and Human Services	Centers for Medicare & Medicaid Services	Illinois Medicaid EHR Incentive Program Education and Outreach Program	103	93.778	2018-37-002	426,149	103,145
						<u>426,149</u>	<u>103,145</u>
					Department of Health and Human Services Total	<u>426,149</u>	<u>103,145</u>
					Medicaid Medical Assistance Program Total	<u>426,149</u>	<u>103,145</u>
					Grand Total	<u>\$ 710,053,926</u>	<u>63,125,558</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, 2018

ID	Sponsor full name
1	Acumen Pharmaceuticals, Inc.
2	Agile Sciences, Inc.
3	Albert Einstein College of Medicine, Inc.
4	Alliance for Clinical Trials in Oncology
5	Alliance for Sustainable Energy, LLC, National Renewable Energy Laboratory
6	Alliance of Chicago Community Health Services
7	Altarum Institute
8	American College of Rheumatology
9	American Heart Association
10	American Institutes for Research
11	American Lightweight Materials Manufacturing Innovation Institute
12	American Lung Association
13	American Psychiatric Association
14	Ann & Robert H. Lurie Children's Hospital
15	An-Najah National University
16	Aptinyx Inc.
17	Arizona State University
18	Arrevus, Inc.
19	Association of University Centers on Disabilities
20	Avar Consulting, Inc.
21	Battelle Memorial Institute
22	BBN Technologies
23	Benaroya Research Institute at Virginia
24	BloodCenter of Wisconsin, Inc.
25	Blue Marble Space
26	Booz, Allen & Hamilton Inc.
27	Bose Corporation
28	Boston College
29	Boston Medical Center
30	Boston University
31	Brigham and Women's Hospital
32	Brown University
33	California Institute of Technology, Jet Propulsion Laboratory
34	Carnegie Institution of Washington
35	Carnegie Mellon University
36	Case Western Reserve University
37	Cedars-Sinai Medical Center
38	Celdara Medical, LLC
39	Cerner Corporation
40	Chicago Association for Research and Education in Science
41	Chicago Department of Public Health
42	Chicago Housing Authority

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2018

ID	Sponsor full name
43	Chicago Public Schools
44	Children's Hospital Boston
45	Children's Hospital of Philadelphia
46	Cincinnati Children's Hospital Medical Center
47	Citrine Informatics
48	Cleveland Clinic Lerner College of Medicine of Case Western Reserve University
49	Cold Spring Harbor Laboratory
50	Columbia University
51	Communication Disorders Technology, Inc.
52	Community Action Project of Tulsa County, Inc.
53	Connecticut Science Center
54	CONRAD Program
55	COPD Foundation
56	Cornell University
57	County of Lake
58	Covitect Inc.
59	D&S Consultants, Inc.
60	Dakota Consulting, Inc.
61	Dartmouth College
62	DePaul University
63	DermaXon LLC
64	Digital Optics Technologies, Inc.
65	Dow Chemical Company
66	Duke University
67	Eastern Virginia Medical School
68	East-West Management Institute Inc.
69	ECOG-ACRIN Medical Research Foundation, Inc.
70	Elorac, Inc.
71	EMMES Corporation
72	Emory University
73	Engineering and Software System Solutions, Inc.
74	Fermi Research Alliance, LLC, Fermi National Acceleratory Laboratory
75	Florida Association of Healthy Start Coalitions, Inc.
76	Florida State University
77	Ford Motor Company
78	Forsyth Institute
79	Frontier Science and Technology Research Foundation
80	FuelCell Energy, Inc.
81	Fundação Faculdade de Medicina
82	Gallaudet University
83	General Motors Corporation
84	George Washington University

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2018

ID	Sponsor full name
85	Georgetown University
86	Georgia Institute of Technology
87	Georgia State University
88	Gold T-Tech, Inc.
89	Government of Israel Ministry of Defense Mission to the USA
90	Great Lakes Hemophilia Foundation
91	Greenway Energy LLC
92	Grzybowski Scientific Inventions, Ltd.
93	Harvard Pilgrim Health Care, Inc.
94	Harvard University
95	Health Research, Incorporated
96	Hektoen Institute for Medical Research
97	Honeywell Federal Manufacturing & Technologies, LLC
98	Houston Methodist Research Institute
99	Howard Brown Health Center
100	Icahn School of Medicine at Mount Sinai
101	ICF International, Inc.
102	ICON Clinical Research, LLC
103	Illinois Department of Healthcare and Family Services
104	Illinois Department of Human Services
105	Illinois Department of Public Health
106	Illinois Institute of Technology
107	Indiana University
108	Indiana University Purdue University Indianapolis
109	Innoblative Designs, Inc.
110	Innovative Design Labs, Inc.
111	Institute for Cancer Research
112	Institute of International Education, Inc.
113	Intact Genomics, Inc.
114	Integrated Protein Technologies, Inc.
115	International AIDS Vaccine Initiative
116	International Business Machines Corporation
117	International Center for Journalists
118	International Research & Exchanges Board
119	Iowa State University
120	Jaeb Center for Health Research
121	Joan and Sanford I. Weill Medical College
122	Johns Hopkins University
123	Joslin Diabetes Center, Inc.
124	Jumpstart for Young Children, Inc.
125	Kaiser Foundation Research Institute
126	Leidos Biomedical Research, Inc.

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2018

ID	Sponsor full name
127	Leidos, Inc.
128	Los Alamos National Security, LLC, Los Alamos National Laboratory
129	Loyola University Chicago
130	Lynntech, Inc.
131	Massachusetts General Hospital
132	Massachusetts Institute of Technology
133	Materials and Electrochemical Research Corporation
134	Mathematica Policy Research, Inc.
135	Mayo Clinic
136	Mayo Clinic Jacksonville
137	Medical College of Wisconsin
138	Medical University of South Carolina
139	MedPro Technologies, LLC.
140	Metropolitan Family Services
141	Michigan State University
142	National Association of Chronic Disease Directors (NACDD)
143	New England Research Institute, Inc.
144	New School
145	New York University
146	New York University School of Medicine
147	Nious Technologies Incorporated
148	Northrop Grumman Corporation
149	NorthShore University HealthSystem Research Institute
150	Nour, LLC
151	NRG Oncology Foundation, Inc.
152	NuMat Technologies, Inc.
153	Office of Naval Research
154	Ohio Department of Education
155	Ohio State University
156	Opto-Knowledge Systems, Inc.
157	Oregon Health & Science University
158	Pacific Northwest National Laboratory
159	Pancreatic Cancer Action Network, Inc.
160	Partners in Hope
161	Pennington Biomedical Research Center
162	Pennsylvania State University
163	Princeton University
164	Protabit LLC
165	Purdue University
166	Queens College, CUNY
167	QuesTek Innovations LLC
168	RAND Corporation

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2018

ID	Sponsor full name
169	Rehabilitation Institute of Chicago
170	Rehabilitation Institute Research Corporation
171	Reinserta un Mexicano, A.C.
172	Rensselaer Polytechnic Institute
173	Research Foundation for Mental Hygiene, Inc.
174	Research Triangle Institute
175	Rho Federal Systems Division, Inc.
176	Rockefeller University
177	Rosalind Franklin University of Medicine and Science
178	Rush University Medical Center
179	Rutgers University, the State University of New Jersey
180	RxGen, Inc.
181	SAFCell, Inc.
182	Salzman Group, Inc.
183	Sanford Burnham Prebys Medical Discovery Institute
184	Scripps Research Institute
185	Seattle Children's Hospital
186	SIMmersion LLC
187	Smithsonian Astrophysical Observatory
188	Social & Scientific Systems, Inc.
189	Southern Methodist University
190	Space Telescope Science Institute
191	Spaulding for Children (MI)
192	SRI International
193	Stanford University
194	StarSight, Inc.
195	State University of New York Health Science Center at Brooklyn
196	Swedish Medical Center
197	Synvitrobio, Inc.
198	Teaching Channel
199	Technion - Israel Institute of Technology
200	Technology Assessment and Transfer, Inc.
201	Temple University
202	Texas Biomedical Research Institute
203	The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc.
204	Thomas Jefferson University
205	Tufts Medical Center, Inc.
206	Tufts University
207	Tulane University
208	U.S. Civilian Research & Development Foundation
209	UChicago Argonne, LLC, Argonne National Laboratory
210	UI Labs

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2018

ID	Sponsor full name
211	United Technologies Research Center
212	Université de Bamako
213	Universities Space Research Association
214	University of Alabama at Birmingham
215	University of Alberta
216	University of Arizona
217	University of Arkansas for Medical Sciences
218	University of California, Berkeley
219	University of California, Davis
220	University of California, Irvine
221	University of California, Lawrence Berkeley National Laboratory
222	University of California, Los Angeles
223	University of California, Riverside
224	University of California, San Diego
225	University of California, San Francisco
226	University of California, Santa Barbara
227	University of Central Florida
228	University of Chicago
229	University of Chicago, National Opinion Research Center
230	University of Cincinnati
231	University of Colorado
232	University of Colorado Denver
233	University of Florida
234	University of Georgia
235	University of Houston
236	University of Ibadan
237	University of Illinois at Chicago
238	University of Illinois at Urbana-Champaign
239	University of Iowa
240	University of Jos
241	University of Kentucky
242	University of Lagos
243	University of Maryland, College Park
244	University of Massachusetts Amherst
245	University of Massachusetts Boston
246	University of Massachusetts Lowell
247	University of Massachusetts Medical School
248	University of Memphis
249	University of Miami
250	University of Michigan
251	University of Minnesota
252	University of Mississippi Medical Center

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2018

ID	Sponsor full name
253	University of Missouri-Columbia
254	University of Nebraska at Kearney
255	University of Nebraska Medical Center
256	University of New Hampshire
257	University of North Carolina at Chapel Hill
258	University of Notre Dame
259	University of Pennsylvania
260	University of Pittsburgh
261	University of Rochester
262	University of Southern California
263	University of Tennessee
264	University of Texas at Austin
265	University of Texas at Dallas
266	University of Texas at San Antonio
267	University of Texas Health Science Center
268	University of Texas M. D. Anderson C
269	University of Texas Medical Branch at Galveston
270	University of Texas Southwestern Med
271	University of Utah
272	University of Virginia
273	University of Washington
274	University of Wisconsin-Madison
275	University of Wisconsin-Milwaukee
276	University of Wisconsin-Whitewater
277	UT-Battelle, LLC, Oak Ridge National Laboratory
278	Vanderbilt University
279	Veterans Medical Research Foundation of San Diego
280	Vidrio Technologies, LLC
281	Vignet Inc.
282	Virginia Commonwealth University
283	Virginia Polytechnic Institute and State University
284	Wake Forest University Health Sciences
285	Washington University in St. Louis
286	Wearifi, Inc.
287	West Virginia University
288	WestEd
289	Yale University

NORTHWESTERN UNIVERSITY

Notes to Supplementary Schedule of Expenditures of Federal Awards

Year ended August 31, 2018

(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 the U.S. Office of Management and Budget Circular OMB 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, 2018. 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, 2018

(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, 2018, are summarized as follows:

Federal Perkins Loan Program (CFDA 84.038)	\$	404,620
Federal Direct Loan Programs (CFDA 84.268)		179,848,063
HPSL Primary Care Loans (CFDA 93.342)		<u>—</u>
Total Federal Student Loan Programs	\$	<u>180,252,683</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 \$24,280,878 and \$188,251, respectively, at August 31, 2018. The University incurred \$80,000 and \$0 in administrative expenses under the Federal Work Study and Perkins programs, respectively, for the year ended August 31, 2018.



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 (the University), which comprise the consolidated statement of financial position as of August 31, 2018, 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 19, 2018.

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) to determine the 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 combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's consolidated 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 determination of consolidated financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.



Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the 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 19, 2018



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

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

The Board of Trustees
Northwestern University:

Report on Compliance for 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, 2018. 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 University's major federal program. However, our audit does not provide a legal determination of the University's compliance.

Opinion on Major Federal Program

In our opinion, Northwestern 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, 2018.

Other Matters

The results of our auditing procedures disclosed instances of noncompliance, which are required to be reported in accordance with the Uniform Guidance and which are described in the accompanying schedule of findings and questioned costs as items 2018-001 and 2018-002. Our opinion on the University's major federal program is not modified with respect to these matters.



The University's responses to the noncompliance findings identified in our audit are described in the accompanying schedule of findings and questioned costs. The University's responses were not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the responses.

Report on Internal Control Over Compliance

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

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or 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 identified certain deficiencies in internal control over compliance, as described in the accompanying schedule of findings and questioned costs as items 2018-001 and 2018-002, that we consider to be significant deficiencies.

The University's responses to the internal control over compliance findings identified in our audit are described in the accompanying schedule of findings and questioned costs. The University's responses were not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the responses.

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 Supplementary 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, 2018, and have issued our report thereon dated December 19, 2018, which contained an unmodified opinion on those financial statements. Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying supplementary 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 supplementary 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 30, 2019

NORTHWESTERN UNIVERSITY
Schedule of Findings and Questioned Costs
Year ended August 31, 2018

(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:
 - Research and Development 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, 2018

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

Finding 2018-001 Inadequate Process for Updating Property Management Records

Federal Agency: Corporation for National and Community Service (CNCS)
U.S. Agency for International Development (USAID)
U.S. Department of Agriculture (USDA)
U.S. Department of Commerce (USDOC)
U.S. Department of Defense (USDOD)
U.S. Department of Education (USDE)
U.S. Department of Energy (USDOE)
U.S. Department of Health and Human Services (USDHHS)
U.S. Department of Homeland Security (USDHS)
U.S. Department of Housing and Urban Development (USHUD)
U.S. Department of Interior (USDO I)
U.S. Department of Justice (USDOJ)
U.S. Department of Labor (USDOL)
U.S. Department of State (USDOS)
U.S. Department of Transportation (USDOT)
U.S. Department of Veterans Affairs (USDVA)
U.S. Environmental Protection Agency (USEPA)
U.S. Social Security Administration (USSSA)
National Aeronautics and Space Administration (NASA)
National Endowment for the Humanities (NEH)
National Science Foundation (NSF)
Nuclear Regulatory Commission (NRC)
Scholarship Foundations
All Pass-Through Entities

Program Name: Research and Development Cluster

CFDA # and Program Expenditures: Various (\$472,169,587)

Federal Award Numbers: Various – See schedule of award numbers

Federal Award Year: Various – See schedule of award numbers

Questioned Costs: None

Condition Found

The University did not consistently follow property management regulations relative to equipment purchased with federal funding from the Research and Development (R&D) Cluster program.

NORTHWESTERN UNIVERSITY
Schedule of Findings and Questioned Costs
Year ended August 31, 2018

The University conducts research and development activities in multiple locations on its Chicago and Evanston campuses. Equipment items purchased with federal funds are utilized at both of these locations. The University identifies all equipment in its property management records with individually assigned asset numbers and each individual asset record includes the specific location of the asset, the federal award general ledger account number which funded the purchase of the asset, and other required information. An asset tag with the assigned asset number is affixed to each asset in accordance with University policy.

During our physical observation of 40 pieces of equipment purchased with R&D Cluster funds, we noted 6 items included on the R&D Cluster inventory list (with a cost value of \$641,848 and a net book value of \$225,122) that could not be located for observation. It was determined that these items had been disposed of previously; however, the property records had not been updated to reflect the disposals.

While the University has documented policies and procedures which have been communicated and are available to University staff and the University's control procedures include performing a biennial inventory, monitoring procedures to verify equipment records are accurate are not operating at a sufficient level of precision to identify all disposals that have not been reported by decentralized units in a timely and complete manner.

As of August 31, 2018, the cost value of equipment purchased with R&D Cluster funds was \$187,740,626 (with a net book value of \$41,330,066).

Criteria

According to 2 CFR 200.313(c), equipment must be used in the program which acquired it or, when appropriate, other federal programs. 2 CFR 200.313(d) requires a non-Federal entity to establish a control system to safeguard equipment and to ensure equipment is adequately maintained. 2 CFR 200.313(e) also requires the nonfederal entity to request disposition instructions from the Federal awarding agency, if required by the terms and conditions of the Federal award, when equipment is no longer needed.

In addition, 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 equipment inventory records are accurate and updated for disposals in a timely and complete manner.

Cause

In discussing these conditions with University officials, they stated the property records were not updated for the disposals tested due to the departments not communicating the updates in a timely manner.

Possible Asserted Effect

Failure to maintain accurate property results in noncompliance with federal requirements and may result in federal approvals not being obtained when required and federal programs not receiving the appropriate share of proceeds from disposals of equipment purchased with federal funds.

Repeat Finding

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

NORTHWESTERN UNIVERSITY
Schedule of Findings and Questioned Costs
Year ended August 31, 2018

Statistical Sampling

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

Recommendation

We recommend the University implement procedures to ensure property records are updated in a timely manner to reflect equipment disposals.

Views of University Officials

Management agrees. Exceptions noted during external audit interim fieldwork were corrected for fiscal year end close. Additional efforts to identify and record potential missing disposals for the fiscal year 2018 re-inventory process were also implemented (as described below in steps 1-4).

In fiscal year 2019, Accounting Services shall reiterate proper procedures to department Unit Representatives regarding the disposition of equipment, including timely submission of disposal requests.

In addition, Accounting Services shall continue the following steps introduced in summer 2018 designed to enhance controls around completeness and accuracy of disposals:

1. Department representatives submit individual asset disposal requests through NU Financials.
2. Department representatives submit biennial re-inventory sheets to Accounting Services.
3. Accounting Services compares disposals per the biennial re-inventory sheets to requests per NU Financials for completeness and accuracy.
4. Accounting Services then follows up on discrepancies with department representatives as necessary.

Note: Previously, Accounting Services made the disposal entries based on the biennial re-inventory sheets alone.

Further in fiscal year 2019, Accounting Services shall perform its own audit of the re-inventories prepared by the department Unit Representatives. This entails judgmentally selecting assets from the re-inventory sheets, and verifying the existence of assets and accuracy of the information (e.g., location, custodian, etc.) through observation. Accounting Services will judgmentally gear its sample towards higher risk items, including higher dollar values and older assets. In addition, Accounting Services' audit sample size shall increase to address risks highlighted from this control activity observation.

These procedures will be fully in place before August 31, 2019.

NORTHWESTERN UNIVERSITY

Schedule of Findings and Questioned Costs

Year ended August 31, 2018

Finding 2018-002	Untimely Completion of Subrecipient Single Audit Desk Reviews
Federal Agency:	Corporation for National and Community Service (CNCS) U.S. Agency for International Development (USAID) U.S. Department of Agriculture (USDA) U.S. Department of Commerce (USDOC) U.S. Department of Defense (USDOD) U.S. Department of Education (USDE) U.S. Department of Energy (USDOE) U.S. Department of Health and Human Services (USDHHS) U.S. Department of Homeland Security (USDHS) U.S. Department of Housing and Urban Development (USHUD) U.S. Department of Interior (USDOl) U.S. Department of Justice (USDOJ) U.S. Department of Labor (USDOL) U.S. Department of State (USDOS) U.S. Department of Transportation (USDOT) U.S. Department of Veterans Affairs (USDVA) U.S. Environmental Protection Agency (USEPA) U.S. Social Security Administration (USSSA) National Aeronautics and Space Administration (NASA) National Endowment for the Humanities (NEH) National Science Foundation (NSF) Nuclear Regulatory Commission (NRC) Scholarship Foundations All Pass-Through Entities
Program Name:	Research and Development Cluster
CFDA # and Program Expenditures:	Various (\$472,169,587)
Federal Award Numbers:	Various – See schedule of award numbers
Federal Award Year:	Various – See schedule of award numbers
Questioned Costs:	None

Condition Found

The University does not have adequate controls in place to ensure single audit desk reviews are completed on a timely basis for subrecipients of the Research and Development (R&D) Cluster program.

The University requires subrecipients who expend more than \$750,000 in federal awards during the subrecipient's fiscal year to submit a single audit report. University staff in Accounting Services for Research and Sponsored Programs (ASRSP) are responsible for reviewing these reports, determining whether required audits are completed, and issuing management decisions on findings reported for the awards passed through by the University within required time frames.

NORTHWESTERN UNIVERSITY
Schedule of Findings and Questioned Costs
Year ended August 31, 2018

During our testing of single audit reports for 40 subrecipients (with aggregate expenditures of \$34,503,656), we noted that single audit desk reviews for 10 of those subrecipients (with total expenditures of \$8,346,825) were not performed on a timely basis. Specifically, the single audit report reviews were not completed within six months after the report was accepted by the Federal Audit Clearinghouse. Delays in reviewing these reports ranged from 7 to 164 days.

While none of the reports that were reviewed late contained findings requiring the University to issue a management decision, the timing of the University's review procedures would not permit compliance with the requirement to issue management decisions within six months.

Amounts passed through to subrecipients of the R&D Cluster program during the year ended August 31, 2018 were \$59,544,217. Total R&D Cluster program expenditures for the year ended August 31, 2018 were \$472,169,587.

Criteria

According to 2 CFR 200.331(d)(3) and 2 CFR 200.521 require that a pass-through entity is required to issue a management decision on audit findings within six months after receipt of the subrecipient's audit report and ensure that the subrecipient takes timely and appropriate corrective action on all audit findings.

Additionally, 2 CFR 200.303 requires non-Federal entities receiving Federal awards establish and maintain internal control designed to reasonably ensure compliance with Federal laws, regulations, and program compliance requirements. Effective internal controls should include procedures to monitor whether (1) federal awards passed through to subrecipients have been properly included in the subrecipient's single audits, (2) subrecipients expending \$750,000 or more in Federal awards during the subrecipient's fiscal year have met the audit requirements of Uniform Guidance, including that the audits are completed within nine months after the end of the subrecipient's fiscal year end, (3) the subrecipient audit reports are reviewed in a timely manner, and (4) management decisions on reported findings are issued within six months after acceptance of the subrecipient's audit reports by the Federal Audit Clearinghouse.

Cause

In discussing these conditions with University officials, they stated the Standard Operating Procedures should better reflect the prioritization needed to complete the reviews in a timely and compliant manner.

Possible Asserted Effect

Failure to review subrecipient single audit reports in a timely manner could result in the University not issuing management decisions within required timeframes.

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.

NORTHWESTERN UNIVERSITY
Schedule of Findings and Questioned Costs
Year ended August 31, 2018

Recommendation

We recommend the University review its current procedures to determine the necessary changes needed to ensure single audit reports are reviewed on a timely basis and any management decisions are issued within required timeframes.

Views of University Officials

Management agrees. Although these desk reviews were not completed within the required timeframe, none of the reviews required the issuance of management decisions to mitigate compliance risks. The University has implemented necessary steps to ensure that the desk reviews, and issuance of management decisions, if necessary, will be made within six months of the audit report acceptance date from the Federal Audit Clearinghouse (FAC).

NORTHWESTERN UNIVERSITY
 Schedule of Findings and Questioned Costs
 Table of Award Numbers
 Year ended August 31, 2018

Name of Federal Program or Cluster (CFDA #)
 Research and Development Cluster (Various):

Award Number			
AGMT00000 775//1U01N104326-01	CCF-1453853 002	CNS-1615837	DMR-1610367 002
AGMT-4/9/15//5P01CA108671-08	CCF-1526109	CNS-1619317	DMR-1610796-001
Agr. 10/06/2015//5R44AR061920-03	CCF-1533560 001	CNS-1651695 001	DMR-1611076 No. 001
Agr. 4/19/2016//HHSN27601500744P	CCF-1533656	CNS-1701921	DMR-1611308
Agr. 8/7/14 // U01HL107407	CCF-1618065-001	CNS-1718670	DMR-1611341
AGREEMENT 3/10/16 // 1 H97HA288910100	CCF-1618502	CNS-1621362	DMR-1612876
Agreement 3/26/13 // 01//FA8651-13-C-0011	CCF-1619253	CONTRACT NO. 11841	DMR-1629383
Agreement 4/17/2018	CCF-1637565	CONTRACT PO #42045/236320/50105365/U62PS001	DMR-1708254
Agreement 4/19/17/2012-VF-GX-K022	CCF-1652491 001	CRB-SSS-S-15-004659/HHSN2612008000	DMR-1710104
Agreement 6/27/18 // 2 R4 AT009158-02	CCF-1733860	CTAFYN067//4UH3TR000967-02	DMR-1710491
Agreement 8/14/2017 // 7R44DC013093-03	CCF-1814706	CTAIN067//RF1AG041845	DMR-1720139
AGREEMENT 8/18/16	CCF-1834324	D14PC00005/0001	DMR-1729016
Agreement signed 11/9/10 // 1U01NS026835-01A1	CCF-1834701	D15AP00027	DMR-1729303
Agr421/17/15012705sub1/R01HS024273	CDT-2013-6 Amd 4 // R33DC011174-02	DAA2-17-62986-1/59-0210-2-160	DMR-1729487-001
AH000527//5R01DK100304-04	CHE-1266201	DAIT-SACCC-03-NW//5UM2A1117870-03	DMR-1747776
Amend. 005//5R44AA022265-03	CHE-1308107	DBI-1256188	DMR-1756245
Amgt. 08/31/17//1647888	CHE-1308504	DBI-1353682	DMR-1801632
ASII/2R44AI092952-02A1	CHE-1351598	DBI-1353952/002	DMR-1806912
AST-1109753/002	CHE-1361173	DBI-1757973	DMR-1822422
AST-1343381	CHE-1363007	DD7-18096A // NAS8-03060	DMS 1502632 003
AST-1352369	CHE-1400596	DD8-19101A//NAS8-03060	DMS -1833295
AST-1359462-003	CHE-1455017	DE-AR0000702	DMS-0636574/005
AST-1412836	CHE-1464488	DE-E0008077	DMS-1043080
AST-1517246 002	CHE-1464916	DE-EE0006082 // PO# TCS67912-001	DMS-1312935
AST-1517491 002	CHE-1465045	DE-EE0006449-0008	DMS-1352173-004
AST-1517753	CHE-1465201	DE-EE0008079	DMS-1405516-002
AST-1547328	CHE-1506683	DE-EE0008089	DMS-1406024
AST-1652522	CHE-1507790	DE-FG02-00ER45810/0020	DMS-1406164
AST-1715216	CHE-1565925	DE-FG02-01ER45945 0018	DMS-1413786
AST-1716762	CHE-1607640	DE-FG02-03ER15457 0015	DMS-1418672
AST-1757792	CHE-1655187	DE-FG02-04ER15612/0013	DMS-1449300
ASUB0000017//2017-ST-061-QA001-01	CHE-1664184	DE-FG02-05ER46248 0014	DMS-1500670
ASUB22//2018-68001-27550	CHE-1665021	DE-FG02-06ER46346 0012	DMS-1506591-001
ATHN2015-VW-1-553/ 1 NU27DD001155-03-00	CHE-1665141	DE-FG02-07ER46433 Mod. 0009	DMS-1508040-002
Award Letter 4/5/16 // 5T06SJM060562-06	CHE-1665255	DE-FG02-08ER15967-0008	DMS-1514698
BBN Ref ID 14303 PO #9500012297//CNS-1346688	CHE-1709888	DE-FG02-08ER46539-0009	DMS-1517080
BCS - 1749580	CHE-1760537	DE-FG02-87ER13808/0033	DMS-1522747
BCS-1251345	CITR Agmt 4/22/2013	DE-FG02-87ER25047/0030	DMS-1522981-001
BCS-1423917	CL 4346 CC 81345 //5U01EB015410-02	DE-FG02-87ER40344 0039	DMS-1547394
BCS-1424025	CL32802 CCR1039//90RT5027-01-00	DE-FG02-96ER14684-0020	DMS-1600023
BCS-1430400	CL5253//R01HD083314	DE-FG02-96ER14999-0019	DMS-1606654
BCS-1440564	CMMI-1130948	DE-FG02-96ER45782-0019	DMS-1600718-001
BCS-1455804	CMMI-1234491	DE-NA0002522	DMS-1610278-002
BCS-1461088 002	CMMI-1265786	DE-NE0008409-0001	DMS-1612437
BCS-1528569	CMMI-1324834	DE-SC0009899 0006	DMS-1619748
BCS-1533512	CMMI-1334609	DE-SC0001059/0008	DMS-1620022
BCS-1546972	CMMI-1334929	DE-SC0004752-0008	DMS-1647351
BCS-1613340	CMMI-1335014	DE-SC0007456	DMS-1653552
BCS-1630141	CMMI-1335585	DE-SC0010265 0004	DMS-1700147
BCS-1634118	CMMI-1351534-005	DE-SC0010594 0003	DMS-1700819
BCS-1647219	CMMI-1361942	DE-SC0012130-0004	DMS-1702019
BCS-1728173	CMMI-1400169	DE-SC0012161 0004	DMS-1708503
BCS-1729720	CMMI-1400618	DE-SC0012531/0001	DMS-1709544
BCS-1732129	CMMI-1404489	DE-SC0014330 0002	DMS-1709894
BCS-1734217	CMMI-1405231	DE-SC0014424-0003	DMS-1710481
BCS-1734981	CMMI-1434834	DE-SC0014520-0002	DMS-1716114
BCS-1806248	CMMI-1434876	DE-SC0014519 10 0002	DMS-1720433
BCS-1812764	CMMI-1435065	DE-SC0015973 0002	DMS-1744209-001
BCS-1823543	CMMI-1435358	DE-SC0016284-0002	DMS-1747457
BL-4831218-NWUC//IS-1636893	CMMI-1435950	DE-SC0016965	DMS-1764421
BL-4831222-NU//BCS-1734853	CMMI-1436297	DE-SC0017615	DMS-1800544
BMC ID 6610//R01CA224911-01A1	CMMI-1436518	DE-SC0018092	DMS-1802037
BMSSA-006 // 80NSSC17M0054	CMMI-1436574	DE-SC0018093	DMS-1809011
BOA 3J-30081 // 3J-30081-0066B	CMMI-1436658	DE-SC0018249-P0001	DMS-1810644
BWH 09/22/16//U01AI063594	CMMI-1462633 001	DGE - 1842165	DMS-1812057
C00045065-5//W911NF-14-1-0359	CMMI-1462850	DGE-1324585 009	DRL-1020316 Amd 005
C2015.0008 // DE-AR0000495	CMMI-1463411	DGE-1450006-003	DRL-1251516
C2017.0013//DE-AR0000813	CMMI-1463489	DGE-1723805	DRL-1252121
CBET-0835800	CMMI-1536503	DMR-0907068	DRL-1252372
CBET-1055379	CMMI-1537060	DMR-0907639	DRL-1344266/003
CBET-1264963	CMMI-1537641	DMR-1121262 Amd 009	DRL-1348800
CBET-1265029	CMMI-1562941	DMR-1207282	DRL-1418020
CBET-1403036	CMMI-1563244	DMR-1207539/ Amd 003	DRL-1420599
CBET-1403058	CMMI-1603050	DMR-1307698	DRL-1433724/001
CBET-1435228	CMMI-1634982	DMR-1308654 Amd 002	DRL-1451762 003
CBET-1438721	CMMI-1646592-002	DMR-1308799	DRL-1515788-002
CBET-1452549-003	CMMI-1654469	DMR-1310292	DRL-1612619
CBET-1453576	CMMI-1662233	DMR-1333335 002	DRL-1614745
CBET-1511450	CMMI-1662435	DMR-1334928	DRL-1623550-01
CBET-1604890	CMMI-1662606	DMR-1334928	DRL-1640201 003
CBET-1637764	CMMI-1663196	DMR-1351959 004	DRL-1657438
CBET-1653315	CMMI-1727744	DMR-1408901-003	DRL-1661089
CBET-1701105	CMMI-1740011	DMR-1410169	DRL-1661264 002
CBET-1704996	CMMI-1742849	DMR-1410968	DRL-1713368
CBET-1706125	CMMI-1743691	DMR-1454688 004	DRL-1723750
CBET-1706642 001	CMMI-1743886	DMR-1505103 004	DRL-1759360
CBET-1806007	CMMI-1748049	DMR-1505849	DRL-1824551
CC 81347 3024//R01MH103910	CMMI-1762035	DMR-1506925-002	DUE-1504952
CC 81765 CL 2910//90RE5010-03-00	CMMI-1763100	DMR-1507058	DUE-1525725
CC# 81353 3037//90ER5013-01-00	CMMI-1829101	DMR-1507101 001	DUE-1644555
CC# 81388 CL4442//R01HD082216-03	CMMI-1833195	DMR-1507810-001	EAR-1338312-005
CC# 81394 CL 4811 // 1544741	CNS-1228357	DMR-1508323 002	EAR-1344280
CC# 81920 CL3719//5R01EB019406-03	CNS-1314620	DMR-1508399-002	EAR-1452344-002
CC#81750//R01HD072080	CNS-1319086	DMR-1508730-003	EAR-1541891
CC#81930 CL4098//5R01HD081525-04	CNS-1329891	DMR-1508731/003	EAR-1550108
cc81478 6323//90SIMS0001-01-00	CNS-1405756 001	DMR-1539724	EAR-1613359
CCF-1216006	CNS-1408790	DMR-1600837	EAR-1734300
CCF-1409601	CNS-1419138	DMR-1602542	ECCS-1505409
CCF-1422489/001	CNS-1441695	DMR-1608218	ECCS-1542205
CCF-1423040	CNS-1526052	DMR-1608258	ECCS-1607838

NORTHWESTERN UNIVERSITY
 Schedule of Findings and Questioned Costs
 Table of Award Numbers
 Year ended August 31, 2018

Name of Federal Program or Cluster (CFDA #)
 Research and Development Cluster (Various):

Award Number		
R305A120531-15-7	Sub No. 4471 CC81932/W81XWH-15-2-0035	W81XWH-17-1-0230
R305A160013 -17	Sub# 12305-52/3P30CA006927-50SB	W81XWH-17-1-0362
R305B100027 - 14	Sub#00003339/HHSN261201200034I	W81XWH-17-1-0405
R305B140029 - 16	Sub#00003350/HHSN261201200034I	W81XWH-17-1-0406
R305B140042 - 17 Mod 4	Sub#2002749092/5U10EY024527-04	W81XWH-17-1-0411
R305B170016	Sub#3003585891/5R01EB013198-09 REVISED	W81XWH-17-1-0578
R305D170041 - 17A	SUB#57266/5U01HL116886-03 REVISED	W81XWH-17-1-0609
R33CA225323	SUB: 110009/SUM1A1068636-12	W81XWH-17-1-0642
R924/5R01 DC009972-09	SUB0000078 Amd. 5 // W911NF1510421	W81XWH-17-1-0679
RC103138NW//DUE-1347605	SUB00000853/BCS-1519120	W81XWH-17-1-8426
RC105782NU//5R01CA193706-03	SUB-01//HSHQDC-14-R-B0009	W81XWH1810053
RC106479NU//1632051	Subk No. 1478794 Mod 14 // NNN12AA01C	W81XWH1810257
RC107136NU//1654929	T539496/R21NR014544	W81XWH1810594
Require5P30AR072579-02	T652681/4U01NS038455-15	W911NF-11-1-0390 P00011
RES126034 Amd 2//R01HL124245	T733841/5R01NS088528-04	W911NF-11-1-0445/P00004
RES509477//DP3DK104438	T745243/1R01AG054079-01	W911NF-12-1-0542/P00008
RES511132/4U01DK094157-06S1	T811257/5U01DA036233-05	W911NF-13-1-0229 P00010
RES511975/5R01CA211762-02	T897810/1R01AG057714-01 Revised	W911NF-13-1-0412/P00002
RES512231/2U01DK094157-07 REVISED	T91HP215420502	W911NF-14-1-0168/P00008
RES512302/1U01AR071168-01A1 REVISE	TM6-17005X/NAS8-03060	W911NF-14-1-0259-P00004
RES512393/5U01NS090407-04	TM7-18007X/NAS8-03060	W911NF-14-1-0461-P00006
RES512561/2U01DK094157-07 REVISED	TO#2 P0#10203492 //DSFH6116D00053	W911NF-14-1-0686-P00004
RES512878/2U01DK094157-07 REVISED	TUL-HSC-555811-17//B//U01HD052104	W911NF-15-1-0017 P00006
RES51337 //2R01NS082007-07	U10CA180820-01-NWU2	W911NF-15-1-0068/P00001
RG884-G2 Amd 1 // R01HL130619	U10CA180820-01-NWU3	W911NF-15-1-0091 P00006
RNG200279-05//R01DK106201	UFDSP00010117//R01HL121023	W911NF-15-1-0151 P00006
RQ15-016R02 Mod 2//DE-EE0006867	UFDSP00010414 // R01GM107227-03	W911NF-15-1-0240 P00004
RR211-536/S001474//R01A1128924-01A1	UFDSP00010684//U01AG022376	W911NF-15-1-0272-P00003
RR376-410/4708620 Amd 3 // 2R01HD03058820A1	UFDSP00011459//R01CA200867(2)	W911NF-15-1-0569 P00001
RR376-428/4945376 Amd 6 // 2P30DA027827-06	UFDSP00011851//U01AG050499	W911NF-16-1-0138 P00003
RSA No. 1594471 // NNN12AA01C	UFDSP00011909//U54AR052646	W911NF-16-1-0169 P00004
S-00014999 // R305A170165	UFDSP00011947//U01NS102038	W911NF-16-1-0372 P00002
S-000700 Amd 6 // USAF FA9550-15-1-0009	UFDSP00012107//R01CA187109/16122063	W911NF-16-1-0384
S002/2R01NS047567-13A1	UFDSP00012338//W912HQ18C0039	W911NF-16-1-0410 P00005
S140181-2 Amd. 3 // 5R01A112009-04	UFDSP0011905//U54AR052646	W911NF-16-1-0458
S20140000026205// 5R01MD007723-03	UNIV59587//5R01DK050203-20	W911NF-16-1-0464-P00004
S4526-PO176307//1R03HD092676-01	USTTB/NU/1R01A1110386-02-2016	W911NF-16-1-0584 P00001
S511000040313//7R01HL125089	UTA16-000087 Amd. 1 // 1R01HD083613-01A1	W911NF-17-1-0184
SA17-0018-S001/1616244	UWSC10113/838300001-0	W911NF-17-1-0233 P00001
SC180072//W81XWH-17-1-0340	UWSC1728/SU1AC016876-20	W911NF-17-1-0326 P00002
SES-0750621/003	UWSC8225/(BPO2840)/5R01NS085331-03	W911NF-17-1-0430 P00001
SES-1129475	UWSC8429 / K01A095060	W911NF-17-2-0054-P00002
SES-1151410/003	UWSC8533/1R01HL127659-01	W911NF-18-1-0006 P00001
SES-1254380-005	UWSC8539/HHSN26820150003I	W911NF-18-1-0035
SES-1260949	UWSC8836/2R01FD003704-03A1	W911NF-18-1-0050
SES-1324778	UWSC9381/5R01HL096875-06	W911NF-18-1-0129
SES-1356899	UWSC9610/5R01A1128782-02	W911NF1810181
SES-1359610 001	VUMC 57993/5R01CA202936-04	W911NF1810200
SES-1427035	VUMC 58837/5R25TW009337-06	W911NF1810394
SES-1456984	VUMC 59440/5R01HL133860-02	W911NF1810429
SES-1530534	VUMC60724/5U2COD023196-02	W911NF-18-2-0074
SES-1530608	VUMC62776//1U01AI32004-01	W91Y1TZ-13-C-0015/3004730431
SES-1530748	VUMC64676//7R01MH106511-03	W A00356827/RFA2015095
SES-1556343	VUMC65034/5U2COD023196-02	W A00406355-RFS2015140/5R01HL125089-02
SES-1628057	VUMC66624//2U01HG008672-04S1	W FUHS114162//R01CA218398
SES-1628126	W000941480/R01EY026817-01A1	W FUHS114489/R01HL127028
SES-1637182	W81XWH-13-1-0319	W FUHS441012 SR-02/W81XWH-13-2-0054
SES-1655382	W81XWH-13-2-0100	W FUHS441082CF12/W81XWH1420004
SES-1702602	W81XWH-14-2-0193	Work Order No. 3J-30081-0067A Rev No. 0067B
SES-1703056	W81XWH-15-1-0214	WU-10-154 Amendment 04 //1R01AR055176-02
SES-1730079	W81XWH-15-1-0215	WU-16-153-MOD-1//5R01NS091439-02
SES-1730483	W81XWH-15-1-0335	WU-17-444//1R01MH104030-01A1
SES-1738297	W81XWH-15-1-0534	WU-18-261//UG3HL138325
SES-1824463	W81XWH-15-1-0708	WU-19-11//1R01MH113883-01A1
SES-1840443	W81XWH-16-1-0021	WU-HT-11-05-MOD-9 Amd 9 // DE-SC0001035
SMA(SBE)-1451416-006	W81XWH-16-1-0166	XEJ-6-62151-01-1 Mod. 3 // DE-AC36-08GO28308
SMA-1419324	W81XWH-16-1-0169	Yale 2.23.2017/R01HL125918
SOF 05-0081 Santos // NAS2-97001	W81XWH-16-1-0375	
SOFIA 05-0037 // NAS2-97001	W81XWH-16-1-0376	
SOFIA 05-0133 01 // NAS2-97001	W81XWH-16-1-0379	
SP00012129-01//1R01GM115763	W81XWH-16-1-0485	
SP0031902-60041063//1D43TW010134-03	W81XWH-16-1-0733	
SPC-00246/5R01NS084288-05	W81XWH-16-1-0763	
SPC-00886//7R01AI28752-03	W81XWH-16-C-0012	
Study# 2222/0003/1U01HL117006-01A1	W81XWH-17-1-0086	
SUB 5.22.17/5U01HL130163-02	W81XWH-17-1-0141	

Northwestern

FINANCIAL OPERATIONS

**SUMMARY SCHEDULE OF PRIOR AUDIT FINDINGS
NORTHWESTERN UNIVERSITY
For Year Ended August 31, 2018**

2017-001 Enrollment Reporting

Corrective Action Plan:

Management notes that there was an error in the submission of graduate degrees to the Clearinghouse. As a result, a student was missed in the submission of conferred degrees. In response to this finding, management has created a query that is run weekly on newly conferred graduates. This file ensures no graduates are missed and all data is appropriately reported to the Clearinghouse.

Expected Implementation Date: October 18, 2017

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

Explanation (if required): N/A

Northwestern

FINANCIAL OPERATIONS

Federal Award Findings and Questions Costs

Corrective Action Plan

Year Ended August 31, 2018

Finding No. 2018-001: Inadequate Process for Updating Property Management Records

CFDA Numbers: Various

Program: Research and Development Cluster

Corrective Action: Exceptions noted during external audit interim fieldwork were corrected for fiscal year end close. Additional efforts to identify and record potential missing disposals for the fiscal year 2018 re-inventory process were also implemented (as described below in steps 1-4).

In fiscal year 2019, Accounting Services shall reiterate proper procedures to department Unit Representatives regarding the disposition of equipment, including timely submission of disposal requests.

In addition, Accounting Services shall continue the following steps introduced in summer 2018 designed to enhance controls around completeness and accuracy of disposals:

1. Department representatives submit individual asset disposal requests through NU Financials.
2. Department representatives submit biennial re-inventory sheets to Accounting Services.
3. Accounting Services compares disposals per the biennial re-inventory sheets to requests per NU Financials for completeness and accuracy.
4. Accounting Services then follows up on discrepancies with department representatives as necessary.

Note: Previously, Accounting Services made the disposal entries based on the biennial re-inventory sheets alone.

Further in fiscal year 2019, Accounting Services shall perform its own audit of the re-inventories prepared by the department Unit Representatives. This entails judgmentally selecting assets from the re-inventory sheets, and verifying the existence of assets and accuracy of the information (e.g., location, custodian, etc.) through observation. Accounting Services will judgmentally gear its sample towards higher risk items, including higher dollar values and older assets. In addition, Accounting Services' audit sample size shall increase to address risks highlighted from this control activity observation.

Contact Person: Nicole Van Laan

Expected Implementation: August 31, 2019

Finding No. 2018-002: Untimely Completion of Subrecipient Single Audit Desk Reviews

CFDA Numbers: Various

Program: Research and Development Cluster

Corrective Action: The University has implemented necessary steps to ensure that the desk reviews, and issuance of management decisions, if necessary, will be made within 6 months of the audit report acceptance date from the Federal Audit Clearinghouse (FAC).

Contact Person: Jennifer Mitchell

Expected Implementation: May 31, 2019