



NORTHWESTERN UNIVERSITY

Single Audit Report

Year ended August 31, 2021

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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	6
Notes to Consolidated Financial Statements	7
Supplementary Schedule of Expenditures of Federal Awards	32
Notes to Supplementary Schedule of Expenditures of Federal Awards	86
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>	88
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	90
Schedule of Findings and Questioned Costs	92



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Independent Auditors' Report

The Board of Trustees
Northwestern University:

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Northwestern University (the University), which comprise the consolidated statements of financial position as of August 31, 2021 and 2020, the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

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

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

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

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Northwestern University as of August 31, 2021 and 2020, and the changes in its net assets and its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.



Emphasis of Matter

As discussed in note 1 to the consolidated financial statements, in 2021, the University adopted Financial Accounting Standards Board Accounting Standards Update No. 2016-02, *Leases (Topic 842)*, as amended. Our opinion is not modified with respect to this matter.

Other Matter

Our audits were conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying supplementary schedule of financial responsibility data as of and for the year ended August 31, 2021 is presented for purposes of additional analysis as required by the U.S. Department of Education and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary schedule of financial responsibility data is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 20, 2021 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 20, 2021

Consolidated Statements of Financial Position

As of August 31, 2021 and 2020

<i>(in thousands of dollars)</i>	2021	2020
Assets		
Cash and cash equivalents	\$285,059	\$381,442
Accounts receivable, <i>net</i>	218,147	214,787
Contributions receivable, <i>net</i>	259,037	277,871
Notes receivable, <i>net</i>	136,111	146,657
Investments	15,143,205	11,576,232
Right-of-use assets—operating, <i>net</i>	159,206	—
Land, buildings, and equipment, <i>net</i>	3,177,018	3,258,694
Total assets	19,377,783	15,855,683
Liabilities		
Accounts payable and accrued liabilities	206,908	223,707
Deferred revenue	205,750	137,757
Deposits payable and actuarial liability of annuities payable	199,041	200,602
Lease liabilities—operating	165,623	—
Bonds, notes, and other debt payable, <i>net</i>	2,538,133	2,832,036
Total liabilities	3,315,455	3,394,102
Net assets		
Without donor restrictions	9,863,772	7,782,322
With donor restrictions	6,198,556	4,679,259
Total net assets	16,062,328	12,461,581
Total liabilities and net assets	\$19,377,783	\$15,855,683

See Notes to the Consolidated Financial Statements, beginning on page 14.

Consolidated Statements of Activities

For the fiscal years ended August 31, 2021 and 2020

(in thousands of dollars)

2021

2020

Net assets without donor restrictions

Operating revenues

Tuition and fees (net of aid, \$520,805 in 2021 and \$512,945 in 2020)	\$659,916	\$661,099
Auxiliary services	40,528	69,658
Grants and contracts	752,376	719,122
Private gifts	232,369	233,671
Investment return designated for operations	421,626	402,815
Sales and services	156,004	195,736
Professional fees	48,537	45,969
Net assets released from restrictions	248,035	214,713
Total operating revenues	2,559,391	2,542,783

Operating expenses

Salaries, wages, and benefits	1,477,348	1,455,808
Services, supplies, maintenance, and other	717,159	728,002
Depreciation	185,918	181,647
Interest on indebtedness	91,163	93,894
Total operating expenses	2,471,588	2,459,351
Excess of operating revenues over expenses	\$87,803	\$83,432

Consolidated Statements of Activities continued on next page.

See Notes to the Consolidated Financial Statements, beginning on page 14.

Consolidated Statements of Activities (continued)

For the fiscal years ended August 31, 2021 and 2020

<i>(in thousands of dollars)</i>	2021	2020
Nonoperating revenues and expenses		
Private gifts and grants for buildings and equipment	\$20	\$40
Investment return, reduced by operating distribution	2,023,088	238,794
Change in value of derivative instruments	5,158	(465)
Other expenses, <i>net</i>	(4,614)	(10,421)
Net assets reclassified	(30,005)	—
Excess of nonoperating revenues over expenses	1,993,647	227,948
Change in net assets without donor restrictions	2,081,450	311,380
Net assets with donor restrictions		
Private gifts and grants for buildings and equipment	250	—
Restricted private gifts	169,233	94,570
Net gain on annuity obligation	12,536	2,112
Investment return	1,555,308	240,725
Net assets released from restrictions	(248,035)	(214,713)
Net assets reclassified	30,005	—
Change in net assets with donor restrictions	1,519,297	122,694
Change in total net assets	3,600,747	434,074
Beginning net assets	12,461,581	12,027,507
Ending net assets	\$16,062,328	\$12,461,581

See Notes to the Consolidated Financial Statements, beginning on page 14.

Consolidated Statements of Cash Flows

For the fiscal years ended August 31, 2021 and 2020

<i>(in thousands of dollars)</i>	2021	2020
Cash flows from operating activities		
Change in net assets	\$3,600,747	\$434,074
Adjustments to reconcile change in net assets to net cash used in operating activities		
Depreciation	185,918	181,647
Losses on disposals, retirements, and sales of buildings and equipment, <i>net</i>	3,454	2,133
(Accretion) amortization of issuance costs, premiums, and discounts, <i>net</i>	(453)	33
Change in allowance for student accounts receivable	394	(452)
Change in allowance for notes receivable and bad debt expense	580	3,320
Realized and unrealized gains on investments, <i>net</i>	(3,973,382)	(866,020)
Gifts of contributed securities	(58,582)	(20,352)
Proceeds from sale of unrestricted contributed securities	48,212	11,006
Change in value of derivative instruments	(5,158)	465
Restricted contributions received for long-term investment and capital projects	(112,724)	(82,093)
<i>Changes in assets and liabilities</i>		
Accounts receivable	(2,227)	(2,786)
Contributions receivable	14,736	18,015
Reduction in the carrying amount of the right-of-use assets—operating	21,639	—
Accounts payable and accrued liabilities	(1,483)	19,856
Deferred revenue	73,086	(93,699)
Deposits payable and actuarial liability of annuities payable	(26,919)	18,021
Lease liabilities—operating	(20,315)	—
Net cash used in operating activities	(252,477)	(376,832)
Cash flows from investing activities		
Purchases of investments	(2,545,240)	(1,630,446)
Proceeds from sales of investments	2,975,480	2,013,364
Acquisitions of land, buildings, and equipment	(121,957)	(145,496)
Proceeds from sale of buildings or equipment	4,103	1,687
Student loans disbursed	(21,506)	(29,409)
Principal collected on student loans	31,723	23,796
Other	(251)	(388)
Net cash provided by investing activities	322,352	233,108
Cash flows from financing activities		
Proceeds from issuance of notes, bonds, and other debt payable	100,000	595,000
Payments for debt issuance costs	—	(1,476)
Principal payments on notes, bonds, and other debt payable	(393,450)	(313,085)
Proceeds from sale of restricted contributed securities	10,370	9,346
Restricted contributions received for long-term investment and capital projects	116,822	79,912
Net cash (used in) provided by financing activities	(166,258)	369,697
(Decrease) increase in cash and cash equivalents	(96,383)	225,973
Cash and cash equivalents at beginning of year	381,442	155,469
Cash and cash equivalents at end of year	\$285,059	\$381,442
Supplemental disclosure of cash flow information		
Change in accrued liabilities for construction in progress	(\$10,246)	(\$22,043)
Capitalized interest	—	41
Cash paid for interest	91,549	90,798

See Notes to the Consolidated Financial Statements, beginning on page 14.

Notes to the Consolidated Financial Statements

For the fiscal years ended August 31, 2021 and 2020

1. Summary of Significant Accounting Policies

University Activities

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

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

Basis of Accounting

General

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

Net Asset Classifications

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

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

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

The category *Net Assets with Donor Restrictions* describes funds within subject to donor-imposed restrictions that will be met either by actions of the University, the passage of time, or may be perpetual in nature. These net assets include gifts for which donor-imposed restrictions have not been met in the year of receipt (these may include future capital projects), as well as trust activity and pledges receivable. Net assets with perpetual restrictions consist of donor-restricted endowment funds, contributions receivable for such funds, and certain trusts. For further discussion of the classification of donor-restricted endowment funds and disclosures about both donor-restricted and institution-designated endowment funds, see notes 4 and 10, respectively.

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

Net assets as of August 31 are as follows:

	2021		
	Without donor restrictions	With donor restrictions	Total net assets
<i>(in thousands of dollars)</i>			
Nature of specific net assets			
Teaching, research, and program support	\$3,380,552	\$3,937,558	\$7,318,110
Student financial aid	886,967	1,144,384	2,031,351
Capital and operations	1,294,610	717,111	2,011,721
Endowment net assets subtotal	5,562,129	5,799,053	11,361,182
Pledges	—	259,037	259,037
Unexpended gifts	—	31,260	31,260
Annuity and other split-interest agreements	—	66,946	66,946
Student loan funds	63,392	42,260	105,652
Operating and plant	4,238,251	—	4,238,251
Total	\$9,863,772	\$6,198,556	\$16,062,328

(in thousands of dollars)

2020

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

Operating Activities

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

Fair Value Measurements

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

Cash and Cash Equivalents

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

Contributions

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

are not recognized until all barriers to entitlement of the assets are overcome and the promisor's rights of return or release have elapsed.

Investments

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

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

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

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

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

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

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

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

Investments in certain real assets and other investments are recorded at acquisition or construction cost or, if received as a contribution, at fair value as of donation date. The University periodically assesses these assets for impairment by comparing their expected future cash flows with their carrying values. An impairment loss is recognized for the difference between estimated fair value and carrying value. In management's opinion, no impairment of investments held at cost existed as of August 31, 2021 and 2020. For further discussion of such investments, see note 4.

The methods described above may produce a fair value that may not be indicative of net realizable

value or of future fair values. Furthermore, while the University believes its valuation methods are appropriate and consistent with those of other market participants, the use of different methodologies or assumptions to determine the fair value of certain investments could result in a different estimate of fair value at the reporting date.

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

Derivative Financial Instruments

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

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

Accounts and Notes Receivable

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

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

Contributions Receivable

Contributions receivable that represent unconditional promises to give are recognized at fair value as contributions with donor restrictions in the period such promises are made by donors. Contributions are discounted at a risk-adjusted rate commensurate with the duration of the donor's payment plan. Amortization of the discounts is recorded as additional contribution revenue. Allowance is made for uncollectible contributions based on management's expectations regarding collection of outstanding promises to give and past collection experience. There were no significant conditional promises to give as of August 31, 2021 and 2020.

Leases

The University has entered into a variety of operating leases for real estate. On the consolidated statements of financial position, operating leases as a lessee are included in right-of-use assets—operating, net, and lease liabilities—operating. Right-of-use assets represent the University's right to use an underlying asset for the lease term. Lease obligations represent the University's liability to make lease payments arising from the lease. The obligations associated with these leases have been recognized at their respective commencement dates as a liability in the consolidated statements of financial position based on future lease payments, discounted by an appropriate incremental borrowing rate. The incremental borrowing rate is based on the estimated interest rate for borrowing over a term similar to that of the lease payments available at the commencement of the lease. The credit quality of the University and current prevailing market conditions were factors used to determine the incremental borrowing rate.

Lease terms may include options to extend or terminate certain leases. The value of a lease is reflected in the valuation if it is reasonably certain management will exercise an option to extend or terminate a lease.

Land, Buildings, and Equipment

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

Depreciation is calculated using the straight-line method over the useful lives of equipment, which

are estimated to be 3 to 20 years; of buildings, building improvements, and land improvements, which are estimated to be 10 to 40 years; and of leasehold improvements, which are estimated to be the shorter of the useful life or the lease term.

The University reviews long-lived assets for impairment by comparing the future cash flows expected from the asset to the carrying value of the asset. If the carrying value of an asset exceeds the sum of estimated undiscounted future cash flows, an impairment loss is recognized for the difference between estimated fair value and carrying value. There were no impairment charges recognized in 2021 or 2020.

Charitable Remainder Trusts

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

Annuities Payable

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

Self-Insurance Reserves

The University maintains a self-insurance program for general liability, professional liability, automobile liability, property damage, educators' liability, cyber liability, and certain employee and student insurance coverages. This program is supplemented with commercial excess insurance above the University's self-insurance retention. The reserves for self-insurance, postemployment benefits, and post-retirement medical and life insurance benefits are based on actuarial studies and management estimates. See notes 11 and 13 for additional discussion.

Revenue Recognition

Revenues from tuition and fees are reflected net of reductions from institutional student aid and are recognized as the services are provided over the academic year, including pro-rata adjustments for educational programs crossing over fiscal years. Institutional student aid includes amounts funded by endowment earnings, gifts, and other sources and reduces the published price of tuition for students receiving such aid. Fiscal year 2022 noncancelable fall-quarter tuition and fees, billed and received in fiscal year 2021, are reported as deferred revenue in fiscal year 2021. Fiscal year 2021 noncancelable fall-quarter

tuition and fees, billed and received in fiscal year 2020, are reported as deferred revenue in fiscal year 2020. (For further discussion of deferred revenues, see note 7.) Of the \$659.9 million and \$661.1 million in revenue recognized for the years ended August 31, 2021 and 2020, respectively, \$633.9 million and \$630.4 million, respectively, was from academic credit programs, and \$26 million and \$30.7 million, respectively, was from nonacademic credit programs.

Revenues from auxiliary services, such as residence and food services, represent fees for goods and services furnished to University students, faculty, and staff; these revenues are recognized in the fiscal year in which the goods and services are provided. Of the \$40.5 million and \$69.7 million in revenue recognized for the years ended August 31, 2021 and 2020, respectively, \$40.3 million and \$64.3 million, respectively, was from room and board, while the remaining revenue was from other miscellaneous residence and food services.

Grants and contracts revenue is received from federal and other sponsors. It may represent either an exchange transaction for an equivalent benefit in return or a nonexchange transaction in which the resources provided are for the benefit of the University, the funding organization's mission, or the public at large. Revenues from exchange transactions are recognized as performance obligations are satisfied, which in most cases are as related costs are incurred. Revenues from nonexchange transactions are recognized as revenue when qualifying expenditures are incurred and applicable conditions and restrictions under the agreements are met. Conditional awards from federal sponsors outstanding as of August 31, 2021 and 2020, were \$743.4 million and \$660 million, respectively.

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

Professional fees arise from faculty and department services provided to external institutions such as

hospitals. Revenues are recognized in the fiscal year in which the services are provided.

Income Taxes

The Internal Revenue Service has determined that the University is exempt from income taxes under Section 501(c)(3) of the US Internal Revenue Code, except with regard to unrelated business taxable income (UBTI), which is taxed at corporate income tax rates. The University files federal and various state and local tax returns. The statute of limitations on the University's federal tax returns remains open for fiscal years 2018 through 2020.

The University had no uncertain tax positions in fiscal year 2021 or fiscal year 2020.

The Tax Cuts and Jobs Act (the Act) was enacted on December 22, 2017. The Act's impact on the University includes excise taxes on executive compensation and net investment income, as well as new rules for calculating UBTI. For the years ended August 31, 2021 and 2020, the University is subject to the federal excise tax of 1.4 percent on net investment income, which includes interest, dividends, and net realized gains on investments.

Uses of Estimates in the Preparation of the Consolidated Financial Statements

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

Newly Adopted Accounting Pronouncements

Effective September 1, 2020, the University adopted FASB Accounting Standards Update (ASU) 2016-02, *Leases (Topic 842)*, as amended, using the modified retrospective method. This guidance is intended to improve financial reporting of leasing transactions by requiring organizations that lease assets to recognize assets as liabilities for the rights and obligations created by leases that extend more than 12 months. As permitted by the ASU, for leases with a term of 12 months or less, the University has elected not to recognize the lease assets and liabilities. Key provisions in this guidance include additional disclosures

surrounding the amount, timing, and uncertainty of cash flows arising from leases. The University elected the effective date transition method and the package of practical expedients, which permits the carry forward of historical conclusions on whether an existing contract is or contains a lease, the lease classification for any expired or existing leases, and the treatment of any indirect costs. Financial information was not updated and disclosures required under the new ASU were not provided for the period before September 1, 2020. The University's adoption of the ASU had significant impacts relating to the recognition of lease liabilities and right-of-use assets for operating leases greater than one year on the consolidated statements of financial position. See note 6.

Recent Accounting Pronouncements

In August 2018, the FASB issued ASU 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*. This guidance aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software or software licenses. The amendment is effective for fiscal year 2022, and the University is evaluating the impact of the new guidance on the consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses*, which amends the Board's guidance on impairment of financial instruments. The University is currently evaluating the impact of the standard, which is effective for the University in fiscal year 2024.

Current Environment

In March 2020, the World Health Organization declared the novel coronavirus (COVID-19) a pandemic. The disease outbreak continued through fiscal year 2021. The University's operations and financial condition were not immune to the pandemic's adverse effects.

Virtual learning continued through the fall quarter of 2020, with a limited number of students invited to return to campus. As more students returned to campus in the winter and spring quarters, some in-person education also resumed. While some faculty and staff

worked on campus to maintain essential operations, most continued working remotely.

Several revenue sources were negatively impacted by the pandemic. Related to students, fall-quarter undergraduate tuition was discounted by 10 percent, and the residence halls experienced lower occupancy during the same period (revenues from auxiliary services attributed to room and board were \$40.3 million and \$64.3 million in fiscal years 2021 and 2020, respectively). Sales and services revenues also decreased, driven by reduced athletics income and fees for services and goods to external parties (\$156 million and \$195.7 million in fiscal years 2021 and 2020, respectively).

University cost-containment measures continued in fiscal year 2021, including the University's continuation of the temporary suspension of retirement contributions through December 31, 2020 (the University contributed \$58.7 million and \$64.2 million in fiscal years 2021 and 2020, respectively). Campus operations, events, and travel did not return to normal operating levels, resulting in additional decreases in operating expenses from services, supplies, maintenance, and other. Incremental costs related to COVID-19 testing and facilities were incurred. In August 2021, in recognition of the Northwestern community's service during fiscal year 2021, the University paid a one-time bonus to the majority of benefits-eligible faculty and staff.

The US Congress passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act on March 27, 2020, the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) on December 21, 2020, and the American Rescue Plan Act (ARPA) on March 11, 2021, which provided economic assistance for certain businesses and individuals. The University did not draw down funding under the provisions of the CARES Act, CRRSAA, or ARPA in fiscal year 2021 or fiscal year 2020. The University continues to monitor the ongoing pandemic and is prepared to take additional measures to protect the health of the University community and promote the continuity of its academic mission.

Reclassifications

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

2. Accounts Receivable and Notes Receivable

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

<i>(in thousands of dollars)</i>	2021	2020
Research and other sponsored programs support	\$125,633	\$120,539
Student receivables	15,568	25,513
Other receivables	77,573	68,939
Accounts receivable subtotal	218,774	214,991
Less allowances for student uncollectible amounts	(627)	(204)
Total accounts receivable, net	\$218,147	\$214,787

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

<i>(in thousands of dollars)</i>	2021	2020
Notes receivable	\$138,384	\$149,090
Less allowances for student uncollectible amounts	(2,273)	(2,433)
Total notes receivable, net	\$136,111	\$146,657

3. Contributions Receivable

Contributions receivable as of August 31 consisted of the following:

<i>(in thousands of dollars)</i>	2021	2020
Unconditional promises expected to be collected in		
Less than one year	\$105,127	\$88,633
One to five years	92,615	128,248
More than five years	86,375	91,979
Contributions receivable subtotal	284,117	308,860
Less unamortized discounts	(24,168)	(30,140)
Less allowances for uncollectible amounts	(912)	(849)
Total contributions receivable, net	\$259,037	\$277,871

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

4. Investments

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

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

Fair Value Disclosures

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

(in thousands of dollars) 2021

	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	\$597,651	—	—	—	\$597,651
US equity	339,902	\$71	—	\$1,597,249	1,937,222
International equity	332,501	23	\$178	2,013,875	2,346,577
Fixed income	106,039	730,662	—	—	836,701
Absolute return	—	—	—	2,190,692	2,190,692
Private investments	—	321	15,062	5,199,157	5,214,540
Real assets	123,089	15,089	665	1,791,722	1,930,565
Other investments	50,684	455	29,765	—	80,904
Subtotal investment assets at fair value	1,549,866	746,621	45,670	12,792,695	15,134,852^(a)
Interest rate swaps	—	(10,860)	—	—	(10,860)
Total	\$1,549,866	\$735,761	\$45,670	\$12,792,695	\$15,123,992

^(a) Investments held at cost totaling \$22,952 thousand should be added to the subtotal investment assets at fair value, and beneficial interest in charitable remainder trusts totaling \$14,599 thousand should be subtracted from the subtotal investment assets at fair value to reconcile to total investment assets of \$15,143,205 thousand as of August 31, 2021.

(in thousands of dollars) 2020

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

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

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

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

The following tables summarize changes in the investments and derivatives classified by the University in Level 3 of the fair value hierarchy for the fiscal years ended August 31, 2021 and 2020:

<i>(in thousands of dollars)</i>	2020					2021
	Fair value	Purchases	Sales and settlements	Realized and unrealized gains (losses)	Transfers into and out of Level 3	Fair value
International equity	\$67	\$164	—	(\$53)	—	\$178
Private investments	6,495	10,667	(\$1,550)	(528)	(\$22)	15,062
Real assets	2,440	—	(1,775)	—	—	665
Other investments	25,644	—	—	4,121	—	29,765
Total investments	\$34,646	\$10,831	(\$3,325)	\$3,540	(\$22)	\$45,670

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

In fiscal year 2021, one investment was transferred out of Level 3 as the company successfully completed an initial public offering; the investment is now classified as Level 1.

In fiscal year 2020, there were 10 transfers out of Level 3 into investments reported as NAV as Practical Expedient, as these partnership investments had estimated fair values based on reported partners' capital provided by the associated external managers.

As of August 31, 2021 and 2020, 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 \$3.6 million and \$6.2 million as of August 31, 2021 and 2020, respectively.

The next table presents funding obligations and redemption terms of investments by asset class. The University is required under certain partnership agreements to advance additional funding up to specified levels over a period of several years. These uncalled commitments have fixed expiration dates and other termination clauses. At August 31, 2021, the University was committed to making future capital contributions of \$2.1 billion, primarily in the next five years, as detailed in the table. Certain agreements also contain notice periods, lock-ups, and gates that limit the University's ability to initiate redemptions.

(in thousands of dollars)

	Fair value	Remaining life	Uncalled commitments	Redemption terms	Redemption restrictions
US equity	\$1,937,222	No limit	\$141,782	Daily to annually, with 1- to 180-day notice periods	Lock-up provisions ranging from none to 5 years
International equity	\$2,346,577	No limit	\$10,200	Daily to annually, with 1- to 180-day notice periods	Lock-up provisions ranging from none to 3 years
Fixed income	\$836,701	No limit	—	Daily	No lock-up provisions
Absolute return	\$2,190,692	No limit	\$83,644	Daily to greater than annually, with 1- to 120-day notice periods; private partnership ineligible for redemption	Lock-up provisions ranging from none to 3 years; side pockets on many funds; one partnership not redeemable
Private investments	\$5,214,540	No limit to 12 years	\$1,127,578	Partnerships ineligible for redemption; equity securities daily, with 1-day notice	Private partnerships not redeemable; equity securities have no lock-up provisions
Real assets	\$1,930,565	No limit to 14 years	\$722,455	Partnerships ineligible for redemption; commodity and equity funds are weekly, with 1- to 3-day notice periods	Drawdown partnerships not redeemable; no restriction on commodity and equity funds

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

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

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

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

The absolute return portfolio is weighted toward long-short equity managers, uncorrelated strategies, and diversifying event-driven or hedged tactical credit

strategies. One investment in this portfolio may not be redeemed over the next year due to lock-up provisions. As of August 31, 2021, the remaining investments have either full or partial liquidity over the next year, with the exception of those having side pockets. As of August 31, 2021 and 2020, the University posted \$52.3 million and \$149 million, respectively, of Treasury bonds and public equity as a source of collateral for an alternative investment strategy.

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

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

Investment Return

Investment return designated for operations is defined as the investment payout, according to the spending guideline for the Long-Term Balanced Pool, and the actual investment income for all other investments. Gross investment income from specific investments held at cost totaled \$14.8 million and \$13.1 million for the fiscal years ended August 31, 2021 and 2020, respectively. Investment expenses related to specific investments held at cost totaled \$4.1 million and \$4.7 million for the fiscal years ended August 31, 2021 and 2020, respectively. All other investment returns are categorized as nonoperating.

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

Derivative Financial Instruments

The University has entered into hedging transactions via interest rate swaps and has maintained those positions since fiscal year 2008.

The University continued its use of uncollateralized variable-to-fixed-rate interest rate swaps during fiscal year 2021 and has maintained those positions since fiscal year 2008. The University manages its exposure to interest rate risk by using highly rated counterparties and on a net basis had obligations to counterparties as of August 31, 2021 and 2020, as disclosed in the tables on the following page. As a result, the University has limited its interest rate risk associated with \$125 million in variable-rate debt (IFA-Series 2008 bonds).

The University has used investment-related derivatives to manage credit exposure. Credit exposure represents the University's potential loss if counterparties fail to perform under the terms of the contracts or if collateral, if any, does not fully support amounts obligated. This exposure is measured by the fair value of the cash collateral held at the counterparties at the reporting date. The University manages its exposure to credit risk by using highly rated counterparties, establishing risk-control limits, and obtaining collateral where appropriate, and on a net basis had obligations to counterparties until these swaptions expired during fiscal year 2020. The University had entered into margin collateral agreements with major investment banks that impose a \$1 million threshold on both parties. Therefore, as of August 31, 2021 and 2020, the University had posted collateral of \$0.

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

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

<i>(in thousands of dollars)</i>		2021				
	Notional amount	Assets	Liabilities	Fiscal year net loss	Interest rate range	Maturity date
Debt-related derivatives						
Interest rate swaps	\$125,002	—	(\$10,860)	(\$5,158)	4.12–4.38%	08/31/23
Total debt-related	125,002	—	(10,860)	(5,158)	4.12–4.38%	08/31/23
Total derivative financial instruments	\$125,002	—	(\$10,860)	(\$5,158)	4.12–4.38%	08/31/23

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

5. Land, Buildings, and Equipment

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

<i>(in thousands of dollars)</i>	2021	2020
Land	\$31,036	\$31,036
Construction-in-progress	30,832	45,983
Buildings and leasehold improvements	4,667,413	4,594,774
Equipment	718,130	703,454
Accumulated depreciation	(2,270,393)	(2,116,553)
Total land, buildings, and equipment, net	\$3,177,018	\$3,258,694

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

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

6. Leases

University as Lessee

At August 31, 2021, the net operating right-of-use assets and corresponding operating lease liabilities associated with future lease payments on the consolidated statements of financial position were \$159.2 million and \$165.6 million, respectively. At August 31, 2021, the University did not recognize any finance leases. Other lease information is summarized below.

(in thousands of dollars)

Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	\$22,856
Right-of-use assets obtained in exchange for new operating lease liabilities	\$180,846
Weighted average remaining lease term	12 years
Weighted average discount rate	1.51%

The amount disclosed for right-of-use assets obtained in exchange for new operating lease liabilities includes right-of-use assets upon ASU 2016-02, *Leases (Topic 842)* implementation of \$180.2 million, and right-of-use assets obtained in exchange for new operating lease liabilities in fiscal year 2021 of \$0.6 million. There were no additions to the carrying amount of right-of-use assets resulting from lease modifications or reassessments in fiscal year 2021.

Lease Cost

The components of lease expense—included in services, supplies, maintenance, and other—for the fiscal year ended August 31, 2021, are as follows:

(in thousands of dollars)

Operating lease expense	\$24,180
Variable lease expense	535
Less sublease income	(4,553)
Total lease expense	\$20,162

Future Lease Payments

Shown below are the lease payments expected to be paid for each fiscal year ending August 31:

(in thousands of dollars)

2022	\$21,772
2023	18,792
2024	17,602
2025	18,183
2026	17,886
2027 and thereafter	84,940
	179,175
Less present value discount	(13,552)
Total future lease payments	\$165,623

The following disclosures pertain to fiscal year 2020, before the University's adoption of ASU 2016-02, *Leases (Topic 842)*.

The University is obligated as lessee under numerous operating leases to pay base rent through the lease expiration dates. Operating leases consist primarily of leases for the use of real property and have terms expiring through fiscal year 2031. Real estate lease expenses totaled \$23.2 million and sublease rental income totaled \$2.5 million for the fiscal year ended August 31, 2020.

University as Lessor

The University is entitled as lessor under its operating leases to receive rental income. Operating leases consist primarily of leases for the use of real property and have terms expiring through fiscal year 2040. The future minimum rental revenues associated with these leases through fiscal year 2040 are \$31.1 million.

7. Deferred Revenue

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

<i>(in thousands of dollars)</i>	2021	2020
Tuition and housing	\$86,444	\$15,225
Sponsored contracts (exchange)	81,386	86,886
Conditional contributions and grants	21,079	22,826
Other deferred revenue	16,841	12,820
Total deferred revenue	\$205,750	\$137,757

8. Deposits Payable and Actuarial Liability of Annuities Payable

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

<i>(in thousands of dollars)</i>	2021	2020
Agency deposits	\$169,600	\$142,287
Actuarial liability of annuities	19,213	21,782
Student tuition and room and board	7,643	32,728
Other deposits payable	2,585	3,805
Total deposits payable and actuarial liability of annuities payable	\$199,041	\$200,602

9. Bonds, Notes, and Other Debt Payable

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

<i>(in thousands of dollars)</i>	Interest rate mode	Fiscal year maturity	Interest rate	2021	2020
Illinois Finance Authority (IFA)–Series 2004	Variable	2035	0.01% ^(a)	\$135,800	\$135,800
IFA–Series 2008	Variable	2047	0.01% ^{(a)(b)}	125,000	125,000
Taxable–Series 2012	Fixed	2040–2048	4.20%	200,000	200,000
Taxable–Series 2013	Fixed	2016–2045	4.64% ^(b)	552,705	558,155
Taxable–Series 2015	Fixed	2035–2049	3.78% ^(b)	500,000	500,000
IFA–Series 2015	Fixed	2023–2029	4.24% ^(b)	128,545	128,545
Taxable–Series 2017	Fixed	2048–2057	3.72% ^(b)	500,000	500,000
Taxable–Series 2020	Fixed	2050–2051	2.64%	300,000	300,000
Commercial paper (\$300,000 available)	Variable	2022	0.11% ^(b)	100,000	—
Promissory note	Fixed	NA	NA	—	8,000
Lines of credit (\$725,000 available)	Variable	NA	NA	—	380,000
Bonds, notes, and other debt payable subtotal				2,542,050	2,835,500
Unamortized issuance costs, premiums, and discounts, net				(3,917)	(3,464)
Total bonds, notes, and other debt payable, net				\$2,538,133	\$2,832,036

^(a) Interest rate resets weekly

^(b) Weighted average interest rate at August 31, 2021

Total obligations including bonds, notes, and other debt payable at August 31, 2021, are scheduled to mature through August 31 of each period as noted in the table below. The schedule has been prepared based on the contractual maturities of the debt outstanding at August 31, 2021. Accordingly, if remarketings of variable-rate debt offerings fail in future periods, debt repayments may become more accelerated than presented here. The potential failed remarketings coincide with the interest rate reset dates and amounts noted above.

(in thousands of dollars)

2022	\$104,790
2023	6,660
2024	7,710
2025	10,240
2026	10,750
2027 and thereafter	2,401,900
Total	\$2,542,050

During the year ended August 31, 2021, the University did not enter into the sale of any additional long-term municipal bonds or increase its long-term debt position. During the year ended August 31, 2020, the Taxable Series 2020 Fixed Rate Bonds were issued to refinance \$300 million of commercial paper.

10. Endowments

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

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

The University's endowment consists of about 2,900 individual donor-restricted endowment funds and about 1,000 funds it designates to function as endowments. The net assets associated with endowment funds, including funds designated by the University to function as endowments, are classified and reported based on whether there are donor-imposed restrictions. Institution-designated endowment funds include quasi-endowments established by specific Board of Trustees approval as well as endowments created by management under general guidelines and policies approved by the Board of Trustees.

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

<i>(in thousands of dollars)</i>	With donor restrictions				2021
	Without donor restrictions	Funds held in perpetuity	Accumulated gains (losses)	Total	
Institution-designated endowment funds	\$5,562,129				\$5,562,129
With donor restrictions					
Underwater funds		\$400	(\$28)	\$372	372
All other funds		1,893,812	3,904,869	5,798,681	5,798,681
Endowment net assets, end of year	\$5,562,129	\$1,894,212	\$3,904,841	\$5,799,053	\$11,361,182

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

Underwater Endowment Funds

The University monitors endowment funds to identify those for which historical cost was more than fair value. Associated unrealized losses of \$0.03 million and \$0.6 million as of August 31, 2021 and 2020, respectively, are recorded in the net assets with donor restrictions classification; subsequent gains increase net assets with donor restrictions.

Investment and Spending Policies

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

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

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

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

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

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

Changes in Endowment Net Assets

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

(in thousands of dollars) 2021

	Without donor restrictions	With donor restrictions	Total
Endowment net assets, beginning of year	\$4,216,889	\$4,267,817	\$8,484,706
Interest and dividends, net of expenses	(4,439)	(4,568)	(9,007)
Net appreciation, realized and unrealized	1,515,797	1,560,019	3,075,816
Total investment return	1,511,358	1,555,451	3,066,809
Contributions	—	123,724	123,724
Appropriation of endowment assets for expenditure	(185,220)	(193,475)	(378,695)
Other changes			
Transfers to create institutional funds	66,730	—	66,730
Transfers of institutional funds per donor requirement	—	19,583	19,583
Spending of institution-designated endowment fund	(15,427)	—	(15,427)
Other reclassifications	(32,201)	25,953	(6,248)
Endowment net assets, end of year	\$5,562,129	\$5,799,053	\$11,361,182

(in thousands of dollars) 2020

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

11. Postretirement and Postemployment Benefit Plans

The University maintains two contributory retirement plans for its eligible faculty and staff. The plans offer employees two investment company options, Teachers Insurance and Annuity Association (TIAA) and College Retirement Equities Fund (CREF), and certain mutual funds offered by Fidelity Investments. Participating employee and University contributions are immediately vested. The University contributed \$58.7 million and \$64.2 million to the two plans in 2021 and 2020, respectively.

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

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

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

The accrued cost for postemployment benefits was \$8.1 million and \$8.8 million at August 31, 2021 and 2020, respectively, and is included in accounts payable and accrued liabilities on the consolidated statements of financial position.

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

<i>(in thousands of dollars)</i>	2021	2020
Benefit obligation	\$23,156	\$21,001
Benefits paid	3,300	2,064
Employer contributions	2,457	1,321
Contributions from participants	843	743
Net periodic postretirement benefit cost	1,843	796
Fair value of plan assets	—	—

Service costs included in net periodic postretirement benefit cost above totaled \$750 thousand and \$688 thousand as of August 31, 2021 and 2020, respectively.

The changes in other than periodic benefit cost included in net assets without donor restrictions on the consolidated statements of activities totaled net losses of \$6.8 million and \$4.1 million as of August 31, 2021 and 2020, respectively, for a decrease of \$2.7 million due to net losses during the fiscal year.

The APBO was \$23.2 million and \$21 million at August 31, 2021 and 2020, 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, 2021 and 2020. For both fiscal years 2021 and 2020, the ultimate healthcare cost trend rate was 5 percent, and the year when the trend rate will reach the ultimate trend rate was 2026.

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

	2021	2020
Weighted average settlement (discount) rate	2.3%	1.9%
Weighted average rate of increase in future compensation levels	2.5%	2.0%
Healthcare cost trend rate	6.0%	6.25%

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

	2021	2020
Discount rate	2.2%	2.6%
Weighted average rate of increase in future compensation levels	2.0%	2.5%
Healthcare cost trend rate	6.25%	6.5%

A one-percentage-point change in assumed healthcare cost trend rates would have had these effects in fiscal year 2021:

<i>(in thousands of dollars)</i>	1% point decrease	1% point increase
(Decrease) increase in total of service and interest cost	(\$78)	\$91
(Decrease) increase in postretirement benefit obligation	(\$794)	\$894

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

<i>(in thousands of dollars)</i>	
2022	\$1,257
2023	1,188
2024	1,182
2025	1,257
2026	1,289
2027–2031	7,165
Total	\$13,338

The University offers a deferred compensation plan under Internal Revenue Code 457(b) to a select group of management and highly compensated employees. The University does not contribute to this deferred compensation plan. The University has recorded both an asset and a liability related to the deferred compensation plan that totaled \$134.2 million and \$108.8 million as of August 31, 2021 and 2020, respectively; these are included in investments and deposits payable and actuarial liability of annuities payable on the consolidated statements of financial position.

12. Related Parties

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

Northwestern Medical Group (NMG) is a not-for-profit, multispecialty physician organization committed to providing clinical care to patients and to supporting the research and academic endeavors of Northwestern's Feinberg School of Medicine (Feinberg). NMG is governed by a board of directors, and its physicians are full-time faculty members or researchers at Feinberg. It is a subsidiary of Northwestern Memorial Healthcare Corporation (NMHC), the not-for-profit parent corporation of Northwestern Memorial Hospital (NMH), which is the primary teaching hospital of Feinberg. 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, 2021 and 2020, accounts receivable arising from support and operational activities with NMHC totaled \$19.3 million and \$17.7 million, respectively, and are included in accounts receivable on the consolidated statements of financial position. For the fiscal years ended August 31, 2021 and 2020, contributions totaling \$118.4 million and \$124 million, respectively, have been made from NMHC to the University and are included in private gifts on the consolidated

statements of activities. For the fiscal years ended August 31, 2021 and 2020, revenues arising from operational activities with NMHC totaled \$37 million and \$35.6 million, respectively, and are included in professional fees and sales and services on the consolidated statements of activities.

13. Self-Insurance Reserves and Other Contingencies

Reserves for losses under the University's self-insurance program, aggregating \$12.2 million and \$9.9 million at August 31, 2021 and 2020, respectively, include reserves for probable known losses and for losses incurred but not yet reported. The reserves are presented on a discounted basis. The discount rate was 6.55 percent in fiscal years 2021 and 2020. 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.

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.

14. Grants and Contracts

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

<i>(in thousands of dollars)</i>	2021	2020
Federal grants	\$585,764	\$550,005
Private grants and contracts	162,496	164,951
State grants	4,116	4,166
Total grants and contracts	\$752,376	\$719,122

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.

15. Liquidity and Availability

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

<i>(in thousands of dollars)</i>	2021	2020
Financial assets		
Cash and cash equivalents	\$285,059	\$381,442
Accounts receivable, <i>net</i>	196,318	197,013
Notes receivable	38,081	23,796
Contributions receivable	46,091	88,633
Endowment payout made available for operations	515,300	495,710
Financial assets available within one year	1,080,849	1,186,594
Liquidity resources		
Commercial paper	200,000	300,000
Bank lines of credit	725,000	385,000
Total financial assets and liquidity resources available within one year for general expenditure	\$2,005,849	\$1,871,594

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

In addition, the University may place commercial paper under a \$300 million Taxable Commercial Paper Note. Under this agreement, outstanding borrowings of \$100 million existed as of August 31, 2021, and no outstanding borrowings existed as of August 31, 2020. The University also may draw \$725 million in standby

lines of credit to supplement working capital requirements. Under this agreement, no outstanding borrowings existed as of August 31, 2021, and outstanding borrowings of \$380 million existed as of August 31, 2020.

Lastly, the University holds institution-designated endowments of \$5,562 million and \$4,217 million as of August 31, 2021 and 2020, respectively. Although the University does not intend to spend from its institution-designated endowment funds—other than amounts appropriated for spending through its annual budget approval and appropriation process—amounts from its institution-designated endowment could be made available if necessary, subject to liquidity of the underlying investments.

16. Functional Classification of Expenses

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

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

<i>(in thousands of dollars)</i>				<i>2021</i>
	Academic	Research	Support	Total
Salaries, wages, and benefits	\$920,387	\$309,515	\$247,446	\$1,477,348
Services, supplies, maintenance, and other	471,688	203,054	42,417	717,159
Depreciation	125,805	46,162	13,951	185,918
Interest on indebtedness	61,687	22,635	6,841	91,163
Total	\$1,579,567	\$581,366	\$310,655	\$2,471,588

<i>(in thousands of dollars)</i>				<i>2020</i>
	Academic	Research	Support	Total
Salaries, wages, and benefits	\$923,409	\$298,256	\$234,143	\$1,455,808
Services, supplies, maintenance, and other	517,945	196,006	14,051	728,002
Depreciation	113,167	55,374	13,106	181,647
Interest on indebtedness	58,496	28,623	6,775	93,894
Total	\$1,613,017	\$578,259	\$268,075	\$2,459,351

17. Subsequent Events

The University has evaluated subsequent events in accordance with the FASB ASC Subsequent Event Topic through December 20, 2021, the date when the consolidated financial statements were issued. The University did not identify any events to be disclosed.

18. Financial Responsibility Standards

The University participates in federal Title IV student financial assistance programs that require it to meet fiscal responsibility standards based on criteria the US Department of Education (ED) has set forth in 34 CFR 668.171. The criteria include the ED's annual calculation of a financial responsibility composite score, as further outlined in 34 CFR 668.172, using audited consolidated financial statements submitted via the ED's eZ-Audit system. The composite score has been and will continue to be based on three ratios: primary reserve, equity, and net income. These ratios use University financial data (see next table) which are not otherwise presented in the consolidated financial statements or other notes to the consolidated financial statements, as of and for the year ended August 31, 2021.

Total long-term debt consists of (1) pre-implementation debt, defined as the amounts reported in the last consolidated financial statements the University submitted to the ED prior to July 1, 2020 (the University's consolidated financial statements for the fiscal year ended August 31, 2019), less any payments or other reductions after August 31, 2019, and not to exceed land, buildings, and equipment, net; and (2) post-implementation debt, defined as debt used to obtain land, buildings, and equipment, net, after the fiscal year ended August 31, 2019, less any payments or other reductions. Required disclosures for post-implementation debt include issue date, term, nature of capitalized amounts, and amounts capitalized. The University did not have any post-implementation debt as of August 31, 2021.

(in thousands of dollars)

Required input per standards	Ratio(s) uses	Input amount	Related consolidated financial statement amount not used as input on supplementary schedule
Land, buildings, and equipment, net—pre-implementation	Primary reserve	\$2,863,540	
Land, buildings, and equipment, net—post-implementation without outstanding debt for original purchase	Primary reserve	282,646	
Construction-in-progress	Primary reserve	30,832	
Total land, buildings, and equipment, net			\$3,177,018
Long-term debt, net—for long-term purposes—pre-implementation	Primary reserve	2,139,560	
Debt, net—not used for purchase of land, buildings, and equipment			398,573
Total bonds, notes, and other debt payable, net			2,538,133
Net periodic postretirement benefit cost			1,843
Less: service costs			(750)
Net periodic benefit cost other than service cost (nonoperating)	Primary reserve	1,093	
Annuity and other split-interest agreements with donor restrictions	Primary reserve	28,086	
Annuity and other split-interest agreements with donor restrictions: restricted in perpetuity			38,860
Total annuity and other split-interest agreements			66,946
Endowment funds held in perpetuity			1,894,212
Endowment pledges			89,686
Annuity and other split-interest agreements			38,860
Student loan funds			42,260
Total net assets with donor restrictions: restricted in perpetuity	Primary reserve	2,065,018	
Term endowments with donor restrictions	Primary reserve	11,594	
<i>Inputs directly from the Consolidated Statements of Activities:</i>			
Total operating revenues			2,559,391
Plus: private gifts and grants for buildings and equipment (nonoperating)			20
Plus: gain on value of derivative instruments			5,158
Less: investment return designated for operations			(421,626)
Total revenues and gains without donor restrictions, excluding net investment return	Net income	2,142,943	
Investment return designated for operations			421,626
Investment return, reduced by operating distribution			2,023,088
Net investment return	Net income	2,444,714	
Loss on sale of fixed assets in other nonoperating	Primary reserve	4,158	
Loss on postretirement obligations			456
Total other nonoperating expenses, net			4,614

Supplementary Schedule of Financial Responsibility Data

As of and for the year ended August 31, 2021

(in thousands of dollars)

Financial element	Location in consolidated financial statements or related notes	Amount used as ratio input
<i>Primary reserve ratio</i>		
<i>Numerator: expendable net assets</i>		
Net assets without donor restrictions	Consolidated Statements of Financial Position	\$9,863,772
Net assets with donor restrictions	Consolidated Statements of Financial Position	6,198,556
Unsecured related party receivable	Note 12, Related Parties	19,300
Land, buildings, and equipment, net—pre-implementation	Note 18, Financial Responsibility Standards	2,863,540
Land, buildings, and equipment, net—post-implementation without outstanding debt for original purchase	Note 18, Financial Responsibility Standards	282,646
Construction-in-progress	Note 5, Land, Buildings, and Equipment	30,832
Right-of-use assets—operating, net	Consolidated Statements of Financial Position	159,206
Accrued cost for postemployment benefits	Note 11, Postretirement and Postemployment Benefit Plans	8,100
Long-term debt, net—for long-term purposes—pre-implementation	Note 18, Financial Responsibility Standards	2,139,560
Lease liabilities—operating	Consolidated Statements of Financial Position	165,623
Annuity and other split-interest agreements	Note 18, Financial Responsibility Standards	28,086
Term endowments with donor restrictions	Note 18, Financial Responsibility Standards	11,594
Net assets with donor restrictions: restricted in perpetuity	Note 18, Financial Responsibility Standards	2,065,018
<i>Denominator: total expenses and losses without donor restrictions</i>		
Total expenses without donor restrictions (operating)	Consolidated Statements of Activities	2,471,588
Net periodic benefit cost other than service cost (nonoperating)	Note 18, Financial Responsibility Standards	1,093
Loss on sale of fixed assets in nonoperating	Note 18, Financial Responsibility Standards	4,158
<i>Equity ratio</i>		
<i>Numerator: modified net assets</i>		
Net assets without donor restrictions	Consolidated Statements of Financial Position	9,863,772
Net assets with donor restrictions	Consolidated Statements of Financial Position	6,198,556
Unsecured related party receivable	Note 12, Related Parties	19,300
<i>Denominator: modified assets</i>		
Total assets	Consolidated Statements of Financial Position	19,377,783
Unsecured related party receivable	Note 12, Related Parties	19,300
<i>Net income ratio</i>		
<i>Numerator: change in net assets without donor restrictions</i>		
Change in net assets without donor restrictions	Consolidated Statements of Activities	2,081,450
<i>Denominator: total revenues and gains without donor restrictions</i>		
Total revenues and gains without donor restrictions, excluding net investment return	Note 18, Financial Responsibility Standards	2,142,943
Net investment return	Note 18, Financial Responsibility Standards	2,444,714

See accompanying independent auditors' report.

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Research and Development:					
Department of Agriculture:					
Developing Mathematical Models for the Formation of New Collaborations at Conferences	177	10.001	27675/58-3022-0-005	\$ 16,617	—
The Effect of the Opioid Crisis on the Farm Sector: Implications from the Rural Economy	241	10.310	SUB00001814/2019-67023-29347	71,185	—
National Institute of Food and Agriculture:					
The Family Check-Up 4 Health: A Family Centered Health Maintenance Approach to Improve Nutrition and Prevent Obesity in Early Childhood	13	10.310	ASUB22-03/2018-68001-27550	13,804	—
A defensible, next generation approach to quantifying and characterizing land use change		10.312	2018-10008-28530	204,618	93,055
Department of Agriculture Total				306,224	93,055
Department of Commerce:					
National Institute of Standards and Technology:					
Development of Levitated, Macroscopically Delocalized Atom Interferometers for a New Measurement of Newton's Constant G		11.609	60NANB19D168 AMD 2	49,454	—
High-fidelity and reduced order models to investigate the thermal history and residual stress for powder bed fusion processes		11.609	70NANB17H283	7,805	—
Advanced Materials Center for Excellence: Center for Hierarchical Materials Design (CHIMaD)		11.609	70NANB19H005 Amnd 2	4,386,290	1,336,262
Department of Commerce Total				4,443,549	1,336,262
Department of Defense:					
Active Nanophotonics in the Flatland with Novel Hybrid Metasurfaces		12.300	N00014-17-1-2425 P00006	94,403	—
Enhancing Quality of Orthotic Services with Process and Outcome Information	175	12.420	Agmt 12/19/16/W81XWH-16-1-0788	474	—
Development of a Targeted Intravascular Therapy to Stop Non-Compressible Torso Hemorrhage Human Fix a Flat	235	12.800	013840-00002//FA8650-21-2-6K01	43,777	—
Scientific Autonomous Reasoning Agent (SARA) integrating Materials Theory, Experiment and Computation	50	12.800	80776-11044//FA9550-18-1-0136	213,650	—
"Rational design and implementation of novel polymer adsorbents for selective uptake of per-and polyfluoroalkyl substances from groundwater"	50	12 RD	82296-11070 AMD 2//W312HQ18C052	92,372	—
A Fast-Light Enhanced Ring Laser Vibrometer for Detection of Extremely Small Vibrations	78	12 RD	PO No. 444 1026735	66,334	—
Drinking Water Treatment Residuals as Material for in-situ Capping of Metal Contaminated Sediments	241	12 RD	UFDSP00012338//W912HQ18C0039	95,259	—
Air Force Office of Scientific Research:					
Foreign Military Training: Building Effective Armed Forces in Weak States		12.630	FA9550-20-1-0277 P00001	21,118	—
MURI: Unraveling the Biology, Chemistry and Nanoscience of Natural and Synthetic Melanins	231	12.800	104170196 //FA9550-18-1-0142// P00003	334,738	—
The Production and Study of Antiprotons and Cold Antihydrogen	80	12.800	134078-5111564//FA9550-15-1-0275	(1,584)	—
Stochastic Self-Consistent Clustering Theory for Composite Performance Prediction: from extreme value microstructure attributes to design of interphase for toughness	58	12.800	313-0968-03//FA9550-18-1-0381	313,584	—
Novel Materials for Transverse Peltier Refrigeration		12.800	FA9550-15-1-0377 P00005	(848)	—
Towards Software Apprentices that Learn in Dynamic Domains		12.800	FA9550-16-1-0138-P00004	158,481	—
A 4D Nanoprinter for Making and Manipulating Macroscopic Materials		12.800	FA9550-16-1-0150-P00007	1,053,493	295,244
PECASE: Multi-dimensional Vibrational-Electronic Spectroscopy to Probe Electronic-to-Vibrational Energy Transfer in Hybrid Nanomaterials		12.800	FA9550-16-1-0379-P00004	184,881	—
Soft Chemical Approaches to the Synthesis of Metastable Materials		12.800	FA9550-17-1-0247-P00004	267,865	—
Reconfigurable Matter from Programmable Atom Equivalents		12.800	FA9550-17-1-0348-P00004	1,255,746	—
Molecular Ion Quantum Control		12.800	FA9550-17-1-0352-P00004	246,773	—
Merging reactivity and properties: photocontrolled synthesis of π -conjugated polymers		12.800	FA9550-18-1-0159 P00002	134,062	—
Electronic Structure Theory for Spin-Forbidden Reaction Dynamics		12.800	FA9550-18-1-0252	16,155	—
Soft Materials for Flexible, Stretchable Hybrid Electronics		12.800	FA9550-18-1-0320-P00002	158,204	—
Rotation, Shift and Scale Invariant Ultrafast Automatic Image Recognition Using an Opto-Electronic Correlator		12.800	FA9550-18-1-0359-P00003	67,068	—
Investigation of Experimental and Theoretical Challenges for Developing Superluminal Sensors		12.800	FA9550-18-1-0401 P00003	77,173	—
Composite Soft Materials with Decentralized and Distributed Actuation		12.800	FA9550-18-1-0493	500,235	255,404
A Biophysical Approach to Uncover the Role of Cell Membrane Mechanics in Sensing Mechanical Force		12.800	FA9550-19-1-0039 P00004	115,709	—
Low-dimensional materials for high-efficiency/high-power nonlinear optical applications at infrared		12.800	FA9550-19-1-0243-P00001	225,443	54,642
Fundamental Dynamics, Predictability, and Uncertainty of Scientific Discovery & Advance		12.800	FA9550-19-1-0354 P00003	711,878	174,244
COVID-19: Fundamental Dynamics, Predictability, and Uncertainty of Scientific Discovery & Advance		12.800	COVID-19: FA9550-19-1-0354 P00003	52,464	—
Fundamental Study of p-Type Doping in MOCVD-Grown Ga2O3		12.800	FA9550-19-1-0410	182,340	—
Reasoning for Social Autonomous Agents		12.800	FA9550-20-1-0091 P0001	401,682	—
Phonon Propagation in Biological Structures and Implications on Phononic Tunability of Synthetic Materials		12.800	FA9550-20-1-0259 P00001	31,914	—
Expanding functionality and enhancing documentation of scQubits, an open-source Python package for superconducting qubits		12.800	FA9550-20-1-0271	10,754	—
Manipulation of Intra-Manifold Excitonic Energy Redistribution in Colloidal Semiconductor Nanoplatelets: Toward High-Temperature Quantum Emitters		12.800	FA9550-20-1-0364	173,145	—
Laser and Spatial Light Modulators for Ultrafast Automatic Image Recognition Using an Opto-Electronic Correlator		12.800	FA9550-21-1-0137	18,034	—
Convergent Evolution to Engineering: Multiscale Structures and Mechanics in Damage Tolerant Functional Bio-composite and Biomimetic Materials	230	12.800	S-000700 Amd 07 // USAF FA9550-15-1-0009	92,522	—
Hierarchical Assembly of Spider Silk Proteins: Exploring Structural Biology of Biomaterials from the Atomic to the Mesoscale	186	12.800	SA0000752 // FA9550-20-1-0103	167,398	—
Machine Learning for Physics-based Systems: Optimal Approximations, Architectures, and Training	274	12.800	UTA20-001225 //FA9550-21-1-0084	66,128	—
				7,015,437	779,534
Air Force Research Laboratory:					
Center of Excellence for Advanced Bioprogrammable Nanomaterials (C-ABN)					
VeriGOOD-ML: Verilog Generator (Open-source), Optimized for Designs for Machine Learning	258	12.910	FA8650-15-2-5518 P00014/P00015/P00016	423,228	21,554
High-speed Low-noise Short-wavelength Infrared Type-II Superlattice Heterojunction Phototransistor		12.910	A008043202//FA8650-20-2-7009 Amd No. 2	103,935	—
Normalizing Timing of Rhythms Across Internal Networks of Circadian Clocks (NTRAIN)		12.910	FA8650-18-1-7810 P00002	208,911	—
		12.910	FA8650-21-2-7119	564,989	—
				877,835	—
Detector Design and Fabrication of Lithography Masks for Thermal TES Calorimeters					
Two-Photon Absorption Cross-Section Enhancements	126	12 RD	PO 7000479355//FA8702-15-D-0001	12,473	—
	217	12 RD	S-114-006-007//FA8650-16-D-5403 / D.O. 0006, FA865	65,609	—

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards
Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Funding award number	Federal expenditures	Passed-through to subrecipients
Targeting Cholesterol Metabolism in Platinum-Resistant Ovarian Cancer		12.420	W81XWH2110378	\$ 30,702	—
Transient implantable nerve stimulator for enhancing regeneration across long segmental peripheral nerve defects	292	12.420	WU-19-170-MOD-2//W81XWH1810170	105,241	—
Prostate Cancer Research Program: Idea Development Award	292	12.420	WU-20-307-MOD-1//W81XWH1910795	59,395	—
				<u>11,229,887</u>	<u>1,008,497</u>
Dynamics of Nanoscale Self-Assembled Porous Materials	231	12.431	109714421(S9002254) AMD 005/W911NF-18-1-0359	120,179	—
Specifically Triggerable Multi – Scale Responses in Organized Assemblies	253	12.431	16-008956-E-04 // W911NF-15-1-0568	148,815	—
Self-assembly of Hybrid Synthetic Organellies	231	12.431	703559/W911NF-13-1-0383	115,702	—
Center for Advanced 2D Organic Networks	50	12.431	76091-1101//W911NF-15-1-0447	625,424	—
7.4 Reactive Chemical Systems: New Principles for Targeting and Triggering based on Molecular Self-Assembly in Topological Defects of Liquid Crystals	50	12.431	88469-11208/W911NF190071	27,310	—
Plasma Driven Solution Electrochemistry	258	12.431	A008178002/W911NF-20-1-0105 REVISED	198,656	—
Targeting the Oncometabolism with Mitochondria-Directed Chemicals	131	12.431	AGMT Bonini 7/72//W911NF1910287	32,811	—
Formal Foundations of Algorithmic Matter and Emergent Computation	75	12.431	AWD-000084-G2//W911NF1910233	127,133	—
Sea Urchin Spicules: Assembly of a Fracture-Toughened Material at the Nano- and Mesoscales	147	12.431	F8595-01-03/W911NF-16-1-0262	(360)	—
QUANTA: Quantitative Network-based Models of Adaptive Team Behavior	233	12.431	KK1623 /W911NF-15-1-0577 09	15,454	—
3D Printing SBIR Ph II	64	12.431	PO 12908/W911NF1910228	506	—
Predicting and Controlling the Response of Particulate Systems through Grain-Scale Engineering	29	12.431	S428657-02/W911NF1910245	117,464	—
Realizing High-Fidelity Gates in Protected Qubits	169	12.431	SUB0000298/W911NF1910016	140,721	—
Endosymbiotic control and enhancement of leafhopper brochosomes	274	12.431	UTA20-000832/W911NF2010195 AMD 02	91,380	—
Stabilization of Reactive Chemical Species and Fundamental Studies of Small-Molecule Reactivity in Metal-Organic Frameworks		12.431	W911NF-14-1-0168/P00010	(540)	—
Ab initio design of noncentrosymmetric metals: crystal engineering in oxide heterostructures. f. Research Area 6: Physics		12.431	W911NF-15-1-0017/P00009	179,693	—
Physically based tempered fractional-order operators for efficient multiscale simulations		12.431	W911NF-15-1-0569/P00002	(363)	—
Engineering the translation apparatus for the synthesis of electronically active sequence-defined polymers		12.431	W911NF-16-1-0372/P00014	1,219,730	837,955
Quantum Disc-based Focal Plane Arrays for Low-cost High-performance Uncooled LWIR Imaging		12.431	W911NF-16-1-0410/P00005	(22)	—
Collective impact and common goals: Planned vs. emergent networks as tools for leveraging community outcomes		12.431	W911NF-16-1-0464-P00005	(2,925)	—
Multisensory Integration by Circadian Clocks – Area 3 Mathematics (Biomathematics) and Area 8 Life Sciences (Neurophysiology)		12.431	W911NF-16-1-0584/P000010	(7,766)	—
Multisensory Integration by Circadian Clocks – Area 3 Mathematics (Biomathematics) and Area 8 Life Sciences (Neurophysiology)		12.431	W911NF-16-1-0584/P000010	2,983	2,983
7.4 Reactive Chemical Systems: Assembly and Dynamics of Soft Matter Observed by Liquid Cell TEM		12.431	W911NF-17-1-0326/P00008	549,625	52,011
II.A.1.b.i.2: Engineering Nanocellulose Materials for High Ballistic Impact Performance		12.431	W911NF-17-1-0430/P00006	74,710	—
Directed Rational Synthesis of Kagome Lattices for the Discovery of Emergent Materials		12.431	W911NF-18-1-0006/P00004	61,951	—
Bridging Dynamic Particle Fracture and High-Strain Rate Comminution of Granular Continua		12.431	W911NF-18-1-0035/P00004	69,534	—
Selective Laser Melting of Ni-based superalloys with combined precipitation- and oxide-dispersion-strengthening		12.431	W911NF-18-1-0129/P00006	185,634	101,570
Stimuli-Responsive Control of Protein-Based Molecular Structure		12.431	W911NF1810200/P00006	1,925,642	1,056,800
Wireless, bioresorbable neural stimulators for discovery in neuroscience		12.431	W911NF1810394-P00003	30,275	—
MOCVD growth of LWIR InAs/InAsSb Type-II superlattices for focal plane array applications		12.431	W911NF1810402-P00004	167,715	—
Ultra-low Energy Receivers based on Electron-Injection Detectors on a CMOS Unified Photonic Integration Platform		12.431	W911NF1810429-P00006	176,860	—
Failure Probability and Safety Gain of Super-Strong Biomimetic Nacreous Materials		12.431	W911NF1910039/P00005	77,613	—
Mechanisms of Extracellular Matrix-Mediated Electrochemical Signaling		12.431	W911NF-19-1-0136-P00004	48,799	—
iTi : Interfacial synthesis of 2D copolymers directed by noncovalent interactions		12.431	W911NF1910154 Modification P00002	(12,361)	—
The impact of organizational strategy on performance of in vitro biosynthesis reactions		12.431	W911NF-19-1-0298	123,055	—
II.A.1.b.ii.3: Coupling Magnetic and Ferroelectric Phenomena in Designed 2D Thio- and Selenophosphate Crystals		12.431	W911NF1910335-P00002	150,272	—
II.A.1.a.i.4: Towards Design Rules for the Synthesis of Functional Metal-Organic Frameworks in Aqueous Media at Ambient Temperature for Targeted Applications		12.431	W911NF1910340/P00003	171,041	—
Energy Conversion from Flowing Salinity Gradients over Nanoscale Metal Layers		12.431	W911NF1910361	151,805	103,563
Sensitivity and Non-Normality in Network Control and Failure Propagation		12.431	W911NF1910383-P00003	204,778	—
Wearable Devices for Monitoring Social Networks		12.431	W911NF1920088	136,480	—
Tribological and Manufacturing Technologies for Unmanned Aerial Systems		12.431	W911NF1920092	84,890	—
3D Mesoscales as Active Interfaces to Individual Neurons in 3D Neural Networks		12.431	W911NF-19-2-0169/P00005	186,364	—
Acquisition of Helium Reliquifiers for Investigation of Novel Two-Dimensional Magnetoelectric Devices		12.431	W911NF2010066	152,620	—
II.A.1.b.iii.1 Molecular Triplets Qubits		12.431	W911NF2010088	162,296	79,405
SR SEQUESTRATION AND MINERALIZATION IN ACANTHAREA		12.431	W911NF2010137/P00001	97,062	—
Exploiting Complexity to Stabilize the Dynamics of Mechanical Systems		12.431	W911NF2010173	11,414	—
COVID-19: Improving Veterans Referrals by Optimizing Network Design in Response to COVID-19		12.431	COVID-19: W911NF2010202	97,602	29,999
Development of Metal-Organic Framework@Fiber-based Solid State Catalyst for Degradation of Chemical Warfare Agents: A.1.a.i.4		12.431	W911NF2020136/P00001	150,546	—
Enhancing Material Development and Manufacturing Technologies of Lightweight Alloys and Tribological Performances for Unmanned Aerial Systems		12.431	W911NF2020292	1,262,365	—
High-throughput Synthesis of Metal-Organic Frameworks		12.431	W911NF-21-1-0020	97,938	—
Thermal cycling effects on the properties of coarse-grained soils: numerical and experimental investigation		12.431	W911NF2110059	57,581	—
Deciphering the role of endogenous neurotransmitters in bacterial biofilms		12.431	W911NF-21-1-0291	38,629	—
Building Constitutive Relationships in Responsive Thermosets: A Multi-scale Experimental and Simulation Effort		12.431	W911NF2120085	2,169	—
				<u>9,846,869</u>	<u>2,264,286</u>
DoD Center of Excellence in Advanced Quantum Sensing (CoE-AQS)	54	12.630	21-155HEH // W911NF202076	298,072	—
Rate Effects in the Deformation of Microscale Metallic Samples – Experiments and Simulations	112	12.630	PO #2004091092/W911NF1220022	176,012	—
The Signatures of Success in Human-Agent Teams		12.630	W911NF1920140-P00003	577,613	116,411
				<u>1,051,697</u>	<u>118,411</u>
Operator 4.0 via Fatigue and Motion Analyses in a Human Digital Twin Enabled Framework for Smart Manufacturing	218	12.RD	19-13-05/W15QKN-19-3-0003	143,610	—
Add-on – Rational Design and Implementation of Novel Polymer Adsorbents for Selective Uptake of Per- and Polyfluoroalkyl Substances from Groundwater	50	12.RD	92944-2064//W912HQ2DP0026	29,447	—
RFQ for Silver Bullet Program	152	12.RD	PO 530002770 // W911NF-17-C-0024	87,623	—
AlGaN for Solar-Blind Avalanche Photo Detectors	154	12.RD	ST18C-003/W912CG-20-C-0009	252,851	—
Assistant Secretary of Defense for Health Affairs: Top Down Proteomics of Laser Capture Microdissected Samples for the Cancer Moonshot	86	12.750	4834/HU00011820032	434,157	—

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards
Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Defense Advanced Research Projects Agency:					
TRAUMAS: Treatment and recovery augmented with electrical and ultrasound-mediated actuation and sensing	46	12.910	2(GG015670)/D20AC00004-01	\$ 55,248	—
Programmable Multiplexed Droplets and Arrays Containing Reaction Networks	284	12.910	798K081/W911NF-18-2-0036	85,968	—
Information Storage and Processing Using Time-Ordered Strings of Molecules, and Molecular Processes	80	12.910	Agmt No. 130368-511189	229,111	—
REPAIR: Regenerative Electronic Patch through Advanced Intelligent Regulation	268	12.910	AWD00001593(416052-2)/D20AC00002	392,305	—
Flexible Asynchronous Space-Time (FAST) Imaging		12.910	HR0011-17-2-0044-P00004	34,310	—
Complete Fog of Force Control Using Swarms		12.910	HR00112020035	298,886	199,966
Direct Replication of a research claim from Sandra & Otto, 2018 in Cognition	35	12.910	Sandra_20g/N660011924015	9,714	—
				1,601,542	199,966
Stable neural interfaces through artificial intelligence-based manifold discovery					
Rotor Mounted Bearing+Elevation Sensor for Swarm Behaviors	63	12.RD	A263642/HR00111990045	26,706	—
Obtaining Multipath & Non-line-of-sight Information by Sensing Coherence & Intensity with Emerging Novel Techniques	81	12.RD	Agmt 10-15-20/HR0011-20-C-0076	16,696	—
SHIELD: A Statistical Machine Learning Framework for Diversity Enabled Ensemble Robustness	196	12.RD	G001534-7505 // HR0011-16-C-0028	8,667	—
Wizkit: Wide-Scale Zero-Knowledge Interpreter Toolkit	203	12.RD	HR00111990074-P00003	75,198	599,371
SCHNEIDER – System for Counterfactual Human Network Evaluation of Individual Differences, Errors, and Residuals	193	12.RD	HR0002230C0087//Wang AGMT 3/8/21	75,949	—
		12.RD	SCHNEIDER-Northwestern-01/HR00111990062	120,005	—
Defense Logistics Agency:					
Digital Innovation Design (DID)	204	12.RD	2017-109/SP4701-17-D-1161	32,271	—
Integration of ICME Tools in Casting Design and Process Optimization for Intelligent Manufacturing	10	12.RD	AGMT 1/3/19/SP4701-17-D-1134	15,687	—
Defense Threat Reduction Agency:					
An integrated multi-scale camouflaging platform for cloaking immunogenicity and evading non-specific clearance of therapeutic proteins	50	12.351	90425-20126 // HDTRA12010004	92,336	—
A novel toolbox for rapid, on demand, in vitro glycoprotein synthesis		12.351	HDTRA1-15-1-3052	372,837	277,402
Highly Stable and Bifunctional Bio-inspired Catalytic MOFs for Destruction of Chemical Threats		12.351	HDTRA1810003-P00005	766,716	11,644
Topology-Enhanced Diffusion of Chemical Warfare Agents in Metal-Organic Frameworks for Detoxification		12.351	HDTRA1910007 P00004	343,656	—
Novel Reactive, Porous, and Processable Polymers for Chem-Bio Defense		12.351	HDTRA1-19-1-0010 Amnd P00003	438,525	—
Interaction with Ionizing Radiation with Matter, University Research Alliance (IRM-URA)	167	12.351	SA21-09/HDTRA12020002	225,615	—
				2,239,685	289,046
Intelligence Advanced Research Projects:					
COVID-19: AMISS (Advanced Misinformation Influence Sentinel System)	158	12.RD	COVID-19: GR121952//2020-20102000001	52,751	—
Navy:					
A CyberOctopus that Learns, Evolves, and Adapts	246	12.300	095643-17467//N00014-19-1-2373 Amd. 3	321,184	—
The microbiome and responsiveness to stress: Countermeasure strategies for improving resilience to sleep and circadian disruption.	236	12.300	1553361 Amd 7//N000014-15-1-2809	53,777	—
From Percolation to Passivation (P2P): Multiscale Prediction and Interrogation of Surface and Oxidation Phenomena in Multi-Principal Element Alloys (MPEAs)	112	12.300	200473407//N00014-20-1-2368	374,283	—
Integrated Harvesting and Storage of Oxygen from Seawater Using Efficient Bipolar Membrane Electrolysis, Impurity Tolerant Electrocatalysts, and Design	266	12.300	236440C/N00014-20-1-2517	219,688	—
Mesoscopic quantum science and metrology with levitated mechanical systems	269	12.300	417315/URFAC: GR510772 AMD. 7 // N00014-18-1-2370	95,268	—
Development of Lightweight, Power-Efficient, Soft Electronic Sensor Systems for Next-Generation Oceanographic Measurements	238	12.300	438651//N00014-21-1-2342	46,663	—
Dynamic Allocation of Autonomy for Limited-Bandwidth Human-Robot Teams Based on Measures of Trust in the Human	175	12.300	Agmt 05/13/19 // N00014-16-1-2247	72,396	—
Advanced Materials Simulation Engineering Tool (AMSET) MLP Project	127	12.300	Agmt 10/7/20	110,000	—
Wearable Technologies for Autonomous Combat Casualty Care	75	12.300	AWD-002038-G1//N00014-21-1-2036	46,261	—
Understanding Atomic Scale Structure in Four Dimensions to Design and Control Mesoscale Morphologies for Oxidation Resistant Alloys		12.300	N00014-16-1-2280-P00011	783,409	607,140
Cyberalloys 2020: Naval Materials by Design		12.300	N00014-16-1-2400 AMD A00003	—	(1)
Multi-Dimensional Control in Laterally Confined Atomically Thin Nanostructures		12.300	N00014-16-1-3055	306	—
Nanomaterials Inspired from the Bacterial Adhesome and Mechanome		12.300	N00014-16-1-3175 P00003	200,942	—
Integrated Optics for Single-Photon Nonlinear Interactions		12.300	N00014-17-1-2409 P00006	210,724	112,828
Designing Hierarchical Three-dimensional Surfaces by Controlling Strain		12.300	N00014-17-1-2432 P00005	67,490	—
Surface and Interface Engineering of van der Waals Nanoelectronic Heterostructures		12.300	N00014-17-1-2993 P00004	121,313	—
Hierarchical Nanoscale Metamaterials		12.300	N00014-17-1-3023 P00005	477,029	—
Plasmonic-Dielectric Metamaterials for Enhanced Spectroscopy and Controlled Chemistry		12.300	N00014-17-1-3024 P00005	239,171	—
Properties and Methods for Distributionally Robust Optimization with Decision Dependent Uncertainty		12.300	N00014-18-1-2097 P00006	29,086	—
Methods for High-Dimensional Nonlinear Optimization		12.300	N00014-18-1-2098 P00005	77,510	—
Cognitive Expertise by Repetition Enhanced Simulation-based (CERES) Training		12.300	N00014-18-1-2316 P00006	250,934	—
Screening For and Preclinical Evaluation of Drugs for Hearing Loss		12.300	N00014-18-1-2508 P00005	356,550	—
Optimizing Nanoscale Coherent Precipitates in Aluminum Alloys by Microalloying with Tungsten		12.300	N00014-18-1-2550 P00005	141,533	—
High-Strength High-Toughness 10%Ni Naval Steels		12.300	N00014-18-1-2594 P00005	230,631	—
Multiscale Fabrication via Multiphoton Direct Laser Writing		12.300	N00014-18-1-2651 P00002	80,159	—
The Phase Field Method: Towards a Tool for Materials Design		12.300	N00014-18-1-2787 A00001	124,193	—
Three-dimensional tomographic and electrochemical characterization of Li-ion battery performance and safety		12.300	N00014-19-1-2135 P00001	188,130	—
A New Method for Compact, High-Performance Atom Interferometric Sensors		12.300	N00014-19-1-2181 P00004	144,320	—
Instrumentation for Surface Engineering of van der Waals Nanoelectronic Heterostructures		12.300	N00014-19-1-2327	67,722	—
Theoretical Foundations and Scalable Algorithms for Mixed-Integer Convex Optimization with System Choice		12.300	N00014-19-1-2321 P00001	140,322	88,552
Building Adaptive, Dependable, and Secure Systems with a Cross-Layer Weakly Hard Paradigm		12.300	N00014-19-1-2496 P00003	202,337	131,616
Manufacturing Process Compiler – A Foundation for New Process Generation		12.300	N00014-19-1-2642 P00002	311,570	—
Development of Lightweight, Power-Efficient, Soft Electronic Sensor Systems for Next-Generation Oceanographic Measurements	259	12.300	N00014-19-1-2688 // C00066003-2	28,979	—
Disruptive Durable All-Polymer Solar Cells (PY2019-000119-AS)		12.300	N00014-20-1-2116-P00001	193,047	—
Hard Isotopic Solids from Soft Two-Dimensional Sheets		12.300	N00014-20-1-2190	174,265	—
Integrated Computational Materials Engineering of Functional Materials Using Phase Field Methods		12.300	N00014-20-1-2327	49,044	—
Towards Intelligent Agents that Learn by Multimodal Communication		12.300	N00014-20-1-2447-P00001	142,638	—
COVID-19: Retrofitting stainless steel with a self-sanitizing surface layer		12.300	COVID-19: N00014-20-1-2685/P00001	139,164	—
Design of 1D/2D/3D perovskite composites for enhancing the stability of high efficiency solar cells		12.300	N00014-20-1-2725	210,246	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
3D assembly of bidirectional bioelectronic scaffolds towards accelerated tissue repair		12.300	N00014-20-1-2777	\$ 163,947	—
Automated Mental Health Assessment (AMHA) to Predict Destructive Behaviors		12.300	N00014-21-1-2216	110,541	—
Direct Laser Writing of In-Fiber Ring Resonator Acoustic Emission Sensors for Structural Health Monitoring 20-000000919		12.300	N00014-21-1-2233	90,485	—
Collective Coupling in Hybrid Plasmon Lattice-Exciton Materials		12.300	N00014-21-1-2289	27,308	—
Fundamental Principles of Phase Transformations, Strength and Toughness in High-Strength 10 wt.% Ni Steels for US Naval Applications		12.300	N00014-21-1-2398	30,422	—
Multi-scale Metamorphic Manufacturing (MMM): Double-Sided Incremental Forming for Functional Metal Plates with Multi-scale Riblet Textures		12.300	N00014-21-1-2484	3,655	—
Stochastic Constrained Optimization		12.300	N00014-21-1-2675	63,270	—
Surface and Interface Engineering of Borophene Nanoelectronic Materials		12.300	N00014-21-1-2679	39,095	—
ACTIVE LEARNING SENSOR-OBJECT MODELS IN HIGHLY VARIABLE ENVIRONMENTS		12.300	N00014-21-1-2706	18,052	—
				7,289,058	940,136
Multi-Modal Sensing Enabled Closed-Loop Transcutaneous Vagal Nerve Stimulation for Musculoskeletal Injury and Disorders	75	12.910	AWD-102572-G 1/N660011924002	187,150	—
Improved Infrared Imaging with Variable Resolution Achieved via Post-Processing	161	12.RD	18110801-01/N6833519C0027 MOD 003	131,284	—
BISC: Bioelectronic Interfacing to Sensory Cortex with massive, fully implanted, flexible, wireless CMOS surface recording and stimulating arrays	46	12.RD	5(GG012664) // N66001-17-C-4002	(7,926)	—
Widely Tunable Surface Emitting Quantum Cascade Lasers	154	12.RD	Agmt 3/72018 // N68936-17-C-0063	(1,743)	—
Department of Defense Total				44,637,290	6,220,801
Department of Education:					
Fulbright-Hays Doctoral Dissertation Research Abroad		84.022	P022A190047	32,292	—
Institute of Education Sciences:					
Enhancing Middle School Mathematics Achievement through Spatial Skills Instruction	235	84.305	011275-004/R305A170640-18	771	—
Moving Beyond the Average: Building a Comprehensive Model of Classroom Quality that Incorporates Children's Individual Experiences	263	84.305	5117878/R305A200308	20,459	—
Planning RCTs in Community Colleges	123	84.305	Agmt 10-12-20/R305D190025	32,366	—
Contexts Inside and Outside of School Walls as Predictors of Differential Effectiveness in Preschool Professional Development	84.305	84.305	R305A160013 - 18	35,092	14,471
Sense-Making in the Disciplines: Supporting Reading and Argumentation in Literature and History	84.305	84.305	R305A180463-21	155,465	66,298
Multidisciplinary Program in Educational Sciences	84.305	84.305	R305B140942 - 17 Mod 4	7,989	—
An RCT Institute for Established Researchers	84.305	84.305	R305B170016	287,862	—
A Summer RCT Institute for Established Researchers	84.305	84.305	R305B200029	28,659	—
Multidisciplinary Program in Educational Sciences	84.305	84.305	R305B200037-2	555,207	—
A User-Friendly Tool for Designing Cluster Randomized Trials with Power and Relevance	84.305	84.305	R305D180002-19	161,237	51,368
What We Have Learned in 20 Years of IES Randomized Trials	84.305	84.305	R305U200005 - 21	267,490	—
Exploring the Spatial Alignment Hypothesis in STEM Learning Environments	297	84.305	S-00014999 // R305A170165	151,846	—
Department of Education Total				1,704,443	132,137
Training-Induced Language and Literacy Improvement in Children with Cochlear Implants	67	84.324	R01834 // R324A160193	101,558	—
			Department of Education Total	1,838,293	132,137
Department of Energy:					
Quantum Materials for Energy Efficient Neuromorphic Computing (Q-MEEN-C)	231	81.049	11238380/DE-SC0019273	118,170	—
Ultrafast Creation and Manipulation of Emergent Phenomena and Novel Phases in Complex Oxides	166	81.049	5709-NU-DOE-2375 // DE-SC0012375	4,743	—
Nanoporous Materials Genome: Methods and Software to Optimize Gas Storage, Separations, and Catalysis	258	81.049	A003127002 Amnd 10/DE-SC0008688	226,882	—
EFRC/UJMN: Inorganometallic Catalysts	158	81.049	A004527502/DE-SC0012702	764,871	—
Switchable Quantum Buffer For Transparent Optical Quantum Network	168	81.049	AGMT 6/42/0/DESC0020537	58,157	—
New Methods for Atomic Structure Determination of Nanoscale Materials	81.049	81.049	DE-FG02-01ER45945 0020	92,614	—
Institute for Environmental Catalysis	81.049	81.049	DE-FG02-03ER15457-0019	1,472,600	—
Antiferromagnetism and Superconductivity	81.049	81.049	DE-FG02-05ER46248-0016	34,433	—
Epitaxial Multifunctional Oxide Heterostructures	81.049	81.049	DE-FG02-06ER46346 0015	159,772	—
Coordination-Chemistry-Derived Materials Featuring Nanoscale Porosity and Selective Chemical Separation Capabilities	81.049	81.049	DE-FG02-08ER15967 0013	166,391	—
Electrostatic Driven Self-Assembly Design of Functional Nanostructures	81.049	81.049	DE-FG02-08ER46539-0012	380,395	—
Fundamental Studies of Light-Induced Charge Transfer, Energy Transfer, and Energy Conversion with Supramolecular Systems	81.049	81.049	DE-FG02-87ER13808 0037	191,541	—
Approaches to Integrated Photochemical Systems for Solar Energy Conversion	81.049	81.049	DE-FG02-99ER14999-0019	404,104	—
The Evolution of Topologically Complex Structures: Coarsening of Dendritic Mixtures	81.049	81.049	DE-FG02-99ER45782-0022	(7,297)	—
Center for Bio-Inspired Energy Science (CBES)	81.049	81.049	DE-SC000989 0011	2,760,825	1,027,294
CENTER FOR LIGHT ENERGY ACTIVATED REDOX PROCESSES (LEAP) (Formerly ANSER)	81.049	81.049	DE-SC001059 0009	38,233	16,899
Surface Plasmon Enhanced Chemistry	81.049	81.049	DE-SC0004752-0012	148,980	—
Scalable, In-situ Data Clustering Data Analysis for Extreme Scale Scientific Computing	81.049	81.049	DE-SC0014330 0002	139,539	—
Bose-Einstein Condensation of Magnons and Potential Device Applications	81.049	81.049	DE-SC0014424-0005	136,645	—
Design of Next Generation Thermoelectrics	81.049	81.049	DE-SC0014520-0005	433,854	—
Research in the Energy, Cosmic and Intensity Frontiers and Theoretical Physics at Northwestern University	81.049	81.049	DE-SC0015910 0005	856,255	—
Missing links in biological methane and ammonia oxidation	81.049	81.049	DE-SC0016284 0005	168,343	—
Properties, Electrochemical Activity, and Stability of Solid Oxide Cell Materials Under Extreme Conditions	81.049	81.049	DE-SC0016965-0003	135,908	—
Geophysical Feedbacks between Fluid-Assisted Sediment Fracture, Compaction and Faulting	81.049	81.049	DE-SC0017615-0005	171,546	—
Electrolyte-Mediated Assembly of Like-Charged Colloids	81.049	81.049	DE-SC0018093	148,442	—
Establishing a Clostridia foundry for biosystems design by integrating computational modeling, systems-level analyses, and cell-free engineering technologies	81.049	81.049	DE-SC0018249-P0004	1,855,250	773,732
Employing bacterial microcompartments to create privileged redox pools for biofuel production	81.049	81.049	DE-SC0019337 0002	410,274	—
Biosynthesis of bioprivileged, linear molecules via novel carboligase reactions	81.049	81.049	DE-SC0019339 0003	398,278	—
Towards the Mechanism of N2 Fixation by Nitrogenase	81.049	81.049	DE-SC0019342 0002	235,413	—
Creating and Interfacing Designer Chemical Quibits	81.049	81.049	DE-SC0019356-0002	1,442,941	361,036
PROTEUS: Machine Learning Driven Resilience for Extreme-scale Systems	81.049	81.049	DE-SC0019358/18SC503797	442,009	—
Systems for Transducing Entanglement between Photons and Electron Spins	81.049	81.049	DE-SC0020168 0002	621,177	337,972
Permanent Magnets Featuring Heavy Main Group Elements for Magnetic Anisotropy	81.049	81.049	DE-SC0020176	135,221	—

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards
Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Supramolecular Dynamics in Self-Assembling Materials		81.049	DE-SC0020884	\$ 295,075	—
Understanding functional dynamics on the nano scale through an integrated experimental-computational framework		81.049	DE-SC0020885-0001	58,868	—
Toward Selective Photocatalytic Conversion of Methane to Methanol by a Colloidal Quantum Dot: Spatio-Temporal Reaction Control and in Situ Methanol Protection Schemes		81.049	DE-SC0021169 0001	160,473	—
Catalytic Kinetics and Mechanisms in Phosphorus Recycling from Ribonucleotide Structures by Iron Oxide Minerals		81.049	DE-SC0021172 001	88,364	—
Center for Molecular Quantum Transduction (CMQT)		81.049	DE-SC0021314 001	2,079,176	580,754
RAPIDS2: A SciDAC Institute for Computer Science, Data, and Artificial Intelligence		81.049	DE-SC0021399	35,291	—
Multiphot high-pressure fluid cell (MHPFC) for photon and electron beams	3	81.049	DE-SC0021481//Espinosa AGMT 4/19/21	16,940	—
Scattering Amplitudes and QFT Insight		81.049	DE-SC0021485	66,655	—
Hybrid Metal Halides: Advancing Optoelectronic Materials	233	81.049	KK2107/DE-SC0012541	1,555	—
Hybrid Metal Halides: Advancing Optoelectronic Materials	233	81.049	KK2107/DE-SC0012541	31,764	—
High Efficiency Semiconductors for Nuclear Material Accounting	173	81.049	RMD C21-15/DE-SC0020039	136,222	—
LiInP2Se6, a new semiconductor detector material for high resolution neutron imaging	173	81.049	RMD C21-29/DE-SC0021554	10,881	—
				<u>17,729,773</u>	<u>3,097,487</u>
Theory-Guided Design and Discovery of Materials for Reversible Methane and Hydrogen Storage		81.086	DE-EE0008816-P0002	151,528	—
Securing Grid-interactive Efficient Buildings (GEB) through Cyber Defense and Resilient System (CYDRES)	209	81.086	M2001973-01/DE-EE0009150	69,463	—
				<u>220,991</u>	<u>—</u>
Identifying Performance Advantaged Biobased Chemicals Utilizing Bioprivileged Molecules	105	81.087	401-20-25A AMD 3/DE-EE0008492/003	115,789	—
CHARACTERIZATION AND ACCELERATED LIFE TESTING OF A NEW SOLID OXIDE ELECTROLYSIS CELL		81.087	DE-EE0008079-0004	151,154	—
Transformative Materials for High-Efficiency Thermochemical Production of Solar Fuels		81.087	DE-EE0008089-0004	125,329	—
Engineered reversal of O-oxidation cycle in clostridia for the synthesis of fuels and chemicals		81.087	DE-EE0008354-0002	337,686	211,366
Efficient Reversible Operation and Stability of Novel Solid Oxide Cells		81.087	DE-EE0008437-0005	344,961	54,325
Resin: Responsible Innovation for Highly Recyclable Plastics		81.087	DE-EE0008928	392,720	—
A Dynamic Technoeconomic Systems Modeling Framework for U.S. Fiber Recycling	205	81.087	SA-19-25/DE-EE0007897	117,593	50,404
				<u>1,585,012</u>	<u>316,095</u>
Novel Algae Technology to Utilize CO2 for Value Added Products	85	81.089	DE-FE0031710	20,280	—
Versatile Reversible Solid Oxide Cell System for Hydrogen and Electricity Production	149	81.089	DE-FE0031986/Barnett 8/6/21	65,939	—
				<u>86,219</u>	<u>—</u>
High-performance nanostructured thermoelectric materials and generators for in-pile power harvesting	265	81.121	203464NU//NE0008812 02	43,022	—
Accelerated Discovery of Compositionally Complex Alloys for Direct Thermal Energy Conversion	200	81.RD	197455/DE-AC02-76SF000515-MOD02	346,662	—
Study of electrode microstructural evolution on solid oxide electrolysis cells at high temperatures for HydroGEN SuperNode	17	81.RD	219484/DE-AC07-051D14517 004	43,684	—
Growth and Integration of Two-Dimensional Transition Metal Dichalcogenides for Logic and Memory	142	81.RD	2207198/DE-NA0003525	85,895	—
DOE NCI Center: Co-design Center for Quantum Advantage	27	81.RD	390039/DE-SC0012704	53,566	—
Continuum Model for Prediction of Chemo-Mechanical Damage Due to Alkali Silica Reaction in Concrete	216	81.RD	3J-30081 // 3J-30081-0065A	(12,000)	—
Support for Saugat Kandel	216	81.RD	3J-30081 // 3J-30081-0068A Rev. No. 0068D	(2,667)	—
ML/DL and I/O Research, Development, and Deployment for RAPIDS	216	81.RD	3J-30081 Rev 0069C // 3J-30081-0069A	132,072	—
Midwest Integrated Center for Computational Materials	216	81.RD	3J-30081-0056A/3J-30081-0056B	(6,904)	—
Oxide Dispersion Strengthened (ODS) Alloys	216	81.RD	3J-30081-0070A	(46)	—
Structure and Properties of Al-Ce-based eutectic alloys created by Laser Powder-Bed fusion	286	81.RD	4000179340/DE-AC05-000R22725	47,581	—
Compressive Creep Behavior of Cast Al-Cu-Mn-Zr Alloys	286	81.RD	400182026 Mod# 3/DE-AC05-000R22725	45,299	—
Rational Design and Development of Nanoscale Crystalline and Amorphous Materials for Sequestration of Radioactive Perchnetate from Tank Waste	108	81.RD	634D35-ANWU//TOA 0000456322/DE-AC09-	32,888	—
CMS LPC Distinguished Researcher 2019	65	81.RD	652513/DE-AC02-07CH11359	12,412	—
Illinois-Express Quantum Network (IEQNET)	65	81.RD	664603/DE-AC02-07CH11359	187,829	—
Activities related to Microstructural Studies of Nb3Sn Coatings for SRF Cavities	65	81.RD	665882/DE-AC02-07CH11359 Mod 1	2,774	—
QuantISED research at Fermilab	65	81.RD	667512/DE-AC02-07CH11359 MOD 2	47,996	—
2020 Software and Computing HL-LHC R&D Postdoc Program	65	81.RD	669547/DE-AC02/07CH11359	34,013	—
Support for Eric Viklund	65	81.RD	669754/DE-AC02-07CH11359 Mod. 1	67,531	—
(SQMS Prime) Superconducting Quantum Materials & Systems	65	81.RD	674560/DE-AC02-07CH11359	2,038,639	—
Graduate Student Support: Tae-Yoon Kim	65	81.RD	675487/DE-AC02-07CH11359	63,995	—
Joint Appointment of Vedran Brdar	65	81.RD	675731	39,438	—
Post-Doctoral Fellow Support: Robert C. Regan	65	81.RD	678534/DE-AC02-07CH11359	46,224	—
LUX-ZEPLIN (LZ) Experiment Support and Operations	228	81.RD	6759174/DE-AC02-05CH11231	21,904	—
Effects of Ultrafast and Coherent Electronic and Nuclear Motions in Photochemical Processes	216	81.RD	8F-30078-M0007//DE-AC02-06CH11357	85,237	—
Joint Center for Energy Storage Research	216	81.RD	8F-30158 // DE-AC02-06CH11357 M0004	910,113	—
MICoM Water Electrode Studies	216	81.RD	8J-300009-0014A	(3,412)	—
Center for Electrolyte-Electrode Interface Science (CEEIS)	216	81.RD	8J-30009//8J-30009-0009A-0009E	137,413	—
Support for Pufan Liu	216	81.RD	8J-30009-0005A/8J-30009	4,181	—
Support for Saugat Kandel	216	81.RD	8J-30009-0006A-0006D //8J-30009	2,667	—
MaterialEyes: A reverse image search tool for materials images	216	81.RD	8J-30009-0013A Rev. 0013D	3,717	—
Image Analysis for Materials Characterization	216	81.RD	8J-30009-0016A Rev. 0016E	76,147	—
Support for Saugat Kandel	216	81.RD	8J-30009-0018B	46,179	—
Biofuels for enhanced fuel economy	216	81.RD	8J-30009-0019A	87,315	—
High-performance I/O Research, Development, and Deployment for DataLib	216	81.RD	8J-30009-0020A	146,542	—
COVID-19: Tunable, Robust, Foul-resistant, Hybrid Hydrophobic-Hydrophilic (TuRF) Metasurfaces for High Temperature Heat Exchange Operations	216	81.RD	COVID-19: 8J-30009-0021C	187,891	—
Creation and exploration of artificial skyrmions in thin films	216	81.RD	8J-30009-0022A-0022c	58,527	—
Development of ML/DL Models for Monitoring Avian Activities around Solar Energy Facilities	216	81.RD	8J-30009-0025B	46,794	—
Psycho-tomographic and pycho-laminographic imaging	216	81.RD	8J-30009-0026A	8,073	—
Exploring Machine Learning-based Approaches to Auto-tuning Distributed Memory Communication	216	81.RD	8J-30009-0027B (Revised)	84,622	—
Psycho-tomographic and pycho-laminographic imaging	216	81.RD	8J-30009-0030A	\$ 8,073	—
Argonne joint appointment funding for Joseph Swartek	216	81.RD	Agmt 9/02/21	41,016	—
Advanced Materials for Energy-Water Systems (AMEWS)	216	81.RD	Agmt 03/14/19 // 8J-30009-0008D	166,824	—
Advanced Materials for Energy-Water Systems (AMEWS)	216	81.RD	Agmt 09/15/21 // 8J-30009-0007A-0007D	54,431	—
Argonne Joint Appointment – Low	216	81.RD	Agmt 09/22/20	114,752	—
Irene Crisologo joint appointment funding-Argonne	216	81.RD	Agmt 1/27/20	47	—
ANL joint appointment funding for Wei-Keng Liao	216	81.RD	Agmt 2/5/20 (Increment Dated 09/02/20)	159,521	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
ANL joint appointment funding-Alok Choudhary-data libraries	216	81.RD	Agmt 2/5/2020	\$ 19,790	—
Aaron Packman joint appointment	216	81.RD	Agmt 5/8/19	14,450	—
Jennifer Dunn ANL joint appt CELS shared services	216	81.RD	agmt 6/3/21	13,411	—
Matthew Plumlee-Argonne joint appointment funding summer 2020	216	81.RD	AGMT 8/12/20	10,813	—
Support for Haitao Li	216	81.RD	Agmt 9/21/20	44,959	—
Argonne Joint Appointment – Poepelmeier	216	81.RD	Agmt 9/22/20	73,417	—
Argonne joint appointment funding for Joshua Paul	216	81.RD	Agmt# 01/13/21 (Form ID: ANL-JA-8331)	44,455	—
Sri Bala Gorugantu Argonne joint appointment funding	216	81.RD	AGMT# 02/24/21 (FORM ID: ANL-JA-8405)	19,719	—
Joint appointment-Pyosang Kim Argonne funding	216	81.RD	Agmt# 08/18/21	157,358	—
Argonne Joint Appointment – Kanatzidis	216	81.RD	Agmt. 08/20/14	226,070	—
Joint Appointment Agreement – Petriello	216	81.RD	Agmt. 08/26/14	130,051	—
Support for Daniel Wiegand	216	81.RD	Agreement 9/14/18	43,382	—
ArgonneJoint appointment funding for Florent Fournol	216	81.RD	ANL-JA-7841	18,639	—
Irene Crisologo Argonne Joint appointment funding 9/1/20-5/31/21	216	81.RD	ANL-JA-8032	17,156	—
Argonne joint appointment funding for Sai Phani Kumar Vangala	216	81.RD	ANL-JA-8364	27,857	—
Harsh Vardhan-Argonne joint appointment funding	216	81.RD	ANL-JA-8372	40,136	—
Argonne joint appointment funding-Shu Xu	216	81.RD	ANL-JA-8540	30,639	—
Joint appointment-funding for Hacksung Kim	216	81.RD	Awrd 11/10/2020	114,142	—
Argonne Joint Appointment – Wasielewski	216	81.RD	Awrd 9/23/2019	(1,825)	—
Joint appointment funding for Michael Mara	216	81.RD	EDSR Agmt 08/18/21	157,358	—
Jennifer Dunn – Joint NU/Argonne Appointment	216	81.RD	EDSR Agmt 2/18/2021	6,413	—
Two-Dimensional Electronic Materials	86	81.RD	NO00399502/DE-NA0002839	115,952	—
Support for Ivan Martinez-Soler	65	81.RD	NO. 651257	41,213	—
Support for Yuber Perez-Gonzalez	65	81.RD	NO. 651835	35,494	—
High-Luminosity LHC U.S. CMS Detector Upgrade Project Trigger DAQ – Correlator Trigger	65	81.RD	NO. 670473/DE-AC02-07CH11359	4,731	—
SFA-Secure Biosystems Design: Rapid Design and Engineering of Smart and Secure Microbiological Systems	216	81.RD	No. 8J-30009 0029C	62,995	—
Development of Hi-Z X-ray Detector	216	81.RD	NO. 8J-30009-0031A	19,122	—
SFA-Secure Biosystems Design: Intrinsic Control for Genome and Transcriptome Editing in Communities	142	81.RD	PO 2223937/DE-NA0003525	285,129	—
Microstructural Studies of Nb3Sn Coatings for SRF Cavities	65	81.RD	PO No. 631010 Rev 1 // DE-AC02-07CH11359	(4,405)	—
REMADE: Material Characterizations and Sorting Specifications That Can Allow the Development of Advanced Tire Constructions with High Incorporation of Recovered Rubber Materials	136	81.RD	REMADE-18-02/DE-EE0007897	40,846	—
Institute for Cooperative Catalysis in Upcycling of Polymers (ICOUF)	106	81.RD	SC-20-534 Mod 3/DE-AC02-07CH11358	267,060	—
US CMS Common Operations	65	81.RD	Subcontract No. 663737/DE-AC02-07CH11359	36,236	—
Structure and Properties of Al-Ce-based eutectic alloys created by Laser Powder-Bed Fusion	286	81.RD	Task Order 4000184857/DE-AC05-00OR22725	42,615	—
Pre-optimized cell free lysates for rapid prototyping of genes and pathways	274	81.RD	UT18-000419/7399340/DE-AC02-05CH11231	124,695	—
Rational Synthesis of Superconductors and Superconductivity and Magnetism	216	81.RD	WO 8J-30009-0028A-0028B	15,990	—
COVID-19: Viral Fate & Transport for COVID-19: Surface and Groundwater Systems Modeling	216	81.RD	COVID-19. WORK ORDER NO. 8J-30009-0024A	45,269	—
CSP Real-time Operations Optimization Software	6	81.RD	XCE-9-92207-01/DE-AC36-08GO28308 Mod. 3	116,584	55,000
Solar for Industrial Process Heat	6	81.RD	XEJ-9-82324-01/DE-AC36-08GO28308	23,738	—
Advanced Research Projects Agency-Energy:					
Additive Manufacturing of Ultrahigh Temperature Refractory Metal Alloys	284	81.135	0000001327/DE-AR0001431	4,533	—
Hybrid Interior-Point/Active-Set PSCOPF Algorithms Exploiting Power System Characteristics	118	81.135	543891-78001/DE-AR0001073	113,557	—
Distributed Electrochemical Production and Conversion of Carbon-neutral Ammonia	185	81.135	C2017.00.13-01/DE-AR0000813	(155)	—
An Iterative Approach for Solving the SCOPF Problem Applying LP, SOCP and NLP Subproblems	81.135	81.135	DE-AR0001077-003	174,826	120,429
Adaptive Discovery and Mixed-Variable Optimization of Next Generation Synthesizable Microelectronic Materials	81.135	81.135	DE-AR0001209-001	536,128	83,528
Selective Hydrogenolysis of Pre-Consumer Polyolefins to Premium Synthetic Lubricants	81.135	81.135	DE-AR0001361	34,732	—
Regrowth and Selective Area Growth of GaN for Vertical Power Electronics	299	81.135	GR101471 CON-8000 1218/DE-AR000087 Mod 0003	135,435	—
				<u>999,056</u>	<u>203,957</u>
National Nuclear Security Administration:					
Chicago-DOE Alliance Center – A Center of Excellence for High Pressure Science and Technology	245	81.112	18046/DE-NA0003975 AMD01	82,774	—
Actinide Center for Excellence	265	81.112	203186NU AMD 4/DE-NA0003763	168,447	—
				<u>251,221</u>	<u>—</u>
Enabling Predictive Scale-Bridging Simulations through Active Learning	213	81.RD	624283/485409/89233218CNA000001	73,985	—
Department of Energy Total				<u>28,613,408</u>	<u>3,672,539</u>
Department of Health and Human Services:					
Administration for Children and Families:					
The Northwestern University Two-Generation Study (NU2Gen) of Parent and Child Human Capital Advancement	47	93.093	90HG1002-04-00	138,827	11,393
The Northwestern University Two-Generation Child and Family Outcomes Study of CAP Tulsa's CareerAdvance® Program	47	93.093	Agmt 1/6/2020	269,089	—
				<u>407,916</u>	<u>11,393</u>

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

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Florida's Office of Early Learning Sunshine Portal Project	241	93.434	SUB00002383-02//P0177546//90TP0068-01-00	\$ 35,052	—
Evidence-informed Practices in Early Childhood Home Visiting: Prevention, Identification and Treatment of Substance Abuse in Families	128	93.RD	HHSP233201500035//50525S05679	1,171	—
Administration for Community Living:					
Improving Electronic Written Communication in Aphasia	175	93.433	6317//90FRE0007-03-00	889	—
Timing of transcranial direct current stimulation (tDCS) combined with speech and language therapy (SLT): An Intervention Development study for Aphasia	175	93.433	7267//90FRE0020-02-00	8,605	—
Rehabilitation Research Training Center (RRTO) on employment for people with Physical Disabilities	175	93.433	80413//90REMO001-01-00	31,698	—
Collaborative Machines Enhancing Therapies (COMET)	175	93.433	82258//90REG0005	100,169	—
Rehabilitation Science for Basic Scientists and Engineers: An Advanced Training Program	93.433	90AR5031-05-00		16,084	3,091
Rehabilitation Science for Basic Scientists and Engineers: An Advanced Training Program	93.433	90AR5031-05-00		154,633	1,658
Advanced Rehabilitation Research Training (ARRT) Program – Employment	93.433	90AREM0003-01-00		39,835	—
Advanced Rehabilitation Research Training (ARRT) Program – Employment	93.433	90AREM0003-02-00		18,873	—
Advanced Rehabilitation Research and Training (ARRT) Program: Northwestern University Advanced Rehabilitation Research Training Application	93.433	90ARHF0003-02-00		1,947	—
Advanced Rehabilitation Research and Training (ARRT) Program: Northwestern University Advanced Rehabilitation Research Training Application	93.433	90ARHF0003-03-00		218,852	—
Northwestern University Policy Research Fellowship	93.433	90ARPO0001-03-00		19,208	—
Northwestern University Policy Research Fellowship	93.433	90ARPO0001-04-00		172,429	—
Multi-site Clinical Trial of Hypoxia in Incomplete SCI	175	93.433	cc81478 6323//90SIMS0001-01-00	73,541	—
Sensor Technology Applied to Rehabilitation in Stroke	175	93.433	cc82288 8161//90REG0010 -01-01	61,188	—
				917,951	4,749
Developing Optimal Strategies in Exercise and Survival Skills to Increase Health and Function	175	93.443	CL3802, CC81038//90RT5027-01-00	6,709	—
Agency for Healthcare Research and Quality:					
The University of Chicago and Northwestern University Predoctoral Health Services Research Program	234	93.225	FP037911-03//ST32HS000084-23	97,643	—
Promoting safe care transitions: Simulation-based mastery learning to improve communication in times of diagnostic uncertainty	212	93.226	080-31050-827501//5R18HS025651-02	37,882	—
Improving Safe Antibiotic Prescribing in Telehealth: A Randomized Trial	272	93.226	110597288 / 5R01HS026506-03	40,385	—
A Chicago Center of Excellence in Learning Health Systems Research Training (ACCELERAT)	93.226		3K12HS026385-03S1	368,328	179,073
NIH NRSA Postdoc Fellowship for BONA KO: An Alternative Approach to Understanding the Drivers of High-Performance End-of-life Care Delivery in the Intensive Care Unit	93.226	5F32HS027724-02		55,235	—
Northwestern University – Patient-centered Intervention and Engagement Training	93.226	5K12HS023011-05		(9,226)	—
Evaluating the Implementation of a Multi-Component Quality Collaborative	93.226	5R01HS024516-05		87,310	7,811
The Value of Children's Hospitals-Are Increased Costs Justified by Improved Outcomes or Driven by Internal and External Economic Forces?	93.226	5R01HS024712-05		104,106	104,106
Preventing Wrong-Drug and Wrong-Patient Errors with Indication Alerts in CPOE Systems	93.226	5R01HS024945-05		417,227	159,135
A Randomized Controlled Trial of Geriatric Emergency Department Innovations	93.226	5R01HS026489-03		379,423	109,008
A Cluster-Randomized Trial of the Northwestern Embedded Emergency Department Physical Therapy (NEED-PT) Protocol for Acute Low Back Pain	93.226	5R01HS027426-02		314,080	—
Midwest Small Practice Care Transformation Research Alliance	93.226	5R18HS023921-03 REVISED		1,946	—
Redesigning Systems to Improve Quality for Hospitalized Patients	93.226	5R18HS025649-05		452,451	106,941
Implementation and Testing of a Diabetes Discharge Intervention to Improve Safety During Transitions of Care	93.226	5R18HS026143-03		372,828	29,990
Expansion, Implementation & Evaluation of Electronic Health Record-Integrated Patient-Reported Symptom Screening in a Comprehensive Cancer Center	93.226	5R18HS026170-03 REVISED		389,026	8,993
Prevent Diabetes Mellitus (PreDM) Clinical Decision Support Intervention in Community Health Centers	93.226	5R18HS026172-03		374,287	162,886
Intervention in Small Primary care practices to Implement Reduction in unhealthy alcohol use (INSPIRE)	93.226	5R18HS027088-03		783,581	399,447
Preventing Opioid Misuse through Safe Opioid Use Agreements between Patients and Surgical Providers (PROMISE ME)	93.226	5R18HS027331-02		363,203	—
Dental prescribing of antibiotics and opioids: high use in the absence of evidence	268	93.226	AWD00002325 (134464-1)//7R01HS025177-05 REVISED	20,040	—
Targeted Healthcare Engineering for Systems Interventions in Stroke (THESIS)	234	93.226	AWD100490 (SUB00000216)//5R18HS027264-02	125,495	—
Enhancing Stroke Prehospital and Emergency Evaluation and Delivery (E-SPEED) study	234	93.226	AWD100573 (SUB00000238)//5R18HS025359-05	87,039	—
Healthy Hearts in Michigan (H2M)	7	93.226	SC-21-003//1U18HS027954-01	250,796	—
COVID-19: The Role of Telehealth in COVID-19 Response	272	93.226	COVID-19: SC0N-00002221//1R01HS028127-01	15,113	—
Safely Improving Emergency Diagnostic Testing through Clinical Safe Harbors	268	93.226	VUMC73418 AMD 3//5R18HS025931-03	18,753	—
				5,029,308	1,267,390
The Comprehensive Unit-based Safety Program (CUSP) for Antibiotic Stewardship	112	93.RD	2003757786//HHSP2332015000201	79,200	—
Centers for Disease Control and Prevention:					
A novel innate immunity risk factor for amyotrophic lateral sclerosis		93.061	5R01TS000294-02-00	296,137	—
Developing and Disseminating Programs to Build Sustainable Lupus Awareness, Knowledge, Skills, and Partnerships	9	93.068	6NU58DP006138	20,216	—
Developing and Disseminating Programs to Build Sustainable Lupus Awareness, Knowledge, Skills, and Partnerships	9	93.068	AGMT 3-25-21//1NU58DP0069080100	19,859	—
				40,075	—
Community Counts: Public Health Surveillance for Bleeding Disorders (Region #V-West, HTC #553)	79	93.080	ATHN2015001-VV-3//5NU27DD001155-05-00	20,666	—
Identifying host biomarkers that determine susceptibility to colonization with an emerging fungal pathogen Candida auris.	107	93.084	JCVI-21-005//1U54CK000603-01-00	992	—
Development and Evaluation of Sports Concussion Prevention Strategies	190	93.136	11679S9B//SU01CE002880-02-00	1,407	—
Firearm Involvement in Adolescent Children of Formerly Incarcerated Parents: A Prospective Intergenerational Study of Resilience Within Families	93.136	1R01CE003271-02-00		402,223	—
Chicago Center for Youth Violence Prevention	234	93.136	FP061138 (5201068601-5)//SU01CE002712-07	96,326	—
				499,956	—
Effects of Medicaid Coverage and State-Level Delivery Approaches on Healthcare Quality, Outcomes, and Costs for Adults with Diabetes	93.945	1U18DP006524-01		325,047	70,418
Effect of ACA Medicaid Expansion on Diabetes: Diagnosis, Treatment, Patient Compliance, and Health Outcomes	93.945	6 U18DP006120-04-02		292,254	51,988
				617,301	122,416

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Intergovernmental Personnel Act Agreement for Theresa Rowe	12	93.RD	17IPA1708457 Mod 4	\$ 568	—
Group A Streptococcus Molecular Epidemiology and Ecology	37	93.RD	A20-0013-S001//75D30119C06841	120,105	—
The HIV Outpatient Study (HOPS) Activity to Abstract Data from Persons Receiving Ambulatory Care for HIV Infection in the United States	75	93.RD	Agmt# 06/11/21//75D30120C08752	80,755	—
COVID-19: Presymptomatic Early Warning System for COVID-19 Infection		93.RD	COVID-19: AWD-001493-G1//75D30120C09558	84,590	—
Food and Drug Administration:					
Final Qualification Package for DDT COA #000079: PROMIS Physical Function in Oncology		93.103	1U01FD006875-01	47,604	—
Development of a context of use and PROMIS Physical Function outcome assessment for patients with sarcopenia		93.103	1U01FD006887-01	39,056	—
Northwestern University Clinical Outcome Assessment Team (NUCOAT)		93.103	5UG3FD006794-02	744,126	94,458
Qualification Plan Preparation to Support DDT COA #000069 PROMIS Fatigue Short Form for Individuals with Multiple Sclerosis	51	93.103	agmt 2/28/20//1U01FD006876-01,	4,597	—
Qualification Plan Preparation to Support DDT COA #000123 PROMIS Physical Function Short Form for Individuals with Multiple Sclerosis: Development of a Qualification Plan for the PROMIS Short Form v2.1--Physical Function-Multiple Sclerosis 15a (DDT COA #	51	93.103	DDT COA #000123-01//1 U01 FD006999-01	129,315	—
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	61	93.103	No EL-1007-01-01//R01FD005396	1,824	—
Preparing a clinical outcomes assessment set for nephrotic syndrome [Prepare-NS]	257	93.103	SUBK00014282 // 1UG3FD007308-01	18,557	—
				<u>985,079</u>	<u>94,458</u>
Psychometric Evaluation of a New CABP PRO Instrument	91	93.RD	ICON Signed 03/26/18	13,760	—
Health Resources and Services Administration:					
Awareness and Access to Care for Children and Youth with Epilepsy	12	93.110	901579 – NU/6 H98MC332370101	6,505	—
Hemophilia Treatment Center (HRSA Award)	79	93.110	Agmt signed 07/17/20 // H30MC24052	28,065	—
				<u>34,570</u>	<u>—</u>
Implementation of the Live Donor Champion Program	112	93.134	2003709195 Mod 3//4R39OT31103-01	13,551	—
Ryan White HIV/AIDS Program Implementation Program for HIV Clinical Quality Improvement	82	93.145	5740-04/6U28HA376440103	9,002	—
Affordable Care Act Teaching Health Center (THC) Graduate Medical Education (GME) Payment Program	93.530		6T91HP21542-08-03	343,835	339,670
Affordable Care Act Teaching Health Center (THC) Graduate Medical Education (GME) Payment Program	93.530		6T91HP21542-09-04	2,548,473	727,283
				<u>2,892,308</u>	<u>1,066,953</u>
A Pilot Study of a Sequential Multiple Assignment Randomized Trial Aimed at Reducing Depressive Symptoms among Home Visiting Clients	112	93.870	2004733906/UD5MC30792	21,748	—
Academic Units for Primary Care Training and Enhancement		93.884	6UH1HP29963-05-01	731,020	146,792
Geriatrics Workforce Enhancement Program: Collaborative Action Team training for Community Health — Older adult Network (CATCH-ON)	183	93.969	15012901-Sub13/5 U1QHP28715-05-00	1,656	—
National Institutes of Health:					
Exploring Cardiovascular and Other Health Associations of Electronic Cigarette Use in US Persons of Hispanic Heritage. The Hispanic Community Health Study / Study of Latinos (HCHS/SOL)		93.077	5R03HL144902-02	9,017	—
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	46	93.113	1(GG013015-01)//5R01ES027845-04	22,093	—
Environmental Obesogens and Weight Change in the POUNDS LOST Trial	80	93.113	111308-511394//5R01ES022981-06	20,266	—
Particulate Air Pollutants and Autism Risk: Exposure Characteristics, Indicators of Susceptibility, and Mechanistic Pathways	114	93.113	1R01ES029963	17,513	—
Investigating Environmental Risk Factors for Breast Cancer Using Adductomics		93.113	1R01ES031809-01A1	163,012	—
PCOS and androgen-related disease modeling and drug testing in Multi-organ Integrated Microfluidic Reproductive Platform		93.113	3UH3ES029073-05S1	875,191	240,201
Mechanisms of Cadmium Induced Dysglycemia and Type 2 Diabetes Mellitus		93.113	5R01ES027011-05	351,230	—
Environmental Arsenic in the Subtype Specification of Breast Cancer		93.113	5R01ES028149-04	339,551	—
Discovery of conserved molecular mechanisms underlying population-wide variation in toxin responses		93.113	5R01ES029830-03	782,930	317,024
Role of alveolar macrophages in particulate matter-induced cardiopulmonary disease	234	93.113	AWD058473-03-PR//5R01ES015024-13	42,244	—
				<u>2,614,030</u>	<u>557,225</u>
Enamel atlas: systems-level amelogenesis tools at multiple scales	232	93.121	11549sc/5UG3DE028872-02	186,166	—
Impacting The Oral HPV Continuum: Prevention, Screening, and Early Detection	112	93.121	2003348761//5R3SDE026631-04	(1,388)	—
Identifying Sox family transcription factor partners and targets essential for neural crest formation		93.121	5F32DE029113-03	67,173	—
The role of amorphous intergranular phases in the development of caries lesions		93.121	5R01DE025702-05 REVISED	21,892	—
Multi-Tissue Craniofacial Engineering using 3D-BMP9-Notch-Synergized Graphene Citrate Composite Scaffolds	234	93.121	AWD101989 (SUB0000493)/1R01DE030480-01	6,179	—
Enamel matrix 3D organization and maturation stage ion flow	68	93.121	NWU025865-2865//5R01DE025865-04	(535)	—
				<u>279,487</u>	<u>—</u>
Creating Comprehensive Maps of Worm and Fly Transcription Factor Binding Site	283	93.172	11524//5U41HG007355-08	581,833	—
Computational methods to identify neo-TADs and enhancer-hijacking in rearranged genomes		93.172	1R01HG011207-01A1	4,762	—
Use of a Machine Learning Approach to Impute Gene Expression in African Americans		93.172	1R21HG011695-01	9,710	—
Genomic Medicine at Northwestern: Discovery and Implementation		93.172	3U01HG00873-04S1	(1,169)	—
NORTH CAROLINA CLINICAL GENOMIC EVALUATION BY NEXT-GEN EXOME SEQUENCING 2	263	93.172	5117472//5U01HG006487-08	177,835	—
Visualization, modeling and validation of chromatin interaction data		93.172	5R01HG009906-05 REVISED	386,111	—
Maximizing Quantitative Structural Information from High-Throughput RNA Structure Probing		93.172	5R03HG011113-02	12,794	—
Northwestern Genomic Risk Assessment and Management Program		93.172	5U01HG011169-02	823,931	—
COVID-19: Northwestern Genomic Risk Assessment and Management Program		93.172	COVID-19: 5U01HG011169-02	79,568	—
Production Center for Mapping Regulatory Regions of the Human Genome	199	93.172	62285506-124217//5U01HG009442-03	371,845	—
Exome Sequencing in Diverse Populations in Colorado & Oregon	114	93.172	OQS030229-NWU04054-03//U01HG007292-08	68,145	—
Mapping the 3D architecture of native human replisomes	67	93.172	R02196//5R01HG010658-02	98,702	—
				<u>2,614,067</u>	<u>—</u>

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards
Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Molecular mechanisms of target-specific synapse formation	281	93.242	10059251-01//2R56MH105426-06	\$ 23,326	—
Molecular mechanisms of target-specific synapse formation	281	93.242	10057900-01//1R01MH125943-01	14,782	—
Three Generations at High and Low Risk for Depression Followed Longitudinally	178	93.242	144275/SR01MH036197-32	9,928	—
Social Processing Deficits in Remitted Adolescent Depression	178	93.242	147186/SR01MH119771-02	334,957	—
Transdiagnostic brain-behavior profiling to enhance cognitive behavioral therapy response	245	93.242	17565-02/SR01MH112705-04	9,451	—
Linking VA and non-VA data to study the risk of suicide in chronic pain patients	110	93.242	192372//1R01MH1219071	133,472	—
How Early Life Experiences Create Individual Variation in Dopamine Circuit Architecture: Understanding Risk for Psychiatric Disease	93.242	93.242	1DP2MH122401-01	707,131	—
60056064 NRSA F30 for Radhika Rawat: Neurogenesis, BMP signaling, and mechanisms of Ketamine's antidepressant effects	93.242	93.242	1F30MH124269-01A1 REVISED	24,461	—
The Neural Mechanisms of Motor Dysfunction in Clinical High-Risk Youth.	93.242	93.242	1F31MH123121-01A1 REVISED	18,595	—
Adaptive Messaging to Support Depression Self-Management	93.242	93.242	1K01MH125172-01	10,141	—
The role of cortex in sleep-related memory reactivation in humans	93.242	93.242	1K99MH122663-01A1	53,558	—
Structural Connectivity of Positive and Negative Emotions: Secondary Analysis of the Human Connectome Project through the RDoC Lens	93.242	93.242	1R03MH119529-01A1 REVISED	83,682	—
Mouse models for live-cell imaging of endogenous Evf2 lncRNA	93.242	93.242	1R03MH126145-01	2,132	—
Northwestern University Mental Health, Earlier: Transdiagnostic, Transdisciplinary, Translational Training Program in Neurodevelopmental Mechanisms of Psychopathology	93.242	93.242	1T32MH126369-01	10,208	—
A Crowd-Powered Technological Treatment for Depression and Anxiety	227	93.242	2019-3710//1R34MH113616-01A1	4,879	—
Small GTPase signaling in dendrites and spines	93.242	93.242	2R56MH071316-16	620,491	—
Virtual Reality Job Interview Training to Enhance Supported Employment for Adults with SMI	257	93.242	3004704106//R01MH110524 AMD No. 2	41,255	—
Cortico-hippocampal mechanisms of context memory	2	93.242	311838 & 311839 // 7R01MH108837-06 & 7R01MH078064-	154,019	—
F32 for Shruti Dave in support of: Optimizing noninvasive modulation of prediction and episodic memory networks via cerebellar stimulation	93.242	93.242	3F32MH118718-03S1	61,752	—
Expanding College Student Mental Health with Stress Management Mobile Technologies	93.242	93.242	3K08MH112878-04S1	132,860	—
Generating an Earlier Science of When to Worry: A Neurodevelopmental, Translational Approach to Characterizing Irritability Patterns Beginning in Infancy	93.242	93.242	3R01MH107652-05S1	467,865	20,925
Effectiveness of a Targeted Brief Intervention for Incentive Suicide Attempt Survivors	269	93.242	417659-GUJR FAO GR511006//R01 MH119264-03	19,704	—
Modeling a Neural Circuit for Flexible Control of Incentive Behaviors	93.242	93.242	4R00MH117264-03	114,559	—
Mechanisms Underlying Large-Scale Coordination of Cortical Activity during Perceptual Decisions	93.242	93.242	4R00MH120047-03	212,328	—
Simulated Clinician Assessment for Cognitive Behavioral Therapy Skills	191	93.242	5065-NU//SR01MH112625-02	48,119	—
Hippocampal Mechanisms of Stress-Induced Generalization of Negative Memories	93.242	93.242	5F30MH122130-02	34,673	—
Cumulative environmental risk exposure in youth at clinical high-risk for psychosis	93.242	93.242	5F31MH119776-03	39,036	—
Neurocorrelates of alterations in facial expressivity in youth at clinical high-risk for psychosis	93.242	93.242	5F31MH121018-02 REVISED	41,237	—
NRSA Postdoc Fellowship for K. Blum in support of: Determining the role of muscle afferent signals in cortical proprioceptive representation	93.242	93.242	5F32MH120893-03	65,328	—
Technology-Enabled Prevention Service for At-Risk Youth	93.242	93.242	5K01MH121854-02	162,168	—
Technology Enabled Services for Coordinated Care of Depression in Healthcare Settings	93.242	93.242	5P50MH119029-02	732,951	36,345
Contributions of Parallel Nigrostriatal Dopamine Circuits to Reward Learning and Habit Formation	93.242	93.242	5R00MH109569-05	(3,668)	—
CAUSAL MECHANISMS OF DISTRIBUTED BRAIN NETWORK FUNCTION DURING EPISODIC MEMORY RETRIEVAL	93.242	93.242	5R00MH117226-04 REVISED	231,994	—
Small GTPase signaling in spines	93.242	93.242	5R01MH071316-15	(491)	—
Mechanisms of Stress-Enhanced Aversive Conditioning	93.242	93.242	5R01MH078064-14 REVISED	(5,310)	—
A Family Genetic Study of Autism and Fragile X Syndrome	93.242	93.242	5R01MH091131-10	766,017	123,442
Synaptic and dendritic dysfunction in psychiatric disorders	93.242	93.242	5R01MH092716-10	550,103	83,398
The role of glutamate receptors in compulsive and perseverative behavior	93.242	93.242	5R01MH099114-09	558,488	—
Behavioral relevance of active dendritic mechanisms of integration and plasticity	93.242	93.242	5R01MH101297-08	536,643	—
Noninvasive Manipulation of Hippocampal-Cortical Brain Networks and Memory	93.242	93.242	5R01MH106512-05	(4,067)	—
Postsynaptic roles of ankyrin	93.242	93.242	5R01MH107182-05	(192)	—
Cortico-Hippocampal Mechanisms of Context Memory	93.242	93.242	5R01MH108837-05	(5,634)	—
Age-Related Histone Modification Effect on Antipsychotic Action	93.242	93.242	5R01MH109466-05	268,040	—
Molecular, anatomic, and functional characterization of midbrain dopamine neuron subtypes	93.242	93.242	5R01MH110556-05	827,783	—
LiveWell: A Mobile Intervention for Bipolar Disorder	93.242	93.242	5R01MH110626-04	125,381	5,071
LifeSense: Transforming Behavioral Assessment of Depression Using Personal Sensing Technology	93.242	93.242	5R01MH111610-04	892,029	132,335
Optimized dosing of repetitive transcranial magnetic stimulation for enhancement of hippocampal-cortical networks	93.242	93.242	5R01MH111790-04	(879)	—
2/3 Community psychosis risk screening: An instrument development study	93.242	93.242	5R01MH112545-05	235,815	—
New Tools to Study Neurosteroid Estrogens	93.242	93.242	5R01MH113189-05	428,462	—
BMP Signaling and Neurogenesis in Major Depressive Order	93.242	93.242	5R01MH114923-03	571,771	—
Development of Sub 100 nm Resolution X-ray Nanotomography of Centimeter-Sized Tissues	93.242	93.242	5R01MH115265-04	297,157	—
Neurohypophysial regulation of midbrain dopamine systems.	93.242	93.242	5R01MH117111-04	494,820	—
Synthesis of Trials to Prevent Suicide Risk Behavior in Sexual and Gender Minorities	93.242	93.242	5R01MH117598-04	516,805	238,473
A pragmatic trial of two strategies for implementing an effective eHealth HIV prevention program	93.242	93.242	5R01MH118213-04	1,489,464	318,776
Sources and functional consequences of individual differences in human functional brain networks related to controlled behavior	93.242	93.242	5R01MH118370-03	592,374	—
An examination of psychomotor disturbance in current and remitted MDD: An RDoC Study	93.242	93.242	5R01MH118741-03	626,760	138,128
2/5 CAPER Computerized assessment of psychosis risk	93.242	93.242	5R01MH120088-02	314,252	—
Optimizing prediction of preschool psychopathology from brain: behavior markers of emotion dysregulation from birth: A computational, developmental cognitive neuroscience approach	93.242	93.242	5R01MH121877-02	783,417	—
A Stepped Wedge Hybrid Type II Trial of an Online Positive Affect Intervention: Blending Implementation and Effectiveness to Improve HIV Continuum Outcomes in Ryan White Clinics in Chicago	93.242	93.242	5R01MH124632-02 REVISED	381,105	51,816
Title: Neurobiology of seizure generalization during electroconvulsive therapy for major depression	93.242	93.242	5R03MH121769-02 REVISED	73,244	—
Neural Habituation in Ultra High-Risk Youth	93.242	93.242	5R21MH110374-02 REVISED	5,515	223
High-Risk Psychosis Youth and Caregivers: Emotion in Interaction	93.242	93.242	5R21MH115231-02	3,023	—

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Year ended August 31, 2021

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Exploring Melipaladines as New Serotonin Receptor Antagonists		93.242	5R21MH115301-02	\$ 75,429	—
Using Speech Acoustics to Reveal Motor Disruptions in Psychosis		93.242	5R21MH119677-02	89,194	8,985
Post-Graduate Research Training Aligned with the NIMH Strategic Plan		93.242	5R25MH115855-03	72,702	—
Exercise and markers of medial temporal health in youth at-risk for psychosis		93.242	5R33MH103231-05	199	—
Training Program in Neurobiology of Information Storage		93.242	5T32MH067564-19	183,203	—
Multidisciplinary Training Program in Digital Mental Health		93.242	5T32MH115882-04	243,333	—
Optical Dissection of the Neural Circuitry Controlling Sensorimotor Gating		93.242	7K01MH113132-04	164,387	—
Mechanisms regulating lncRNA short and long range signaling		93.242	7R01MH111267-05	151,889	—
Academic-Community EPINET (AC-EPINET): Mitigating Barriers to Care	97	93.242	8821-NU/1R01MH120588-01A1	8,658	—
DART2.0: comprehensive cell type-specific behavioral neuropharmacology	58	93.242	A03-0696/1RF1MH117055	387,150	—
Developing Insulin-like growth factor binding protein 2 (IGFBP2) peptide fragment-based therapeutics to treat functional and behavioral deficits in Ph	4	93.242	Agmt 7/28/21 // 1R41MH121140-01	93,096	—
Synaptic Protein Networks, Genetic Risk, and Spine Loss in Schizophrenia	268	93.242	AWD00000863 (133093-1)/5R01MH118497-03	11,159	—
Systematic Functional Interpretation of Regulatory Variants in Schizophrenia	153	93.242	EH15-150-S1/5R01MH106575-05	37,587	—
Biopsychosocial mechanisms underlying regularizing psychopathology in a prospective, population-based cohort of sexual minority young adults	299	93.242	GR105700 (CON-80001711)/5R01MH116245-03	103,881	—
ProNET: Psychosis-Risk Outcomes Network	299	93.242	GR110982 (CON-80002758)/1 U01 MH 124639-01	67,552	—
Integrating a suite of mental health apps for depression in a healthcare setting	1	93.242	NU_Mohr/0028727/2R44MH114725-03	76,954	—
Altered auditory networks in HIV-induced central nervous system dysfunction	53	93.242	R1072/5R01NS108809-03	70,328	—
Prodromal Inventory for Negative Symptoms (PINS): A Development and Validation Study	242	93.242	SUB00001927/5R01MH116039-03	201,494	—
Mapping Dimensional Aspects of Biobehavioral Threat Reactivity in Young, Violence-Exposed Children: Linkages to Fear, Distress, and Disruptive Behavior	239	93.242	UCHC7-138040688-A2/1U01MH113390-01A1	15,920	—
Targeting negative affect through mindfulness training in youth at risk for internalizing problems	287	93.242	UNIV61518/5R61MH119270-02	226,870	—
The NewTics Study: A novel approach to pathophysiology and cause of tic disorders	292	93.242	WU-17-444-MOD-3/5R01MH104030-04	16,381	—
Early Life Adversity, Biological Embedding, and Risk for Developmental Precursors of Mental Disorders	292	93.242	WU-19-11-MOD-4/5R01MH113863-04	147,321	—
Dyadic Synchrony as a Mechanism of Parent-Child Interaction Therapy (PCIT): A Neuroscience-Based Approach	292	93.242	WU-20-123 // 7R21MH115088-02	(30)	—
From Irritability to Impairment: How Neurodevelopment of Executive Function and Parent-Child Neural Synchrony Influence the Transition from Normal to Abnormal Functioning	292	93.242	WU-20-280-MOD-1/7R01MH107540-05	15,770	—
				18,775,303	1,157,917
Investigating the Influence of Alcohol Use and Partner Risk Heuristics on HIV Risk Behavior among Young Men Who Have Sex with Men		93.273	2F32AA028194-02 REVISED	37,436	—
COVID-19: Role of Alcohol Disparities in HIV Risk among Sexual Minority Youth		93.273	COVID-19: 5R01AA024409-05S1	436,678	185,841
Efficacy of Couples-Based HIV Prevention in Vulnerable Young Men		93.273	5R01AA024065-05	282,917	20,822
Role of Alcohol Disparities in HIV Risk among Sexual Minority Youth		93.273	5R01AA024409-05	220,954	—
				957,985	206,663
IND-Enabling Pre-Clinical Studies to Accelerate the Clinical Development of a Humanized Anti-Cocaine Monoclonal Antibody	235	93.279	012490-00003/5U01DA050330-02	10,126	—
The Neuroproteomics and Neurometabolomics Center on Cell-Cell Signaling	246	93.279	096739-17681/2P30DA018310-16 Amd. 2	205,939	—
Great Lakes Node of the Drug Abuse Clinical Trials Network	183	93.279	18112701-Sub05/UG1DA049467-02	722	—
Collaborating Consortium of Cohorts Producing NIDA Opportunities (C3PNO)	229	93.279	1935 G YA461-04/5U24DA044554-05	90,442	—
COVID-19: Collaborating Consortium of Cohorts Producing NIDA Opportunities (C3PNO)	229	93.279	COVID-19: 1935 G YA102/3U24DA044554-04S1	30,611	—
A New Approach to Integrating Primary and Secondary HIV Prevention in Young Male Couples		93.279	1DP2DA042171-01	397,703	—
Elucidating Mechanisms of Pregnancy's Protective Effect on Drug Abuse Using Integrated Data Analysis		93.279	1R01DA050700-01A1	140,312	19,215
CRCNS: NeuroBridge: Connecting Big Data for Reproducible Clinical Neuroscience		93.279	1R01DA053028-01 REVISED	9,859	—
2/2 Optimizing access, engagement and assessment to elucidate prenatal influences on neurodevelopment: The Brains Begin Before Birth (B4) Midwest Consortium		93.279	1R34DA050266-01 REVISED	244,070	79,148
COVID-19: 2/2 Optimizing access, engagement and assessment to elucidate prenatal influences on neurodevelopment: The Brains Begin Before Birth (B4) Midwest Consortium		93.279	COVID-19: 1R34DA050266-01 REVISED	46,364	—
Reduced complexity mapping of oxytocine self-administration and stress responsiveness in rats	273	93.279	21-3867-NWU AMD 1//5R01DA048017-02	107,121	—
Wake Forest NCORP Research Base	291	93.279	360-101740-442411//3UG1CA189824-07S1	71,553	—
Interferon-modulated vaccines against HIV		93.279	3DP2DA051912-01S1	575,912	—
Multilevel Influences on HIV and Substance use in a YMSM Cohort		93.279	3U01DA036939-05S2	(2,661)	—
FP: Wake Forest NCORP Research Base	291	93.279	487-101740-442411//3UG1CA189824-07S1	3,315	—
Contribution of the Virome to HIV/AIDS pathogenesis		93.279	5DP1DA049493-04	617,080	49,911
The design, synthesis, and evaluation of natural product-inspired small molecules targeting the 5-HT2C receptor as novel therapeutics for opioid use disorder		93.279	5F30DA050445-02	46,198	—
Understanding Substance Use Risk among Sexual Minority Women		93.279	5K01DA046716-03	171,117	—
A Multilevel Network Model of Drug Use and HIV Racial Disparities in Men		93.279	5K08DA037825-05	51,934	—
Understanding and reducing HIV risk behavior and substance use among self-identified bisexual adolescent men		93.279	5K08DA045575-03	(925)	—
Cognitive-Affective Substrates of Smoking: Targets for Maternal Behavior Change		93.279	5K23DA037913-05	103,173	—
Center for Prevention Implementation Methodology for Drug Use and HIV (Ce-PIM)		93.279	5P30DA027828-10	757,100	171,585
COVID-19: Center for Prevention Implementation Methodology for Drug Use and HIV (Ce-PIM)		93.279	COVID-19: 5P30DA027828-10	99,642	38,213
Center for chronic pain and drug abuse		93.279	5P50DA044121-04	1,439,933	81,018
New Inactivators of GABA Aminotransferase for Addiction and Epilepsy		93.279	5R01DA030604-10	471,775	97,482
Drug Abuse and Related Health Disparities: An Intergenerational Longitudinal Study of Offspring of Delinquent Youth (Northwestern Offspring Project)		93.279	5R01DA024082-04	470,127	—
netCanvas: Development, Hardening, and Dissemination of a Software Suite for the Collection of Complex Network and Contextual Data in HIV and Drug Research		93.279	5R01DA042711-05	210,447	19,914
System-Level Implementation to Reduce Excess Opioid Prescribing in Surgery		93.279	5R34DA044752-03	21,734	3,750
Developing and Testing a Social Network Data Capture Tool to Improve Partner Services		93.279	5R34DA052216-02	179,375	—
Multilevel Influences on HIV and Substance Use in a YMSM cohort		93.279	5U01DA036939-07	1,862,067	—
COVID-19: Multilevel Influences on HIV and Substance Use in a YMSM cohort		93.279	COVID-19: 5U01DA036939-07	120,200	—
Assessing the impact of opioid prescription duration limits		93.279	7R21DA050047-02	11,869	—
Examining the Quality of Opioid Use Disorder Treatment in a Medicaid Research Network	268	93.279	AWD00000068 (132578-11)/5R01DA048029-03	6,260	—
JCOIN 024	234	93.279	AWD100228 (SUB00000487)/1U2CDA050098-01 REVISED	34,118	—
The National Drug Abuse Clinical Trials Network: New England Consortium Node CTN-0099	299	93.279	GR109729 (CON-80002392)/3 UG1 DA 015831-19S1	194,490	—
Optimizing PrEP Adherence in Sexual Minority Men who Use Stimulants	256	93.279	POH&PC-001603-0500000283/5R01DA051848-02	56,196	—
Sensitivity to Unpredictable Threat and Smoking Lapse Behavior	243	93.279	R-19-0063/R21DA045285	16,264	—
Evaluating the Effectiveness of an eHealth EBI for Latino Youth in Primary Care	256	93.279	SPC-000247/5R01DA040756-05	12,229	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Supporting Treatment Adherence for Resilience and Thriving (START): A mHealth intervention to improve ART adherence for HIV-positive stimulant-using Neuroscience, Immunology, Social Adversity and the Roots of Addictive Behaviors: Toward a New Framework for Drug Use Etiology and Prevention	256	93.279	SPC-001373/FR01DA049843-02	\$ 39,250	—
Development of an implantable closed-loop system for delivery of naloxone for the prevention of opioid-related overdose deaths	242	93.279	SUB000024121P50DA051361-01	338,366	—
	292	93.279	WU-20-178//1UG3DA050303-01	1,706,476	—
				10,787,883	560,236
COVID-19: Rapid Diagnostics of SARS-CoV-2/COVID-19 of Asymptomatic People Wishing to Return to Work or School	45	93.286	COVID-19: 1400-SUB/3U54HL119810-07S1	282,995	—
Enabling Technology for a Biomimetic Artificial Retinal Chemical Synapse Chip	245	93.286	17495/5R21EB028069-02	35,385	—
An Enzyme Self-Amplification System for Ultrasensitive Detection of Biomarkers at the Point of Care		93.286	1F32EB031608-01	6,488	—
Reconfigurable MRI technology for safe and high-resolution imaging of deep brain stimulation at 3T		93.286	1R01EB030324-01A1	51,130	—
BehaviorSight: Privacy enhancing wearable system to detect health risk behaviors in real-time.		93.286	1R21EB030305-01	43,165	—
Next-Generation Cardiovascular MRI powered by Artificial Intelligence		93.286	1R21EB030806-01A1	40,217	—
COVID-19: The Center for Innovation in Point-of-Care Technologies for HIV/AIDS at Northwestern University (C-THAN) RADx Supplemental Request		93.286	COVID-19: 3U54EB027049-02S1 REVISED	3,718,915	1,503,618
Center of Excellence for Mobile Sensor Data-to-Knowledge (MD2K)	255	93.286	5-40708/5U54EB020404-05	5,396	—
Developing a virtual placenta biobank		93.286	5K08EB030120-02	147,611	—
Patient-adjustable MRI technology for high-resolution imaging of deep brain stimulation		93.286	5R00EB021320-04	172,224	—
Image-Guided Transcatheter Delivery of Natural Killer Cell Therapy Augmented with IFN-Gamma Eluting Microspheres		93.286	5R01EB026207-04	328,709	—
Design-driven engineering of robust mammalian sense-and-respond functions		93.286	5R01EB026510-03	265,667	—
Developing a SMART scaffold for bladder augmentation		93.286	5R01EB026572-03	737,724	264,787
Safety assessment of MRI in patients with retained cardiac leads		93.286	5R03EB025344-02	33,051	—
Enabling Non-Invasive Cell Tracking for Patient-Specific Vascular Endothelial Cells		93.286	5R03EB027998-02	57,209	—
Assessing RF heating of deep brain stimulation implants in high-field open-bore MRI systems		93.286	5R03EB029587-02	91,110	—
Rapid Pediatric Cardiovascular MRI without Contrast Agent or Anesthesia		93.286	5R21EB024315-02 REVISED	29,853	18,004
Interdisciplinary Graduate Education in Movement and Rehabilitation Sciences		93.286	5T32EB009406-10	158,916	—
Graduate Training Program for Magnetic Resonance Imaging		93.286	5T32EB025766-03	165,242	—
The Center for Innovation in Point-of-Care Technologies for HIV/AIDS at Northwestern University (C-THAN)		93.286	5U54EB027049-04	924,810	391,381
Human and Machine Learning for Customized Control of Assistive Robots	175	93.286	71186 cc 9130115R01EB024058-02	11,034	—
Improved Whole-Brain Spectroscopic MRI for Radiation Treatment Planning (Shim)	63	93.286	A278172//5U01EB0128145-03	24,248	—
COVID-19: RADx Clinical Studies Core	254	93.286	COVID-19: OSPWPM33765-NW//3U54HL143541-02S2	892,418	—
Bioresorbable RF Coils for Post-Surgical Monitoring by MRI	287	93.286	UNIV61946/5R21EB027881-02	113,433	—
				8,436,950	2,177,790
Genomic Analysis of Enhanced Response to Heart Failure Therapy in African Americans (GRAHF)	268	93.307	0041119(124864-3)/5R01MD009118-05 REVISED	2,370	—
2021 National LGBTQ+ Health Conference: Bridging Research and Practice		93.307	1R13BD015672-01	2,019	—
Racial disparities in police use of deadly force as a cause of racial disparities in sleep health across the life course	124	93.307	236743//5U01MD014023-02	9,586	—
ELLAS: Environment, Leiomyomas, Latinas and Adiposity Study	257	93.307	3004650350/5R01MD011570-06	22,852	—
Health disparity in pharmacogenomics: African American SNPs and drug metabolism		93.307	5R01MD009217-06	(46)	—
Reducing Assessment Barriers for Patients with Low Literacy		93.307	5R01MD010440-05	723,546	258,648
Understanding socioeconomic disparities in perinatal risk: The role of epigenetic and transcriptional regulation in the placenta		93.307	5R01MD011749-05	447,127	72,036
Effectiveness and Implementation of a Mindfulness Intervention for Depressive Symptoms Among Low-income, Racial/Ethnic Minority Adults in a Federally Qualified Health Center		93.307	5R01MD012236-04	707,691	—
Characterizing PrEP Adherence and Patterns of Use in a Diverse Community Cohort of Young Men		93.307	5R01MD013609-04	448,227	—
Collateral Consequences of Parents Incarcerations for Their Adolescent Children: A Prospective Longitudinal Study		93.307	5R01MD014020-03	504,455	—
COVID-19: Collateral Consequences of Parents Incarcerations for Their Adolescent Children: A Prospective Longitudinal Study		93.307	COVID-19: 5R01MD014020-03	45,027	—
The OPTIMIZE Study: Optimizing Patient Navigation for Perinatal Care		93.307	5R01MD014068-03 REVISED	866,906	437,671
Simulation Modeling to Understand and Address HIV Disparities in Racial, Ethnic, and Sexual Minority Populations		93.307	5R01MD014703-02 REVISED	312,372	37,979
Understanding the Disparities in Postpartum Hemorrhage and Hemorrhage Outcomes		93.307	5R03MD011628-02	4,521	—
African-American Social Support Effectiveness Treatment: Partners Alleviating Perinatal Depression (ASSET-PPD)		93.307	5R21MD014798-02	146,324	18,753
Northwestern University Minority Health and Health Disparities Research Training (NU-MHRT)		93.307	5T37MD012428-03 REVISED	314,818	—
A Pragmatic Trial of An Adaptive eHealth HIV Prevention Program for Diverse Adolescent MSM		93.307	5U01MD011281-05	1,243,058	331,389
African American Cardiovascular pharmacogenetic CONSorTium (ACCOuNT): discovery and translation		93.307	5U54MD010723-05	2,468,652	1,806,571
Unraveling Racial Disparities in Portal Hypertension: A Clinical, Spectroscopic and SNP Approach	18	93.307	7000001469//R21MD013631-02	9,759	—
Using epigenomic subtyping to understand the racial differences in lymphoma	234	93.307	FP064397//R21MD011439	32,122	—
VietAmerican Health Pilot Study	264	93.307	RF00219-2021-0066//R21MD013542-01A1	11,103	—
				8,322,489	2,963,047
Impact of Culturally Aware Mentoring Interventions on Research Mentors and Graduate Training Programs	284	93.310	000000238//5U01GM132372-02	39,308	—
COVID-19: Clinical and Translational Science Award – Trans-NIH Research Support (Sub award)	131	93.310	COVID-19: 04/13/21 // 3UL1TR001436-06S1	110,211	—
Enhanced Grant Writing Coaching Groups for a Diverse Biomedical Workforce	281	93.310	10050224-03//5U01GM132366-02	37,656	—
Identifying Mechanisms Governing T Cell Diversity		93.310	1DP2A136599-01	514,760	—
Cell-free DNA sequencing approaches to define the genetic etiology of unexplained epilepsy		93.310	1DP2NS111506-01 REVISED	576,998	—
Data Center for Acute to Chronic Pain Biosignatures	112	93.310	2004904875//5U54DA049110-02	58,484	—
Genetic mapping of visual circuits		93.310	3DP2EY027983-01 S1	667,829	—
Mechanisms of Genome Organization in Brain Development and Behavior		93.310	5U01DA053691-02	488,387	—
Renewable and Specific Affinity Reagents for Mapping Proteoforms in Human Tissues		93.310	5UH3CA246635-03	542,403	122,556
The 4D nucleome of muscle regeneration in ischemia-induced tissue damage and repair	58	93.310	A034155-01//U01-HL156064-01	70,527	—
Building Up	268	93.310	AWD00001053 (134698-2) // 5U01GM132133-02	29,225	—
COVID-19: Community network driven COVID-19 testing among most vulnerable populations in the Central United States	234	93.310	COVID-19: AWO101615 (SUB0000363)/3UG1DA050066-02S1	257,217	—
COVID-19: SCENTinel: A Rapid Smell Test for COVID-19 Surveillance	138	93.310	COVID-19: NIH073A01DALTO//U01DC019578-01	56,616	—
A streamlined platform for phosphoproteome mapping of human tissues	163	93.310	No. 54671//1UG3CA256967-01	32,121	—
The role of nucleoli in human genome organization in normal and disease states	254	93.310	OSP33101-00//5U01CA260699-02	200,060	—
Center for 3D Structure and Physics of the Genome	254	93.310	OSP33133-04//1UM1HG011536-01	107,497	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

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Center for 3D Structure and Physics of the Genome	254	93.310	OSP33133-05/1UM1HG011538-01	\$ 76,408	—
Genetics and quantum chemistry as tools for unknown metabolite identification	242	93.310	SUB00001824/UZCES030167	64,085	—
				3,929,792	122,556
A National Center for Digital Health Informatics Innovation.	162	93.350	1011902_NWU/5U24TR002306-04	3,495	—
COVID-19: A National Center for Digital Health Informatics Innovation.	162	93.350	COVID-19: 1011902_NWU/5U24TR002306-04	173,995	—
COVID-19: N3C Supplement CD2H National Covid Cohort Collaborative	162	93.350	COVID-19: 1011902-001_NWU/3U24TR002306-04S3	17,673	—
COVID-19: A National Center for Digital Health Informatics Innovation: Supplement: CD2H – National COVID Cohort Collaborative (N3C)	162	93.350	COVID-19: 1011902-003_NORTHWESTERN/3U24TR002306-03	82,763	—
Gut microbiome and steroid hormones	183	93.350	19030404-Sub01//R21TR003105	6,504	—
Northwestern University Clinical and Translational Science Institute		93.350	3UL1TR001422-07	6,325,858	442,301
COVID-19: Northwestern University Clinical and Translational Science Institute		93.350	COVID-19: 3UL1TR001422-07	480,457	—
Northwestern University Clinical and Translational Science Institute (NUCATS)		93.350	5KL2TR001424-07	888,191	171,663
Northwestern University Clinical and Translational Science Institute (NUCATS)		93.350	5TL1TR001423-07	542,884	137,400
Improving Patient Reported Outcome Data for Research through Seamless Integration of the PROMIS Toolkit into EHR Workflows		93.350	5U01TR001806-04	602,663	402,689
COVID-19: Outcomes Following COVID-19 Infection among Hospitalized Infants	58	93.350	COVID-19: A03-3768/3U24TR001608-05S2	7,785	—
University of Pittsburgh Clinical and Translational Science Institute (CTSI) ACT Administrative Supplement	268	93.350	AWD0000243 (134445-29	30,572	—
COVID-19: Epidemiological and clinical characterization of genomic variation in SARS-CoV-2	234	93.350	COVID-19: AWD065282 (SUB00000309) // 3UL1TR002389-04S2	398,491	—
				9,561,311	1,154,053
Analyzing and Interpreting Clinician and Patient Adverse Event Data to Better Understand Tolerability in ECOG-ACRIN Studies	52	93.353	1204003/5U01CA233169-03	98,109	—
Structure and Function of the SS18-SSX-containing mSWI/SNF (BAF) Complex Unveiling New Paths Toward Therapeutic Targeting	52	93.353	1205703/1U54CA231638-01 REV	300,737	—
Structure and Function of the SS18-SSX-containing mSWI/SNF (BAF) Complex Unveiling New Paths Toward Therapeutic Targeting	52	93.353	1205704/1U54CA231638-01REV	22,258	—
Structure and Function of the SS18-SSX-containing mSWI/SNF (BAF) Complex Unveiling New Paths Toward Therapeutic Targeting	52	93.353	1U54CA231638-01//1205702	103,209	—
Implementation and Evaluation of an Expanded Bilingual Electronic Symptom Management Program across a Multi-site, Fully integrated Comprehensive Cancer Center		93.353	3UL1CA233035-01S1	743,709	41,972
Using Information Technology to Improve Outcomes for Children Living with Cancer		93.353	5U01CA246612-03	411,447	85,834
Minimally Invasive Colorectal Cancer Risk Stratification with Nanocytology (Institution change)	18	93.353	7R33CA225233-02/Backman AGMT 9/14/21	96,812	—
Accelerating Colorectal Cancer Screening and Follow-up through Implementation Science in Chicago (ACCSIS-Chicago)	234	93.353	AWD069107-01-PR (SUB00000212)/5UH3CA233229-03	41,879	—
				1,611,133	127,806
A Community-Developed, Culturally Based PC Consult Program Delivered via Tele-health for African American and White Rural Southern Elders with Life Limiting Illness	222	93.361	000521619-SC001//5R01NR017181-03	12,808	—
Pain Response Evaluation of a Combined Intervention to Cope Effectively (PRECICE)	291	93.361	349-101790-116454//UG3NR019196-01	104,991	—
Testing the Efficacy of a Couple-focused, Tailored mHealth Intervention for Symptom Self-Management among Men with Prostate Cancer and their Partners	263	93.361	5114999/5R01N016990-04	39,029	—
EHR-based Universal Medication Schedule to Improve Adherence to Complex Regimens		93.361	5R01NR015444-05	358,717	199,317
				515,545	199,317
Mitigating Long-term Treatment-related Morbidity in Childhood Cancer Survivors	222	93.393	000519160-003//1R35CA220502-01A1	11,723	—
Disease Beliefs and Cognition: Effect on Diabetes Management in Older Breast Cancer Survivors	90	93.393	0255-3801-4609/5R01CA214491-05	169,634	—
A Population-based Approach to Single CTC Analysis in Metastatic Breast Cancer	212	93.393	060-27000-527101/5R01CA207469-02	(22,139)	—
A novel therapy for pancreatic neuroendocrine tumors	294	93.393	0WSU20054//1R01CA240607-01A1	11,028	—
Small molecule probes of MYC stability and function in tumorigenesis		93.393	1R01CA257258-01A1	135,503	—
Predicting and Preventing Chemotherapy-Induced Cardiotoxicity in African American Children		93.393	1R01CA261898-01	8,038	—
Surgical Multispecialty Access to Research in Residency Training (SMART)		93.393	1R38CA245095-01A1	46,396	—
Patient-Centered Reminders to Inform, Motivate, and Engage Colorectal Cancer Screening Adherence in Rural Communities: The PRIME-CRC Trial	121	93.393	21-08-003 // 1R01CA240496-01A1	86,726	—
PROMIS AYA/Optimizing Health Related Quality of Life Measurement in Adolescent and Young Adult Oncology: A PROMISING Solution	291	93.393	276-100730-114162//5R01CA218398-04	139,206	—
Technology Facilitated Behavioral Intervention for Depression among Diverse Patients in Ambulatory Oncology		93.393	3R37CA255875-01S1	135,474	—
Using MOST to EMPOWER: Optimizing an emotion regulation intervention to enhance well-being among young adult cancer survivors	291	93.393	412-100730-550033//5R01CA242849-02	98,993	—
Testing Novel Pharmacogenetic and Adherence Optimization Treatments to Improve the Effectiveness of Smoking Cessation Treatments for Smokers with HIV	267	93.393	578028//5R01CA243914-02	248,533	—
K00 for Deanna Tiek in support of: Novel relationships of splicing factors in temozolomide-resistant glioblastoma		93.393	5K00CA234799-04	88,953	—
Regulation of Human Papillomavirus Gene Expression		93.393	5R01CA096655-28	274,953	—
In Vivo Model of Epstein-Barr Virus Latency		93.393	5R01CA073507-20	(2,797)	—
HPV and the DNA Damage Response		93.393	5R01CA142861-10	216,457	—
Patient Navigation 2.0: Addressing the Challenge of Scaling Navigation through Checklist-based Implementation		93.393	5R01CA163830-08	270,927	31,409
Behavioral Activation and Varenicline for Smoking Cessation in Depressed Smokers		93.393	5R01CA184211-05	(12,077)	—
Behavioral Activation and Varenicline for Smoking Cessation in Depressed Smokers		93.393	5R01CA184211-05	112,637	112,637
Progesterone Signaling and Blockade in Human Breast Tumorigenesis and Prevention		93.393	5R01CA192124-05	27,096	—
Reducing the Effects of Active Surveillance Stress, Uncertainty and Rumination thru Engagement in Mindfulness Education (REASSURE ME)		93.393	5R01CA193331-06	187,555	58,027
Functional Dissection of the K27M Histone Mutation in Gliomagenesis		93.393	5R01CA197313-04 REVISED	82,875	68,750
The inhibitory network between EZH2 and PARG1 in triple-negative breast cancer		93.393	5R01CA208257-06	383,851	55,789
Transcriptional Elongation Control in Development and Disease		93.393	5R01CA214035-19	399,753	—
Evaluating the protective effect of a tissue selective estrogen complex (TSEC) in women with newly diagnosed ductal carcinoma in situ		93.393	5R01CA218436-05	599,549	353,731
Genomic Prediction of Doxorubicin-Induced Cardiotoxicity		93.393	5R01CA220002-04	339,455	—
Translating buccal nanocytology for lung cancer screening into clinical practice		93.393	5R01CA225002-04	519,733	211,821
Role of NF90 in Prostate Cancer		93.393	5R01CA227918-04	389,563	—
Determinants of transdermal drug delivery to the normal and the irradiated breast		93.393	5R01CA235647-03	337,291	24,983
Targeting Posttranslational Modifications in Breast Carcinogenesis		93.393	5R01CA250110-02	378,116	—
Feasibility of OncoMed to Improve Self-Management and Adherence to Oral Anticancer Medications		93.393	5R21CA226871-02	84,000	—
Evaluating Patient-Reported Outcomes Monitoring in Routine Care of Patients with Chronic Myeloid Leukemia for Increasing Adherence and Clinical Response to Therapy: The EMPATHY Pilot Study		93.393	5R21CA230367-02	124,390	30,918
Mutations of Chromatin and its Modifying Machineries in Malignancies		93.393	5R35CA197569-07	875,788	—
Histone Modification and Transcription Elongation in Human Cancer		93.393	5R50CA211428-05	218,602	—
Informatics Tools for Quantitative Digital Pathology Profiling and Integrated Prognostic Modeling		93.393	5U01CA220401-04	352,906	250,099
Structural Cell Biology of DNA Repair Machines	228	93.393	7336107 Mod. 4 // 5P01CA092584-20	115,928	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

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NU JWU07M1 – Multicenter Selective Lymphadenectomy for Melanoma Trial II: A Phase III Multicenter Randomized Trial of Sentinel Lymphadenectomy and Complete Lymph Node Dissection versus Sentinel Lymphadenectomy ALone in Cutaneous Melanoma Patient with Mo	111	93.395	Agmt signed 11.11.11// P01CA029605	\$ 2,924	—
Radiation Oncology Chair of the Children's Oncology Group	170	93.395	AR03222/U10CA180886	2,809	—
Institutional Membership-Alliance for Clinical Trials in Oncology	5	93.395	Fully executed 11/13/13	10,753	—
Radiation Oncology Chair of the Children's Oncology Group	41	93.395	PO#20190831/2U10CA180886	19,971	—
PSMA-targeted AuNPs for MR guided radiotherapy and radiosensitization	33	93.395	RESS 16065//1R01CA260847-01	79,069	—
ECOG-ACRIN Deputy Chair of Policy and Implementation	60	93.395	U10CA180820-06-NWU1A/U10CA180820-06_07	52,658	—
Dignity Therapy for Elderly Cancer Outpatients: 3 Arm Nurse or Chaplain Led Trial	241	93.395	UFDSP00011459/R01CA200867	74,395	—
Expanding the impact of integrated quality of life endpoints in multiple myeloma study E1A11	60	93.395	UG1CA189828-07-NWU5-E1A11//3UG1CA189828-07S2	102,535	—
				9,078,031	1,053,320
Pre-clinical development of a novel class of immunotherapeutic antibody for metastatic prostate cancer	31	93.396	1001NU/1R44CA247503-02	79,068	—
A non-canonical role for EZH2 in rRNA methylation		93.396	1R01CA256741-01A1	18,061	—
Comprehensive analyses of HOXB13-regulated transcriptional programs critical for prostate cancer progression		93.396	1R01CA257446-01	63,376	—
A deubiquitination module controls Treg adaptation to tumor microenvironment		93.396	1R01CA257520-01	359,423	—
Targeting posttranslational modifications of B7-1H4 in carcinogenesis and therapy		93.396	1R01CA258765-01	32,524	—
Targeting posttranslational modifications of CD73 in TNBCs		93.396	1R01CA258857-01	32,524	—
KSHV-induced oncogenic changes in a primary human lymphatic endothelial cell model of Kaposi's Sarcoma		93.396	1R21CA265574-01	5,138	—
Chemically produced neural progenitors loaded with ferumoxide-protamine sulfate for visualization of gliomas	34	93.396	1R43 CA228726-01A1	84,062	—
Multidisciplinary Integrative Genomic Approach to Distinguish Lethal from Indolent Prostate Cancer in Men of European and African Ancestry	112	93.396	2002911519/SU01CA196390-05 REVISED	3,710	—
MnSOD Acetylation Promotes Cancer Stem Cell Phenotypes in Breast Cancer		93.396	3R01CA216882-04S1	443,549	—
Targeting interplay between KLF4 and PRMT5 in carcinogenesis		93.396	55R01CA202363-05	224,064	—
Dissect regulation of RNA translation in human cancers		93.396	5R00CA207865-05	93,793	—
Mechanism and therapeutic potential of macrophage regulation in glioblastoma		93.396	5R00CA240896-03	253,877	—
Signal Transduction of Type 1 Interferons in Malignant Cells		93.396	5R01CA077816-21	300,049	—
Mechanisms of Leukemogenesis in Down Syndrome		93.396	5R01CA101774-18	(258)	—
Targeting Novel Protein Complexes for the Treatment of Acute Myeloid Leukemia		93.396	5R01CA121192-13	258,904	—
Sirt2 Directs Kras IR Cell Resistance and Tumorigenesis		93.396	5R01CA182506-05	(3,951)	—
Triad1 regulates myelopoiesis and functions as a leukemia suppressor		93.396	5R01CA195642-05	(93,852)	—
Integrating Epigenomic and Nuclear Receptor Signaling in Castrate Resistant Prostate Cancer		93.396	5R01CA196270-05	16,623	—
Interplay between ER and TGF-β in carcinogenesis		93.396	5R01CA202948-06	224,887	—
Target MIC shedding to revive anti-tumor immunity		93.396	5R01CA204021-06	369,885	—
The role of GPM3 in tumor-promoting emergency myelopoiesis		93.396	5R01CA208354-05	264,691	—
Identification and targeting of mechanisms specific to glioma stem cells in glioblastoma		93.396	5R01CA214928-04	327,067	—
Galp13 and pancreatic cancer progression		93.396	5R01CA217907-04	268,347	—
Targeting Musashi-2 (MSI2) regulation of VEGFR2/VEGF-A in lung cancer		93.396	5R01CA218602-04	429,013	—
WEE1 inhibition and tumor immunity		93.396	5R01CA222963-04	331,083	—
Role of Desmoglein 1 in Keratinocyte-Melanocyte Communication and Melanoma		93.396	5R01CA228196-03	447,841	14,356
Genetic mechanisms underlying sexual dimorphism in cancer and response to therapy		93.396	5R01CA229618-04	540,076	166,784
Targeting a Treg deubiquitinase in antitumor immune therapy		93.396	5R01CA232347-03	305,403	—
How Circulating Melanoma Cells Usurp the Leukocyte Transmigration Mechanism for Successful Metastasis		93.396	5R01CA236904-03	353,638	—
Understanding Progesterone Receptor action in Obesity for Endometrial Cancer Prevention		93.396	5R01CA243249-03	474,320	122,764
Molecular mechanisms underlying circulating tumor cell aggregation		93.396	5R01CA245699-02	559,395	—
Transcriptional Control of Cellular Survival and Proliferation in KSHV-transformed B Cells		93.396	5R01CA247619-02	346,375	—
Modeling the Glioblastoma Microenvironment to Uncover Progression Mechanisms and Therapeutic Targets		93.396	5R01CA247905-02	427,908	32,982
Therapeutic targeting of demethylation-deubiquitination axis in acute leukemia		93.396	5R01CA248770-02	360,227	—
The distinct role of cysteinyl leukotriene receptor for myeloid-derived suppressive cells		93.396	5R01CA250101-02	256,750	—
Reactive Oxygen Species in the Initiation, Survival and Racial Disparity of Uterine Leiomyoma		93.396	5R01CA254367-02	386,423	4,917
DISE – a natural cancer surveillance mechanism – a new road to cancer therapy		93.396	5R35CA197450-07	800,669	—
Mitochondrial metabolism and ROS regulate cancer		93.396	5R35CA197532-06	991,652	—
Genomics and bioinformatics analysis to understand castration-resistant prostate cancer		93.396	5R50CA211271-05	141,187	—
Bioinformatic Analysis of Next Generation Sequencing Data from Cancer Cells		93.396	5R50CA221848-05	167,834	—
Underlying Mechanisms in Angiosarcoma		93.396	7R01CA197943-06	94,790	—
Matching panels of in vivo and in vitro model system of pediatric brain tumors	12	93.396	901599-NU AMD 1//SU01CA217613-02	35,182	—
				11,075,567	341,803
Spatio-Temporal Organization of Chromatin and Information Transfer in Cancer		93.397	3U54CA193419-05S1	805,132	187,423
The Northwestern University Cancer Health Equity Research SPORE (NU-CHERS)		93.397	5P20CA233304-02	398,806	—
The Robert H. Lurie Comprehensive Cancer Center		93.397	5P30CA060553-27	6,754,771	45,153
SPORE in Prostate Cancer		93.397	5P50CA180995-05	739,065	404,915
SPORE for Translational Approaches to Brain Cancer		93.397	5P50CA221747-04	1,887,530	—
Nucleic Acid-Based Nanocostructures for the Treatment of Cancer		93.397	5U54CA199091-05	232,429	—
The Chicago Collaborative to Promote and Advance Cancer Health Equity		93.397	5U54CA203000-05	(20,931)	—
13: The Chicago Cancer Health Equity Collaborative (ChicagoCHEC)		93.397	5U54CA203000-07	940,937	—
Epigenomic Biomarkers of HIV-Associated Cancers in Nigeria		93.397	5U54CA221205-05	726,782	403,681
ECOG/FSTRF PSA for ECOG Clinical Trial Protocols	70	93.397	Agmt 8/13/12 / U01CA021115	54,303	—
				12,518,808	1,041,172
Development of Rationally Designed Cancer Vaccines using Protein-Like Polymers (PLPs)		93.398	1F30CA257519-01	8,440	—
Elucidating the Role of C16orf72 in the Cellular Stress Response Network		93.398	1F30CA264513-01	34,216	—
A patient-specific hPSC model of breast cancer to identify genetic determinants of subclonal response and resistance to PARP inhibitors		93.398	1F31CA247395-01A1 REVISED	11,131	—
Characterizing the role of SRCAP in Epidermal Homeostasis and Squamous Cell Carcinoma		93.398	1F31CA261114-01	21,790	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Exosomal CD44 in the metastasis of triple negative breast cancer	93.398	1F32CA257345-01 REVISED		\$ 31,518	—
Improving sleep in gynecologic cancer survivors	93.398	1K08CA247973-01A1		79,926	—
The role of tumor derived exosomes in bone metastasis of prostate cancer	93.398	5F30CA225133-04 REVISED		41,022	—
NIH NRSA Predoc Fellowship for Michael Raymond Drumm, AB.: Tissue factor regulation of receptor tyrosine kinases in glioblastoma	93.398	5F30CA243288-02		47,467	—
Elucidation of a structural rationale for the binding of Myc by small molecule inhibitors	93.398	5F30CA250196-02		52,467	—
Investigating Mechanisms of Cancer Redox Homeostasis with Metabolic CRISPR-Based Screens	93.398	5F30CA250236-02		48,559	—
Mechanistic Basis of Resistance to Chemohormonal Treatment in Prostate Cancer	93.398	5F30CA250248-02		50,064	—
NIH NRSA Predoc Fellowship for Maureen McNulty: The Effect Of Cohesin Mutations In Hematologic Malignancies	93.398	5F31CA216976-03		(2,676)	—
The function of Ubiquitin-Specific Peptidase 22 (USP22) on T regulatory cell function. NRSA for Elena Montauti	93.398	5F31CA220801-04		41,595	—
The design, synthesis, and characterization of potent and selective MEK7 inhibitors as targeted therapies for T-cell acute lymphoblastic leukemia	93.398	5F31CA228431-03		43,905	—
NRSA F31 for Namrath G Sastry in Support of: Novel Roles of LY6K in Glioblastoma Tumorigenicity	93.398	5F31CA232630-02 REVISED		(1,243)	—
Bioresponsive MR probes for imaging pancreatic cancer	93.398	5F31CA235997-03		47,484	—
Irreversible Inhibition of Cerebellar Gli Transcription Factors by Cobalt (III) Complexes	93.398	5F31CA236175-03		47,948	—
Development of Gd(III)-Pt(II) MR Probes for Tandem Detection & Chemotherapy	93.398	5F31CA239426-03		40,427	—
Synthesis, and Evaluation of Potent and Selective MEK4 Inhibitors as a Targeted Therapeutic for Metastatic Pancreatic Ductal Adenocarcinoma	93.398	5F31CA250353-02		38,667	—
Tissue Factor/Protease-Activated Receptor 2 in IDH1 wild-type and IDH1 mutant gliomas (NRSA Postdoc Fellowship for Dusten Urrut, PhD)	93.398	5F32CA216996-03		30,728	—
Targeted discovery of anti-proliferative natural products using genomics and metabolomics	93.398	5F32CA221327-03		1,348	—
Top-down proteomic characterization of MEK/ERK in MAPK-driven cancers	93.398	5F32CA246894-02		62,638	—
Designing with Dissemination in Mind: Optimization of a mHealth Physical Activity Intervention for Breast Cancer Survivors	93.398	5K07CA196840-05		17,578	—
Development of a Novel Statewide Learning Collaborative to Increase Lung Cancer Guideline Adherence and Improve Cancer Care Delivery	93.398	5K07CA216330-05		179,901	—
The Role of ZEB1 Mutations in Cutaneous T Cell Lymphoma	93.398	5K08CA191019-06		(8,491)	—
A molecular informed therapy for Diffuse Intrinsic Pontine Gliomas (DIPG)	93.398	5K09CA234434-02		112,793	—
Carcinogenesis Training Program	93.398	5T32CA009560-35		377,402	—
Training Program in Signal Transduction and Cancer	93.398	5T32CA070085-25		263,582	—
Cancer Nanotechnology Training Program	93.398	5T32CA186897-05		37,596	—
Behavioral and Psychosocial Research Training in Cancer Prevention and Control	93.398	5T32CA193193-05		6,211	—
Behavioral and Psychosocial Research Training in Cancer Prevention and Control	93.398	5T32CA193193-07		253,377	—
Collaborative Northwestern Surgical Oncology Research Training (CONSORT)	93.398	5T32CA247801-02		166,491	—
				2,181,843	—
NCI Community Oncology Research Program (NCORP) Research Bases (UG1)	60	93.399	2UG1CA189828-06-NWU1 AMD 1 // 2UG1CA189828-06 REVI	208,852	—
COVID-19: ECOG-ACRIN NCORP Research Base – CT	60	93.399	COVID-19: 5UG1CA189828-07-NWU3//5UG1CA189828-07	2,363	—
Northwestern Cancer Prevention Consortium	60	93.399	5UG1CA242643-03	540,129	—
NRG Oncology NCORP Research Base	156	93.399	8/1/20NCORP-CELLA-GY7//2UG1CA89867-07	50,305	—
ECOG-ACRIN NCORP Research Base: Cancer Care Delivery Research (CCDR)	60	93.399	UG1CA189828-06-NWU2//2UG1CA189828-06 REVISED	43,110	—
ECOG-ACRIN NCORP Research Base – CT – Pilot Study	60	93.399	UG1CA189828-07-NWU4//5UG1CA189828-07	48,654	—
ECOG-ACRIN NCORP Research Base-Clinical Trials-NWU6	60	93.399	UG1CA189828-07-NWU6//5UG1CA189828-07	33,547	—
ECOG-ACRIN NCORP Research Base-CCDR-NWU7	60	93.399	UG1CA189828-07-NWU7//5UG1CA189828-07	10,306	—
				937,266	—
E2F1 in BM progenitor cell differentiation and cardiovascular repair	222	93.837	000514985-001//7R01HL131110-03	(159)	—
Young Adult and Midlife Transitions in Physical Activity and Sedentary Behavior with Heart Failure Risk and Progression: Coronary Artery Risk Development in Young Adults (CARDIA)	222	93.837	000528250-SC001//1R01HL149796-01A1	48,945	—
Comprehensive Home-based Self-Management Support for COPD Patients	90	93.837	0255-C061-4609 // 5R34HL143747-03	40,646	—
AAA Geometric Surrogates – Geometric Surrogates for Clinical Management of Abdominal Aortic Aneurysms	277	93.837	1000001715/5R01HL121293-04	6,294	—
Risk Assessment of Cerebral Aneurysm Growth with 4D flow MRI	171	93.837	11001052-014//2R01HL1215267-06A1	60,513	—
PRE-DETERMINE: Biologic Markers and MRI SCD Cohort Study	24	93.837	116706//R01HL091069	10,838	—
Machine Learning for the Automated Identification and Tracking of Rare Myocardial Diseases	24	93.837	120816//5R01HL140731-04	238,856	—
Leveraging a Natural Experiment to Estimate the Effects of School Racial Segregation on Cardiovascular Risk Factors among Youth and Young Adults	232	93.837	12245sc AMD //R01HL151638	16,913	—
A first-in-class therapeutic to block ischemia/reperfusion injury following acute myocardial infarction	45	93.837	1225-SUB//1U54HL119810-07	51,134	—
Cardiac Exosomes in myocardial ischemic injury	24	93.837	123168//5R01HL150401-02	37,124	—
Intersection of Material-Need Insecurities and Health Outcomes among People Living with HIV	232	93.837	12480sc//R01HL155226-01	10,056	—
Genomics of Post-Operative Atrial Fibrillation after Cardiac Surgery	24	93.837	125218//R01HL149998-01A1	4,904	—
Impact of Disparities Affecting Survival among Advanced Heart Failure Patients and Transplant Recipients	45	93.837	1353-SUB//R01HL141892-04	20,713	—
The role of p21-activated Kinase (Pak1) in Atrial Fibrillation.	183	93.837	14091801-Sub01//5R01HL128330-04	(1,901)	—
Hispanic Community Health Study/Study of Latinos (HCHS/SOL) Ancillary Study (AS) on Coronary Artery Calcium and its Association with Protective/Risk Factors and Epigenetic Patterns	245	93.837	18741//1R01HL152692-01A1	7,973	—
High-Definition Conformal Electronics for VTF/VT	73	93.837	19-S13-02//5R01HL141470-03	313,302	—
Skin-like, stretchable, and wearable sensors for monitoring QT interval and hemodynamic variables in Atrial Fibrillation	93.837	93.837	1F30HL157066-01	32,509	—
NIH NRSA Predoc Fellowship for Malini Filip: MeTK as a new target to understand and ameliorate HFpEF	93.837	93.837	1F31HL156408-01 REVISED	22,262	—
Utilizing Patient-Specific hiPSC-CMs to Investigate Pediatric Calmodulinopathy (NRSA Predoc Fellowship for Katherine A. Fetterman, BA.)	93.837	93.837	1F31HL156596-01 REVISED	18,348	—
Quantifying Compliance to the New 2017 Hypertension Treatment Guidelines and Investigating the Association Between Guideline Compliance and Patients' Trajectory of Blood Pressure	93.837	93.837	1K01HL145345-01A1	13,752	—
Pathogenesis of Heart Failure with Preserved Ejection Fraction in Chronic Kidney Disease	93.837	93.837	1K23HL150236-01A1	22,536	—
Electronic Health Record Nudges to Improve Quality of Care in Heart Failure	93.837	93.837	1K23HL155970-01A1	6,914	—
Functional roles of lymphatics in organogenesis and tissue repair	93.837	93.837	1R01HL151388-01A1 REVISED	338,498	—
The identification and pathophysiology of non-infarcted but injured myocardium in the post-ischemic heart	93.837	93.837	1R01HL152712-01A1 REVISED	356,239	—
Targeting the Meta-organismal Butyrate Pathway to Prevent Arterial Restenosis after Vascular Surgery	93.837	93.837	1R01HL153306-01A1 REVISED	33,526	—
Cardiovascular Health Trajectories from Birth Thru Adolescence in A Diverse Cohort of Children	93.837	93.837	1R01HL155864-01	28,585	—
Immunologic, Inflammatory, and Clinical contributors to HIV-Related Heart Failure with Preserved Ejection Fraction (HFpEF)	93.837	93.837	1R01HL156792-01	116,476	—
Combining longitudinal cohort studies to examine cardiovascular risk factor trajectories across the adult lifespan and their association with disease	93.837	93.837	1R01HL158963-01	25,995	—
Automatic quantification of myocardial motion in older adults	93.837	93.837	1R03HL144891-01	72,179	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Optimizing the Implementation of a Population Panel Management Intervention in Safety-Net Clinics for Childhood Hypertension		93.837	1R56HL148192-01	\$ 362,310	183,246
Underlying Mechanisms in CADASIL		93.837	1U01HL151203-01A1	169,318	—
1/2 + PROMote weight loss in obese PAD patients to prevEnt mobility loss: the PROVE Trial		93.837	1UG3HL141729-01A1	261	165
Spironolactone Initiation Registry Randomized Interventional Trial in Heart Failure with Preserved Ejection Fraction SPIRRIT-HFpEF	58	93.837	2037894/5U01HL134679-02	5,898	—
Effect of Hospital-Cardiologist Integration on Clinical Practice, Healthcare Quality, and Medicare Spending	73	93.837	20-M38//5R01HL153154-02	122,545	—
Molecular markers of early cardiometabolic health transitions in the CARDIA study	124	93.837	230189//5R01HL136685-05	27,168	—
Precision MRI of Left Atrial Fibrosis for Patients with Atrial Fibrillation		93.837	2R01HL116895-06	165,125	—
Comprehensive Cardiac Structure-Function Analysis in Heart Transplantation		93.837	2R01HL117888-06A1	33,239	—
Implementing an evidence-based mHealth healthy diet and physical activity intervention: Make Better Choices 2 for rural Appalachians	249	93.837	320004059-21-334//5R01HL152714-02	362,353	—
Transition from Risk Factors to Heart Failure: Prevalence, Pathogenesis, and Phenomics	291	93.837	330-100720-114489//5R01HL127028-04 REVISED	148,981	—
Deciphering Variants of Uncertain Significance in Long-QT Syndrome		93.837	3R01HL122010-08S1	1,598,750	936,929
Cardiomyopathy Genomes Project		93.837	3R01HL128075-07S1	609,598	127,387
COVID-19: Administrative Supplement to Real-time Wideband Cardiac MRI for Patients with a Cardiac Implantable Electronic Device		93.837	COVID-19: 3R01HL151079-01S1	435,819	—
Patient Level Prediction of Clinical Outcomes and Cost-Effectiveness in SPRINT (Optimize-SPRINT)	46	93.837	4(GG011659-03)//5R01HL139837-04	10,804	—
Cook County Clinical Research Site (CC_CRS) of the MACS/WIHS Combined Cohort Study (MW_CCS)	84	93.837	50811-324-NWU//5U01HL146245-03 AMD 03	35,077	—
Metabolic pathways to cardiovascular disease: A multi-omics approach	263	93.837	5116709R01HL143885-02	15,807	—
Efficacy of Potassium Nitrate In Heart Failure with Preserved Ejection Fraction	267	93.837	574598//5R01HL121510-05	7,802	—
Early Psychosocial Intervention and Child and Parent Cardiovascular Disease Risk	166	93.837	5875-NU-DHHS-7809 AMD 3//HL137809	101,979	—
4D Flow MRI-based assessment of atrial fibrillation (NIH NRSA Predoc Fellowship for Liliana Ma, AB.)		93.837	5F30HL137279-04	50,404	—
4D Flow MRI for characterization of brain arteriovenous malformations		93.837	5F30HL140910-04	33,444	—
Defining regulatory regions for cardiomyopathy genes		93.837	5F30HL142187-04	30,096	—
Evaluation of Aortic Hemodynamics and Compliance in Aortic Stenosis		93.837	5F30HL145995-03	42,151	—
The Role of CD99L2 in Leukocyte Transendothelial Migration in vitro and in vivo		93.837	5F31HL131355-05 REVISED	15,901	—
Regulation of Cardiac Metabolism and Heart Failure by Tristetraprolin (NIH NRSA Predoc Fellowship for Adam de Jesus, BA.)		93.837	5F31HL132552-05	34,246	—
Alternative Mechanisms of Monocyte Transendothelial Migration in Inflammation (NRSA Predoc Fellowship for Margarette Clevenger)		93.837	5F31HL147413-02 REVISED	48,709	—
Youth Exposure to Violence and Pulmonary and Cardiovascular Health: Meta- and Primary-Analytic Approaches to Understanding Mediators and Moderators.		93.837	5F31HL147509-02	37,484	—
NRSA Predoc Fellowship for Emily Pinheiro: A Patient-Specific hiPSC Model of Nilotinib-Induced Peripheral Artery Disease Pharmacogenomics		93.837	5F31HL151160-02	47,272	—
Social Determinants of Health and Novel Prediction of Cardiovascular Health from Young Adulthood to Middle Age in the CARDIA Study		93.837	5F31HL151178-02 REVISED	33,321	—
Social Network Characteristics and Cardiovascular Health in South Asian Americans		93.837	5F32HL149187-02	67,053	—
Micropatterned surfaces for modeling muscular dystrophy-associated cardiomyopathy		93.837	5F32HL154712-02	68,521	—
Quantitative MRI for the assessment of subclinical CAD in T2DM		93.837	5K01HL121162-05	59,873	—
A Systems Science Approach to Understanding Racial/Ethnic Disparities in Obesity		93.837	5K01HL133531-04	(2,135)	—
Predicting risk of cardiotoxicity among young and emerging adult breast cancer patients from treatment to survivorship		93.837	5K01HL152009-02	121,919	—
The Role of Gut Microbiota in Neointimal Hyperplasia After Vascular Injury		93.837	5K08HL130601-05	55,036	—
Modulation of Macrophage Function through Alternative Splicing in Cardiometabolic Diseases		93.837	5K08HL135348-04	129,615	—
Associations Among Apolipoprotein A1 Structural Variants and High-Density Lipoprotein Function		93.837	5K23HL133801-04	63,251	—
Implementation science to improve cardiovascular outcomes among liver transplant recipients		93.837	5K23HL136891-04	212,614	—
A Systems Approach to Align ICU Care with Patient Treatment Goals		93.837	5K23HL146890-02	53,555	—
Mentored patient-oriented research of novel mechanisms for cardiovascular disease in patients with chronic kidney disease		93.837	5K24HL150235-02	98,209	—
Myofibrillar proteins in cardiomyopathy and arrhythmias		93.837	5K99HL141698-02	(528)	—
The Roles of Endothelial PECAM and the LBRC in Leukocyte Transmigration		93.837	5R01HL046849-28	157,329	—
PAI-1 and Vascular Senescence		93.837	5R01HL051387-25	523,712	115,822
Sarcoglycan in Myopathy and Muscle Membrane Stability		93.837	5R01HL061322-22	395,747	—
Beyond PECAM: Mechanisms of Transendothelial Migration		93.837	5R01HL064774-18 REVISED	234,694	—
Prox1 in Mammalian Lymphangiogenesis		93.837	5R01HL073402-19	247,943	—
CEREBRAL AUTOREGULATION MONITORING TO REDUCE BRAIN INJURY FROM CARDIAC SURGERY		93.837	5R01HL082259-10	106,834	—
Determinants, Trajectories, and Consequences of Abnormal Cardiac Mechanics		93.837	5R01HL107577-08	482,542	205,807
Functional Cardiovascular 4D MRI in Congenital Heart Disease		93.837	5R01HL115828-09	719,695	213,529
MRI of Diffuse Left Ventricular Fibrosis in Atrial Fibrillation		93.837	5R01HL116895-05 REVISED	27,591	—
Atrial arrhythmias and Ca2+ waves in HF: simulation and experimental studies		93.837	5R01HL119095-05	(98,771)	—
Atrial arrhythmias and Ca2+ waves in HF: simulation and experimental studies		93.837	5R01HL119095-05	30,197	30,197
Efferocytosis-Directed Inflammation Resolution and Repair in the Hypoxic Heart		93.837	5R01HL122309-07 REVISED	602,487	46,634
Childhood Origins of CHD Disparities: Neural & Immune Pathways		93.837	5R01HL122328-04 REVISED	(621)	(621)
Low Intensity Exercise intervention for peripheral artery disease: The LITE Trial		93.837	5R01HL122846-04 REVISED	36,319	14,480
Pathophysiological Significance of Atrial Fibrillation Electrogram Patterns		93.837	5R01HL125881-05	293,859	140,000
TELMisartan plus Exercise to improve functioning in PAD: The TELEX Trial		93.837	5R01HL128117-05	171,874	10,743
Fox Transcription factors in lymphatic vessel development		93.837	5R01HL128920-04	(158)	—
Statistical methods to correct for measurement error in self-reported dietary data from lifestyle intervention trials		93.837	5R01HL127491-03	(24,611)	—
Role of SNRK in cardiac metabolism and development of heart failure		93.837	5R01HL127646-04	28,725	—
Vimentin-mediated regulation of the inflammasome in acute lung injury		93.837	5R01HL128194-04	(107,676)	—
Mechanical circulatory support: Measures of adjustment and quality of life		93.837	5R01HL130502-05	482,220	96,566
Improve PAD Performance with METformin: The PERMET Trial		93.837	5R01HL131771-05	423,814	98,944
Community Translation of the South Asian Healthy Lifestyle Intervention (SAHELI)		93.837	5R01HL132978-05	722,358	309,581
Metabolic Pathways Underlying the Contrasting Sodium-BP and DASH/OmniHeart-BP Relationships		93.837	5R01HL135486-04	447,102	265,318
An Interpersonal Relationships Intervention for Improving Cardiovascular Health in Youth		93.837	5R01HL136676-03	736,490	416,480
Methods to Improve Personalized Cardiovascular Disease Prevention Across the Life Course		93.837	5R01HL136942-04	295,548	46
Rapid Real-Time Cardiovascular MRI for Detecting Coronary Artery Disease		93.837	5R01HL138578-03	115,105	—
Mechanistic insights into the deleterious effects of SIRT2 in the heart under stress conditions		93.837	5R01HL138962-04	348,283	—
TAM-Kinases in Transplant		93.837	5R01HL139812-04	438,907	246,346
Oxidative stress contributes to atrial fibrillation by causing remodeling of the autonomic nervous system		93.837	5R01HL140061-04	478,255	—
Mechanistic insights into the role of mitochondrial iron in doxorubicin-induced cardiomyopathy using human induced pluripotent stem cells		93.837	5R01HL140927-02	215,776	—
Regulating fibrosis and growth through latent TGFbeta binding proteins		93.837	5R01HL140938-04	499,971	—

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards
Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Mechanistic insights into HIV-mediated heart failure with preserved ejection fraction		93.837	5R01HL140973-04	\$ 466,075	—
Low-Profile 3D-Printed Radiopaque Bioresorbable Vascular Scaffolds		93.837	5R01HL141933-03	490,569	—
Spontaneous cardiac fibrosis in PAI-1-deficient mice and men: A rare mutation informs a common molecular pathophysiology		93.837	5R01HL142761-03	659,319	—
Molecular mechanisms of Foxo-mediated angiogenesis		93.837	5R01HL144129-04	463,979	—
Epigenetic Determinants of Lipoproteins Across the Early Adult Life Course		93.837	5R01HL146844-02	552,209	—
Pathogenesis of lung injury mediated by lung-restricted antibodies		93.837	5R01HL147290-03	694,402	101,279
Role of Spleen educated monocytes in mediating ischemia-reperfusion injury following lung transplant		93.837	5R01HL147575-03	703,677	—
Cardiovascular Health Associations with Minority stress: Biobehavioral Evaluations and self-Reported Sociopsychological outcomes by MEDIATED by SOGI status (CHAMBERS)		93.837	5R01HL149866-02	358,829	170,630
Real-time Wideband Cardiac MRI for Patients with a Cardiac Implantable Electronic Device		93.837	5R01HL151079-02 REVISED	377,678	6,139
Myocardial Vulnerability to Ischemia-Induced Dysfunction and Heart Failure: The Impact of HIV/SIV, ART, and Targeted Immunotherapy		93.837	5R01HL154862-02 REVISED	481,530	234,019
Understanding the contributions of the neighborhood social environment to cardiovascular disease risk factors in a multi-ethnic cohort of Chicago women		93.837	5R03HL145223-02	(33,987)	—
Microbe-Related Modulation of Neointimal Hyperplasia after Arterial Injury		93.837	5R03HL146880-02	30,284	—
4D Virtual Catheter (vCath) Assessment of Hemodynamic Pathways in Aortopathy Pathogenesis		93.837	5R21HL150498-02 REVISED	117,119	—
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	5R33HL139852-03	426,138	248,180
Comparing and Combining Bortezomib and Mycophenolate in SSc Pulmonary Fibrosis		93.837	5R34HL122558-03 REVISED	(11,464)	—
Vascular Growth and Regeneration		93.837	5R35HL140014-04	979,593	—
Research Training in CVD Epidemiology and Prevention		93.837	5T32HL069771-18	277,790	—
Vascular Surgery Scientist Training Program		93.837	5T32HL094293-08	542	—
Vascular Surgery Scientist Training Program		93.837	5T32HL094293-13	338,101	—
Northwestern University Molecular and Translational Cardiovascular Training Program		93.837	5T32HL134633-05	359,163	—
Channelopathies and Cardiomyopathies Among Sudden Deaths in the Young		93.837	5U01HL131914-03 REVISED	(290,544)	—
Channelopathies and Cardiomyopathies Among Sudden Deaths in the Young		93.837	5U01HL131914-03 REVISED	102,186	102,188
Northwestern CORE Clinical Research Site: Trans-omics for HIV/AIDS Research		93.837	5U01HL146240-03	3,340,571	477,181
COVID-19: Northwestern CORE Clinical Research Site: Trans-omics for HIV/AIDS Research		93.837	COVID-19: 5U01HL146240-03	58,539	—
1/2 + PROMote weight loss in obese PAD patients to prevent mobility loss: the PROVE Trial		93.837	5UH3HL141729-03	603,760	110,843
Precision Medicine for Dilated Cardiomyopathy in European and African Ancestry	158	93.837	6007268//5R01HL128857-05	(2,769)	—
Low Flow Nocturnal Oxygen Therapy on Hospital Admissions and Mortality in Patients with Heart Failure and Central Sleep Apnea (LOFT-HF)	158	93.837	60078530//5UG3HL140144-03	12,736	—
The WHI Strong and Healthy Silent Atrial Fibrillation Recording study (WHISH STAR)	199	93.837	61528610-125216//1R01HL136390//5R01 HL 136390-04	15,877	—
Continuation of the nuMiMB Heart Health Study	180	93.837	7-312-02174571//1U01HL145358-01A1	179,071	—
Identifying effective strategies used by Medicare Accountable Care Organizations to improve outcomes for patients with heart failure: A mixed-methods study		93.837	7R01HL139895-04	252,137	89,217
Mediators of Atherosclerosis in South Asians in America	232	93.837	8696ac//R01HL093009	(666)	—
Pregnancy as a Window to Future Cardiovascular Health: Adverse Pregnancy Outcomes	180	93.837	888-15-16-12//12-312-0214047-52917L	2,125	—
Response of the Gut Microbiome and Circulating Metabolome to Diet Intervention in Young Children: Ancillary Study to the Keeping Ideal Cardiovascular Health					
Family Intervention Trial (KIDFIT)	12	93.837	901552-NU//5K23HL145101-03	3,491	—
Understanding Inflammatory and Metabolic Pathways of Myocardial and Vascular Dysfunction in South African Youth Living with Perinatal HIV	12	93.837	901603-NU//1R01HL151287-01A1	29,837	—
MMP Responsive Nanoparticles for Treating Acute Myocardial Infarction	231	93.837	97968689 (S9001870)//5R01HL139001-04	120,145	—
A New Biological Therapy for Atrial Fibrillation	45	93.837	982-SUBJ/SU45HL119810-05S1	(16,625)	—
The Therapeutic Strategies, Outcomes and Costs of Critical Limb Ischemia in BEST-CLI Study: BEST Critical Limb Ischemia (vCLI) Registry	145	93.837	A032731//R01HL141213-01A1	16,221	—
Pediatric Replacement of the Pulmonary Valve – TOF Trial	41	93.837	ACT.#3201200621; PO#963055-RSUB//1R34HL1	11,897	—
Role of S-nitrosylation in Transdifferentiation	134	93.837	AGMT0003306AM1//R01HL133254-03	7,651	—
BEST-CLI: Trial to Compare Best Endovascular versus Best Surgical Therapy in Patients with Critical Limb Ischemia (BEST)	145	93.837	Ag: 8/7/14 // U01HL107407	11,525	—
Non-Invasive Biosensors To Detect Cardiovascular Changes In Heart Failure	75	93.837	AWD-100909-G2//R01HL130819	13,450	5,828
Nonenhanced 3T QISS MR Angiography of the Peripheral Arteries	153	93.837	EH15-107SS//5R01HL130093-05	6,639	—
Pre-Procedure Evaluation of High-Risk Patients using Next Generation Radial QISS (Fixed Price)	153	93.837	EH17-147-S2//5R01HL137920-04	20,356	—
Pre-Procedure Evaluation of High-Risk Patients using Next-Generation Radial QISS (Cost-Reimbursable)	153	93.837	EH17-147-S3//5R01HL137920-04	15,840	—
Role of Valve-Mediated Hemodynamics on Bicuspid Aortopathy	237	93.837	FY20.954.006_AMD2//5R01HL133504-05	214,266	—
Renin cell identity and blood pressure homeostasis	282	93.837	GB10827_PO#2257593//5R01HL148044-02	19,580	—
TRANSFORM-HF (ToRsemide compArison with furoSemide FOR Management of Heart Failure) Study	299	93.837	GR104831(CON-80001527)/7U01HL125511-02	5,100	—
Precision medicine for dilated cardiomyopathy – novel assessment of cardiac mechanics via speckle tracking echocardiography to identify early phenotypes	158	93.837	GR116057SPC-1000003925R01HL149423 AMD2	121,092	—
REPRIEVE A5332 and A5333s	124	93.837	Mod. 6/PS#225707//U01HL123336-06	19,741	—
Trans-omic analysis of epicardial adipose tissue in atrial fibrillation	256	93.837	OS0000639//1R01HL155718-01	14,555	—
Processed Food Intake, Metabolomics, and Adiposity	258	93.837	PO08292501//1R01HL150053-01A1	14,833	—
Non-invasive Evaluation of Intracranial Atherosclerotic Disease Using Hemodynamic Biomarkers		93.837	R01 HL149787-02	249,033	—
Pregnancy Blood Pressure, Diabetes, and Obesity in Relation to Perinatal Complication	114	93.837	RNG211295-NW UU//1R01HL157666-01	3,942	—
HCMR – Novel Predictors of Outcome in Hypertrophic Cardiomyopathy	133	93.837	SP0657005/SU01HL117006-05	11,498	—
The Fragile Families Cardiovascular Health Follow Up Study	189	93.837	SUB0000420//5R01HL149869-02	243,010	—
Cardiac Mechanisms of Sudden Unexpected Death in Epilepsy	257	93.837	SUBK00012386//1R01HL149363-01A1	32,182	—
Pravastatin Clinical Center Participation Terms and Conditions – Clinical Center #28	73	93.837	U24HL140168	9,917	—
Dietary sodium, inflammation, and salt sensitivity of blood pressure	288	93.837	VUMC76348//5R01HL148661-02	82,726	—
Exercise in Genetic Cardiovascular Conditions	299	93.837	Yale 2.23.2017//R01HL125918	1,611	—
				29,785,939	5,002,903
Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) (Insight)	49	93.838	001-Amend2//5U01HL128954-04	31,222	—
Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) (RETHINC)	49	93.838	003//5U01HL128954-05	33,247	—
Resolution of Diffuse Inflammatory Lung Injury in Neonatal Mice	112	93.838	004008239//5R01HL114800-06	(3,969)	—
Self-management Behaviors Among COPD Patients with Multi-morbidity	90	93.838	0255-8785-4609//5R01HL126508-05	70,199	—
The clinical impact of longitudinal measures of cardiac and pulmonary vascular morphology in smokers	24	93.838	119856//5R01HL116473-09	16,262	—
COVID-19: Collaborative Cohort of Cohorts for COVID Research (C4R)	46	93.838	COVID-19: 12(GG015997-01)//RTI 22-312-0217571-66178	119,864	—
The transcription factor Mlz1-mediated mechanisms of lung aging	245	93.838	17843//5R01HL141459-04	5,854	—
Mechanisms of Recovery from Viral Pneumonia		93.838	1R01HL154998-01A1	102,518	—
COVID-19: Epigenetic modifiers of regulatory T cell function following viral pneumonia		93.838	COVID-19: 1R01HL153122-01A1 REVISED	53,566	—
Differential role of tissue-resident and monocyte-derived alveolar macrophages in the development of pulmonary fibrosis		93.838	1R56HL135124-01	(34,264)	—
An Anesthesia-Centered Bundle to Reduce Postoperative Pulmonary Complications: The PRIME-AIR Study	124	93.838	236660-04//SUH3HL140177-03	81,562	—

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards
Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Combined Cardiopulmonary Failure in COPD: SPIROMICS HF	46	93.838	3(GG015835-01)//ZR01HL093081-10	\$ 249,156	—
PrecISE Network site study	263	93.838	5117256-H3NORTH/HWES Amd. 1//5U24HL138998-04	10,293	—
The role of airway epithelial CRAC channels in allergic lung inflammation		93.838	5F31HL151170-02	40,860	—
Determinants of age-related regulatory T cell function during influenza A virus-induced lung injury.		93.838	5F32HL151127-02	79,625	—
High carbon dioxide impairs lung repair		93.838	5K08HL125940-05	(101,428)	—
Regulatory T cell Uhrf1 and DNA methylation in repair of acute lung injury		93.838	5K08HL128867-05	(582)	—
Mitochondrial metabolic regulation of lung epithelium: alveolar generation and regeneration		93.838	5K08HL143139-03	151,000	—
Single-Cell Transcriptomic Analysis to Identify Drivers of Pulmonary Fibrosis		93.838	5K08HL146943-02	156,729	—
Pathophysiology of Acute Lung Injury		93.838	5P01HL071643-15	583,662	—
Transitions from Impaired Respiratory Health to Lung Disease		93.838	5R01HL122477-07	598,938	296,558
Hypercapnia and Suppression of Anti-viral Host Defense		93.838	5R01HL131745-03	2,203	—
Macrophage Modulation of Lung Fibrosis		93.838	5R01HL134375-04 REVISED	291,847	—
Wnt-beta-catenin cross interactions in alveolar macrophages and epithelial cells in persistence of SSc-ILD		93.838	5R01HL134800-04	371,467	—
Donor nonclassical monocytes initiate lung injury following transplantation		93.838	5R01HL145478-03 REVISED	698,399	—
Role of hypercapnia on the lung airways		93.838	5R01HL147070-03	555,370	—
Regulation of airway epithelial cell-mediated inflammation by CRAC channels		93.838	5R01HL149385-03	467,829	17,708
Mechanisms of regulatory T cell-mediated recovery from severe influenza A virus infection		93.838	5R01HL149883-02	675,057	—
Lung transplant injury drives chronic lung allograft dysfunction via recruitment of monocyte-derived alveolar macrophages		93.838	5R01HL153312-02	559,608	—
Targeting linear ubiquitination to attenuate inflammation and promote repair after IAV infection		93.838	5R01HL154686-02	439,462	—
Training Program in Lung Sciences		93.838	5T32HL076139-14	(1,591)	—
Training Program in Lung Sciences		93.838	5T32HL076139-18	394,029	—
The American Lung Association (ALA) Lung Health Cohort		93.838	5U01HL146408-03	2,169,391	1,771,932
The Role of Placental Maternal Vascular Underperfusion in Neonatal Pulmonary Hypertension	12	93.838	A18-0219-S001-A02 – NU//5R01HL139798-05	36,632	—
Pulmonary Complications in a Birth Cohort after a Randomized Trial of Exposure to Antenatal Corticosteroids: the ALPS Follow-Up Study	73	93.838	Agmt 6/7/17//R01HL098354	13,178	2,640
Losartan Effects on Emphysema Progression Trial (LEEP)	11	93.838	ALA-ACRC LEEP 6/1/2021 // 5U01HL128954-01	41,396	25,600
Network Management Core (NEMO) for the Pulmonary Trials Cooperative (PTC) – CleanUp	268	93.838	CNVAA00046691 (133106-11)//5U01HL128954-05	(3,921)	—
A novel data science and network analysis approach to quantifying facilitators and barriers of low tidal volume ventilation in an international consortium of medical centers	153	93.838	EH17-325-S7//5R01HL140362-03	129,626	—
Azithromycin and the Airway Microbiome in Asthma	234	93.838	FP064381-02 // 5R34HL136991-02	37,255	—
Chicago Metropolitan Asthma Consortium for severe/exacerbation-prone asthma	234	93.838	FP068077-A // 5UG1HL139125-04	70,336	—
Third Coast HIV-related Cardiovascular and Sleep Disorders K12 Career Development Program (TC-CSK12)	234	93.838	FP068767-01 // 5K12HL143959-03	233,046	—
Resolution of Diffuse Inflammatory Lung Injury in Neonatal Mice	41	93.838	GRT-0000547/PO No. 20203251//7R01HL114800-07	36,591	—
Pulmonary Complications in a Birth Cohort after a Randomized Trial of Exposure to Antenatal Corticosteroids: the ALPS Follow-Up Study	73	93.838	S-ALP1920-FC28//5R01HL098354-07	19,346	—
				9,500,070	2,114,438
Timeliness of Management of Trauma Related Hemorrhage and Trauma Related Coagulopathy		93.839	1K23HL157832-01	384	—
Transendothelial Migration of Leukocytes: Developing New Paradigms in Health and Disease		93.839	1R35HL155652-01	409,312	—
Understanding thrombosis formation in myeloproliferative diseases	267	93.839	579931//1-R01-HL-148014-01A1	32,678	—
Defining the Role of IQGAP1 in Leukocyte Transmigration in vitro and in vivo		93.839	5F30HL134202-05	30,234	—
Tailored Adaptation of the AHRQ VTE QI Guide to Local Hospital Context.		93.839	5K08HL145139-03	191,010	—
Aberrant megakaryopoiesis in the myeloproliferative neoplasms.		93.839	5R01HL112792-08 REVISED	29,304	25,362
The roles of mDia2 in hematopoietic stem and progenitor cell engraftment and migration		93.839	5R01HL148012-02	462,248	125,101
The role of Pleckstrin-2 as a functional node in myeloid proliferation		93.839	5R01HL150729-07	448,178	46,748
Vascular-Targeting Genomic and Genetic Strategies for Acute Chest Syndrome	97	93.839	7910_NW//5R01HL111656-08	13,808	—
MOLECULAR MECHANISMS UNDERLYING CLONAL EXPANSION OF HEMATOPOIETIC STEM CELLS		93.839	7R01HL150624-03	11,009	—
1/2 CATHETER-DIRECTED THERAPY FOR CHRONIC DVT(C-TRACT TRIAL)	292	93.839	WU-18-261/UG3HL138325	10,371	—
				1,638,536	197,211
Mentoring in community engaged implementation research to reduce cardiovascular disparities		93.840	1K24HL155897-01	448	—
The International Seminar on Cardiovascular Epidemiology and Prevention, 2020		93.840	1R13HL154583-01	50,902	—
Implementation and scale-up science of salt reduction policies in Nigeria	221	93.840	1UG3HL152381-01_NU_001//1UG3HL152381-01	238,984	—
Transforming Hypertension Management in Nigeria		93.840	5R01HL144708-03	687,617	376,738
Community Intervention to Reduce Cardiovascular Disease in Chicago (CIRCL-Chicago)		93.840	5UG3HL154297-02	609,344	256,788
A mixed methods study to identify and refine implementation strategies to increase use of cardiac rehabilitation for patients with heart failure		93.840	7R01HL146884-03	241,833	85,112
				1,829,128	718,638
Characterization of the lupus nephritis microRNome	222	93.846	000518393-002//5R01AR073850-03	41,739	—
Osteoarthritis Progression And Sensory Pathway Alterations	183	93.846	12052504-Sub05//5R01AR064251-07	303,697	—
Knee Arthroplasty Activity (KArAT) Trial	24	93.846	124057//1UG5AR075288-01A1	15,606	—
Regulation of the Desmosomal Cadherin, Desmoglein-1, dynamics during epidermal differentiation		93.846	1F31AR076188-01A1	40,710	—
Mechanoregulation of the epidermal immune response: the role of desmoglein 1		93.846	1F32AR078645-01A1	9,552	—
Social Determinants and Timeliness of Total Knee Replacement: A National Perspective		93.846	1R01AR078342-01	93,647	5,496
Neuron-Keratinocyte Communication in the Epidermis in Normal and Diabetic Wound Healing		93.846	1R01AR77691-01	635,874	—
Metagenomic TMAO pathway during scleroderma pathogenesis: novel gene-environment interaction paradigm and therapeutic target		93.846	1R61AR076231-01 REVISED	1,156	—
An In Silico, Medical Record-based Model for Understanding the Initiation of Autoimmune Events (IMMUNE)		93.846	1R61AR076262-01	77,576	—
A Sequenced Strategy for Improving Outcomes in Patients with Knee Osteoarthritis Pain	112	93.846	2004639920//1UG3AR077360-01	(4,414)	—
SKOAP – A Sequenced-Strategy for Improving Outcomes in Patients with Knee Osteoarthritis Pain	112	93.846	2004852077//4UH3AR077360-02	97,690	—
Replacing Sedentary Time using an Innovative mHealth Intervention among Total Knee Replacement Patients	270	93.846	20-4064//1R21AR074780-01A1	23,305	—
Desmoplakin Assembly and Function in Epidermis		93.846	2R01AR043380-26	60,539	—
CNS Pain Mechanisms in Early Rheumatoid Arthritis: Implications for the Acute to Chronic Pain Transition		93.846	2R01AR064850-8	328,508	51,267
Selective Inhibition of CYP26A1 in the Skin for the Treatment of Ichthyosis	56	93.846	2R44AR069415-02	15,944	—
Breaking down barriers: defining the role of EphA2 in building epidermal tight junctions in atopic dermatitis		93.846	3K01AR072773-03S1	90,122	—
New Directions in Biology and Disease of Skeletal Muscle		93.846	3R13AR078066-01S1	5,438	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Dose-specific Responsiveness of Glucocorticoid Receptor-driven Transcription in Skeletal Muscle (Predoc Fellowship for Isabella M. Salamone)		93.846	5F31AR073655-03	\$ 35,980	—
Quantifying the Biomechanical and Neural Factors Contributing to Shoulder Instability		93.846	5F31AR074288-03	31,022	—
Muscle-Tendon Structure and Function Following Chronic Limb-Shortening Imposed by Proximal Row Carpectomy		93.846	5F31AR076920-02 REVISED	44,222	—
Assessing contributions of muscular imbalance to shoulder osteoarthritis		93.846	5F31AR077426-02	38,573	—
Epidermal polarization: the desmosomal cadherin desmoglein 1 regulates tissue mechanics and barrier function		93.846	5K01AR075087-03	86,699	—
Core Center for Clinical Research at Northwestern University		93.846	5P30AR072579-05	756,171	24,582
Northwestern University Skin Disease Research Center Resource-based Center		93.846	5P30AR075049-03	772,221	—
Regulators of Epidermal Gene Expression		93.846	5R00AR065480-04	7,538	—
Function of Desmoglein 1/Pemphigus Foliaceus Antigen		93.846	5R01AR041636-29	455,645	—
Inter-junctional signaling in epithelial junctional complex		93.846	5R01AR044016-24	277,796	—
Mechanisms Underlying Heterotopic Ossification		93.846	5R01AR066539-04	(101,468)	—
Genetic Analysis of MicroRNA Functions in Skin Stem Cells In Vivo		93.846	5R01AR066703-08	464,875	—
Glycosphingolipids Mediate Diabetic Wound Healing Impairment		93.846	5R01AR068375-05	173,708	—
3-D printed hyperelastic bone composites for bone regeneration and spine fusion		93.846	5R01AR069580-04	30,518	—
Inflammatory arthritis: mechanistic insights into initiation and progression		93.846	5R01AR070225-05	455,332	—
Cadherin clusters and actin filaments		93.846	5R01AR070166-05	281,016	—
Lupus Intervention Fatigue Trial (LIFT)		93.846	5R01AR071091-04	683,603	87,446
Noninvasive tools for assessing muscle structure and function		93.846	5R01AR071162-05	509,123	306,015
Transcriptional regulation of skin stem cells and their niche		93.846	5R01AR071435-06	272,418	—
Supramolecular nanofibers for recombinant growth factor-free spine fusion		93.846	5R01AR072721-04 REVISED	679,962	189,044
The molecular basis of Interleukin-31 driven itch		93.846	5R01AR073279-03 REVISED	317,032	—
Brain Pathophysiology of Osteoarthritis Pain		93.846	5R01AR074274-03 REVISED	64,175	—
Damage-Associated Molecular Patterns Driving Fibrosis Progression in Scleroderma		93.846	5R01AR074907-02	77,184	57,227
Epidermal Gene Regulation by Transcription Elongation and Termination		93.846	5R01AR075015-02	285,125	—
Synovial Macrophage Transcriptional Signatures for Predicting Therapeutic Efficacy		93.846	5R01AR075423-03	586,507	—
The pathogenic mechanism of anti-phosphatidylethanolamine antibodies		93.846	5R21AR071705-02	(62,194)	—
The pathogenic mechanism of anti-phosphatidylethanolamine antibodies		93.846	5R21AR071705-02	3,411	3,411
Novel Role for A20 in Fibrosis Susceptibility		93.846	5R21AR074292-02	(4,205)	—
Targeting NAD metabolism to treat systemic sclerosis		93.846	5R21AR074523-02	(14,701)	—
Targeting NAD metabolism to treat systemic sclerosis		93.846	5R21AR074523-02	12,262	12,262
Transcriptional Signature of Macrophages in SSC		93.846	5R21AR074902-02	159,124	—
Desmoplakin Assembly and Function in Epidermis (R37 MERIT Extension Application R37AR043380)		93.846	5R32AR043380-25	198,667	—
Post Graduate Program in Cutaneous Biology		93.846	5T32AR060710-09	175,229	—
Translation of novel and repurposed drugs to address the acute and late effects of mustard exposure		93.846	5U01AR071168-05	851,715	17,099
MicroRNA-mediated regulation in mammalian skin		93.846	7R01AR059697-11	105,467	—
Defining Components of Physical Therapy Achieving Maximum Function after TKR		93.846	7R01AR071048-03	35,010	—
IMPACCT – Infrastructure for Musculoskeletal Pediatric Acute Care Clinical Trials	12	93.846	901575-NU/1R34AR075303-02	5,737	—
Evolving Adaptive and Effector Mechanisms from Pre-RA Through Established Disease	237	93.846	FY17.090.001 FY20.090.004_AMD5/3UH2AR067681-05S1	313,000	—
Pathogenic Wnt-beta catenin target genes in macrophages and fibrosis	299	93.846	GR106866(CON-80001829)/5R01AR073270-02	274,098	—
Failed Regeneration in the Muscular Dystrophies: Inflammation, Fibrosis and Fat	241	93.846	SUB00001919/US4AR052646	(637)	—
Failed Regeneration in the Muscular Dystrophies: Inflammation, Fibrosis and Fat	241	93.846	SUB00001921/US4AR052646	87,730	—
Failed Regeneration in the Muscular Dystrophies: Inflammation, Fibrosis and Fat	241	93.846	SUB00002441/US4AR052646	8,272	—
Postdoctoral Rheumatology Training		93.846	T32AR007611-19	200,810	—
				12,047,481	753,849
Expanding live donor kidney transplantation through advocacy training and social media	112	93.847	2003447902/5R01DK1119662-04	107,102	—
Advancing Multiparametric Kidney Functional Magnetic Resonance Imaging to Identify Kidney Histopathologic Lesions	22	93.847	01_NWU_05439/5U2CCK114886-4	3,293	—
Evaluating Affective and Unified Behavioral Approaches to Reducing Diabetes Distress and Improving Glycemic Control	232	93.847	120299sc/5R01DK121241-02	12,471	—
Phosphate Binder Therapy and Chronic Kidney Disease in Children	229	93.847	1652 G YA008/1U01DK122013-01	160,576	—
Mechanisms of diabetes from acute pancreatitis in African Americans and Hispanics	245	93.847	18174/1U01DK121378-01	9,815	—
Methylomics of prenatal GDM: Natural history & lifestyle intervention in children	165	93.847	1R01DK100790-50363-S2/5R01DK100790-04	38,083	—
Effects of Epigenetic Regulation in Chronic Pelvic Pain Syndrome		93.847	1R01DK124460-01A1	110,192	—
Cross-regulation of Immunometabolism and Circadian Pathways in Obesity Pathophysiology		93.847	1R01DK127800-01A1	119,334	—
Integrating a culturally competent APOL1 genetic testing program into living donor evaluation		93.847	1R01DK128207-01	89,722	—
Rapid hormonal modulation of feeding circuit dynamics and its disruption in obesity		93.847	1R01DK128477-01	105,733	—
WildCam: A Privacy Conscious Wearable Eating Detection Camera People will Actually Wear in the Wild		93.847	1R03DK127128-01	6,761	—
Designing a Mobile Obesity & Binge Eating Intervention for Implementation in Clinical Settings		93.847	1R03DK128531-01	13,606	—
Functional analysis of Claudin-2 in pancreatic ductal cells in health and disease		93.847	1R56DK124493-01	82,663	—
Wake Forest Collaborative Application for an APOLLO Clinical Center	291	93.847	287-101750-119551/5U01DK116040-04	16,513	—
NW University Program in Endo Diabetes and Hormone Action		93.847	2T32DK007169-42	28,899	—
10/22 Limited Competition for the Continuation of the Diabetes Prevention Program Outcomes Study (DPPOS) – Clinical Center		93.847	2U01DK048380-28	177,620	—
Dissecting the role of dynamic epigenome prompting pathways leading to kidney allograft fibrosis	252	93.847	3001055/7R01DK122682-02	32,633	—
SenseWhy: Overcoming the Lens of Passive Sensing		93.847	3K25DK113242-04S1	193,599	—
Glycemic Profile of Pregnancy Consortium Biostatistics Research Center		93.847	3U01DK123758-02S1	686,740	—
Health literacy intervention to improve diabetes outcomes among rural primary care	224	93.847	509611/5R01DK107572-04	(534)	—
Preconceptional health of Latinas and its association with child adiposity	263	93.847	5112424/5R01DK116028-02	119,404	33,768
Cure GN 2.0 – UNC-PCC	263	93.847	5117458/5U01DK100867-08	5,942	—
Genomic Basis for the Circadian Regulation of B-cell Function and Glucose Homeostasis		93.847	5F30DK116481-04 (Revised)	27,320	—
NIH NRSA Predoc Fellowship for Bilal Abdullah Naved: Strategies in Renal Nanomedicine to Impact Treatment Paradigms in Kidney Disease		93.847	5F30DK123985-03	37,027	—
NRSA Postdoc Fellowship for Chelsea Hepler: A Central Circadian Clock-Adipose Tissue Circuit Regulates Thermogenesis and Energy Balance		93.847	5F32DK1122875-02	66,208	—
Transition from Acute to Chronic Pelvic Pain in a Murine Model of Chronic Prostatitis		93.847	5K01DK114395-03 REVISED	12,764	—
Testing Intervention Strategies for Addressing Obesity and Binge Eating		93.847	5K01DK116925-04	205,399	—
Regulation of Ulcerative Colitis by mast cells and histamine		93.847	5K08DK09721-05	(1,128)	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Dissecting the Nutritional Regulation of Feeding Circuits	93.847	5K08DK118188-05		\$ 150,135	—
Non-invasive Imaging Biomarkers to Identify a High-risk Chronic Kidney Disease Phenotype	93.847	5K23DK120811-02		175,323	—
Circadian Neuronal Basis for Obesity and Diabetes	93.847	5K99DK124882-02		86,565	—
Disordered Tissue Biomechanics as a Driver of Esophageal Disease	93.847	5P01DK117824-04		1,529,768	89,645
Kidney Therapeutics: Translating Discoveries into Prevention, Treatment and Cures for Kidney Diseases	93.847	5P30DK114857-03		1,348,161	121,381
Pathogenesis of Diabetic Nephropathy	93.847	5R01DK060635-18		271,461	—
Mast cells in male pelvic pain and lower urinary tract dysfunction	93.847	5R01DK083609-10		247,433	—
Integration of Feeding Time and Glucose Metabolism by the Circadian Gene Network	93.847	5R01DK090625-09		368,154	91,530
Effectiveness of Physiologic Testing in PPI Non-Responders	93.847	5R01DK092217-08		241,099	67,287
Cholestasis and the Unfolded Protein Response	93.847	5R01DK093807-08		201,320	—
Interplay of Dietary Lipid and Circadian Dysregulation in Metabolic Syndrome	93.847	5R01DK100814-05		(5)	—
Regulation of FGF23 by DMP1 in Health and in Chronic Kidney Disease (CKD)	93.847	5R01DK101730-05		96,907	14,721
The roles of pleckstrin-2 as a functional node in erythropoiesis	93.847	5R01DK102718-05		(5,267)	—
Regulation of FGF23 in Chronic Kidney Disease (CKD) by iron and inflammation	93.847	5R01DK102815-05		15,707	—
Regulation of FGF23 in Chronic Kidney Disease (CKD) by iron and inflammation	93.847	5R01DK102815-07		743,477	—
Testing a medication risk communication and surveillance strategy: The EMC2 Trial	93.847	5R01DK103684-04		(1,567)	—
Testing a medication risk communication and surveillance strategy: The EMC2 Trial	93.847	5R01DK103684-04		(2,014)	(2,014)
Altered Microbiome of Chronic Pelvic Pain	93.847	5R01DK103769-04		358,354	(118)
Urinary Renin Angiotensin System in Diabetes	93.847	5R01DK104785-03 REVISED		(137)	—
A Culturally Targeted Transplant Program to Increase Live Donation in Hispanics	93.847	5R01DK104876-05		650,110	338,465
Omega-3 derived epoxy fatty acids and sEH in pancreatitis-induced carcinogenesis	93.847	5R01DK107167-04		101,285	19,911
Lipoteichoic acid mediated immune modulation of chronic pain	93.847	5R01DK108127-04		134,886	—
Barrier integrity, microbiome and HIV target cell interactions in the human male genital tract pre and post circumcision	93.847	5R01DK108434-04		331,403	139,512
SMART Weight Loss Management	93.847	5R01DK108678-05		286,426	101,091
Nuclear Repressors in Genomic Control of Healthful Obesity	93.847	5R01DK108987-05 REVISED		177,466	—
Nonhuman Primate Model of Bladder Regeneration Using Autologous Bone Marrow Cells	93.847	5R01DK109539-05		44,679	—
Novel Diagnostics and Therapeutic Targets for Calcification in CKD	93.847	5R01DK110087-05		417,196	154,670
Transplant Regimen Adherence for Kidney Recipients by Engaging Information Technologies: The TAKE IT Trial	93.847	5R01DK110172-04		552,873	291,923
Lysosomes in neonatal enterocytes and their pathologies	93.847	5R01DK111032-04		158,816	—
The effects of capsinoids on brown adipose tissue recruitment and activation in obesity	93.847	5R01DK112281-03 REVISED		280,935	86,402
The Circadian System as a Neuronal Regulator of Feeding Time and Body Weight Setpoint	93.847	5R01DK113011-04		311,083	—
Mechanism of autophagy activation in the prevention of type 2 diabetes	93.847	5R01DK113170-05		321,129	2,473
Role of HNF4a in the regulation of FGF23 in health and disease	93.847	5R01DK114158-04		508,068	—
Endothelial PHD2/HIF Axis in Ischemic Kidney Injury and Inflammation	93.847	5R01DK115880-04 REVISED		564,855	—
Molecular Mechanisms of Epithelial Contribution to Esophageal Inflammation and Tissue Repair	93.847	5R01DK116988-04		310,739	—
Predicting Newborn and Childhood Adiposity: An Integrated Omics Approach	93.847	5R01DK117491-04		559,401	305,407
Rescuing Kidneys at Risk of Discard	93.847	5R01DK118425-03		599,276	180,928
Molecular mechanisms for bone marrow failure and clonal progression during the innate immune response in Fanconi Anemia	93.847	5R01DK121354-03		490,417	22,249
Estrogen and Abdominal Muscle Fibrosis	93.847	5R01DK121529-03		763,055	10,426
The Unfolded Protein Response in Fatty Liver	93.847	5R01DK121997-03		490,812	—
Clock Control of Muscle Glucose Metabolism and HIF Activity	93.847	5R01DK123358-02		398,768	—
Molecular dysregulation of primary cilia TRPP2 channels caused by Finger 1 variants	93.847	5R01DK123463-03		558,200	—
Neutrophils instruct macrophage responses to promote mucosal healing	93.847	5R01DK124199-02		378,294	—
The roles of mDia2 in membrane remodeling and organelle clearance during reticulocyte formation	93.847	5R01DK124220-02		289,589	—
Methodological and data-driven approach to infer durable behavior change from mHealth data	93.847	5R01DK125414-02		371,622	42,040
Evaluating the EVO treatment optimized for resource constraints: Elements Vital to treat Obesity	93.847	5R01DK125749-02		611,503	25,301
Mechanisms of Salmonella Clearance by Neutrophils in the Intestinal Lumen	93.847	5R03DK116663-02		57,019	—
Health and Economic Impacts of Coverage Requirements and Health System-Community Coordination for Diabetes Prevention	93.847	5R18DK110741-05		523,749	42,355
Behavioral Nudges for Diabetes Prevention (BEGIN) Trial in Primary Care	93.847	5R18DK123375-02		463,436	77,338
Promoting Utilization of Kidneys by Improving Patient Level Decision Making	93.847	5R21DK108104-02 REVISED		(2,281)	—
Olfactory contributions to sleep-dependent food craving and calorie intake	93.847	5R21DK118503-02		122,418	2,342
Use of simulation-based mastery learning to improve polypectomy outcomes	93.847	5R21DK124816-02		171,745	—
Sustaining Women's Engagement and Enabling Transitions after Gestational Diabetes Mellitus (SWEET)	93.847	5R34DK125958-02		186,691	—
NW University Program in Endo Diabetes and Hormone Action	93.847	5T32DK007169-41		137,397	—
Basic Science Training Grant in Urology	93.847	5T32DK062716-15		38,595	—
Transplant Surgery Scientist Training Program	93.847	5T32DK077862-15		189,802	—
NUKIDS: Scientist Training Program in Kidney Disease	93.847	5T32DK108738-05		209,025	4,928
10/22 Diabetes Prevention Program Outcomes Study (DPPPOS) Phase 3- Research Project	93.847	5U01DK048380-27		136,054	—
Pelvic Pain and Depression	93.847	5U01DK082342-13		198,887	17,795
LURN II: Enhanced Characterization of Patients with LUTS Using Biopsychosocial Approaches	93.847	5U01DK097779-08		520,359	196,377
Pilot Studies Targeting Mineral Metabolism in CKD	93.847	5U01DK099930-07		(24)	—
Glycemic Profiles and Pregnancy Outcomes Study (GLOSS)	93.847	5U01DK123745-02		225,575	—
NORTHWESTERN UNIVERSITY PLUS CLINICAL SITE	93.847	5U01DK126045-02		215,907	—
Vision: Validated Systematic Integration of Epigenomic Data	166	93.847 6138-NU-DHHS-6766//5R24DK106766-04		96,048	—
Sensorimotor Impairments in Men with Chronic Prostatitis/Chronic Pelvic Pain Syndrome: Relationship of resting state brain activity to pelvic floor muscle activation	272	93.847 85596622//5R01DK110669-02		9,205	—
The Tshilo Dikotla Study: Metabolic Outcomes of Children HIV/ARV-Exposed Uninfected in Botswana	12	93.847 901539-NU//5R01DK109881-05		13,649	—
Aberrant DNA Methylation Underlying Adverse Prenatal Exposures and Increased Newborn and Childhood Adiposity	12	93.847 901608 - NU//R01DK118403		56,905	—
Stent vs. Indomethacin for Preventing Post-ERCP Pancreatitis: The SVI Trial	132	93.847 A00-2010-S010//5U01DK104833-06		42,380	—
Sphincterotomy for Acute Recurrent Pancreatitis	132	93.847 A03-3556-S009//5U01DK116743-03		3,566	—
HLo - Pragmatic trial of higher vs. lower serum phosphate targets in patients undergoing hemodialysis	58	93.847 A03-3579//5U03DK118748-03		35,818	—
Antifibrotic Actions of SARA	12	93.847 A19-0185-S001-NU//5R01DK105055-05		73,694	—
Excess Radiation Exposure in Infants and Children From Videofluoroscopic Swallow Studies	132	93.847 A20-0260-S001 Amd. 1//5R01DK122975-02		18,993	—
A new approach to predict graft outcome from histology in children undergoing kidney transplantation using machine learning methods	63	93.847 A259308//5R21DK122229-02		10,962	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
NRSA Predoc C. Versteeg in support of: Determining the role of the Cuneate nucleus in the processing of proprioceptive information in the awake behaving animal	93.853	5F31NS106833-03		\$ 45,558	—
The Use of Eye Movement Testing to Detect Neurocognitive Change Associated with Subconcussive Impacts	93.853	5F31NS106840-02 REVISED		11,422	—
NIH NRSA Predoctoral Fellowship Award for Michael Iorga: Intraoperative Functional Mapping Using Infrared Thermography	93.853	5F31NS115362-02 Revised		45,611	—
A Predictive Model for Assessment of CSF Flow Through Ventricular Shunts	93.853	5F31NS115422-02		47,507	—
A subtype-specific ablation of dopamine neurons to mimic human Parkinson's disease	93.853	5F31NS115524-02		41,320	—
NRSA Predoc Fellowship for Elizabeth Daley: Investigating ETF1 at the Interface of Translation Repression and Nonsense-Mediated Decay in C9-ALS/FTD Neurotoxicity	93.853	5F31NS117084-02		35,807	—
Effects of oxaliplatin-based chemotherapy on proprioception in cancer survivors	93.853	5F31NS118832-02		41,154	—
Synaptic Regulation of Inmate Freezing by the Fastigial Nucleus of the Cerebellum	93.853	5F32NS106720-03 REVISED		31,289	—
Identification of Biomarkers Reflecting Homeostatic Sleep Drive	93.853	5F32NS110183-03		56,368	—
Investigation of Histone H3 Post-Translational Modifications in Pediatric Brainstem Glioma	93.853	5K08NS097624-03		(2,933)	—
Investigation of Histone H3 Post-Translational Modifications in Pediatric Brainstem Glioma	93.853	5K08NS097624-03		(5,670)	(5,670)
Role of PCDH12 in neural circuit formation during brain development and disease	93.853	5R00NS089943-05		(2,283)	—
Dopaminergic and Muscarinic Signaling in the Striatum	93.853	5R01NS034696-22		(712)	—
Targeting the Integrated Stress Response to Protect Oligodendrocyte lineage Cells	93.853	5R01NS034939-20		183,669	—
Myoferlin in muscle membrane fusion and repair	93.853	5R01NS047726-16 REVISED		211,758	—
A primate model of an intra-cortically controlled FES prosthesis for grasp	93.853	5R01NS053603-15		607,962	—
Combined Approach to the Genetic Basis of Epilepsy	93.853	5R01NS053792-17		76,719	—
Store-Operated Channels in the Nervous System	93.853	5R01NS057499-13 REVISED		118,026	—
The Loss of Independent Joint Control of the Upper Limb in Spastic Hemiparetic CP	93.853	5R01NS058667-08		268,003	—
Synaptic Circuit Organization of Motor Cortex	93.853	5R01NS061963-14		301,082	—
Cajal-Retzius cells and neuronal signaling in postnatal cortical networks	93.853	5R01NS064135-12		376,184	—
Functional Development of Motor Networks	93.853	5R01NS067299-10		(6,747)	—
ZFP24 Control of the myelination program of oligodendrocytes	93.853	5R01NS067550-07		360,608	—
GABAergic Signaling in the External Globus Pallidus	93.853	5R01NS069777-10		297,678	—
The Role of Lysosomal Glucocerebrosidase in Synucleinopathies	93.853	5R01NS076054-10		893,651	—
Understanding the Cellular Basis of Movement Disorders	93.853	5R01NS082351-08		1,119,317	—
Genetic Modifiers of Childhood Epilepsy	93.853	5R01NS084959-07		410,790	—
Concordance of TDP-43 Inclusions with Cortical Atrophy and Clinical Phenotype	93.853	5R01NS085770-05		(679)	—
Concordance of TDP-43 Inclusions with Cortical Atrophy and Clinical Phenotype	93.853	5R01NS085770-07		445,366	112,672
Neurogenetic Approaches to Study Directed Behavior in Drosophila	93.853	5R01NS086859-08		452,193	—
The Neural Control of Internal Joint State	93.853	5R01NS086973-05		9,405	1,688
Mechanisms Underlying Tau45-230-Induced Neuronal Degeneration	93.853	5R01NS090993-05		151,203	—
The role of a-synuclein accumulation in lysosomal hydrolase trafficking and function	93.853	5R01NS092823-05		197,473	—
Effect of Unilateral and Bilateral STN Stimulation on Eye-Hand Coordination	93.853	5R01NS092950-05		267,500	—
Targeting histone demethylase activity for the treatment of pediatric brainstem glioma	93.853	5R01NS093079-05		(1)	—
Coding properties of Vibrissal-Responsive Trigeminal Ganglion Neurons	93.853	5R01NS093385-05		120,951	—
Glioblastoma Phenotype Modulation Through miRNA Control of Wnt Signaling	93.853	5R01NS093843-05		24,737	—
Designing brain machine interfaces to drive plasticity and enhance recovery after brain injury	93.853	5R01NS094748-05		131,138	31,238
Biomimetic Somatosensory Feedback through Intracortical microstimulation	93.853	5R01NS095251-05		377,025	194,059
Autophagy Regulation of Glioblastoma Tumorigenesis and Responses to Therapy	93.853	5R01NS095634-05		105,061	—
Radiation + Temozolomide Induced Mutation and Malignant Progression of GBM	93.853	5R01NS095642-05		152,495	—
Microcircuits of the Subiculum and Epilepsy	93.853	5R01NS096092-04		375,433	—
Rational derivation of DA neuron subtypes from IPS cells for improved modelling of Parkinson's disease	93.853	5R01NS096240-04		475,250	—
Cellular plasticity and equilibrium in GBM progression	93.853	5R01NS096376-05		401,203	10,474
AMPK, metabolism and ALS	93.853	5R01NS096746-06		243,077	61,846
IDO1 and immunotolerance in glioblastoma.	93.853	5R01NS097851-05		493,886	—
The Human Motor Output Map	93.853	5R01NS098509-05		322,630	134,866
The role of amyloid precursor protein in HIV-1 replication and associated neurodegeneration	93.853	5R01NS099064-05		334,067	—
A wearable myoelectric computer interface to reduce muscle co-activation in acute and chronic stroke	93.853	5R01NS099210-05		325,791	23,163
Regulation of CD4+ T cell-mediated Demyelination Following Oligo Ablation	93.853	5R01NS099334-05		465,660	55,183
Mouse model studies of TMEM230-linked Parkinson's disease	93.853	5R01NS099623-05		311,586	63,971
Investigation of ALS caused by mutant CHCHD10	93.853	5R01NS099638-05		337,474	35,340
Postsynaptic functions of neuronal adhesion molecules: focus on Cntnap2	93.853	5R01NS100785-04		351,765	—
Subcortical auditory processing in sports-related concussions and contact/collision sports	93.853	5R01NS102500-04		517,464	—
Tissue Factor as a Key Determinant of IDH1 Mutant versus IDH1 Wild-type Glioma Thrombosis and Malignancy	93.853	5R01NS102669-05		405,592	—
Determining How Defective Nucleo-Cytoplasmic Trafficking Leads To Neurodegeneration In C9orf72-Related ALS And FTD	93.853	5R01NS104219-04		432,593	40,508
Cellular and Molecular Role of CXCR4 signaling in Painful Diabetic Neuropathy	93.853	5R01NS104295-04		648,552	—
Deciphering the Roles of Kainate Receptors in Developing CNS Circuits	93.853	5R01NS105502-04		514,554	—
Contralateral Corticobulbar Structural and Functional Changes Post Stroke: Biomarkers for the upper limb flexion synergy	93.853	5R01NS105759-02		460,417	—
Genetic Approaches to Optimize CAR T cells for Glioblastoma Therapy	93.853	5R01NS106379-04		569,275	184,684
Molecular Mechanisms Integrating Circadian Timing and Photic Signaling	93.853	5R01NS106955-04		205,204	—
The Role of Mitochondria in TDP-43 Proteinopathy	93.853	5R01NS107396-04		(34,602)	—
Mechanisms of striatal structural and functional plasticity.	93.853	5R01NS107539-04		333,277	—
Reversible mRNA methylation in oligodendrocyte development and CNS myelination	93.853	5R01NS109372-04		289,785	—
Mechanisms of electrical stimulation of a canonical motor microcircuit	93.853	5R01NS109552-04		420,160	—
Role of Host Cell Factors in Newborn Herpes Simplex Virus (HSV) Encephalitis	93.853	5R01NS110631-03		393,708	—

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards
Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
MAPK as target of glioma immunoceding by CD8 T-cells, and predictor of response to immunotherapy	93.853	5R01NS110703-02		\$ 536,368	—
Hemostasis, Hematoma Expansion, and Outcomes After Intracerebral Hemorrhage	93.853	5R01NS110779-03		437,696	129,744
Motoneuron mortality in neurodegenerative diseases induced by homeostatic dysregulation of excitability	93.853	5R01NS110953-03		318,433	126,894
Modulation of the prefrontal cortical network in neuropathic pain	93.853	5R01NS112292-02		545,269	8,553
Optimizing the restoration and rehabilitation of function using cortically controlled FES following SCI	93.853	5R01NS112535-03		484,378	99,240
Role of purine metabolism in chemoresistance	93.853	5R01NS112856-03		309,864	—
Combining myoelectric training with sleep-based memory reactivation to improve motor recovery after stroke	93.853	5R01NS112942-03		396,541	—
SLFN5: A Novel Therapeutic Target for Glioblastoma	93.853	5R01NS113352-03		328,333	—
Development of Novel MNK Inhibitors for Treating Glioblastoma	93.853	5R01NS113425-03		369,300	—
Cellular mechanisms of hippocampal network neuroplasticity generated by brain stimulation	93.853	5R01NS113804-03		1,542,444	501,497
Neuronal excitability and copy number variation disorders	93.853	5R01NS114977-02		488,880	30,841
Role of Protein Methylation in Cell Mitosis and Glioblastoma	93.853	5R01NS115403-02 REVISED		369,708	12,768
Glutamate receptor signaling pathways in the circuit integration of adult-born neurons	93.853	5R01NS115471-02		583,025	22,164
Regulation of synaptic plasticity and cognitive functions by store-operated Orai1 channels	93.853	5R01NS115508-02		387,274	—
Real-Time Tracking of Gene Therapy by Bioactivated MR contrast Probes	93.853	5R01NS115571-02		428,067	132,112
Arginine Metabolism Regulates Myeloid Immune Suppression in Glioblastoma	93.853	5R01NS115955-02		466,889	—
Models of rodent facial musculature for the study of active tactile sensing	93.853	5R01NS116277-02		109,221	—
Interaction between Tissue Factor, Junctional Adhesion Molecule-A, and Integrin B1 to drive self-renewal in glioblastoma	93.853	5R01NS117104-02		444,135	166,729
Immune-modifying nanoparticles for the treatment of traumatic brain injury	93.853	5R01NS117476-02		516,942	—
Neuronal roles of Parkinsons Disease Vps13C in regulating autophagy and calcium dynamics	93.853	5R01NS117750-02		351,450	—
Targeting IDH mutations to improve seizure control in glioma patients	93.853	5R01NS118039-02		462,446	—
Mechanisms of gene regulation and RNA processing in synucleinopathies	93.853	5R01NS118244-02		503,464	—
Development of a novel therapeutic strategy for treatment of SOD1-linked ALS by CRISPR/Cas9-mediated SOD1 promoter editing	93.853	5R01NS118928-02		353,146	—
TRPC3 channels as pharmacological targets for the treatment of ataxia	93.853	5R21NS090346-02 REVISED	(5,426)	—	—
The effects of a-synuclein accumulation on proteome composition, stability and aggregation	93.853	5R21NS107768-02		29,211	—
Exploring the role of protein farnesylation in the regulation of SNARE protein ykt6 in synucleinopathy models	93.853	5R21NS107770-02		64,217	—
A Novel approach to therapy in ALS and ALS/Dementia using new insights from ALS5/SPG11	93.853	5R21NS109917-02		74,733	—
The Role of Aortic-Carotid Hemodynamics and Aberrant Flow in HIV Cerebral Injury	93.853	5R21NS122511-02		58,997	—
Characterized Adult Primary Human Microglia Cells for Research	93.853	5R24NS104160-04		298,635	—
Research Education Program for Trainees in Neurology	93.853	5R25NS070695-10 REVISED		62,116	60,477
Research Education Program for Trainees in Neurology	93.853	5R25NS070695-12		56,481	—
Synaptic Coding in the Cerebellar Corticonuclear Circuit	93.853	5R33NS116854-02		613,075	—
Ionic Currents and Spiking in Cerebellar Nuclear Neurons	93.853	5R37NS039395-19		(20,168)	—
Synaptic Transmission, Plasticity, and Integration in the Subthalamic Nucleus	93.853	5R37NS041280-20		103,619	—
The role of ATP13A2/PARK9 in secretion of exosomes and alpha synuclein	93.853	5R37NS096241-04		(62,205)	—
The role of ATP13A2/PARK9 in secretion of exosomes and alpha synuclein	93.853	5R37NS096241-04		34,922	34,922
General Motor Control Mechanisms and Disease Training Program	93.853	5T32NS041234-19		322,401	—
TRAINING PROGRAM IN THE NEUROSCIENCE OF HUMAN COGNITION	93.853	5T32NS047987-15		258,086	—
Clinical Coordination Center for STEADY-PD3	93.853	5U01NS080818-04		150,871	—
Study in Parkinson Disease of Exercise Phase 3 Clinical Trial: SPARK3	93.853	5U01NS113851-02		2,013,417	819,301
Clinical Research Sites for the Network of Excellence in Neuroscience Clinical Trials (NEXT Sites)	93.853	5U24NS107213-04		362,394	18,025
Channellopathy-Associated Epilepsy Research Center	93.853	5U54NS108674-04		3,041,867	1,455,929
MyCog – Rapid detection of cognitive impairment in everyday clinical settings	93.853	5UJHNS105562-05		1,313,519	392,520
Maternal Outcomes and Neurodevelopmental Effects of Antiepileptic Drugs (MONEAD) II	199	93.853	61869966-125439/5U01NS038455-19	113,631	—
Mechanisms of Early Recurrence in Intracranial Atherosclerotic Disease (MyRIAD)	256	93.853	662706/5R01NS084288-05 REVISED	1,565	—
Epigenetic Regulation of Nerve Injury	284	93.853	761K946/R01NS100510-01A1	188,307	—
Alpha-synuclein biomarkers in Parkinson disease	93.853	7K08NS093127-06		123,543	—
Role of Inflammation in Progressive Multifocal Leukoencephalopathy	93.853	7R01NS047029-16		308,185	—
Functional Segregation Within the Whisker-Barrel Neocortex	93.853	7R01NS091439-06		77,483	—
An Intracortical Brain-Computer Interface Model for High-Efficiency Development of Closed-Loop Neural Decoding Algorithms.	66	93.853	800010796-11/UC000153/5R01NS109257-02	64,789	—
Perinatal Arterial Stroke (PAS): A Phase III Multi-site Trial of I-ACQUIRE	12	93.853	Agmt 3/3/20/1U01NS106655-01A1	7,140	—
A randomized, double-blind, placebo-controlled trial of urate-elevating inosine treatment to slow clinical decline in early Parkinson disease ("Inosine Phase 3")	124	93.853	Agmt 4/24/17/5U01NS090259-03	8,653	—
MACC/EPICC-Net as a Hub for the HEAL Initiative EPICC-NET	131	93.853	AGMT 5/20/21/1U24NS115679-01	7,608	—
NN108: Topiramate as a disease altering therapy for Cryptogenic Sensory Peripheral Neuropathy (CSPN)	124	93.853	Agmt Signed 02/27/12/1U01NS095388	32,538	—
COHORT OF HIV-ASSOCIATED SEIZURES AND EPILEPSY IN ZAMBIA (CHASE): SCALE UP AND EXPANSION INFORMED BY R21 FINDINGS	269	93.853	AWARD0000487/URF-AC: GRS 11027/R01NS094037	47	—
Touch spanning spatial scales: The neural basis of texture perception in somatosensory cortices	234	93.853	AWD064415/SUB00003241/5R01NS101325-04	49,570	—
Predicting Stroke Risk in Intracranial Atherosclerotic Disease with Novel High Resolution, Functional and Molecular MRI Techniques	234	93.853	AWD101460 (SUB00004111)/R01NS114632-01A1	189,402	—
Role of interneurons in brain tissue oxygen regulation	153	93.853	EH17-251-S1//5R01NS107383-04	77,290	—
Probing Somatosensory Representations in the Cuneate Nucleus of Awake Primates	234	93.853	FP06021//5R01NS095162-02	127,387	—
Cell Type Specific Genetic Manipulation to Dissect Cholinergic Interneuron Function and Plasticity in a Symptomatic Model of DYT1 Dystonia (et)	280	93.853	GMO212305 PO 000002283//R01NS110853-01A1	23,804	—
(CREST-2) Trial: Carotid Revascularization and Medical Management for Asymptomatic Carotid Stenosis Trial	131	93.853	MCW Signed 11/09/17/5U24NS100648-04	3,903	—
Examining the role of phosphatidylethanolamine and autophagic disruption in Lewy Body Dementias and Parkinson's disease	121	93.853	NWLU224063-03/5U01NS080168-07	16,209	—
Differing Neuronal Mechanisms Mediating Locomotion and Spasms After Spinal Cord Injury	223	93.853	22-08-001//1R56NS114272-01A1	5,696	—
LRP4 signaling in neuromuscular junction formation	33	93.853	S002/2R01NS047567-13A1	26,387	—
Molecular and cellular dissection of the pathogenesis of herpes simplex encephalitis with iPSC-derived CNS and PNS cells	181	93.853	SPN pending RESS13371/2R01NS082007-09	67,050	—
Molecular and cellular dissection of the pathogenesis of herpes simplex encephalitis with iPSC-derived CNS and PNS cells	181	93.853	SUB00000135/2R01NS072381-10	77,785	—
Quantification of dynamic ankle mechanics for assessment and treatment of locomotor dysfunction post stroke	257	93.853	SUB00000183 // 5R01NS072381-11	49,798	—
Multiparameter Variant Prediction (MVP) in Epilepsy	257	93.853	SUBK00011246/5R21HD097863-02	49,351	—
NN110 – A Dose Selection Trial of Light Therapy for Impaired Sleep in Parkinson's Disease	124	93.853	SUBK00011889/1 U54 NS117170-01	129,825	—
			U01NS114001	608	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Chronic Rhinosinusitis Integrative Studies Program 2 (CRISP2)		93.855	SP01A1145818-03	\$ 1,759,859	447,894
Third Coast Center for AIDS Research		93.855	SP30A117943-05	(2,537)	—
Third Coast Center for AIDS Research		93.855	SP30A117943-05	(851)	(851)
Third Coast Center for AIDS Research		93.855	SP30A117943-07	2,805,245	338,006
ALPHA-HERPESVIRUS TRANSPORT IN AXONS		93.855	SR01A1056346-15	(1,725)	—
ALPHA-HERPESVIRUS TRANSPORT IN AXONS		93.855	SR01A1056346-15	4,351	4,351
ALPHA-HERPESVIRUS TRANSPORT IN AXONS		93.855	SR01A1056346-17	297,447	57,594
The Role of Group 1 CD1-restricted T Cells in Infectious Disease		93.855	SR01A1057460-16	170,071	—
Molecular mechanism of V. vulnificus MARTX toxin in pathogenesis and food safety		93.855	SR01A10092825-10	555,282	—
Accessory Virulence Factors of Pseudomonas aeruginosa		93.855	SR01A1118257-05	173,502	—
REPRIEVE A5332 Women's Ancillary Study		93.855	SR01A123001-02//BWH AGMT 11/23/16	232	—
Harnessing MUC16-IgG Interactions to Enhance HIV Vaccine Function	24	93.855	SR01A1125171-05	125,731	35,651
The role of IL-27/Lag3 axis in regulating Foxp3+ regulatory T cell function		93.855	SR01A1125247-06	341,656	—
REDD1 dissociates the therapeutic and adverse effects of glucocorticoids in skin		93.855	SR01A1125366-05	667,219	84,750
Poxvirus manipulation of the host cell protein synthesis machinery		93.855	SR01A1127456-05	384,906	—
Hormones in allergic disease		93.855	SR01A1127783-05	308,908	—
Distinct mast cell responses in male and female S.J.L mice underlie sex dimorphic EAE susceptibility		93.855	SR01A1128292-05	484,753	—
Food Allergy Outcomes Related to White and African American Racial Differences (FORWARD)		93.855	SR01A1130348-05	986,792	542,765
Macrophage Redox State in Sterilizing and Injurious Inflammation		93.855	SR01A1131267-05	367,040	—
Autoantibody mediated pathogenesis in chronic rhinosinusitis with nasal polyps: mechanisms and consequences		93.855	SR01A1134952-04	368,422	—
Structure and Function of EBV Protein Complexes that Trigger Epithelial Cell Entry		93.855	SR01A1137267-04	561,626	—
Siderophores of Legionella pneumophila		93.855	SR01A1139054-04	443,892	525,714
The role of non-classical MHC class I molecules in immune responses to Mycobacterium tuberculosis infection		93.855	SR01A1141083-04	548,027	—
Nuclear rotation and cellular reorganization during Cytomegalovirus infection		93.855	SR01A1141470-03	426,437	—
Design and characterization of biomimetic nanobiomaterials to elicit CD1-restricted T cell responses during sub-unit vaccination		93.855	SR01A1145345-03	772,058	—
Targeting the functions of the gonococcal Type IV pilus		93.855	SR01A1146073-02	286,546	—
Characterizing Mucosal Changes in the FRT Leading to Increased HIV Acquisition		93.855	SR01A1146087-03	297,769	45,729
Foxp3+ regulatory T cell-dependent treatment of allergic inflammation by glucocorticoids		93.855	SR01A1147496-04	396,422	40,817
Mitochondria regulate adaptive immunity		93.855	SR01A1148190-03	551,818	—
Mechanism of Herpes Simplex Virus (HSV) Induced Membrane Fusion		93.855	SR01A1148478-02	453,338	34,968
Virus-host interactions governing alpha-herpesvirus genome delivery and neuroinvasion		93.855	SR01A1148780-02	494,195	62,182
The role of FEZ1 in early HIV-1 infection		93.855	SR01A1150559-08	440,455	—
Evolution and consequences of multidrug resistant ribosome		93.855	SR01A1150986-02	336,368	—
Functionally Defining HIV-Host Interactions During the Early HIV-1 Lifecycle		93.855	SR01A1150996-02	1,278,144	895,810
Discovery of novel benzimidazole resistance mechanisms		93.855	SR01A1153088-02	557,055	203,693
Diverse Functions of p38 α MAPK in T Helper Differentiation		93.855	SR03A125813-02	12,326	—
Probing the Functions of KLF2 Downregulation		93.855	SR21A1119137-02	(26)	—
Defining the Siderophore of Stenotrophomonas maltophilia, an Emerging, Multi-Drug Resistant Pathogen		93.855	SR21A1125968-02 REVISED	90,934	—
Biomarkers for Highly Virulent Pseudomonas aeruginosa Strains		93.855	SR21A1129167-02 REVISED	(8,212)	—
Biomarkers for Highly Virulent Pseudomonas aeruginosa Strains		93.855	SR21A1129167-02 REVISED	37,825	37,825
A Master Role of Symmetric Arginine Dimethylation in Lupus Autoantibody Response		93.855	SR21A1131087-02	36,702	—
T regulatory cell responses during viral infection		93.855	SR21A1132848-02	(26,921)	—
Regulation of HPV Replication by Sirtuin Deacetylases		93.855	SR21A1133984-02	(13)	—
Novel Proteoform Biomarkers of Acute Rejection in Liver Transplant Recipients		93.855	SR21A1135827-02	20,154	—
Reassessing Legionella pneumophila Recognition during Intracellular Infection of Human Macrophages		93.855	SR21A1137458-02	130,694	—
Leveraging immunostimulatory pathways that enhance BCG vaccination for the rational design of synthetic neonatal vaccine formulations		93.855	SR21A1137932-02	(1,560)	—
Leveraging immunostimulatory pathways that enhance BCG vaccination for the rational design of synthetic neonatal vaccine formulations		93.855	SR21A1137932-02	31,401	31,401
Metabolic and Immune Consequences of Antibiotic-Related Microbiome Alterations during TB Treatment		93.855	SR21A1148033-02	164,391	60,733
Mechanisms and Modifiers of Zika Virus Innate Immune Evasion		93.855	SR21A1148949-02	245,924	—
An unbiased screen to identify Neisseria gonorrhoeae genes important for survival to neutrophil killing mechanisms		93.855	SR21A1148981-02	146,939	—
Vibrio vulnificus toxin-receptor interactions		93.855	SR21A1149061-02	197,532	—
6mer seed toxicity and AIDS		93.855	SR21A1150910-02	200,385	—
Regulation of Neuromyelitis Optica via Tolerance Induced by PLG Nanoparticles Encapsulating Aquaporin 4 Epitopes		93.855	SR21A1151438-02	299,057	—
Dynamics of Pseudomonas aeruginosa During Bacteremia		93.855	SR21A1153953-02	214,967	—
Dynamic interactions within alpha-herpesvirus virions and their impact on infection		93.855	SR21A1154104-02	180,231	—
Mechanisms of Gonococcal Plin Antigenic and Phase Variation		93.855	SR37A1033493-28	415,941	—
Identification of the Initial Targets of Transmission		93.855	SR37A1094595-10	638,200	326,200
Immunology and Molecular Pathogenesis Training Program		93.855	5T32A1007476-25	270,071	—
Northwestern University Allergy Immunology Research Program (NUAIR)		93.855	5T32A1083216-10	5,490	5,119
Northwestern University Allergy and Immunology Research (NUAIR) Program		93.855	5T32A1083216-12	230,281	30,715
Northwestern University Infectious Diseases Education and Science (NuIdeas)		93.855	5T32A1095207-10	196,044	112,540
Multicenter AIDS Cohort Study		93.855	SU01A1035039-26	(3)	—
Multicenter AIDS Cohort Study		93.855	SU01A1035039-26	(9,278)	(9,278)
Successful Clinical Response In Pneumonia Therapy (SCRIPT) Systems Biology Center		93.855	SU19A1135964-04	2,473,648	41,963
COVID-19: Successful Clinical Response In Pneumonia Therapy (SCRIPT) Systems Biology Center		93.855	COVID-19: SU19A1135964-04	54,966	—
Using siglecs and their ligands to treat allergic diseases SALTAD		93.855	SU19A1136443-04	1,153,103	616,534
Chicago Clinical Trials Unit		93.855	SUM1A1069471-14 revised	1,049,705	785,469
Sustained Long Acting Prevention Against HIV Program Operation		93.855	SUM1A110184-04	978,220	75,784
Innate Immune Surveillance of HIV-1 During Transmission and Systemic Infection	187	93.855	60088-12935-NWU// 5 R01 AI127302-05	63,237	—
[U19] Integrated Genomics of Mucosal Infections: Viral Diversity and Pathogenicity in Mucosal Respiratory and Gastrointestinal Disease	18	93.855	700000088//SU19A1144297-03	2,605	—
A novel multifunctional role of diverse substrate binding and import by the Haemophilus Sap transporter	179	93.855	700191-0222-00//SR01A1139519-03	202,367	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Development and characterization of a nanocarrier for enhanced delivery of benzimidazole during acute and chronic T. cruzi infection		93.855	7R21AI144529-02	\$ 248,936	—
Mechanisms for Initiation of Food Allergy Early in Life	97	93.855	8575/1R01AI153239-01	2,484	—
Clostridium innocuum as an emerging multidrug-resistant antibiotic-associated diarrheal pathogen	12	93.855	901553-NU/5R21AI144549-02	42,210	—
Urinary ProAdrenomedullin to Risk Stratify Children with Community-Acquired Pneumonia	12	93.855	901574 NU/5R03AI147112-02	17,051	—
Macrophage Immune Modulation to Improve Outcome in Obstructive Cholestasis	12	93.855	901605-NU (Green)/1R21AI153747-01	16,540	—
Macrophage Immune Modulation to Improve Outcome in Obstructive Cholestasis	12	93.855	901605-NU (Winter)/1R21AI153747-01	19,682	—
Identifying the Breadth of Antibody Responses to Clostridioides difficile Infection	12	93.855	901606-Northwestern/5R03AI149000-02	3,127	—
Identifying Specific Antigenic Targets of Kawasaki Disease	12	93.855	901622/1R01AI150719-01A1	21,803	—
Soy Isoflavones for Inner City Infants at Risk for Asthma (SIRA)	12	93.855	901635-NU-DCC (Kim)/1U01AI160018-01	10,480	—
IMPAACT Network Leadership and Operations Center (LOC) Grant – CRS 4001 PF	12	93.855	915377-NU/SUM1AI068632-14	1,860	—
Impact of CCR5 Blockade in HIV+ Kidney Transplant Recipients	232	93.855	9254sc/5U01AI118594-03	66,507	—
EpiModel 2.0: Integrated Network Models for HIV/STI Prevention Science	63	93.855	A011168/5R01AI138783-03	43,917	—
Modeling concurrent cytomegalovirus infection and transplantation tolerance	58	93.855	A031106/5R01AI114824-05	15,637	—
Bridging Antibody Fc-mediated Antiviral Functions Across Humans and Nonhuman Primates	58	93.855	A033429/5P01AI120756-05	37,273	—
Rapid discovery of millions of intact biosynthetic gene pathways for natural product compounds treating infectious diseases from the majority of un-sequenced filamentous fungi with a novel FAC-NGS tool		93.855	Agmt 8/25/21//1R44AI140943-02	110,355	—
Targeting Inflammation and Alloimmunity in Heart Transplant Recipients with Tocilizumab	124	93.855	AGMT 8/11/20/5U01AI136816-02	17,686	—
COVID-19: COVID-19 CoVPN Protocol 3003/Janseen	229	93.855	COVID-19: CoVPN3003-Janssen/3UM1AI068636-14S2 REVISED	18,492	—
Next-Generation Phylodynamics-targeted Partner Service Models for Combined HIV Prevention	234	93.855	FP06835-A (S20888601-6) // 5R01AI136056-04	173,215	—
Protocol ITN056ST: Evaluation of Donor Specific Immune Senescence and Exhaustion as Biomarkers of Operational Tolerance Following Liver Transplantation in Adults	20	93.855	FY19ITN156/SUM1AI109565-06	7,496	—
Immune Tolerance Network (EWL-Pre-SunBeam)	20	93.855	FY20ITN338/SUM1AI109565-07	(6,119)	—
Immune Tolerance Network – Prime Award No.: 5UM1AI109565-07 FAIN: UM1AI109565	20	93.855	FY20ITN337/SUM1AI109565-08	13,010	—
COVID-19: Systemic Allergic Reactions to SARS-COV-2 Vaccination (SARS Vaccination)	20	93.855	COVID-19: FY21ITN447/2UM1AI109565-08	77,694	—
Mucosal mechanisms of altered HIV susceptibility in adolescents	258	93.855	N008806602/R01AI128782	31,374	—
Mucosal mechanisms of altered HIV susceptibility in adolescents	256	93.855	SPC-008866/5R01AI28782-04	(957)	—
Pathogenesis of Jeilongvirus	242	93.855	SUB00001474/R01AI128924	110,096	—
Allergen Loaded Nanoparticles for Food Allergy Tolerance	257	93.855	SUBK00012728 // 1R01AI155678-01	55,546	—
COVID-19: ACTG A5401 Protocol PF Fund	229	93.855	COVID-19: Taiwo AGMT 4/20/21/2UM1AI068636-15	63,222	—
The Role of Lipid-specific T cells in Mediating Protection Against M. Tuberculosis	283	93.855	UW-SC120652/5R01AI146072-02	163,571	—
High vs. Standard Dose Flu Vaccine in Adult Stem Cell Transplant Recipients	288	93.855	VUMC82776/SU01AI32004-02	(6,301)	—
Comparison of High vs. Standard Dose Influenza Vaccines in Adult Solid Organ Transplant Recipients	288	93.855	VUMC85656/1U01AI52967-01	697	—
				37,324,487	6,316,810
NIFEDIPINE PTB SUPPLEMENT	245	93.856	18338/3R01HD089455-04S1	28,861	—
Structure and function of desmosomal cadherins	46	93.859	1(GG011995-01)/5R01GM118584-04	98,020	—
Center for the Structural Biology of Cellular Host Elements in Egress, Trafficking, and Assembly of HIV (CHEETAH Center)	281	93.859	10044932-10/5P50AI150464-15	338,438	—
Micromechanical basis of meiotic chromosome condensation and architecture	246	93.859	101111-18038/1R01GM135549-01A1	34,373	—
Understanding the Structural/Functional Basis of HIV Replication in Macrophages	232	93.859	10996sc // 5P50AI150476-14	73,243	—
Development of Affinity Rod Scaffolds for Cryo-EM Sample Preparation	171	93.859	11000768-046/1R21GM127958-01A1	(4,711)	—
Team Dynamics, Networks, and Assembly (Team DNA)	229	93.859	1295 G T4411/5R01GM112938-05	58,037	—
Team Dynamics, Networks, & Assembly (Team DNA)	229	93.859	1295 G UA135/5R01GM112938-05	88,807	—
Information Processing by Post-Translational Modification	80	93.859	153447.5/111019.0005/5R01GM105375-07	76,432	—
Optical nanosensor for 3D force sensing in intact tissues of live animals	236	93.859	1560378/1R21GM140347-01	19,157	—
National Infrastructure for Standardized and Portable EHR Phenotyping Algorithms	110	93.859	194147/5R01GM105688-09	161,902	—
High-throughput discovery of protein energy landscapes in natural and designed proteomes		93.859	1DP2GM140927-01	571,060	—
Structural and functional characterization of putative Cu importer CopD		93.859	1F32GM140573-01 REVISED	9,024	—
A Biosynthetic Strategy to Manufacture Less Toxic Amphoterics		93.859	1F32GM142211-01	22,665	—
Resource for Quantitative Elemental Mapping for the Life Sciences		93.859	1P41GM135018-01	941,786	49,442
New Acid Catalysis Concepts for Asymmetric Synthesis		93.859	1R01GM131431-01	(2,534)	—
Development of spectroscopic Single-Molecule Localization Microscopy		93.859	1R01GM140478-01	189,709	—
Histone chaperone networks for new and evicted histones		93.859	1R01GM143638-01	15,091	—
Bright and switchable fluorophores for highly multiplexed super-resolution microscopy towards molecular interaction imaging		93.859	1R21GM141675-01	8,660	—
Development of dictyBase, an online informatics resource		93.859	2R01GM06426-17	(3,067)	—
The Dictyostelium Stock Center		93.859	2R01GM087371-10	(2,439)	—
Cryo ptychography combined with x-ray fluorescence analysis of metals in cells		93.859	2R01GM104530-06 REVISED	102,400	14,841
Non-coding RNAs and their mechanisms and functions		93.859	2R35GM118144-06	312,308	—
Integrated Empirical and Translational Research to Diversify the Scientific Workforce		93.859	2R35GM118184-06	137,704	—
Characterization of new methanobactins and their biosynthetic enzymes		93.859	3F32GM131665-02S1	59,756	—
Molecular mechanisms controlling kinetochore-microtubule attachments during mitosis		93.859	3R01GM135391-02S1	384,884	—
Metalloenzymes and metal homeostasis		93.859	3R35GM118035-06S1	186,783	—
Structural and biophysical studies of proteins, nucleic acids, and their complexes		93.859	3R35GM118108-05S1	537,395	—
Medical Scientist Training Program		93.859	3T32GM008152-35S1	1,476,724	—
Biotechnology Predoctoral Training Program		93.859	3T32GM008449-21S1	545,748	—
Postdoctoral Pathways – Broadening Access to Career Advancement	23	93.859	4500002877/5R25GM121257-04	97,869	—
Src kinase phosphorylation of the human mitotic kinesin, Eg5		93.859	4R01GM107209-04	(43,906)	—
Analysis of lamin-chromatin interactions and their regulation of chromosome organization and gene expression	32	93.859	5-10742-01/5R01GM106023-08	88,043	—
Accessing the Silent Majority: Induction of Gene Expression in Fungal Artificial Chromosomes for Natural Product Discovery		93.859	5F32GM134679-03	59,319	—
Tissue-Based Metal Imaging Tools and Their Application Towards Spatiotemporal Mapping of Zinc Fluxes in Ovaries		93.859	5F32GM139401-02	66,550	—
Violence Exposure and Cardiovascular Risk in Adolescence		93.859	5F32AI146005-03	69,625	—
The role of innate immunity in the traumatic brain injury-induced immune suppression syndrome		93.859	5K08GM117341-04	(4,565)	—
Regulation and Function of Intermediate Filaments in Cell Mechanics		93.859	5P01GM096971-09	1,964,286	827,309
National Resource for Translational and Developmental Proteomics		93.859	5P41GM108569-07	1,374,268	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Metalloregulation by MerR and Fur Protein Families		93.859	5R01GM038784-31 REVISED	\$ 149,614	—
Molecular Mechanisms of Basolateral Targeting in Polarized Epithelial Cells		93.859	5R01GM070736-13 REVISED	51,107	—
Mechanisms of Kinesin Regulation		93.859	5R01GM072656-09	(11,219)	—
Carbene Catalysis Strategies for Organic Synthesis		93.859	5R01GM073072-13	(37,400)	—
DNA zip codes and the spatial organization of the yeast genome		93.859	5R01GM080484-12	23,327	—
Developmental Dynamics of Ciliated Epithelia		93.859	5R01GM089970-12	343,909	—
Src kinase phosphoregulation of the human mitotic kinesin, Eg5		93.859	5R01GM107209-03	(22,731)	—
Biological Transition Metals		93.859	5R01GM111097-49 REVISED	445,467	—
Analysis of Novel Virus-induced RNAs		93.859	5R01GM111652-04	(390)	—
Assembly and epigenetic inheritance of the human centromere		93.859	5R01GM111907-08	273,131	—
Integrative informatics approach to develop safe glucocorticoid therapies		93.859	5R01GM112945-04	150,742	40,000
Molecular Regulation of Radial Intercalation		93.859	5R01GM113922-04	271,545	—
Algorithms for Glyco-Proteform Detection		93.859	5R01GM115739-06	251,287	—
Capturing Transient Protein Structures on Multiple Spatial and Temporal Scales		93.859	5R01GM115761-05	9,561	—
Capturing Transient Protein and Nucleic Acid Structures During Their Functions on Multiple Spatial and Temporal Scales		93.859	5R01GM115761-07	242,210	—
Regulatory Roles of Zinc Fluxes in Metalloprotein Occupancy and Cell Cycle Progression		93.859	5R01GM115848-04	48,203	—
Neural Crest Ontogeny and the Control of Stem Cell Attributes		93.859	5R01GM116538-04	27,648	—
Defining the molecular and cellular mechanism of epigenetic transcriptional memory		93.859	5R01GM118712-04	40,658	—
Investigating the molecular mechanism of mitochondrial tethering		93.859	5R01GM120303-05	349,259	—
RNA Ligation Pathways in Mammalian Unfolded Protein Response		93.859	5R01GM120307-04	229,267	—
Regulation and function of bacterial 100S ribosome		93.859	5R01GM121359-05	448,180	8,550
Specific inhibition of transcription factors with Cobalt-Schiff Base Complexes		93.859	5R01GM121518-04	200,826	—
New Methods and Strategies for the Concise Synthesis of Bioactive Polycyclic Molecules		93.859	5R01GM124089-04	233,243	—
Regulation of chromosome segregation during oocyte meiosis		93.859	5R01GM124354-04	120,085	—
Social signals that regulate C. elegans development		93.859	5R01GM126125-03	309,502	—
Prion-mediated protein aggregation/co-aggregation and cellular consequence		93.859	5R01GM126318-04	310,675	—
Cadherin-catenin regulation in dividing epithelial cells		93.859	5R01GM129312-04	395,845	—
Cell signaling in regeneration and tissue scaling		93.859	5R01GM129339-03	422,921	—
The role of monocyte and microglia interaction in the evolution of traumatic brain injury-induced neurodegeneration		93.859	5R01GM130662-03	889,834	3,924
Enhancement of neural regeneration		93.859	5R01GM130835-03	314,162	—
Functional Roles of Nascent RNA Structure in Regulating and Coordinating Gene Expression		93.859	5R01GM130901-02	400,236	—
Continuous Probing of Nanoconstruct-Cell Interactions at Biologically Relevant Time Scales		93.859	5R01GM131421-03	436,685	—
Development of Photoreversible 4D Cell Culture Technologies		93.859	5R01GM132677-03	278,669	28,826
Regulation of de novo purine synthesis by the MAPK/ERK pathway		93.859	5R01GM135587-02 REVISED	228,286	—
Structure and Mechanism of Non-Homologous End Joining		93.859	5R01GM135651-02 REVISED	373,149	23,438
Cytokinesis staging mechanisms		93.859	5R01GM137133-02	109,365	—
SCISIPBIO: Understanding and Assembling Dream Teams to Conduct Clinical and Translational Science		93.859	5R01GM137410-02	117,698	48,391
Intrinsic-contrast super-resolution imaging of DNA at 2-nm resolution		93.859	5R01GM139151-02	274,430	—
Quantitative analysis of metabotropic glutamate receptor activation and modulation		93.859	5R01GM140272-02	259,035	—
The Interplay of Electric Potential and Morphology of Biomembranes		93.859	5R01GM140461-02	217,573	—
Regulation mechanisms of ABC transporters		93.859	5R01GM140584-02	288,404	—
A Quantum Dot Probe for Nanosecond-Timescale Imaging of Fast Biological Processes		93.859	5R21GM127919-02	(3,519)	—
A Microfluidic Device for Temporal Live-Cell Analysis of Intracellular Biomolecules		93.859	5R21GM132709-02	155,470	—
Dictyostelium Community Resource		93.859	5R24GM137770-02	750,171	—
Mentoring for Success: Developing Fundamental Skills for Biomedical Research		93.859	5R25GM079300-13	150,700	—
Northwestern University Interdepartmental Neuroscience Postbaccalaureate Research Education Program		93.859	5R25GM121231-05	347,036	4,336
Metalloenzymes and metal homeostasis		93.859	5R35GM118035-05	226,382	—
Non-coding RNAs and their mechanisms and functions		93.859	5R35GM118144-05	485,184	—
Integrated Empirical and Translational Research to Diversify the Scientific Workforce		93.859	5R35GM118184-05	587,626	47,959
Impact of genetic variants on gene regulation and 3D genome organization in human diseases		93.859	5R35GM124820-05	342,415	—
Microtubule motors, cytoskeletal organization and cell polarity		93.859	5R35GM131752-03	627,949	—
Selective inhibition of nitric oxide synthase for multiple indications		93.859	5R35GM131788-03	619,400	71,082
The molecular mechanisms and functional significance of gene positioning		93.859	5R35GM136419-02	556,354	—
New Cooperative Catalysis Concepts for Asymmetric Synthesis		93.859	5R35GM136440-02	297,295	—
Characterizing functional translation in putative 'noncoding' regions of a genome		93.859	5R35GM138192-02	372,385	—
Cellular and Molecular Basis of Disease Training Program		93.859	5T32GM08061-39	810,581	—
Molecular Biophysics Training Program at Northwestern University		93.859	5T32GM08382-28	307,064	—
Chemistry of Life Processes Predoctoral Training Program		93.859	5T32GM105538-09	288,065	—
Dissecting functional cooperation among subunits in a catalytic ribonucleoprotein		93.859	60057276//R01GM120582	386	—
Dynamics and allosteric in protein-RNA regulation	158	93.859	60060542//R01GM120923	8,886	—
Genetic Analysis of Beneficial Bacterial Colonization	284	93.859	790K182//7R35GM119627-03	43,448	—
The Roles of Enhancer RNAs in the Regulation of Gene Expression		93.859	7R35GM128900-04	18,756	—
COVID-19: SampleStream: A Radically Simplified Platform for Protein Sample Preparation	100	93.859	COVID-19: Agmt 2/2/2021//Contract No. 3 R44 GM121130-03S1	148,821	—
Computational epigenetics modeling of cell identity genes	134	93.859	AGMT00003280//R01GM125632-03	2,769	—
COVID-19: Design of cost-effective COVID-19 surveillance	268	93.859	COVID-19: AWD00002352 (134497-3)//3U24GM132013-02S2	99,998	—
Establishing the market-readiness of an in vivo technology for assessing drug toxicity-induced tissue damage	59	93.859	NW-0221//R41GM140538-01	17,798	—
Resource for Quantitative Elemental Mapping for the Life Sciences	137	93.859	RC113087NWU//P41GM135018	81,635	—
Mechanobiology of Vimentin Intermediate Filaments in 3D Collective Cell Migration	125	93.859	SS271_PDF 560195//R01GM140108-01	41,511	—
Probing Cellular Membrane Processes by Single Particle Orientation and Rotational Tracking	76	93.859	SP00012129-01//R01GM115763	8,570	—
Orthogonal Ubiquitin Transfer to Profile E3 Substrate Specificity	76	93.859	SP00014037-01//R01GM104498	78,329	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Orthogonal Ubiquitin Transfer to Profile E3 Substrate Specificity	76	93.859	SP0013463-01/5R01GM104498-09	\$ 218,261	—
				<u>27,258,648</u>	<u>1,168,098</u>
New Evidence on Conception and Pregnancy Loss in the U.S	284	93.865	0000000895//1R01HD102207-01	13,864	—
Intimate Partner Violence in Sexual Minority Female Adolescents and Young Adults	235	93.865	010314-006/5R01HD086170-05	253,967	—
Development of a standardized measure of social-communication abilities for children with neurodevelopmental disorders	232	93.865	10364sc/5R01HD093012-04	66,448	—
Molecular basis of altered drug metabolism during pregnancy	171	93.865	11001136-002/7R01HD089455-05	161,479	—
Pediatric HIV/AIDS Cohort Study (PHACS): 2020	80	93.865	117267-0107-5115573//1P01HD103133-01	44,111	—
Pediatric HIV/AIDS Cohort Study (PHACS): 2020	80	93.865	117267-0182-5119289//1P01HD103133-01	18,880	—
Health Outcomes around Pregnancy and Exposure to HIV/ARV (HOPE):	80	93.865	117270-5112848//1R01HD101351-01	36,168	—
Integrating Environmental Cues at the Maternal-Fetal Vascular Interface	232	93.865	11731sc/5R01HD072455-08	32,866	—
Optimization of Drug Dosing in Pregnant Women through Research and Education (OPRC)	122	93.865	1428NW/5U54HD047904-15	3,644	—
Molecular Basis of Altered Drug Metabolism During Pregnancy	245	93.865	16572//5R01HD089455-04	146,489	—
Cortical Priming to Optimize Gait Rehabilitation Post Stroke	245	93.865	18583 // 5R01HD075777-07	1,003	—
Universal strengths-based parenting support in pediatric health care for families with very young children following the Flint Water Crisis	148	93.865	18-A1-00-1001408//5R01HD096909-03	15,611	—
Defining epigenetic mechanisms for embryonic patterning		93.865	1R01HD101563-01A1	76,452	—
Oocyte genomic instability as a driver of the aging ovarian innate immune response		93.865	1R01HD105752-01	805	—
LASDB Meeting 2019		93.865	1R13HD100162-01	(1)	—
Role of m6A modification in Alpha 1-antitrypsin deficiency induces liver disease		93.865	1R21HD104904-01	24,119	—
Improving the Pelvic Health of Women and Girls Through the Use of a Digital Coaching Platform	176	93.865	1R41HD097845-01A1//1R41HD097845-01A1-S1	65,134	—
Research Training in Sensorimotor Neurorehabilitation		93.865	1T32HD101395-01A1	48,000	—
How Housing Vouchers Affect Biology & Health	112	93.865	200326202 // U01HD075967	128,200	—
Pathways linking Early Adversity and Support to Behavioral and Physical Health	265	93.865	203344NU//1R01HD091235-03	70,496	—
Quantification of Shoulder Pathology and Manual Wheelchair Propulsion in Children and Adults with Spinal Cord Injury using Advanced Biomechanical Modeling and Diagnostic Imaging		93.865	203405427//R01HD098698-01	19,158	—
Maternal-Fetal Medicine Units Network -- The Northwestern Study Center	285	93.865	2UG1HD040512-22 REVISED	112,000	—
Pharmacologic strategies to use the levonorgestrel implant in HIV-infected women	261	93.865	34-2009-2031-001//5R01HD085887-05	4,221	—
Patient navigation to improve outcomes among low-income women in the postpartum period		93.865	3R01HD098178-03S1	681,877	—
Infant attention in the context of language		93.865	5F32HD096580-03	80	—
Maternal psychological stress, adverse birth outcomes, and the role of inflammatory mediators in the placenta		93.865	5F32HD100076-03	64,978	—
Cerebral organoid models of CHD2-associated intellectual and developmental disabilities		93.865	5F32HD101280-02	83,053	—
Intergenerational health impacts of interpersonal and community-based violence: From childbirth to childbearing		93.865	5F32HD102152-02	69,024	—
Effect of Injury Severity and Location on Spasms Post SCI		93.865	5K01HD084672-05	45,335	—
Research Career Development in Obstetrics and Gynecology		93.865	5K12HD050121-17	187,457	—
Interdisciplinary Engineering Career Development Center in Movement and Rehabilitation Sciences		93.865	5K12HD073945-10	457,250	384,269
Upper-Extremity Torque Perceptual Impairments in Chronic Hemiparetic Stroke		93.865	5K25HD096116-04	153,377	—
Uterine Leiomyoma Research Center Program		93.865	5P01HD057877-10 REVISED	589,368	21,744
Northwestern Uterine Leiomyoma Research Center		93.865	5P50HD098580-03	1,754,934	502,551
Cognitive Architecture of Bilingual Language Processing		93.865	5R01HD098588-10	358,598	—
Neuromuscular Mechanisms Underlying Poor Recovery from Whiplash Injuries		93.865	5R01HD079076-05	(11,403)	—
Linking language and cognition in infancy: Entry points and developmental change		93.865	5R01HD083310-05	344,011	—
PED Screen: Pediatric Sepsis EHR Registry, Clinical Outcomes, and Predictive Model		93.865	5R01HD087363-05 REVISED	684,958	684,958
Integrative Genomics, Epigenomics and Bioinformatics Analyses of Human Uterine Fibroids		93.865	5R01HD089552-05	523,886	131,702
Bilateral Priming Plus Task Specific Training for Severe Upper Limb Hemiparesis		93.865	5R01HD091492-05	265,987	183,563
Understanding Diverging Profiles of Academic and Physical Health Outcomes in African American Youth		93.865	5R01HD093718-03	605,578	75,402
Homeostatic to reactive hyaluronan matrices in ovarian reproductive aging		93.865	5R01HD093726-04 REVISED	235,067	37,946
Firearm Involvement Among Parents and Their Adolescent Children: A Prospective Longitudinal Study of At-Risk Youth		93.865	5R01HD093935-04	468,866	—
Effects of device-assisted practice of activities of daily living in a close-to-normal pattern on upper extremity motor recovery in individuals with moderate to severe stroke		93.865	5R01HD095187-03	304,540	—
PROgressive Abduction Loading thERapy (PRALINE): A Phase IIb Stroke Rehabilitation Trial with Longitudinal Tracking		93.865	5R01HD096071-03	397,458	107,992
Effects of a Prenatal Depression Preventive Intervention on Parenting and Young Children's Self-Regulation and Functioning (EPIC)		93.865	5R01HD097215-03	774,050	18,657
Clinical Trial of Enhancing Recovery in Children Undergoing Surgery -- ENRICH-US		93.865	5R01HD099344-03	785,943	313,148
3/4: Pre-IVF treatment with a GnRH antagonist in women with endometriosis -- A prospective double blind placebo controlled trial (PREGNANT)		93.865	5R01HD100318-03	141,749	—
AMH signaling pathway variation in PCOS		93.865	5R01HD100630-02	371,384	61,557
The Effects of Injury Timing on Neural Microstructural Complexity and Motor Impairments in Cerebral Palsy		93.865	5R03HD094615-02	89,194	—
Oncofertility Consortium Annual Conference		93.865	5R13HD063248-11	10,085	—
Development of a Portable Synergy Resistant EMG-driven FES Device for Intuitive Control of Grasp and Release During Functional Arm Activities Following Stroke		93.865	5R21HD094073-02	15,172	—
SweetMama: Leveraging technology for diabetes education and support to low-income pregnant women		93.865	5R21HD094271-02	71,902	—
Extremely Long Lived Proteins and Female Reproductive Aging		93.865	5R21HD098498-02	100,549	—
Determination of the Recruitment of Indirect Motor Pathways in Chronic Hemiparetic Stroke		93.865	5R21HD099710-02	121,688	36,382
Early origins of health disparities: Chronic inflammation		93.865	5R21HD101757-02	198,298	—
Endometriosis and Retinoids		93.865	5R37HD038691-20	92,497	—
Pathophysiology and Rehabilitation of Neural Dysfunction		93.865	5T32HD007418-30	267,837	—
Northwestern Center for Reproductive Science Predoctoral Training Program in Reproductive Science, Medicine, and Technology		93.865	5T32HD094699-03	190,193	—
Optimizing Medication Management for Mothers with Depression during Pregnancy (OPTI-MOM)		93.865	5U54HD085601-05	315,964	34,089
Maternal-Fetal Medicine Units Network -- The Northwestern Study Center		93.865	5UG1HD040512-21	197,706	77,242
Intensive Combination Approach to Rollback the Epidemic (ICARE) in Nigerian Adolescents		93.865	5UG3HD096920-02	187,112	155,462
Intensive Combination Approach to Rollback the Epidemic (ICARE) in Nigerian Adolescents		93.865	5UH3HD096920-04	790,796	421,848
Intuitive Control of a Hybrid Prosthetic Leg During Ambulation	175	93.865	7186//5R01HD079428-07	53,711	—
The Functional Importance of Powered Wrist Flexion/Extension and Simultaneous Control for Upper Limb Prostheses	175	93.865	7186-8191 Annid 2//5R01HD094861-03	7,109	—
Role of Muscle stem cells in sarcomere addition and contracture development	175	93.865	80184//1R03HD094662	9,574	—
EASI: Shear Wave Elastography Assessment for Predicting Success of Labor Induction	284	93.865	856K531//1R01HD096361-01	39,029	—
Center for Smart Use of Technology to Assess Rehabilitation	175	93.865	8963//P2CHD101899	43,286	—

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards

Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass- through ID number	Assistance listing	Funding ID number	Federal expenditures	Passed- through to subrecipients
Fertility Decision-Making in Youth and Young Adults	12	93.865	901547-NU/5R21HD097459-02	\$ 3,489	—
A Data-Driven Analysis of Pediatric Organ Dysfunction Patterns To Discover Sepsis Phenotypes	12	93.865	901553/5R21HD096402-02	42,593	—
Intensive Rehabilitation Research Grant Writing Workshops in the United States	132	93.865	A00-3512-S001/5R25HD074546-10	13,020	—
Cord Blood Adductomics in Bronchopulmonary Dysplasia	12	93.865	A20-0046-S001-NU/1R21HD100831-02	87,569	—
A Cognitive Test Battery for Intellectual Disabilities	226	93.865	A20-1951-S003/RO1HD076189	30,798	—
Preterm human milk composition in conditions of maternal overweight and obesity and effects of milk constituents on preterm infant body composition	12	93.865	A21-0107-S001/1R21HD102778-01A1	9,870	—
Understanding preferences regarding the offer of elective induction of labor to inform development of a decision support tool	124	93.865	AGMT 2/6/2020/5R21HD098496-02	15,621	—
MFMU Network Capitation Agreement	73	93.865	Agmt 4/25/14//U10HD036801	209,513	123,525
SIESTA (Sleep of Inpatients: Empower Staff to Act) for Acute Stroke Rehabilitation	234	93.865	AWD100824 (SUB00002246)/1R01HD097786-02	70,343	—
Improve dynamic lateral balance of humans with SCI	175	93.865	CL5253/1R01HD083314	4,853	—
Psychosocial Intervention, Maternal Inflammation, and Birth Outcomes: Centering vs Routine Prenatal Care (PIINC)	153	93.865	EH17-256-S2-1/5R01HD092446-04	125,623	—
FSH Glycoforms and Ovarian Signaling	237	93.865	FY22.1115.001//1R01HD103384-01A1	10,739	—
Maternal, Infant, and Child Health Outcomes of Sexual Minority Women: An Opportunity for Improving Health Equity	281	93.865	NW10048964//1R01HD0914505-01-2	22,871	—
Novel Pediatric Neurocognitive Screening Using Central Auditory Tests	53	93.865	R1064JLM/5R01HD095277-03	58,817	—
Long-term effects of Zika virus infection on sound processing in the brain	53	93.865	R1297/2R21DC017603-02	4,068	—
Multi-level factors affecting postpartum sterilization	33	93.865	RESS15306-AMD //R01HD098127	96,439	—
Origin of Chronic Diseases of Aging Among Rural African Young Adults	242	93.865	SUB00001828/1R01HD091046-01A1	21,617	—
Developmental, Contextual, and Psychosocial Predictors of Weathering and Health among Rural African Americans in their Fourth Decade of Life	242	93.865	SUB00002073/5R01HD030588-26	117,786	—
Study of Ovarian Aging and Reserve in Young Women (SOAR)	257	93.865	SUBK00009462//5R01HD088638-04	21,176	—
Pediatric HIV/AIDS Cohort Study (PHACS): Understanding Maternal HIV Disease through Pregnancy and the Postpartum Period and its Role in Child Health Outcomes	215	93.865	TUL-HSC-557541-19/20/5U01HD052104-15	(1)	—
MFMU Network Capitation Agreement	73	93.865	U24HD036801/AGMT 10/18/21	70,248	—
				15,513,053	3,372,037
Research on Epigenetics, Weathering, Aging, & Residential Disadvantage (REWARD) Study	284	93.866	0000000505//1R01AG061080-01A1-02	14,979	—
Integrative Pathways to Health and Illness	284	93.866	0000000784//5U19AG051426-05	58,034	—
Regulation of tau expression in Alzheimer's disease and aging	90	93.866	0255-1551-4609//5R01AG054008-05	30,902	—
Natural Language Processing and Automated Speech Recognition to Identify Older Adults with Cognitive Impairment	90	93.866	0255-D461-4609 // 5R01AG066471-02	123,828	—
Blood mitochondrial DNA biomarkers of midlife cognitive decline and adverse brain imaging changes – A longitudinal investigation in the CARDIA population-based cohort study.	46	93.866	1(G017449-01)/1R01AG069120-01	91,929	—
Long-term Outcomes of Knee OA in the OAI Cohort	232	93.866	10477sc/5R01AG050469-05 AMD 04	12,264	—
Structural characterization of Aβ strain variation in AD mouse models	272	93.866	110365091-AMD 3//5R01AG061865-04	165,517	—
The Subclinical Vascular Contributions to Alzheimer's Disease: The Multi-Ethnic Study of Atherosclerosis (MESA) Multisite Study of AD	291	93.866	111-720-551083//5R01AG058969-02	310,850	—
Predicting post-transplant mortality and global functional health based on pre-transplant functional status in liver transplantation	232	93.866	11799sc/5R01AG059183-04	29,153	—
Anti-Amyloid Treatment in Asymptomatic Alzheimer's Disease (A4) Open-Label Extension Study	272	93.866	120151062//1R01AG063689-01/via BWH Subaward #12133	58,362	—
Application of Economics and Social Psychology to Improve Opioid Prescribing Safety (AESOPS)	272	93.866	124931788 // 5R33AG057395-04	88,835	—
The A3 Study: Anti-Amyloid prevention of Alzheimer's disease	272	93.866	131741339//5R01AG054029-02	4,600	—
Combination anti-amyloid therapy for preclinical Alzheimer's disease (A45)	272	93.866	131741549//1R01AG061848-01	690	—
Alzheimer's Clinical Trials Consortium (ACTC) (U24)	272	93.866	13514337/1U24AG057437	16,068	—
USC/UCLA Center on Biodemography and Population Health	272	93.866	13691861/1P2P30AG017265-20	35,549	—
Alzheimer's Disease Neuroimaging Initiative (ADNI) Diversity Taskforce Project	272	93.866	137206820//U19AG024904-12	25,366	—
Gene Therapy for Alzheimer's Disease	80	93.866	153271.5106938.0002//5R21AG059157-02	13,135	—
Chicago Asian Resource Center for Minority Aging Research (RCMAR)	184	93.866	1666//P30AG059304-03	7,923	—
A Dynamic Environmental Exposure Approach to Study Behaviors in Mid-Life	245	93.866	17784/5R01AG062180-02	52,758	—
Determining the neural and biomechanical contributions to age-dependent impairments in balance control	93.866	1F31AG069412-01A1 REVISED		24,594	—
Dysfunction of microglial proteostasis drives neuroinflammation and cognitive decline following pneumonia	93.866	1F31AG071225-01 REVISED		21,611	—
Management of Complex Medication Regimens among Older Adults with Alzheimer's Disease and Related Dementias and their Caregivers	93.866	1K01AG070107-01		65,276	—
Well-being as a Protective Factor against Cognitive Decline and Dementia Risk	93.866	1K99AG071838-01		30,461	—
Northwestern Alzheimer's Disease Research Center	93.866	1P30AG072977-01		536	—
Defining native proteoform landscape for amyloid-beta in Alzheimer's disease	93.866	1R01AG063903-01		823,108	—
COCOA flavanols to improve walking performance in PAD: the COCOA-PAD II Trial	93.866	1R01AG068458-01A1		29,652	—
Hepatocyte growth factor to Improve Functioning in PAD: the HI-PAD Study	93.866	1R21AG056903-01		43,148	—
Molecular Targets of Aging-Triggered Memory Decline in a Stress-Reactive Rat Strain	93.866	1R21AG062968-01A1		158,091	17,416
Functional investigation of the role of TYR mutations and neuromelanin in Parkinson's disease	93.866	1R21AG064470-01A1		193,537	—
Understanding the impact of stress reactivity on racial/ethnic disparities in cognitive function.	93.866	1R21AG089435-01		113,829	—
Sporadic Alzheimer's Disease modeled with diabetes and high cholesterol in rabbit	93.866	1R56AG050492-01A1		(7,336)	—
Cell non-autonomous regulation of proteostasis in aging and longevity	93.866	1R56AG059579-01 REVISED		(2,796)	—
Mitochondrial Stress Response in FUS proteinopathy and related dementia	93.866	1R56AG061327-01A1 REVISED		307,056	—
RNA binding protein networks in tau pathogenesis	93.866	1R56AG063934-01		33,788	—
Regulation of Peripheral Proteostasis	93.866	1RF1AG057296-01		377,471	—
Molecular and cellular mechanisms of the UNC5C netrin receptor in Alzheimer's disease pathogenesis	93.866	1RF1AG057727-01A1 REVISED		690,977	—
Sex Differences in Central Stress Response and Alzheimer's Disease Neuropathology	93.866	1RF1AG057884-01		430,194	—
The Role of RNA Binding Protein Networks in Tauopathy and Related Dementia	93.866	1RF1AG068140-01		446,617	—
Exploring the origins of myelin abnormalities in normal ageing and in vascular dementia	93.866	1RF1AG072080-01		83,502	—
Microbiome-mediated therapies for aging and healthspan in marmosets	211	93.866	20-04848-401//1R01AG065546-02	26,365	—
Cell-specific genomic features of Alzheimer's disease progression (Supplement)	58	93.866	2833397//3RF1AG054474-01S1	6,543	—
Exceptional Cognitive Aging: Neuropsychologic, Anatomic and Pathologic Correlates	93.866	2R56AG045571-06		908,164	232,698
Synaptic substrates of age-dependent memory deficits	93.866	2RF1AG07139-15		389,190	9,424
BACE1 as a Therapeutic Target for Alzheimer's Disease	93.866	2RF1AG022560-16 REVISED		682,197	—
First-in-human SAD & MAD trials for MW151, a novel Alzheimer's disease drug candidate that attenuates proinflammatory cytokine dysregulation	249	93.866	320002345-19-178//1R01AG061898-03	144,270	—
Novel Gastrocnemius Myoelectric Characteristics in Peripheral Artery Disease Patients Associated with Impaired Functional Performance	249	93.866	3200003801-21-236 // 1R01AG066724-01-A1	11,726	—
Genetic Epidemiology of Caffeine and Cognitive Decline	93.866	3K01AG053477-05S1		112,632	—
COVID-19: Genetic Epidemiology of Caffeine and Cognitive Decline	93.866	COVID-19: 3K01AG053477-05S1		68,257	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Alterations of Sleep and Circadian Timing in Aging		93.866	3P01AG011412-22S1	\$ 2,160,734	429,215
Sustaining quality of life of the aged: Heart transplant or mechanical support?		93.866	3R01AG047416-05S1	35,150	198,062
Clinical, Neuroanatomic, and Pathologic Signatures of FTLD-tau in Dementia Phenotypes		93.866	3R01AG062586-02S1	426,992	—
MRI of Left Atrial Hemodynamic Disorders in Atrial Fibrillation		93.866	3R21AG055954-02S1	30,220	—
Boston Early Adversity and Mortality Study (BEAMS): Linking administrative data to long-term longitudinal studies		93.866	3RF1AG064006-01S1	742,393	435,933
ARMADA: Advancing Reliable Measurement in Alzheimer's Disease and cognitive Aging.		93.866	3U2CAG057441-03S1	2,052,836	1,005,920
The Mobile Toolbox for Monitoring Cognitive Function		93.866	3U2CAG060426-04S1	4,222,113	2,467,328
Aging, Emotion Regulation, and Stress	55	93.866	5014366G169/1R21AG059938-01A1	10,087	—
Life Course Process of Alzheimer's Disease: Sex Difference and Biosocial Mechanisms	263	93.866	5113263/5R01AG057800-03	177,325	—
Connectomic Imaging in Familial and Sporadic Frontotemporal Degeneration	267	93.866	577121/5U01AG052943-04 REVISED	24,071	—
CARDIA Year 35 Brain MRI Renewal	267	93.866	578134/5R01AG062819-02	91,966	—
Center On Alpha-synuclein Strains In Alzheimer Disease & Related Dementias	267	93.866	579555/5U19AG062418-02	30,305	—
Modeling Ovarian Aging Phenotype in Mechanically Tuned 3D Matrices (NIH NRSA Predoc Fellowship for Emma Gargus, BS.)		93.866	5F30AG058387-04	40,112	—
NRSA in support of Michael Fernandez: Mechanisms of autophagic dysfunction in progranulin-related neurodegeneration		93.866	5F30AG060722-03 REVISED	50,136	—
NRSA in support of Wesley Peng: Regulation of neuronal calcium transfer between mitochondria and lysosomes in health and neurodegeneration.		93.866	5F30AG066333-03	44,526	—
NRSA F31 for Timothy John Hark in support of: Determining and Characterizing Substrates of Protein Degradation Impairments in Models of Alzheimer's Disease		93.866	5F31AG059364-02	14,468	—
Alzheimer's Disease Characterization via a Novel Native Mass Spectrometry Platform		93.866	5F31AG069456-02	40,266	—
Estradiol reduces mitochondrial oxidant stress in SNc DA neurons		93.866	5F32AG058396-03	5,982	—
Aging, immunosenescence and glioblastoma		93.866	5K02AG68617-02	165,712	—
Investigating the role of neuroinflammation in Limbic-predominant age related TDP43 encephalopathy		93.866	5K08AG065463-02	185,148	—
Integrative Multi-Scale Systems Analysis of Gene-Expression-Driven Aging Morbidity		93.866	5K99AG068544-02	104,378	—
Disordered Proteostasis as a Driver of Disease in the Aging Lung		93.866	5P01AG049665-04	(57,167)	—
Disordered Proteostasis as a Driver of Disease in the Aging Lung		93.866	5P01AG049665-07	2,417,250	270,274
COVID-19: Disordered Proteostasis as a Driver of Disease in the Aging Lung		93.866	COVID-19: 5P01AG049665-07	229,830	—
Proteostasis in Aging and Neurodegenerative Disease		93.866	5P01AG054407-04	2,644,120	1,900,630
Alzheimer's Disease Core Center		93.866	5P30AG013854-25	2,184,728	—
The Claude D. Pepper Older Americans Independence Center (OAIC) at Northwestern University		93.866	5P30AG059988-02	1,112,261	—
Personality and Well-being Trajectories in Adulthood		93.866	5R01AG018436-20	270,488	38,011
Molecular Neuropathology and Mechanisms of BACE1 Elevation in Alzheimer's Disease		93.866	5R01AG030142-10	22,481	—
LitCog III: Health Literacy and Cognitive Function among Older Adults		93.866	5R01AG030611-12	(31)	—
LitCog IV: Health Literacy and Cognitive Function Among Older Adults		93.866	5R01AG030611-14	655,497	54,152
COVID-19: LitCog IV: Health Literacy and Cognitive Function Among Older Adults		93.866	COVID-19: 5R01AG030611-14	235,279	—
A Universal Medication Schedule to Promote Adherence to Complex Drug Regimens		93.866	5R01AG046352-05	216,092	13,089
Noninvasive Stimulation to Improve Hippocampal-Dependent Memory in Older Adults		93.866	5R01AG049002-06	358,367	—
Stellate Ganglion Blockade for the Management of Vasomotor Symptoms		93.866	5R01AG049524-05	492,187	22,581
Role of BMP Signaling in the Aging Brain		93.866	5R01AG054429-05	805,364	—
PREDICT-ADFTD: Multimodal Imaging Prediction of AD/FTD and Differential Diagnosis		93.866	5R01AG055121-04 REVISED	606,516	542,110
Communication Bridge: A person-centered internet-based intervention for individuals with primary progressive aphasia		93.866	5R01AG055425-04	1,092,090	—
Determinants of neurodegenerative decline in the aphasic variant of Alzheimer's disease		93.866	5R01AG056258-09	500,186	5,623
INTERmittent pneumatic ComprEssion for Disability rEversal in PAD: the INTERCEDE Trial		93.866	5R01AG057693-04	652,267	107,771
LEAF 2.0: Randomized trial of a technology-based positive emotion intervention for informal caregivers of individuals with Alzheimer's disease		93.866	5R01AG058613-04	574,341	61,843
Decision Making and Implementation of Aging-in-Place/Long Term Care Plans among Older Adults		93.866	5R01AG058777-03	483,512	—
An Epidemiologic Study of Disparities in Sleep and Cognition in Older Adults (DISCO)		93.866	5R01AG059291-03	751,647	38,413
Lifecourse determinants and outcomes of epigenetic age acceleration across two generations		93.866	5R01AG061006-03	533,556	401,963
Novel Protein Aggregation Inhibitors and Upper Motor Neuron Stabilizers for ALS and other Neurodegenerative Diseases		93.866	5R01AG061708-03	701,901	—
The role of activity induced exosome signaling in synaptic pathology of Alzheimer's Disease		93.866	5R01AG061787-04	565,834	—
Molecular Mechanisms Underlying Behavioral and Psychological Symptoms in Alzheimers Disease		93.866	5R01AG062249-04	581,145	264,817
Genetic modifiers of the Mediterranean-DASH diet intervention for Neurodegenerative Delay (MIND) response		93.866	5R01AG065398-02	82,431	—
Bioenergetic Mechanisms Underlying Circadian Dietary Intervention		93.866	5R01AG065398-03	412,831	—
Personality and Non-Cognitive Factors in the Prediction and Moderation of Risk of Dementia Progression and Physical Health		93.866	5R01AG067622-03	417,921	145,993
Cognitive SuperAging: A model to explore resilience and resistance to aging and Alzheimers disease		93.866	5R01AG067781-02	126,780	—
Negotiation Training to Optimize Caregiver Communication in Alzheimer's Disease		93.866	5R01AG068421-02	282,162	—
Reconstructing the temporal landscape of gene regulation in aging		93.866	5R01AG068579-02	95,961	—
Exploring the modulation of synaptic/extrasynaptic NMDAR balance as a novel therapeutic strategy in Alzheimer's disease and other neurodegenerations		93.866	5R01AG069266-02	272,023	—
ToolBox Detect: Low Cost Detection of Cognitive Decline in Primary Care Settings		93.866	5R01AG069762-02	129,195	—
The Effect of Home Heating Prices on the Mortality and Morbidity of Older Americans		93.866	5R03AG058113-02	51,636	—
Longitudinal Trajectories of Physical and Cognitive Function among Persons Aging with HIV		93.866	5R03AG067980-02	118,500	—
Physiological role of naturally occurring amyloid beta oligomers		93.866	5R21AG060203-02	2,289	—
Epigenetic regulation of the Klotho / Miz 1 axis in smoking-induced emphysema.		93.866	5R21AG060211-02	9,255	—
A test of the calcium hypothesis of Alzheimers disease		93.866	5R21AG060267-02	68,169	—
Highly Functional Organic Core Templated High-Density Lipoproteins to Reverse Vascular Disease		93.866	5R21AG062999-02	121,978	—
Unacylated Ghrelin to Improve Functioning in PAD: the GIFT Trial		93.866	5R21AG063076-02	141,675	20,436
APelin, EXercise, and mobility in Peripheral Artery Disease, the APEX-PAD Study		93.866	5R21AG065705-02	77,107	—
Behavioral Economics Applications to Geriatrics Leveraging EHRs (BEAGLE)		93.866	5R33AG057383-05	579,415	61,678
Slow Outward Currents and Learning In Aging Hippocampus		93.866	5R37AG008796-28	219,474	—
C. elegans Model for Neurodegenerative Diseases of Aging		93.866	5R37AG026647-15	6,362	—
Predoctoral and postdoctoral training program in aging and dementia		93.866	5T32AG020506-20	448,908	6,513
Preclinical development of a novel small molecule inhibitor of Alzheimer's disease-related cognitive impairment		93.866	5U01AG066722-02	954,149	490,734
Cell autonomous and non-cell autonomous roles of the GWAS risk factor BIN1 in Alzheimer's disease neuropathology	271	93.866	61441285-00-4/7RF1AG054223-02	21,401	—
Alzheimer's Disease Cooperative Study - A4	272	93.866	75689162/U19AG010483-25R	(16,296)	—
Early Onset AD Consortium - the LEAD Study (LEADS)	97	93.866	7861_NW/SU01AG057195-03	20,443	—
Alzheimer's Disease Neuroimaging Initiative (ADNI3)	272	93.866	79634993 AMD 5/WEI2015-01/U19AG024904	25,280	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Long-Term Nicotine Treatment of Mild Cognitive Impairment	272	93.866	81622655/6R01AG047952-02	\$ 5,636	—
The role of personality in cognitive aging and dementia	202	93.866	83945/21152237/5R01AG06093303	18,200	—
LEVERAGING NEUROIMAGING BIOMARKERS TO UNDERSTAND THE ROLE OF SOCIAL NETWORKS IN ALZHEIMER'S DISEASE	97	93.866	8890/5R01AG057739-03	12,638	—
Functional Limitations and Disability Among Middle-Aged Adults	58	93.866	A033130/5R01AG062502-02	26,242	—
PRagmatic Evaluation of eVENTs And Benefits of Lipid-Lowering in oldEr Adults (PREVENTABLE)	58	93.866	A03-3153/1U19AG0665188-01 REVISED	13,650	—
PRagmatic Evaluation of eVENTs And Benefits of Lipid-Lowering in oldEr Adults (PREVENTABLE) – Data Coordinating Center	58	93.866	A03-3869/5U19AG065188-02	11,055	—
Royal Translational Research Center to Promote Context-Specific Caregiving of Community-Dwelling Persons Living with Alzheimer's Diseases or Related Disorders: FTD Tele-Savvy: Adapting and Testing an Evidence-based Psychoeducation Program for Caregivers	63	93.866	A261128/5P30AG064200-02 REVISED	52,430	—
Preparation for End-of-Life Decision Making in Mid Alzheimer's Disease	63	93.866	A323305/5R01AG057714-04	26,368	—
A wearable acoustomechanic sensor system for quantifying social interactions of patients with dementia	295	93.866	Agmt 3/15/19 // 1R43AG060812-01	(234)	—
COVID-19: Continuous Monitoring of COVID-19 Symptomatology for Elderly Patients in Long Term Care Facilities Using Advanced, Soft, and Flexible Sensors Mounted on the Suprasternal Notch	195	93.866	COVID-19: AGMT 4/1/2021/R41AG062023	23,417	—
A Therapeutic Wearable Sensor for Dysphagia	195	93.866	Awrd 4/18/2019//R41AG062023-01	82,696	—
Cardiovascular and HIV/AIDS Effects on Brain Structure/Function and Cognition	268	93.866	CNVA00050794(128001-6)//5R01AG0348529-10	80,712	—
Building the Geriatric Emergency Care Applied Research (GEAR) Network	299	93.866	CON-80002943 (GR112405)//TR33AG058926-04	77,474	—
Geriatric Emergency care Applied Research network 2.0 – Advancing Dementia Care (GEAR 2.0 ADC)	299	93.866	GR111286 (CON-80002701)//R61AG068822-01 REVISED	123,942	—
NIA AD/ADR Health Care Systems Research Collaboratory	299	93.866	GR111329 (CON-80002700)//5U54AG063546-02 REVISED	36,469	—
PREDICT-ADFTD: Multimodal Imaging Prediction of AD/FTD and Differential Diagnosis	158	93.866	GR123789/SPC-1000005389//TR01AG055121-05	40,997	—
Collaborative Care for the Older Injured Patient: A Trauma Medical Home	97	93.866	IN4688176NW/5R01AG052493-05	5,601	—
Escitalopram for Agitation in Alzheimer Disease	112	93.866	JHU 07/19/19//5R01AG052510-03	(7,573)	—
ARTFL LEFTDS Longitudinal Frontotemporal Lobar Degeneration (ALLFTD)	129	93.866	NOR-263134-01/PO #67509301// 5U19AG063911-02	32,364	—
Optimization of small molecule SERCA2b activators to inhibit neuron loss in Alzheimer's disease	143	93.866	NW-0620/2R42AG062001-02A1 1	411,034	—
ARTFL LEFTDS Longitudinal Frontotemporal Lobar Degeneration (ALLFTD)—Fixed Price	129	93.866	NWU-263134-01//5U19AG063911-02	2,438	—
Trial of Parkinson's Ad Zoledronic Acid (TOPAZ)	206	93.866	P-163-PO2800007864//R01AG059417	3,160	—
The Effect of High Intensity Walking on Frailty	43	93.866	R01AG060162/AGMT 12/17/2020	28,570	—
SAGE LEAF: Reducing Burden in Alzheimer's Disease Caregivers through Positive Emotion Regulation and Virtual Support	25	93.866	R43AG065080-SB1//R43AG065080	194,361	—
Tailored Non-Pharmacotherapy Services for Chronic Pain: Testing Scalable and Pragmatic Approaches	114	93.866	RNG210311-BUDG01-NU-001//U03AG067493-01	5,618	—
Tailored Non-Pharmacotherapy Services for Chronic Pain: Testing Scalable and Pragmatic Approaches	114	93.866	RNG210885-NORTH HWES TERN//4UHSAG067493-02	71,759	—
Using the PROMIS Cognitive Item Bank for Early Detection of Cognitive Decline in Primary Care	174	93.866	SC-A0000397//R61AG069776	44,910	—
First-in-human study of MW151, a novel drug targeting neuroinflammation	96	93.866	SP0047505_1031/18//4R44AG060846-02 REVISED	213,772	—
Production and quality analysis of clinical drug for a novel CNS protein kinase inhibitor therapeutic candidate	144	93.866	STTR/4R42AG062095	424,326	28,674
Nicotinamide riboside as an Enhancer of Exercise Therapy in hypertensive older adults: The NEET Trial.	241	93.866	SUB00002057 // 5R21AG064282-02	7,688	—
Epigenetic regulation of the Klotho / Miz 1 axis in smoking-induced emphysema.	257	93.866	SUBK00014621//TR21AG060211-03	29,337	—
National Alzheimer's Coordinating Center	283	93.866	UWSC7728/3U01AG016976-20SA	46,441	—
High dimensional mediation analysis for DNA methylation markers mediating cardiovascular health metrics and cardiovascular diseases	292	93.866	WU-19-384-MCD-1//5R21AG063370-02	29,706	—
Lifecourse CVD Risk and Midlife Cognitive Trajectories and Brain Aging: Implications for Alzheimer's and Dementia Prevention	151	93.866	YAF2194-04//5R01AG063887-02	34,575	—
				43,634,071	9,271,301
Novel circuit mapping strategies to reverse engineer the retina		93.867	1DP2EY026770-01	(107,522)	—
The Role of Vimentin Cytoskeleton in the Mechanobiology of Schlemm's Canal Endothelium.		93.867	1K99EY032547-01	23,107	—
The role of Angiopoietin-TEK signaling in polypoidal choroidal vasculopathy		93.867	1R01EY32609-01	44,165	—
Re-engineering Connectivity in the Drosophila Brain		93.867	1R21EY031848-01	142,589	—
Reconstructing positional information in the eye from scRNA-seq and relating it to signal transduction		93.867	1R21EY032233-01	4,722	—
ADAlumumab Vs. conventional ImmunoSuppEasion for uveitis (ADVISE) Trial	112	93.867	2004591747//UG1EY028091	2,489	—
Non-canonical GABAergic Pathways in the Visual System		93.867	3R01EY030565-02S1	524,567	—
Oxygen delivery and metabolism in diabetic retinopathy using visible-light optical coherence tomography		93.867	5F30EY026472-05	468	—
Mechanisms of neurovascular coupling in the retina and their dysfunction in diabetes		93.867	5F30EY031565-02	52,604	—
F31 in support of Sam Cooler-Functional specialization by asymmetric receptive fields in the retina		93.867	5F31EY029593-03	18,380	—
Functional Divergence at the Mouse Type 6 Bipolar Cell Terminal		93.867	5F31EY030344-03	43,469	—
Intrinsic electrical properties shape feature selectivity in a novel retinal ganglion cell		93.867	5F31EY030737-03	44,917	—
NIH NRSA Predoc Fellowship for Andrew Jo: Intersectional Genetic Dissection of Inner Retinal Circuits		93.867	5F31EY031985-02	41,309	—
The role of beta2-adrenergic receptor and interleukin-6 signaling in macrophage-driven choroidal neovascularization		93.867	5K08EY030923-02	216,980	—
Function of Basal Synapses at Mammalian Photoreceptors		93.867	5R01EY012141-24	451,408	—
The Role of MicroRNAs in Corneal Epithelial Homeostasis		93.867	5R01EY019463-12	317,641	—
The Mechanical Basis of Primary Open Angle Glaucoma		93.867	5R01EY019696-10	73,638	47,323
Neural Mechanisms of Fixation Choice While Searching Natural Scenes		93.867	5R01EY021579-07	360,950	209,653
Activation of the Angiopoietin-Tie2 Pathway to Treat Ocular Hypertension and Glaucoma		93.867	5R01EY025799-04	(138,977)	—
Activation of the Angiopoietin-Tie2/TEK Pathway to Treat Ocular Hypertension and Glaucoma		93.867	5R01EY025799-06	599,801	—
Investigating oxygen metabolism in diabetic retinopathy		93.867	5R01EY026078-05	413,404	211,040
Mechanisms underlying the formation of the cornea and ocular surface epithelium		93.867	5R01EY028304-04	445,712	—
The Roles of Autophagy in Limbal/Corneal Epithelia.		93.867	5R01EY028560-04	340,292	—
Investigating nanoscale neuronal damages in early glaucoma towards clinical optical detection		93.867	5R01EY029121-04	417,090	251,350
Spatially resolved measurements of retinal metabolism		93.867	5R01EY029306-03	304,740	—
Exploring the angiogenesis-to-fibrosis transition in ischemic retinopathies		93.867	5R01EY030121-02	476,230	6,339
Cell types and functional circuitry in the mouse retina		93.867	5R01EY030169-03	418,327	—
Synapses as Independent Computational Units in the Excitatory Pathways of the Retina		93.867	5R01EY031029-02	247,761	—
Functional consequences of heterotypic retinal ganglion cell coupling		93.867	5R01EY031329-02	326,721	—
Monitoring the hemodynamic response to therapy in diabetic retinopathy		93.867	5R01EY031815-02	322,863	21,813
Ultra-fast Scalable OCT Systems based on a New Photon Detector		93.867	5R21EY029516-02	81,648	21,715
Multidisciplinary Visual Sciences Training Program		93.867	5T32EY025202-05 REVISED	(755)	—
Multidisciplinary Visual Sciences Training Program		93.867	5T32EY025202-07	81,798	—
Microvasculature in Colon Field Carcinogenesis (Institution change)	18	93.867	7000001387//TR01CA224911-04	118,490	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Diabetic Retinopathy Clinical Research Network 2019-2023 Master Agreement	109	93.867	Agmt 10.24.2019/ZUG1EY014231-18	\$ 7,781	—
DROR Retina Network Chair Emeritus – Diabetic Retinopathy Clinical Research Network	109	93.867	Agmt 12/3/19	78,553	—
Microvasculature in Colon Field Carcinogenesis: Clinical-Biological Implications	22	93.867	BMC ID 6610-01/R01CA224911-02	(2,189)	—
Data-Driven Biomechanical Simulation of Eye Movement and Strabismus	72	93.867	E2048123/1R01EY029715 AMD 2	31,088	—
ER stress and diabetic retinopathy	201	93.867	R1217228//5R01EY01994912	131,103	—
Macular Edema Treatment Trials Associated with MUST (META-MUST)	112	93.867	Sub#2002749092/5U10EY024527-04	1,537	—
				6,958,729	769,233
Bayesian Generative Methods for Extracting and Modeling Relations in EHR Narratives		93.879	1R21LM012618-02	(2,120)	—
Bayesian Generative Methods for Extracting and Modeling Relations in EHR Narratives		93.879	1R21LM012618-02	7,102	7,102
Network of the National Library of Medicine Evaluation Center		93.879	1U24LM013751-01	206,264	—
Network Models for Metabolomics	253	93.879	21-015788-A 00/1R01LM013444-01	137,529	—
Enhancing clinical trials participation through library partnerships		93.879	5G08LM012688-03	86,851	—
Health For All: Advancing Library-Academic Medical Center Partnerships to Navigate Wellness and Scale Preventive Services Access		93.879	5G08LM013188-03	176,477	—
Informatics Platform for Mammalian Gene Regulation at Isoform-level		93.879	5R01LM011297-08	2,197	—
Modeling the Incompleteness and Biases of Health Data		93.879	5R01LM013337-02	254,212	—
Implementing and Evaluating a Machine Learning Tool for Entity Resolution in Drug Use and Sexual Contact Networks of YMSM		93.879	5R21LM012578-02	3,052	—
A FAIR Public Repository for Experimentally Verified Proteoforms		93.879	5R21LM013097-02	179,543	31,612
Predoctoral Training Program in Biomedical Data Driven Discovery (BD3)		93.879	5T32LM012203-05 REVISED	243,039	—
Informatics Platform for Mammalian Gene Regulation at Isoform-level	202	93.879	89574/2/1164547//7R01LM01129709	60,950	—
A Library-based Data Retrieval and Management Training Program for Clinical Researchers	247	93.879	S01580-01/5UG4LM012346-05	19,988	—
				1,375,084	38,714
Fogarty Global Health Training Fellowship Program	80	93.989	116559-5101817//5D43TW010543-04	(20,404)	—
Building the Next Generation of Researchers in TB/HIV Diagnostics in Mali (B-NextGen)		93.989	2D43TW010350-06	16,405	—
Northwestern/Nigeria Research Training Program in HIV and Malignancies (NN-HAM)		93.989	5D43TW009575-08	308,694	174,737
Expanded Multidisciplinary NeuroAIDS Research Training to Improve HIV Outcomes in Nigeria		93.989	5D43TW009608-09	208,659	120,768
Building capacity for patient-centered outcomes research to improve the quality and impact of HIV care in Tanzania		93.989	5D43TW010946-03	217,912	80,216
University of Ibadan MEPI Junior Faculty Research Training Program (UI-MEPI-J)	244	93.989	7/225/29/NU-02//D43TW010140-02	(1,418)	—
Integrating Hypertension & Cardiovascular Disease Care into existing HIV Services Package in Botswana	225	93.989	Agmt 8/5/2021/UC3HL154499	—	—
HIV and Mycobacterial Disease in Mali		93.989	5D43TW010350-05	125,155	83,592
Building Research And Innovation in Nigeria's Science – (BRAINS)	250	93.989	SP0031902-60041063//5D43TW010134-05	5,474	—
Support of Training and Mentoring in Nigeria for Academics (STAMINA)	248	93.989	UJ-STAMINA-NW04//D43TW010130-04	2,668	—
				871,996	459,313
A randomized, double-blind, placebo-controlled study of 4-hydroxymoxifen topical gel in women with mammographically dense breasts -fixed pricing	279	93.RD	00004887/HHSN2612012000341-T011	10,587	—
Pharmacokinetics and Safety of Commonly Used Drugs in Lactating Women and Breastfed Infants	58	93.RD	2335518/HHSN-2752010000031	3,409	—
I-PARTS Integrated Platform for Anti-Cancer Radiation Therapeutics Screening: Utilization of Engineered Single cell arrays and traditional Clonogenic assays.	164	93.RD	75N91019C00043	298,041	—
ImageDePHI: Image De-Identification for the Acceleration of Cancer Research	116	93.RD	75N91020C0024//K003187-00-502	60,318	—
Multi-Ethnic Study of Atherosclerosis (MESA) Exam 7 – Task Area B		93.RD	75N92020D00004//K5N92021F00001	15,417	—
Multi-Ethnic Study of Atherosclerosis – Field Center		93.RD	75N92020F00001-75N22020D00004/P00001	545,087	—
NIH Infant and Toddler Toolbox		93.RD	75N94019D00005	1,044,627	132,075
Pilot Testing, Refinement, and Validating of the NBT, and Preparation for Norming Study (NIH Infant and Toddler Toolbox: TO 2)		93.RD	75N94019D00005 P00002	1,594,097	226,416
IPA for Michael Bass		93.RD	Agmt 10/10/20	16,226	—
A real-time, cost-effective, accurate UV measurement and prevention system to reduce skin cancer incidence in consumers.	295	93.RD	AGMT 4/24/19//R44CA224658	64,545	—
AMD Ryan Initiative Study (ARIS) LONGITUDINAL STUDY OF EARLY AMD AND RETICULAR PSEUDODRUSEN	62	93.RD	Agmt 7/7/21 Mod 1//HHSN263201700001C	12,227	—
WOG Purchase Service Agreement-OHSU	162	93.RD	Agmt Signed 9/14/15	123,600	—
Cancer Prevention Agent Development Program: Early Phase Clinical Research		93.RD	HHSN261201200035//75N91019F00130/P00003	537,113	—
Cancer Prevention Agent Development Program: Early Phase Clinical Research		93.RD	HHSN261201200035//HHSN26100014	2,111,356	1,813,078
SurvivorConcierge: Extending Cancer Survivorship Care Beyond the Clinic Using a Smartphone-enabled Monitoring, Navigation and Tailored Intervention Program		93.RD	HHSN261201500013C	(2,876)	—
CARDIA Task Area B – Cohort Limited Exam (Year 35)	289	93.RD	HHSN2682018000031	284,876	—
Coronary Artery Risk Development in Young Adults (CARDIA) Study – Chicago Field Center		93.RD	HHSN2682018000031-P0003	589,563	(2,112)
Phase II Multi-Center, Prospective, Randomized, Double-Blind Study of Nitazoxanide in Acute and Chronic Norovirus in Hematopoietic Stem Cell and Solid Organ Transplant Recipients		93.RD	HHSN272201600016C	649,248	461,154
Structural Genomics Centers for Infectious Diseases		93.RD	HHSN272201700060C-14	4,221,330	3,001,336
COVID-19: Structural Genomics Centers for Infectious Diseases		93.RD	COVID-19: HHSN272201700060C-14	1,144,317	863,849
Asthma Cohort Support Contract		93.RD	HHSN275201300013C	17,988	17,988
Ambient Air Pollution Exposure During Pregnancy and Longitudinal Fetal Growth	62	93.RD	HHSN2752018000061 TO No 75N94019F00125	37	—
COVID-19: A Federated COVID-Rich ICU Database	125	93.RD	COVID-19: 55207, PO#584331//75N97020C00013	39,878	—
Longitudinal Associations of Individual-, Interpersonal-, and Institutional-Level Assets with Cardiovascular Health		93.RD	Task Order 75N92021F00152 Contract HHSN26820180000	45,399	—
COVID-19: Task B08 Option 3c for "Development and Use of a Non-Human Primate Model of SARS-CoV-2 Infection."	215	93.RD	COVID-19: TUL-HSC-558729-20/21 AMD 2//HHSN2722017000331	233,665	—
COVID-19: Task B08 Option 3d for "Development and Use of a Non-Human Primate Model of SARS-CoV-2 Infection."	215	93.RD	COVID-19: TUL-HSC-558731-20/21 AMD 2//HHSN2722017000331	150,999	—
Office of Minority Health: Clinical Trials Awareness Modules for the Lupus Conversations Academic-Community Partnership		93.137	5CPIMP181168-02-02	137,552	68,776
Office of the Assistant Secretary for Health: Re-Entry Community Linkages (RE-LINK)		93.137	5 CPIMP161134-05-00	322,298	—
Office of the Assistant Secretary for Preparedness and Response (ASPR): COVID-19: Advanced, Bio-Integrated, and Cloud-Enabled Sensors for Early Diagnosis of Respiratory Infections in the Home Setting.	195	93.RD	COVID-19: AGMT 5/19/21//75A50119C00043	50,176	—
Office of the Director, National Institutes of Health: ECHO Consortium on Perinatal Programming of Neurodevelopment	90	93.310	0255-2298-4609//5UH3OD023337-05	32,823	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
The role of steady state broadly neutralizing antibody tissue levels in preventing distal site SHIV replication	183	93.310	19110106-Sub02/7K01OD024882-04	\$ 58,145	—
Infrastructure: Illinois Precision Medicine Consortium (IPMC)		93.310	307200/26557-01S3 REVISED	9,662,562	6,153,447
Biochemical Basis of Chromatin Folding and Chromosome Condensation		93.310	5DP5OD024587-05	164,481	—
The role of steady state broadly neutralizing antibody tissue levels in preventing distal site SHIV replication		93.310	5K01OD024882-03 REVISED	(76)	—
ECHO PRO Research Resource: A Developmentally based Measurement Science Framework for Assessing Environmental Exposure and Child Health		93.310	5U24OD023319-04	3,618,710	634,734
COVID-19: ECHO PRO Research Resource: A Developmentally based Measurement Science Framework for Assessing Environmental Exposure and Child Health		93.310	COVID-19: 5U24OD023319-04	157,973	—
TOP2A effects on transcription in gliomas: implications for personalized therapy		93.310	7DP5OD021356-05	166,060	—
				<u>13,860,678</u>	<u>6,788,181</u>
PAGES (Progressing through the Ages: Global Climate Change, Evolution, and Societal Well-being)	246	93.351	076638-15799/5R25GM129196-05	11,668	—
Laser Ablation Inductively Coupled Plasma Time-of-Flight Mass Spectrometer for Advanced Bioelement Imaging Applications		93.351	1S10OD026786-01	657,890	—
Acquisition of an MD3-UP microdiffractometer for macromolecular crystallography		93.351	1S10OD028566-01	334,076	—
Acquisition of an Eiger2 X 16M pixel array detector for macromolecular crystallography		93.351	1S10OD028680-01	763,848	—
Understanding the mechanism(s) of systemic antibody delivery, distribution, and localization to mucosal sites in the in vivo macaque model		93.351	3K01OD026571-03S1	228,540	98,589
Animal Models for SCN2A Neurodevelopmental Disorders		93.351	5R21OD025330-02	89,842	—
Tandem Genetically Encoded Voltage and Calcium Indicator Mice for Optical Physiology of Excitable Cells		93.351	5R21OD025345-02 REVISED	96,347	—
				<u>2,182,211</u>	<u>98,589</u>
Science Club Summer Camp: Training Teachers and Youth in Authentic STEM Practice		93.859	5R25GM129223-05	68,558	—
Data and Research Support Center: Precision Medicine Initiative Cohort Program Coordinating Center (U2C)	288	93.910	VUMC60724/5U2C0D023196-04	149,666	—
Department of Health and Human Services Total				<u>433,436,524</u>	<u>68,753,047</u>
Department of Homeland Security:					
COVID-19: Value-focused Robust Optimization for Disaster Response	13	97.061	COVID-19: ASUB00000364/17STQAC00001-04-00	165,327	—
COVID-19: Undergraduate Research Assistant for Value-focused Robust Optimization for Disaster Response	13	97.061	COVID-19: ASUB00000545/17STQAC00001-03-00	19,439	—
Department of Homeland Security Total				<u>184,766</u>	<u>—</u>
Department of Justice:					
National Institute of Justice:					
Firearm involvement of parents and their adolescent children: A prospective intergenerational study of high-risk youth		16.560	2017-IJ-CX-0019	53,208	—
Delinquent and Criminal Behaviors of Parents and Their Adolescent Children: A Prospective Intergenerational Study of Children of Former Juvenile Offenders		16.560	2020-MU-MU-0001	99,053	—
Improving Employment & Reducing Recidivism Among Prison Offenders via Virtual Reality Job Interview Training	257	16.560	SUBK00009850/2019-MU-MU-0004 – AMD 01	6,916	—
				<u>159,177</u>	<u>—</u>
Evaluating a Cognitive Behavioral Approach for Improving Life Outcomes of Underserved Young Women: A Randomized Experiment in Chicago	234	16.726	FP064531-01-SP//2016-JU-FX-0002	63,966	—
Office on Violence Against Women:					
Testing the effectiveness of a domestic violence intervention at reducing recidivism		16.026	2020-SI-AX-0009	8,646	—
Department of Justice Total				<u>231,789</u>	<u>—</u>
Department of State:					
Innovative Approaches to Evaluating Citizen-Led Rule of Law Initiatives in Ukraine		19.345	SLMAQM19GR2131	6,911	—
Future Innovations in Embassy Planning, Design, Construction & Operation	117	19.RD	19AQMM19D00063	374,967	—
Department of State Total				<u>381,878</u>	<u>—</u>
Department of the Interior:					
National Park Service:					
Constraining the Mammoth Cave Nitrogen Cycle with a Combined Sequencing-Isotope Approach	146	15.931	P0020895/P20AC00630	15,479	—
United States Geological Survey:					
Probabilistic Seismic Hazard Map testing in Nepal: A cooperative agreement between the USGS and Northwestern University		15.808	G19AC00104-02	40,780	—
IPA Agreement		15.RD	Stein AGMT 7/16/21	21,979	—
Department of the Interior Total				<u>78,238</u>	<u>—</u>
Department of Transportation:					
Tier I Center on TELEMOBILITY		20.701	69A3552047139	484,972	72,109
Federal Aviation Administration:					
Evaluating the Potential of Urban Air Mobility Service to Airports	160	20.RD	Mahmassani AGMT 12/16/20	10,000	—
Federal Highway Administration:					
Models and policy tools for emerging transportation services: Promoting socially inclusive outcomes		20.215	693JJ31945046	(69)	—
Optimizing Bridge Abutment Slope Protection at Stream Crossing	298	20.RD	0092-21-02	5,015	—
Department of Transportation Total				<u>499,918</u>	<u>72,109</u>
Department of Veterans Affairs:					
Edward Hines, Jr. VA Hospital:					
Amplify Gait to Improve Locomotor Engagement in Spinal Cord Injury (AGILE SCI Trial)		64.RD	36C24E21D0007	20,809	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Tara Cornwell		64.RD	IPA AGMT, Signed 04/09/2020	23,088	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Elizabeth Bisch Platt		64.RD	IPA AGMT, Signed 05/13/21 (578/151)	20,989	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Lutfiyya NaQiyba Muhammad, Sponsored by Dr. Bonnie Harris		64.RD	IPA AGMT, Signed 07/24/20 (578/151)	8,608	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Jungwha (Julia) Lee, Sponsored by Dr. Bonnie Martin-Harris		64.RD	IPA AGMT, Signed 07/24/2020 (578/151)	8,939	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Abigail Barbara Day		64.RD	IPA AGMT, Signed 09/04/20 (578/151)	7,262	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Intergovernmental Personnel Act (IPA) Assignment Agreement for Alexis Renee Demonbreun	64.RD	IPA Agmt. Signed 09/11/2020 (578/151)		\$ 6,327	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Brittany Nicole Krekler	64.RD	IPA AGMT. Signed 09/11/2020 (578/151)		33,480	—
IPA For Todd Parrish: Neural Target Identification for Functional Disability Associated with Alcohol Related Characteristics Among Veterans with Co-occurring AUD+mTBI	64.RD	IPA AGMT. Signed 12/01/2020 (578/151)		10,651	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Heather Henderson	64.RD	IPA AGMT. Signed 9/1/21		5,813	—
Jesse Brown VA Medical Center:					
Intergovernmental Personnel Act (IPA) Assignment Agreement for Saul Soberanes	64.018	AGMT 06/15/2021		68,333	—
FY2020-21 VA IPA for Christina Spaulding	64.018	IPA Agmt 04/05/2021		68,240	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Paul Cheresch	64.018	IPA AGMT Signed 04/5/2021		73,359	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Shantel Olivares: Molecular Mechanisms of Nonalcoholic Fatty Liver Disease	64.018	IPA Agmt Signed 8/10/2020		46,479	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Ziyun Lu (537/151)	64.018	IPA AGMT. dated 7/22/21		21,781	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Elisa J. Gordon (NU Supervisor: David Brentem)	64.018	IPA Agmt. Signed 08/03/2021		11,704	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Mengjia Kang	64.018	IPA AGMT. Signed 08/03/2021 (YR4)		21,057	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Ewa Kosciuczuk (537/151)	64.018	IPA AGMT. Signed 09/01/2019 (537/151)		55,039	—
Leigh Ann Fall – Intergovernmental Personnel Act (IPA) Assignment Agreement	64.018	IPA Agmt. Signed 09/18/2019 (FY19-20)		2,202	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Yanni Yu	64.018	IPA Agmt. Signed 10/16/2019 (FY19-20)		(5,896)	—
				<u>362,298</u>	—
Intergovernmental Personnel Act (IPA) Assignment Agreement in support of Bin Liu	64.RD	AGMT 06/25/2021		76,856	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Hao Wang	64.RD	Agmt 7/12/21		58,012	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Julie Karen Johnson (Supervised by Dr. David Brentem)	64.RD	IPA AGMT Signed 02/07/20		2,121	—
FY2021 Intergovernmental Personnel Act (IPA) Assignment Agreement for ZASU MARIE KLUG	64.RD	IPA AGMT. Signed 01/28/2021		11,634	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Ryan Caldwell FY20 IPA	64.RD	IPA AGMT. Signed 04/07/2020		19,102	—
Intergovernmental Personnel Act (IPA) Assignment Agreement in Support of Weiqi Huang	64.RD	IPA Agmt. Signed 06/25/21		94,950	—
VA IPA FY20 for Elspeth Beauchamp	64.RD	IPA AGMT. Signed 07/22/21		40,306	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Michael Cavanaugh	64.RD	IPA AGMT. Signed 07/28/20		5,579	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Yinu Wang	64.RD	IPA AGMT. Signed 08/07/2020		65,713	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Yaqi Zhang	64.RD	IPA AGMT. Signed 08/07/2020		21,654	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Yanni Yu (FY2020-21)	64.RD	IPA AGMT. Signed 08/10/2020		69,998	—
Intergovernmental Personnel Act (IPA) Assignment Agreement in support of Jianghong Wang	64.RD	IPA AGMT. Signed 09/01/2020		77,944	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Julie Johnson (Supervisor: David Brentem)	64.RD	IPA AGMT. Signed 09/15/2020		17,761	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Zasu Marie Klug	64.RD	IPA AGMT. Signed 09/30/2020		20,265	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Stefania Fatone, Sponsored by Dr. Steven Gard	64.RD	IPA AGMT. Signed 7/07/2021 (537/151)		11,543	—
Intergovernmental Personnel Act (IPA) Assignment Agreement for Linda India (FY2019-20)	64.RD	IPA AGMT. Signed 8/07/2020		3,619	—
VA Connecticut Healthcare System:					
FY2021-22 IPA Assignment Agreement for Lori Post: IPA for Tracking Guns among Veterans	64.RD	IPA AGMT. Signed 04/07/2021		8,358	—
VA Sierra Pacific Network:					
Intergovernmental Personnel Act (IPA) Assignment Agreement for Benjamin Schalet	64.018	IPA AGMT. Signed 03/09/21 (Y4)		18,989	—
Department of Veterans Affairs Total				<u>1,132,768</u>	—
Environmental Protection Agency:					
The Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air): Next Stage	283	66.509	UWSC101113/838300001-0	28,361	—
Approaches to Reduce Nutrient Loadings for Harmful Algal Blooms Management	293	66.509	Wells AGMT 12/15/20/84008601	86,151	—
Environmental Protection Agency Total				<u>114,512</u>	—
National Aeronautics and Space Administration:					
Evolution of hydrogen in the inner solar system: volatile abundances and isotopic compositions in CAIs and chondrules from primitive carbonaceous chondrites	32	43.001	10829-1255 AMD 3/80NSSC18K604	14,786	—
A simulation pipeline for the study of kilonovae light curves and r-process nucleosynthesis in compact binary mergers	262	43.001	18042-02/80NSSC18K0565	35,845	—
The Balloon-Borne Large Aperture Telescope for Polarization – BLASTPol	267	43.001	573659 / 80NSSC18K041-05	138,923	—
Biosignature Preservation in Sulfate-Dominated Hypersaline Environments	74	43.001	AWD7774162-GR206675/80NSSC20K0849	19,050	—
Biologic and Resource Analog Investigations in Low Light Environments (BRAILLE)	21	43.001	BMSSA-006 // 80NSSC17M0054	59,158	—
Continued X-Ray Monitoring of GW170817 with Chandra	194	43.001	DD7-18095X // NAS8-03060	4,214	—
Chandra Observations of Extreme Mass Loss from the Progenitors of Luminous Type IIin SNe	194	43.001	G07-18045A	13,645	—
X-ray Observations of Rapid, Luminous and Blue Stellar Explosions	194	43.001	G09-20054A/NAS8-03060	1,138	—
Late-time Monitoring of GW170817 across the Electromagnetic Spectrum	194	43.001	G09-20058A/NAS8-03060	22,585	—
Continued Chandra-NuSTAR Monitoring of the Unprecedented Metamorphosis of SN2014C at t>1500 days since Explosion	194	43.001	G09-20060A/NAS8-03060	542	—
Revisiting the Mysterious X-ray Excess of SGRB 130603B	194	43.001	G00-21041X/NAS803060	25,870	—
The Late-Time X-Ray Behavior of Short Gamma-Ray Bursts: Implications for Energetics and Rates	194	43.001	G00-21042X/NAS8-03060	53,070	—
The Late-time X-ray Behavior of Short Gamma-ray Bursts: Implications for Energetics and Rates	194	43.001	G01-22043X/NAS8-03060	1,068	—
Mapping extreme mass loss from evolved massive stars with coordinated Chandra-NuSTAR observations	194	43.001	G07-18054A // NAS8-03060	6,539	—
Continued NuSTAR Monitoring of the Unprecedented Metamorphosis of SN2014 at T>1000 Days since Explosion	30	43.001	RSA No. 1609661	1,474	—
				<u>397,907</u>	—
Project FUSION: Facilitating Unified Systems of Interdependent Organizational Networks					
Multiple Undergraduate Research Projects	242	43.003	SUB00001667/80NSSC18K0511P00001 Mod 8	86,040	—
Multiple Undergraduate Research Projects	246	43.008	099286-17921/80NSSC20M0046 01	62,100	—
Multiple Undergraduate Research Projects	246	43.008	2015-05200-09/078131-15789)-AB425/NNX154A105H	7,000	—
				<u>69,100</u>	—
Air-Carbon Boundary Layer Chemistry for Hypersonic Ablation.					
Controllable Combustion of Metal Fuels for Space Power Systems	236	43.012	1561377/80NSSC21K1574	546	—
	276	43.012	2261204SOA/80NSSC20K0293	73,979	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

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Air-Carbon Boundary Layer Chemistry for Hypersonic Ablation	139	43.012	G201-19-W7671//80NSSC19K0220	\$ 68,800	—
				<u>143,325</u>	—
Preparation and Characterization of Sn- and Sb-based Zintl Phases as Promising Thermoelectric Materials	30	43.RD	1536068-006/NNN12AA01C	12,275	—
Design and fabrication of strain-balanced low dark current short-wavelength infrared photodetectors based on type-II superlattices with optical response from 0.4 to 2.5um	154	43.RD	80NSSC18C0170	1,517	—
Extended Short Wave Infrared Focal Plane Array for Versatile Imaging Systems	154	43.RD	80NSSC21C0313	8,127	—
Testing a new physical model for the formation of galactic disks and its implications for star formation variability, ISM kinematics and galactic winds	197	43.RD	HST-AR-16124.001-A/INASS- 26555	17,219	—
Using the full power of the HST Archive to Address the Red Supergiant Problem	197	43.RD	HST-AR-16136.006-A/INASS-26555	20,051	—
Probing CO-dark Gas within the Planck Galactic Cold Clumps	197	43.RD	HST-GO- 15104.001-A/INASS-26555	6,990	—
VLA & HST Monitoring of Sgr A* in July 2019 with Spitzer and Chandra	197	43.RD	HST-GO- 15667.001-A/INASS-26555-01	7,249	—
Late-time monitoring of GW170817 across the electromagnetic spectrum	197	43.RD	HST-GO-15606.001-A/INASS-26555	9,329	—
1000 Days of GW170817: A Deep Multi-Band View of the First Neutron Star Merger with HST	197	43.RD	HST-GO-15886.007-A/INASS-26555	72,034	—
Scylla: A Pure-parallel, Multi-headed Attack on Dust Evolution and Star Formation in ULLYSES Galaxies	197	43.RD	HST-GO-15891.009-A/INASS-26555	4,970	—
Measuring the Star Formation Efficiency of Molecular Clouds in the Small Magellanic Cloud	197	43.RD	HST-GO-15912.001-A/INASS- 26555	45,967	—
Late-time Observations of Calcium-Rich Transient SN 2019ehk	197	43.RD	HST-GO-16075.004-A/INASS-26555	1,779	—
Quantifying the Diversity of Relativistic Transients with Radio Observations	197	43.RD	HST-HF2-51403.001-A Amend 2/INASS-26555	93,316	—
Stellar Afterlives and Black Hole Cataclysms: Learning about Stars, Galaxies, and the Cosmic Expansion with Gravitational Waves	197	43.RD	HST-HF2-51455.001-A Amend 1/INASS-26555	100,190	—
The study of hyper-accreting black holes and the origin of gold in the Universe	197	43.RD	HST-HF2-51487.001-A/INASS- 26555	4,075	—
Cycle 7: Joint HAWC+ALMA Investigation of Young Protostars in Ophiuchus	219	43.RD	NNA17BF53C/SOF 07-0147 Mod 01	33,048	20,916
NASA Ames Research Center:					
Effects of Partial Gravity on Multi-system Mammalian Physiology: Microbiome and Related Systems		43.007	80NSSC20K1519 P00002	27,039	—
Effects of Spaceflight on Gastrointestinal Microbiota in Mice: Mechanisms and Impact on Multi-System Physiology		43.007	NNX15AL05G 000015	492,554	67,113
				<u>519,593</u>	<u>67,113</u>
NASA George C. Marshall Space Flight Center:					
The Columnar to Equiaxed Transition and Dendrite Fragmentation		43.003	NNX17AD48G-000011	163,829	—
Microstructure Evolution in Freeze-Cast Materials		43.007	80NSSC18K0196 P00009	114,700	—
NASA Goddard Space Flight Center:					
The Strontium Isotope Composition of Neoproterozoic Carbonates: Implications for the Carbon Cycle and the Evolution of the Biosphere		43.001	80NSSC17K0245 P00003	35,465	—
Late-time X-ray Behavior of Short Gamma-Ray Bursts: Implications for Energetics and Rates		43.001	80NSSC18K0189	10,303	—
Late-time X-rays to map the Zoo of Engine-driven Stellar Explosions		43.001	80NSSC18K0379	17,076	—
The Physics, Observational Signatures, and Consequences of AGN-Driven Galactic Winds		43.001	80NSSC18K1096 P00004	100,563	—
Biofilms in the Deep Subsurface: Implications for Planetary Habitability		43.001	80NSSC18K1267	48,162	—
Tools for Modeling Selection Biases and for Advanced Astrophysical Interpretation of LISA Observations		43.001	80NSSC19K0323-P00002	22,097	—
Source of Energy and pre-explosion progenitor evolution of Super-luminous SNe		43.001	80NSSC19K1310	24,189	—
Exploring and Investigating the Physics of Time-Domain Multi-Messenger Astronomy across the Electromagnetic Spectrum & Beyond (FINESST 2019 A Hajela)		43.001	80NSSC19K1422-P00001	40,700	—
Habitability and Observational Prospects of Rocky Exoplanets Evaluated with 3D Chemistry-Climate Models		43.001	80NSSC19K1523-P0001	38,165	—
Mapping Extreme Mass Loss from Massive Stars with Fermi and the VLA		43.001	80NSSC19K1715	20,162	—
Neutrinos and Gamma-rays From Magnetic Reconnection in Blazars		43.001	80NSSC20K0213	1,500	—
Dark Matter Searches with the Micro-X Rocket		43.001	80NSSC20K0430-P00002	26,384	—
NuSTAR Observations of Fast and Blue Stellar Explosions		43.001	80NSSC20K0642	10,811	—
Explosion Mechanisms and Energy Sources Powering Super-Luminous Supernovae		43.001	80NSSC20K0764	22,725	—
Magneto-Rotational Instability in the Sun? Global Radiation-MHD Simulations of the Near-Surface Shear Layer		43.001	80NSSC20K1280	171,633	—
				<u>589,935</u>	—
Efficient and Scalable Fabrication of Solid Oxide Fuel Cells via 3D-Printing		43.012	80NSSC17K0192-P00006	57,860	—
Defect engineering for more reliable and efficient p-type thermoelectric materials		43.012	80NSSC20K1192-P00001	52,706	—
				<u>110,566</u>	—
NASA John F. Kennedy Space Center:					
Evaluation of International Space Station Bacteria for Disinfectant Resistance	115	43.RD	PO: SMS0000637	16,417	—
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	55	43.002	501237SG138 // NNX16AQ48G	663	—
SCALE: Shared Cognitive Architectures for Long-term Exploration		43.003	80NSSC18K0221-P00008	115,908	51,741
Team Task Switching in Astronaut Crews on the International Space Station: Integrating Multiteam Membership, Multiteam Systems, multi-tasking, & Multidimensional Networks to Monitor & Enable Functional Work Shifts in Astronaut Crews		43.003	80NSSC18K0276-P00008	116,519	—
Composing Teams with TEAMSTAR: Tool for Evaluating And Mitigating Space Team Risk		43.003	80NSSC21K0925	26,663	—
CREWS: Crew Recommender for Effective Work in Space		43.003	NNX15AM32G-000020	161,353	—
				<u>420,443</u>	<u>51,741</u>
NRI: Collaborative Research: Integrating Physics Models and Control Methodologies for Enhanced Legged Locomotion on Yielding Terrain		43.007	NNX15AR24G 000007	(907)	—
National Aeronautics and Space Administration Total				<u>3,069,747</u>	<u>139,770</u>
National Foundation of the Arts and Humanities: Institute of Museum and Library Services: Getting to know their data doubles: An inquiry into student perceptions of privacy issues associated with academic library participation in learning analytics	97	45.312	IN-4370124-NU // LG-96-18-0044-18	9,084	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
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	\$ 43,289	—
National Foundation of the Arts and Humanities Total				52,373	—
National Science Foundation: CBET-EPSRC A Game-Changing Approach for Tunable Membrane Development: Novel Covalent Organic Framework Active Layers Supported by Solvent Resistant Materials	246	47.041	087147-16468-01/CBET-1706219	143,825	—
EFRI C3 SoRo: An integrated approach towards computational design, fabrication and understanding of bio-hybrid soft architectures capable of adaptive behavior	246	47.041	093088-175159/EFMA-1830881-02	89,827	—
Engineering Research Center for Innovative and Strategic Transformation of Alkane Resources – CISTAR	171	47.041	10001437-044 Amd 4/1647722-EEC	538,289	—
EFRI CEE: Engineered Retinal Epigenetics	272	47.041	132228948/EFMA-1933394	116,399	—
SNM: Customized Inkjet Printing of Graphene-Based Real-time Water Sensors	285	47.041	1727846/183405339/AAC5754	(8,790)	—
DMREF: Collaborative Research: A Data-Centric Approach for Accelerating the Design of Future Nanostructured Polymers and Composites Systems	58	47.041	333-2389 AMD 4//1818574	108,869	—
RAISE-EQuIP: Single-Chip, Wall-Plug Photon Pair Source and CMOS Quantum Systems on Chip	23	47.041	450002864/ECCS-1842692	95,520	—
NR: INT: Co-Robot Controllers for Human-Like Physical Interaction and Improved Motor Learning	175	47.041	8913 cc 82089 // 2024488	53,214	—
EFRI C3 SoRo: Strong Soft Robots—Multiscale Burrowing & Inverse Design	258	47.041	A007037602 AMD 1 // EFMA-1830950	17,366	—
Scalable Integration of Graphene-Enhanced Coatings for High-Energy Lithium-Ion Battery Cathodes	290	47.041	Award 08/14/19/IIIP-1913417	20,555	—
A novel wound dressing for infection control and tissue regeneration	87	47.041	Award 10/4/2019/IIIP-1660301	26,925	—
SNM: Scalable Nanomanufacturing of Graphene-based Real-time Water Sensors through Customized Inkjet Printing	234	47.041	AWD101315 (SUB00000317)/2039268	136,718	—
FMRG: Manufacturing Advanced Electronics through Printing Using Bio-based and Locally Identified Chemicals (MADE-PUBLIC)	234	47.041	AWD101466 (SUB00000407) // 2037026	234,511	—
Neuroprotective Engineering Based on Innate Responses to Stroke	47.041		CBET-1403036	(71)	—
CAREER: Engineering Non-Growth Metabolism for High-Yield Biochemical Production	47.041		CBET-1462549-003	11,724	—
CAREER: Rational design of a biomimetic nanomaterial library to probe mechanisms behind virus-induced immunopathology	47.041		CBET-1453576	14,505	—
SusChEM: Integrated Materials and Process Systems Development for Sustainable Carbon Capture	47.041		CBET-1604890	8,427	—
NR: Task-Based Assistance for Software-Enabled Biomedical Devices	47.041		CBET-1637764	20,463	—
Collaborative Research: Electrorotational fluid instabilities	47.041		CBET-1704996	29,995	—
Engineering a secretion-based, high-titer protein production process in bacteria	47.041		CBET-1706125	48,803	—
Spectroscopic photon localization microscopy for super-resolution molecular imaging	47.041		CBET-1706642 001	144,508	—
GOALI: Advanced biomanufacturing with inducible feedback promoters	47.041		CBET-1803747	82,062	—
Investigating the impact of tumor heterogeneity on sustained low dosage immunotherapy via a peritumoral immunotheranostic hydrogel	47.041		CBET-1806007	72,584	—
From the Nuclear Pore Complex to Smart Artificial Nanochannels	47.041		CBET-1833214	151,625	—
GOALI: Charge Interactions in Transport of Mixed Solutes in Nanofiltration Membranes	47.041		CBET-1840816	50,489	—
RoL: EAGER: DESYN-C3 Moving information across synthetic membranes via engineered sensors	47.041		CBET-1844219	197,912	—
RoL: RAISE: DESYN-C3: A platform for Modular Pseudo-Organelles for Compartmentalization and Control of Pseudo-Cell Processes	47.041		CBET-1844336	117,005	—
Convergence: RAISE: Systems Approaches for Vulnerability Evaluation and Urban Resilience (SAVEUR)	47.041		CBET-1846883	410,948	69,309
COVID-19: Convergence: RAISE: Systems Approaches for Vulnerability Evaluation and Urban Resilience (SAVEUR)	47.041		COVID-19: CBET-1846883	53,487	23,885
Collaborative Research: Towards a Generalized Microkinetic Description of Lignin Liquefaction	47.041		CBET-1926412	99,908	—
GOALI: Flow driven segregation at the particle level	47.041		CBET-1929265	57,505	—
Collaborative Research: Cell-free glycoprotein synthesis technology for point-of-care vaccine biomanufacturing	47.041		CBET-1936789	38,041	—
Structural Health Monitoring of Biofilms for Sustainable Reactive Nitrogen Management	47.041		CBET-1937290	42,951	—
Elucidating and Computing Metabolic Networks for Co-Valorization of Cellulose and Lignin Derivatives	47.041		CBET-2022854	19,217	—
ECO-CBET: Collaborative Research: Towards a Circular Nitrogen Bioeconomy: Tandem Bio- and Chemocatalysis for Sustainable Nitrogen Recovery and Nitrous Oxide Mitigation	47.041		CBET-2033793 001	69,876	—
CAREER: Metabolomics-Enabled Approaches to Advance Characterization of Organic Matter Trapping in Natural and Engineered Matrices	47.041		CBET-2041869	140,811	—
Collaborative Research: Innovation in Sustainable Mass Timber Building Systems	47.041		CMMI 1762757	36,786	—
Strong and Multifunctional Geopolymer Composites: A Multi-Scale Study	47.041		CMMI 1829101 002	128,296	6,556
LEAP-HI: Catalyzing Resilient Urban Infrastructure Systems: Integrating the Natural and Built Environments	47.041		CMMI 1854827	256,941	192,372
CAREER: The mechanics of subsurface urban heat islands	47.041		CMMI 2046586	8,242	—
COVID-19: NSF RAPID – Tracking and deconstructing Covid 19 vaccine distribution as an extreme logistics event	47.041		COVID-19: CMMI 2114778	67,280	—
Dynamic Matching Problems with Application to Kidney Allocation	47.041		CMMI 2137286	68,137	—
Electric Field Guided Micro Additive Manufacturing Process	47.041		CMMI-1463411	(3,078)	—
Processing of Advanced Foam Scaffolds for Iron-Air Battery Applications	47.041		CMMI-1562941 001	(156)	—
Magnetically Controlled-Laser Induced Plasma Micro-Machining (MC-LIPMM)	47.041		CMMI-1563244	25,000	—
Green Simulation: A Methodology for Reusing the Output of Past Computer Simulation Experiments	47.041		CMMI-1634982	10,071	—
CPS: Synergy: An Integrated Simulation and Process Control Platform for Distributed Manufacturing Process Chains	47.041		CMMI-1646592-002	141,862	—
Stability and Optimality Properties of Sequential Action Control for Nonlinear and Hybrid Systems	47.041		CMMI-1662233	153,427	—
Collaborative Research: Concurrent Design of Quasi-Random Nanostructured Material Systems (NMS) and Nanofabrication Processes using Spectral Density Function	47.041		CMMI-1662435	100,566	—
On-demand Generation of Diamond-like-carbon Layers for Efficient Lubrication of Mechanical Systems	47.041		CMMI-1662806	69,977	—
Exploiting Network Structure in Routing Problems: Applications to School Bus Routing	47.041		CMMI-1727744-002	81,554	—
Electromechanical Properties and Deformation of Biomembranes	47.041		CMMI-1748049	509	—
Data-driven multiscale damage and failure prediction	47.041		CMMI-1762035-001	220,413	—
Equitable and Efficient Scarce Resource Allocation using Stochastic Fractional Optimization	47.041		CMMI-1763035	122,364	—
Collaborative Research: GOALI: Modeling and optimizing patient-flow dynamics in hospitals and hospital networks	47.041		CMMI-1763100	28,528	—
Decision-Flow Queuing Networks for Analysis of Knowledge-Based Service Operations Systems	47.041		CMMI-1826353	136,053	—
CAREER: Modeling Soil-Machine Interaction for Advances in Civil Construction and Terrestrial Robotics	47.041		CMMI-1846817	82,134	—
CAREER: Transformative mobility analysis: Mixed Methods framework	47.041		CMMI-1847537	30,213	—
Convergence: RAISE: Auto-regulatory Scaffolds for Directed Evolution of Non-living Functional Materials	47.041		CMMI-1848613	408,526	228,146
Asset Allocation: A Statistical Learning Approach	47.041		CMMI-1916616	88,407	—
Rethink ride-hail: from understanding limits to reaching full potential	47.041		CMMI-1922665-004	133,318	—
Multi-Scale Multi-Material Printing of 3D Bead Arrays via Self-Focused Electrohydrodynamic Jets	47.041		CMMI-1934350	52,114	—
Manipulating Nanoparticle-Modified Melt Pool Dynamics in Additive Manufacturing	47.041		CMMI-1934367	195,249	—
An Atomistic Experimental Investigation of Fracture in Transitional Metal Dichalcogenides	47.041		CMMI-1953806	47,197	—
Collaborative Research: A Hierarchical Multidimensional Network-based Approach for Multi-Competitor Product Design	47.041		CMMI-2005661-0001	74,532	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

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Service Systems with Dependencies: Theory and Applications		47.041	CMMI-2006350	\$ 36,180	—
Freeze-Cast Manufacturing of Stable Iron-Alloy Foams for Energy Conversion and Storage		47.041	CMMI-2015641	71,098	—
NRI: INT: Robotic Shepherding for Flow Control in Uncertain Dynamic Environments		47.041	CMMI-2024774	292,018	—
Photonic Moiré Nanostructures for Scalable Fabrication of Quantum Structures		47.041	CMMI-2028773	54,613	—
New Kind of Experiment and Theory to Determine the Effect of Crack-Parallel Stresses on Fracture of Concrete and Similar Materials		47.041	CMMI-2029641 001	57,005	—
EAGER: Investigating the Hinge Mechanics of the Spike Protein to Understand the Coronavirus Infection Mechanism		47.041	CMMI-2034584	155,660	—
NNCI: Soft and Hybrid Nanotechnology Experimental (SHyNE) Resource		47.041	ECCS 2025633 AMD 002	687,919	—
CAREER: Principled Deep Reinforcement Learning for Societal Systems		47.041	ECCS 2048075	80,224	—
NNCI: Soft and Hybrid Nanotechnology Experimental (SHyNE) Resource		47.041	ECCS-1542205	352,797	35,702
Exploring local confinement of ultrafast light to enable nondestructive acoustic metrology at the nanoscale		47.041	ECCS-1611356	(1,025)	—
NCS-FO: How Ecology Induces Cognition: Paleontology, Machine Learning, and Neuroscience		47.041	ECCS-1835389	183,183	—
CPS: Medium: Information based Control of Cyber-Physical Systems operating in uncertain environments		47.041	ECCS-1837515	295,234	—
Anti-ferromagnetic Electric-field-controlled Memory Devices		47.041	ECCS-1853879	30,938	—
NSF-BSF: CCSS: Resistance Tomography with 2D Sensor Membranes		47.041	ECCS-1912694	137,410	—
BioNet: a distributed network of bioelectronic devices for closed-loop control of physiological processes		47.041	ECCS-2023849	155,852	100,477
Collaborative Research: SWIFT: LARGE: Dynamics and Security Aware Predictive Spectrum Sharing with Active and Passive Users		47.041	ECCS-2030251	57,471	—
COVID-19: RAPID: Collaborative Research: Data Analytics for Mechano-acoustic and Physiological Monitoring of COVID19 Symptoms		47.041	COVID-19: ECCS-2031495	61,712	—
SNM: Robust Scalable Nanomanufacturing of Photonic Structures		47.041	EEC-1530734	(6,383)	—
SNM: Robust Scalable Nanomanufacturing of Photonic Structures		47.041	EEC-1530734	(24)	(24)
Planning Grant: Engineering Research Center for Accelerated Catalytic Design and Characterization (ACDC)		47.041	EEC-1840619	22,098	—
Planning Grant: Engineering Research Center for Democratizing Manufacturing Accessibility for Designers (DEMAND)		47.041	EEC-1840621	59,061	—
RET Site: Collaborative Research: Research Experiences for Teachers across the National Nanotechnology Coordinated Infrastructure		47.041	EEC-1953437	43,357	—
EFRI-CEE: Macroeconomic engineering via modulation of chromatin nanoenvironment		47.041	EFMA-1830961	509,588	—
EFRI-CEE: Epigenetic Cell Reprogramming In Situ: A Novel Tool for Regenerative Engineering		47.041	EFMA-1830968	670,154	—
Magnetic microrollers as a platform for active transport	147	47.041	F0276-01/CBET-1706562	54,626	—
EFRI-CEE: Epigenetic Regulation Over Multiple Length Scales: Understanding Chromatin Modifications Through Label Free Imaging and Multi-Scale Modeling	234	47.041	FP068540-01-PR// EFMA-1830969	264,645	—
Partnership for development of high-performance magnetic memory technology		47.041	IIP-1919109	127,884	49,397
CAREER: Prediction of multiscale emergent dynamics in decentralized cell populations	283	47.041	UWSC12093-01/CBET-2025760	34,671	—
				<u>10,707,601</u>	<u>705,820</u>
Core-shell Plasmonic Nanoparticle Lattices	177	47.049	#27464/CHE-2039044	64,450	—
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	253	47.049	17-009589 D Amd. 2 // AST-1636621	101,997	—
SII Planning Grant: National Center for Radio Spectrum Innovations (NCRSI)	265	47.049	203949NUI/AST-2037852	38,434	—
Center for the Chemistry of Molecularly Optimized Networks	58	47.049	333-2440// CHE-1832256	112,096	—
CCI Phase I: NSF Center for Synthesizing Coherence	58	47.049	333-2655/CHE-1925690	83,453	—
Student Observing Support Program	14	47.049	367148// 1519126	37,523	—
CCI Phase I: Center for Sustainable Separations of Metals	267	47.049	577550//1925708	90,937	—
QII – TAQS: Solid state integration of molecular qubits	158	47.049	60072764/1936219	45,442	—
U.S. CMS Upgrades for the High-Luminosity Large Hadron Collider	50	47.049	79433-20666-02 (Revised)/PHY-1946735	176,146	—
Center for Sustainable Polymers	258	47.049	A008060101/CHE-1901635 Amd.2	213,696	—
Center for Sustainable Polymers	258	47.049	A008060102-02/CHE-1901635	105,208	—
NSF Center for Sustainable Polymers: Quantitative framework for cost and sustainability evaluation of emerging sustainable polymers	258	47.049	A008060113/CHE-1901635	62,301	—
Student Observing Support Program	14	47.049	Agmt 311721 //AST-1519126	9,398	—
Accretion and Star Formation Induced by the Galactic Center Supermassive Black Hole Sgr A*		47.049	AST-1517246 002	24,497	—
CAREER: The Physics of Stellar Feedback and Star Formation Regulation in Galaxies		47.049	AST-1652522	147,554	—
Collaborative Research:CDS&E: Mining Physically Predictive Cosmological Simulations		47.049	AST-1715216	38,276	—
Black Holes in Dense Star Clusters		47.049	AST-1716762	61,343	—
REU Site: Preparing a Diverse Workforce through Interdisciplinary Astrophysics Research		47.049	AST-1757792-002	82,389	—
Unfolding the Dynamic and Colorful Lives of Compact Object Mergers		47.049	AST-1814782	192,496	—
Collaborative Research: Misaligned Short GRBs from Structured Jets in the Dawn of Gravitational Wave Astronomy		47.049	AST-1815304	48,586	—
WoU-MMA, Collaborative Research: Searches After Gravitational Waves Using Arizona's Observatories		47.049	AST-1908358	172,983	—
Collaborative Research: A multi-wavelength observational and theoretical study of the fastest evolving stellar explosions		47.049	AST-1909796	15,638	—
Collaborative Research: Impacts of massive BH formation and evolution pathways on GW sources		47.049	AST-1910209	15,779	—
Collaborative Research: WoU-MMA: Multi-scale and multi-messenger modeling of jets in active galactic nuclei		47.049	AST-1911080	65,572	—
WoU-MMA: Luminous Supermassive Black Hole Accretion Systems as High-Energy Neutrino Factories		47.049	AST-2009884	25,397	—
Cottrell Fellowship: Distorted Accretion Disks: The Restless Environments of Planet-Forming Systems	177	47.049	Award #27470/CHE-2039044	62,500	—
Materials Research and Science Engineering Center – Renewal 02	234	47.049	AWD101244 (SUB00000356)-1/2011854	12,605	—
ACME III: Advanced Cold Molecule Electron Electric Dipole Moment Search	234	47.049	AWD102289 (SUB00000527)/2136573	61,668	—
Collaborative Research: Electronic Coherence Effects in Multichromophore Systems Probed by Two-Dimensional Electronic Spectroscopy		47.049	CHE	78,108	—
Surfaces of Secondary Organic Aerosol Particles		47.049	CHE-1607640	(3,231)	—
Surfaces of Secondary Organic Aerosol Particles		47.049	CHE-1607640	8,186	8,186
New Lewis Bases for Chemical Catalysis		47.049	CHE-1665141	171,836	—
Voltage-dependent interfacial structure and properties of room temperature ionic liquids: operando X-ray studies		47.049	CHE-1665255	119,965	—
Electrostatically Regulated Supramolecular Capsules and Receptors Assembled via the WLA		47.049	CHE-1709888-001	155,606	—
Donor-Acceptor Energy Transfer in the Presence of Photonic and Plasmonic Structures		47.049	CHE-1760537	113,361	—
Plasmon-Driven Chemistry as Revealed by Ultrafast SERS, Single Molecule SERS, and Electrochemical TERS		47.049	CHE-1807278	206,645	—
Correlative Tools for In Situ Analysis of Single Nanoparticles and their Ligands		47.049	CHE-1808502	184,822	—
Transient Physicochemical Properties of Nanomaterials		47.049	CHE-1808590	28,996	—
CLC: EAGER: Collaborative Research: Developing Experiment and Theory for Entangled Photon Spectroscopy		47.049	CHE-1838392	77,508	—
CAREER: Photocontrolled Dynamic Covalent Crosslinkers for Light-Responsive Polymer Networks		47.049	CHE-1847948	71,133	—
Synthetic, Mechanistic, and Catalytic Studies of Electrophilic d- and f-Element Complexes		47.049	CHE-1856619	233,213	—
Hyperpolarized Multi-Spin Systems as Qubits for Quantum Information Science		47.049	CHE-1900422	210,217	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Studying the Processes of Assembly and Stimuli-Responsive Morphological Transformations in Solvated Macromolecular Nano-Assemblies	47.049	CHE-1905270		\$ 108,875	38,637
Collaborative Research: Isotopologue Synthesis and Use for Elucidating Important Chemical Mechanisms of Organic Condensation Reactions in Atmospheric Particles	47.049	CHE-2003359		119,867	—
Donor-acceptor energy transfer involving classical and quantum light in the presence of photonic and plasmonic structures	47.049	CHE-2055565		26,693	—
CAS-MNP: Molecular Probing Surface Reactivity Dynamics of Native versus Photo-Oxidized Microplastics and Nanoplastics in Environmental Aqueous Media	47.049	CHE-2109097		18,133	—
Ink-based additive manufacturing of high-entropy alloys from oxide and hydride powders	47.049	DMR-2004769		150,310	—
CAREER: Ligand Engineering of Structure and Electronic Function in Complex Metal Oxyfluorides	47.049	DMR-1454688-005		5,766	—
Collaborative Research: High-Throughput Quantification of Solid State Electrochemistry for Next Generation Energy Technologies	47.049	DMR-1505103		75,971	—
Oxide Surfaces: From Bulk to Nanoparticles	47.049	DMR-1507101-003		135,306	—
Nonequilibrium States of Topological Quantum Fluids and Unconventional Superconductors	47.049	DMR-1508730-003		(1,805)	—
Shape and Dimensional Precision in Polymeric Nanostructures	47.049	DMR-1508731		21,932	—
Collaborative Research: Designer Glass Ceramics	47.049	DMR-1600837		44,032	—
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		(193)	—
Size Effect on the Evolution of Kirkendall Pores in Ti-Coated Ni Wires	47.049	DMR-1611308		49,282	42,633
Interfacial ordering in aqueous solutions: X-ray scattering studies	47.049	DMR-1612876		14,726	—
DMREF: Collaborative Research: Tackling disorder and ensemble broadening in materials made of semiconductor nanostructures	47.049	DMR-1623963		255,864	—
Quantum Interference and Coherence Effects on Charge Transport in Organic Semiconductors	47.049	DMR-1710104		13,999	—
Deposition, Equilibrium Structure and Mechanical Response of Polyelectrolyte Complexes	47.049	DMR-1710491		(939)	—
MRSEC: Center for Multifunctional Materials	47.049	DMR-1720139-006		2,583,468	108,468
DMREF: Collaborative Research: Synthesis, Characterization, and Modeling of Complex Amorphous Semiconductors for Future Device Applications	47.049	DMR-1729016		124,727	—
DMREF: Collaborative Research: Structure Genome of Metal-Insulator Transitions	47.049	DMR-1729303		78,638	—
DMREF: Collaborative Research: Accelerating Thermoelectric Materials Discovery via Dopability Predictions	47.049	DMR-1729497-001		73,885	—
EAGER: Bulk Nanostructured Metals from Twinned Nanowires	47.049	DMR-1747776		13,862	—
CAREER: Understanding the Role of Structure on Ionic/Electronic Properties in Polymeric Mixed Conductors	47.049	DMR-1751308-003		124,791	—
JUAMI (Joint Undertaking for Africa Materials Institute)	47.049	DMR-1756245		5,420	—
High-Pressure Synthesis of Missing Pnictide Superconductors	47.049	DMR-1801632-002		47,027	—
Collaborative Research: Predictive theory, synthesis and characterization of a new type of transparent conductor without doping	47.049	DMR-1806912		28,000	—
Materials Chemistry of Superprotonic Solid Acids	47.049	DMR-1807234		181,403	—
MRI: Acquisition of a Dedicated Electron Beam Lithography (eBL) System for Interdisciplinary Research, Hands-on Education and Inspiring Outreach	47.049	DMR-1828676		239,810	—
EAGER: Enabling Quantum Leap: Driven Non-Equilibrium Room Temperature Quantum States	47.049	DMR-1838507		105,108	90,144
Engineering New Anisotropic Superfluid Phases of ³ He	47.049	DMR-1903053-002		144,582	—
Symmetry Breaking in Non-Hermitian Plasmonic Lattices	47.049	DMR-1904385-001		156,187	—
Solid-State Oxides and Oxide-Fluorides	47.049	DMR-1904701		93,858	—
Manipulation of Hole-pinned Vortices: Classical and Quantum	47.049	DMR-1905742		145,851	—
Total Tomography of Nonplanar Heterostructures for Quantum Information Processing	47.049	DMR-1905768		95,546	—
Bioengineering Single Crystal Growth	47.049	DMR-1905982-002		260,301	—
Optical Spin Orientation and Transport in Layered Mono- and Di-chalcogenide Semiconductors	47.049	DMR-1905986		98,853	—
GOALI - Collaborative Research: An Experimental and Theoretical Study of the Microstructural and Electrochemical Stability of Solid Oxide Cells*	47.049	DMR-1912530		115,735	—
GOALI: Investigation of Cyclic Failure in Aluminosilicate Nanocomposites	47.049	DMR-1928702-001		101,163	—
Unconventional Heteroanion Ceramics: 2D Layered Seleno- and Thio-Phosphates	47.049	DMR-1929356		164,841	—
CAREER: Visualizing single-chain conformation and dynamics of bottlebrush polymers in the bulk state	47.049	DMR-1945249-001		92,301	—
Collaborative Research: Optical Transitions in Metallic Nanoclusters at High Pressure	47.049	DMR-2002891		30,765	—
Synthesis of Complex and Advanced Chalcogenide Materials	47.049	DMR-2003476		145,510	—
Quantum Coherence Effects on Charge Generation in Organic Semiconductors	47.049	DMR-2003739		110,814	—
Collaborative Research: Impact of a colloidal suspension droplet: Suspension flows at extreme shear rates	47.049	DMR-2004176		66,943	—
Probing Fundamental Magneto-Electronic Properties of Two-Dimensional Metal Halides	47.049	DMR-2004420		69,289	—
Ions at aqueous interfaces: X-ray fluorescence and scattering studies	47.049	DMR-2004557-001		55,937	—
Peptide Brush Polymers: Theory and Synthesis for Functional Design	47.049	DMR-2004899		191,245	—
Mottle Colloids with Tunable Random Walk: Individual Dynamics and Collective Behavior*	47.049	DMR-2004926		79,391	—
Structure and Function of Heteroanionic Materials	47.049	DMR-2011208		116,881	—
COVID-19: RAPID: On-mask Chemical Modulation of Respiratory Droplets	47.049	COVID-19: DMR-2026944		145,201	—
COVID-19: RAPID: Hydrated Graphene Oxide Elastomeric Composites for Sterilizable and Reusable N95 Masks	47.049	COVID-19: DMR-2029058		145,638	—
COVID-19: RAPID: Regenerable Antiviral Nanoporous Materials for Protection	47.049	COVID-19: DMR-2029270		99,959	—
Protein Crystallization Programmed with DNA	47.049	DMR-2104353		53,840	—
Collaborative Research: Design and Demonstration of Persistent Spin Textures in Ferroelectric Oxide Thin Film	47.049	DMR-2104397		21,525	—
Analysis on Manifolds	47.049	DMS-1502632-005		19,737	—
RTG: Interdisciplinary Training in Quantitative Biological Modeling	47.049	DMS-1547304-004		153,015	—
CAREER: Complexity of Disordered Systems	47.049	DMS-1653552-004		55,516	—
Dynamical aspects of Ramsey theory	47.049	DMS-1700147		(1,357)	—
Collective dynamics of particles at fluid interfaces	47.049	DMS-1716114		51,800	—
Midwest Probability Colloquium 2017-2019	47.049	DMS-1744209-001		1,400	—
Northwestern University Quantitative Biology Center (NUQuB)	47.049	DMS-1764421-003		822,446	—
Dynamics with a Combinatorial Bent	47.049	DMS-1800544		57,379	—
Modull of Galois representations and applications	47.049	DMS-1802037-002		23,738	—
Singularities and Smoothness in Geometric Partial Differential Equations	47.049	DMS-1809011		2,398	—
Homotopy theory of foliations and diffeomorphism groups	47.049	DMS-1810644		1,192	—
Global Harmonic Analysis	47.049	DMS-1810747-002		59,345	—
Collaborative Research: Factorization Homology, Deformation Theory, and Duality	47.049	DMS-1812057-002		71,504	—
CAREER: An Integrated Inferential Framework for Big Data Research and Education	47.049	DMS-1841569/002		47,256	—
Collaborative Research: Adaptive Gaussian Markov Random Fields for Large-scale Discrete Optimization via Simulation	47.049	DMS-1854562		57,397	—
Stability of functional and geometric inequalities and applications	47.049	DMS-1901427		23,287	—
Problems in combinatorics and number theory via ergodic theoretic methods	47.049	DMS-1901453		30,140	—
Word distributions in groups	47.049	DMS-1902041		49,454	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Flexible Stein Manifolds and Fukaya Categories		47.049	DMS-1906554	\$ 16,714	—
Causeway Postbaccalaureate Program		47.049	DMS-1916410	39,872	—
Equidistribution of Torus Orbits		47.049	DMS-1946333 002	47,523	—
FRG: Collaborative Research: Geometric Structures in the p-adic Langlands Program		47.049	DMS-1952678 AMD001	24,023	—
Collaborative Research: Variational inference approach to computer model calibration, uncertainty quantification, scalability, and robustness		47.049	DMS-1952897	36,743	—
Inducing and exploiting grid structures for fast, adaptive and accurate estimation		47.049	DMS-1953111	27,119	—
Nonlinear Partial Differential Equations and Geometry		47.049	DMS-2005311	102,568	—
Zero-Order and Stochastic Methods for Large-Scale Optimization		47.049	DMS-2011494	66,018	—
Novel Decomposition and Active-Set Techniques Enabling Scalable Computational Frameworks for Large-Scale Nonlinear Optimization Problems		47.049	DMS-2012410	64,432	—
Collaborative Research: High-Dimensional Decision Making and Inference with Applications to Personalized Medicine		47.049	DMS-2015568 001	73,793	—
CAREER: Rigidity of Group Actions on Manifolds		47.049	DMS-2020013 002	59,345	—
Linear Partial Differential Equations on Singular Spaces		47.049	DMS-2054424	45,004	—
Combinatorial and Algebraic Structures in Dynamics		47.049	DMS-2054643	69,236	—
Cyclotomic Spectra and p-Divisible Groups		47.049	DMS-2102010	70,236	—
Fractal Fourier Extension Estimates		47.049	DMS-2107729	57,696	—
SuperCDMS SNOLAB Operations	196	47.049	G001942-7515/PHY2012936	62,062	—
SI Planning: WHISPERS: Wireless Hardware Innovations and Signal Processing for Enhanced Radio-astronomy and Scientific Spectrum Sharing	282	47.049	GA11529_PO#2277962//2037838	54,601	—
CCI Phase I: NSF Center for the Mechanical Control of Chemistry (CMCC)	210	47.049	M2002925/CHE-2023644	16,187	—
Photochemical Strategies to Activate Far-Red Fluorescence with Green Light	256	47.049	OS00000274//CHE-1954430	59,340	—
Telecom-Band Rotational Cooling of a Heavy Molecular Ion		47.049	PHY - 1806861 002	51,608	—
Collaborative Research: Axion Resonant InterAction Detection Experiment (ARIADNE) – a renewal proposal		47.049	PHY 2111544	8,892	—
The Science and Fundamental Understanding of the Radio Frequency Surface Resistance of Nitrogen Doped SRF Cavities		47.049	PHY-1734332	140,245	—
Collaborative Research: Axion Resonant InterAction Detection Experiment (ARIADNE) – a continuation proposal		47.049	PHY-1806871 003	26,665	—
Measuring gravity at the micron scale with laser-cooled trapped microspheres: a continuation		47.049	PHY-1806866-002	45,011	—
Collaborative Research: The SuperCDMS SNOLAB Experiment		47.049	PHY-1809730-003	67,349	—
Lepton Magnetic Moments and Fine Structure Constant		47.049	PHY-1903756 //002	163,350	—
Gravitational-Wave Inference from Binary Compact Objects		47.049	PHY-1912648	115,160	—
Collaborative Research: Uncovering how riboswitches exploit out-of-equilibrium RNA folding pathways to make genetic decisions		47.049	PHY-1914567 002	88,268	26,210
1st CQF Workshop on Precision Electroweak		47.049	PHY-1928439	1,521	—
Low-Threshold Modular Detectors for Coherent Elastic Neutrino-Nucleus Scattering		47.049	PHY-2013203-001	73,499	—
Measuring gravity at the micron-scale with laser-cooled trapped microspheres: a renewal proposal		47.049	PHY-2110524	37,794	—
PM: Electron and Positron Magnetic Moments from a Quantum Cyclotron		47.049	PHY-2110565	42	—
				14,721,906	314,278
Critical Zone Observatory Network for Intensively Managed Landscapes	246	47.050	072212-14695	25,299	—
Network Cluster CINET: Critical Interface Network in Intensively Managed Landscapes	246	47.050	101348-18087//EAR-2012850	41,062	—
NSFGEO-NERC: Collaborative Research: Developing a new Lower Cretaceous time scale: Foundation for the next generation of paleoceanographic		47.050	1951835 EAR-01	17,366	—
U.S. Science Support Program Office associated with the International Ocean Discovery Program (IUSSP-IODP) (Gabriella D. Kitch)	46	47.050	71B/GG090939//OCE 1450528	10,765	—
CAREER: triple-isotope approach to unraveling subsurface food webs		47.050	EAR-2042249	21,010	—
The Ca and Sr (radiogenic and stable) isotope geochemistry of weathering in Iceland		47.050	EAR-1613359	62,441	—
Collaborative Research: NSF/EAR-BSF: Coupled Sand and Clay Motion, Bed Morphodynamics, and Porewater Exchange		47.050	EAR-1734300	97,408	—
Superdeep Diamonds from the Transition Zone and Lower Mantle		47.050	EAR-1853521	153,424	—
Collaborative Research: Dry Rifting in the Albertine-Rhino graben (DRIAR), Uganda		47.050	EAR-2021721	35,827	—
PREVENTS Track 2: Collaborative Research: Defining precursors of ground failure: a multiscale framework for early landslide prediction through geomechanics and remote sensing		47.050	ICER-1854951	77,838	—
GP-IN: Graduate soft skills development through mentoring pre-university students through diverse geoscience		47.050	ICER-2023263	67,408	—
CAREER: South Greenland's Holocene Climate History Reconstructed Using Three Paleolimnological Approaches		47.050	PLR-1454734	1,105	—
				610,953	—
I-Corps Sites: Southeastern Wisconsin-Enhancing Regional Technology Commercialization (NUMIX)	285	47.070	193405421//1829202	2,000	—
CHS: Small: Collaborative Research: Validating and Communicating Model-based Approaches for Data Visualization Ability Assessment		47.070	2120750-000	91,719	—
CRI: CI-SUSTAIN: Racket on Alternative Platforms	150	47.070	502648-780501//CNS-1823244	31,253	—
CAREER: Robot Learning from Motor-Impaired Instructors and Task Partners	175	47.070	81454 Amd 3 //IIS-1552706	93,508	—
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	97,330	—
IRNC: RXP: StarLight SDX – A Software Defined Networking Exchange for Global Science Research and Education		47.070	ACI-1450871	398,689	193,245
GENI Multi-Service Exchange (SDX)	19	47.070	Agmt 9/28/16 Mod 3 // CNS-1536090	(5,906)	—
CPS: Synergy: Collaborative Research: Learning Control Sharing Strategies for Assistive Cyber-Physical Systems	175	47.070	CC# 81394 CL 4811 // 1544741	35,830	—
CAREER: Energy-Efficient and Energy-Proportional Silicon-Photonic Manycore Architectures		47.070	CCF-1453853-004	17,067	—
SHF: Small: Greybox Computing: An Associative Computing Methodology with Instruction Directed Power and Clock Management		47.070	CCF-1618065-001	26,454	—
SHF: Small: Collaborative Research: ALTHEIA: A Framework for Automatic Detection/Correction of Corruptions in Extreme Scale Scientific Executions		47.070	CCF-1619253	39,936	26,318
AI/F: Collaborative Research: Algorithms for Probabilistic Inference in the Real World		47.070	CCF-1637585	138,714	—
CAREER: Beyond Worst-Case Analysis: New Approaches in Approximation Algorithms and Machine Learning		47.070	CCF-1652491 004	33,660	—
AI/F: Mechanism Design and Machine Learning for Peer Grading		47.070	CCF-1733860	104,991	—
Collaborative Research: TRIPODS Institute for Optimization and Learning		47.070	CCF-1740735	158,778	—
CPS: Breakthrough: Collaborative Research: A Framework for Extensibility-Driven Design of Cyber-Physical Systems		47.070	CCF-1834324 (417)	—	—
CAREER: SOISTICe: Software Synthesis with Timing Contracts for Cyber-Physical Systems		47.070	CCF-1834701 002	64,900	—
CAREER: Design and Synthesis of Energy-efficient Time-domain Computing for Intelligent Edge Processing		47.070	CCF-1846424-002	110,359	—
SHF: Small: The Compiler-Architecture Solution to the Data Dependent, Circuit-Level Critical-Paths Variations		47.070	CCF-1908488	72,158	—
CF: Small: Wireless Massive Access: From Fundamental Limits to Practical Design		47.070	CCF-1910168	63,860	—
HDR TRIPODS: Collaborative Research: Institute for Data, Econometrics, Algorithms and Learning		47.070	CCF-1934931/001	219,542	—
Collaborative Research: AF: Medium: Design and Analysis of Models and Algorithms for Real-life Problems		47.070	CCF-1955351 001	51,696	—

NORTHWESTERN UNIVERSITY
Supplementary Schedule of Expenditures of Federal Awards
Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Collaborative Research: CIF: Small: Convexification-based Decomposition Methods for Large-Scale Inference in Graphical Models	47.070	CCF-2007814		\$ 68,468	—
Collaborative Research: CIF: Small: A Unified Framework of Distributional Optimization via Variational Transport	47.070	CCF-2008827		74,100	—
SHF: Small: Development of Differentiable Memory Augmented Neural CPU Architecture for Cognitive Computing	47.070	CCF-2008906		97,598	—
Collaborative Research: PPOSS: Planning: Unifying Software and Hardware to Achieve Performant and Scalable Zero-cost Parallelism in the Heterogeneous Future	47.070	CCF-2028851-002		76,031	—
Collaborative Research: PPOSS: Planning: A Disciplined Approach to Scaling in the Post-Moore's Law Era	47.070	CCF-2118708		4,198	—
Computing Innovation Fellows 2020 Project	47.070	CIF2020-NWU-13//CCF-2030859		84,510	—
SaTC: CORE: Small: Efficient Logic Encryptions for Hardware IP Protection	47.070	CNS 2113704		6,751	—
NetS: SMALL: Broadband Service Reliability, Characterization And Improvement	47.070	CNS-1619317		8,176	—
NSF/SaTC-BSF: CORE: Small: The Utilitarian Implications of Privacy Protections	47.070	CNS-1718670		53,222	—
Collaborative Research: Chameleon: A Large-Scale, Reconfigurable Experimental Environment for Cloud Research	47.070	CNS-1743324-003		34,984	—
CSR: Medium: Collaborative Research: Interweaving the Parallel Software/Hardware Stack	47.070	CNS-1763743 004		322,326	—
NetS: Small: Incentivizing Internet-Scale Web Mining with Webcoin	47.070	CNS-1810582		93,526	—
CSR: Small: Development of Distributed Neural Processing Electronics for Whole-body Computing and Biomedical Sensor Fusion	47.070	CNS-1816870		147,279	—
Computer Science for All: Researcher Practitioner Partnerships Workshops (CS for All: RPP), Chicago and Los Angeles	47.070	CNS-1821362		(55,101)	—
SCC: Hall (interests for all): A smart socio-technical infrastructure to identify, cultivate, and sustain youth STEAM interests in a diverse mid-sized American city	47.070	CNS-1831685		693,603	—
Equitable Computer Science for All Learning Ecosystems: Developing Underserved Students' Computational Making Literacies Through Community-Embedded Out of School Time Programming	47.070	CNS-1838916		88,107	—
CPS: Synergy: Securing the Timing of Cyber-Physical Systems	47.070	CNS-1839511		114,032	102,636
CAREER: Efficient Query Processing for Private Data Federations	47.070	CNS-1846447 002		90,961	—
CRIL: CSR: Systems and Tooling Enabling Adaptive Intermittent Computing	47.070	CNS-1850496-002		55,767	—
CNS Core: Small: Collaborative Research: The Interplay of Markets and Security in 5G Shared Spectrum Services	47.070	CNS-1908807		104,352	—
DCL: SaTC: Early Stage Interdisciplinary Collaboration: Privacy Enhancing Framework to Advance Behavior Models	47.070	CNS-1915847		138,057	—
Envisioning Workshops for Computing in Undergraduate Education	47.070	CNS-1944777		87,850	55,533
Collaborative Research: SaTC: CORE: Medium: Quicksilver: a Write-oriented, Private, Outsourced Database Management System	47.070	CNS-2016240		51,718	—
COVID-19: RAPID: Internet Traffic and Compliance with Government Stay-at-Home Measures	47.070	COVID-19: CNS-2027922		105,142	—
COVID-19: RAPID: Low-cost, Batteryless Smart PPE Tackling the COVID-19 Pandemic	47.070	COVID-19: CNS-2032408		178,144	—
CPS: Medium: Batteryless Sensors Enabling Smart Green Infrastructure	47.070	CNS-2038853		186,129	—
SCC-CIVIC-PG Track B: Strengthening Resilience of Ojibwe Nations across Generations (STRONG): Sovereignty, Food, Water, and Cultural (in)Security	47.070	CNS-2044053		3,124	—
CAREER: Designing for Learning at the Intersection of Sports, Analytics and Physical Computing	47.070	CNS-2047693		352	—
CSGrad4US Mentoring Program	47.070	CNS2123180-CRA-Northwestern		18,049	—
CRIL: CHS: Automatically Praising Learning Process to Promote the Growth Mindset in Computer Science	47.070	COM IIS-1755628		74,898	—
BIGDATA: Collaborative Research: F: Stochastic Approximation for Subspace and Multiview Representation Learning	47.070	IIS-1840866		84,668	—
CHS: Small: Computer-supported Collective Deliberation for the Future of Work	47.070	IIS 2008450		77,588	—
NSF Cyberlearning: Context-Aware Metacognition Practice: Instrumenting Classroom Ecosystems to Help Introductory Computer Science Students Develop Effective Learning Strategies	47.070	IIS 2016900		102,793	—
CAREER: Coherent Computational Imaging: Micro Measurements in a Macro World	47.070	IIS-1453192		68,773	—
DIP: Collaborative Research: CRAFT: An Online Learning Platform for Scaffolding the Crowd Feedback Loop for Design Innovation Education	47.070	IIS-1530837		98,659	—
CHS: Small: Collaborative Research: The Presentation of Self in Networked Life	47.070	IIS-161387 001		28,851	—
H	47.070	IIS-1617468-001		6,524	—
III: Small: Collaborative Research: Algorithms for Query by Example of Audio Databases	47.070	IIS-1617497		(230)	—
CHS: Small: Coordination of Opportunistic Actions to Produce Globally Effective Behaviors for Physical Crowdsourcing	47.070	IIS-1618096		53,612	—
RI: Small: Modeling and Learning Visual Similarities under Adverse Visual Conditions	47.070	IIS-1619078		113,319	—
EXP: Agile Research Studios: Scaling Cognitive Apprenticeship to Advance Undergraduate and Graduate Research Training in STEM	47.070	IIS-1623635		83,403	—
CAREER: Understanding and addressing geographic inequalities in location-aware technologies	47.070	IIS-1707296-003		53,822	—
CHS: Small: Assessing the Role of Platform Algorithms in Shaping News Attention	47.070	IIS-1717330		39,504	—
RI: Small: Collaborative Research: Information-driven Autonomous Exploration in Uncertain Underwater Environments	47.070	IIS-1717951		39,201	—
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		150,203	—
CRIL: CHS: Early Detection of Collective Misconceptions with Network-aware Machine Learning Tools	47.070	IIS-1755873		40,843	—
CHS: Small: Collaborative Research: Structured Data Peer Production: Addressing Challenges and Leveraging Opportunities	47.070	IIS-1815507/001		42,305	—
RI: Small: A Unified Compositional Model for Explainable Video-based Human Activity Parsing	47.070	IIS-1815561		101,005	—
Making Minecraft Multimodal: A Naturalistic Platform for Collaborative Learning and Creating	47.070	IIS-1822865-002		325,236	—
Collaborative Research: NCS-FO: Discovering dynamics in massive-scale neural datasets using machine learning	47.070	IIS-1835345		54,088	—
BIGDATA: IA: Collaborative Research: Asynchronous Distributed Machine Learning Framework for Multi-Site Collaborative Big Brain Data Mining	47.070	IIS-1837999		29,324	—
RI: Medium: Collaborative Research: Next-Generation Statistical Optimization Methods for Big Data Computing	47.070	IIS-1840857		2,096	—
CAREER: Computational Journalism: Integrating Algorithms and People in the Production of News Information	47.070	IIS-1845460/003		79,893	—
CHS: Medium: Next Generation Content Production Tools for People with Vision Impairments	47.070	IIS-1901456-004		286,950	—
CHS: Medium: Collaborative Research: Empirically Validated Perceptual Tasks for Data Visualization	47.070	IIS-1901485		170,476	—
CHS: Small: Collaborative Research: Representing and Learning Visualization Design Knowledge	47.070	IIS-1907941		16,746	—
CHS: Small: Collaborative Research: Modeling the Ecological Dynamics of Online Organizations	47.070	IIS-1910202-001		6,146	—
CAREER: Enhancing Critical Reflection on Data by Integrating Users' Expectations in Visualization Interaction	47.070	IIS-1930642 /004		40,403	5,618
CAREER: Transforming Online Scholarly Communication with Networked Crowd Computation	47.070	IIS-1943506		61,745	—
EAGER: An Inexpensive Tactile Interface for Dexterous Manipulation	47.070	IIS-1952598		69,910	—
Collaborative Research: RI: Medium: Living Architectures: From Army Ants to Self-Assembling Robot Swarms	47.070	IIS-1956019		65,025	—
RI: Small: Extracting and Representing Commonsense Knowledge Using Language Models	47.070	IIS-2006851		75,264	—
RI: Small: Visual Reasoning and Self-questioning for Explainable Visual Question Answering	47.070	IIS-2007613		46,924	—
Collaborative Research: NRI: FND: Flying Swarm for Safe Human Interaction in Unstructured Environments	47.070	IIS-2024615		30,255	—
CHS: Small: Developing a Probabilistic Grammar for Flexible Uncertainty Visualization	47.070	IIS-2126598		37,559	—
NSCI SI2-SSE: The N-jettiness software framework for precision perturbative QCD calculations in particle and nuclear physics	47.070	OAC-1740142		124,654	—
CyberTraining: CU: The LSST Data Science Fellowship Program	47.070	OAC-1829740		69,910	—
Collaborative Research: Framework: Data: HDR: Nanocomposites to Metamaterials: A Knowledge Graph Framework	47.070	OAC-1835782		35,587	—
Collaborative Research: Frameworks: Multiphase Fluid-Structure Interaction Software Infrastructure to Enable Applications in Medicine, Biology, and Engineering	47.070	OAC-1931372		36,172	—
Mid-scale RI-1 (M1:IP):SAGE: A Software-Defined Sensor Network	47.070	OAC-1935984		1,751,950	391,585

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
BD Spokes: SPOKE: MIDWEST: Collaborative: Integrative Materials Design (IMaD): Leverage, Innovate, & Disseminate		47.070	oIS-1636909	\$ 38,966	—
Protecting Micro-service Provenance Privacy	198	47.070	PO52877//OAC-1547467	13,499	—
S&AS: INT: Autonomous Multi-Robot Visual Monitoring for Urban, Agricultural, and Natural Resource Management	230	47.070	S-001096//IS-1724341	18,598	—
Frameworks: Bayesian Analysis for Nuclei in Diverse Theories	159	47.070	UT21727//OAC-2004601	96,432	—
				<u>9,538,577</u>	<u>774,935</u>
Collaborative Research: Hyaluronan, NRF2 and Protracted Female Fertility in Long-lived Naked Mole-Rats	50	47.074	91778-20440 // IOS-2005919	9,120	—
REU Site: Synthetic Biology (SynBREU)		47.074	DBI-1757973	85,014	—
CSBR: Living Stocks – Enhancement of the Caenorhabditis Natural Diversity Resource		47.074	DBI-1630382	248,745	—
Collaborative Research: IIBR Instrumentation: The Nanosizer – A new tool for the preparation of arbitrary bioactive surfaces		47.074	DBI-2032180	90,933	—
Collaborative Research: MTM 1: Decoding the genomic rules of denitrification in bacterial communities		47.074	EF-2025521	6,616	—
Mechanisms of sensory control of developmental rate		47.074	IOS-1755244	209,455	—
Reticulospinal Execution of Innate Decision-Making		47.074	IOS-1456830	(5,464)	—
The Vibrissotactile Natural Scene		47.074	IOS-1558068	70,707	—
CAREER: Discovery of the molecular mechanisms underlying microevolution of phenotypic plasticity in a developmental trait		47.074	IOS-1751035-002	34,309	—
CAREER: Mapping the proteomic landscape of neural systems.		47.074	IOS-1846234-002	250,189	—
Collaborative Research: Bilateral BBSRC-NSF/BIO: Synthetic Biology for Lignin Utilization		47.074	MCB-1614953	66,267	—
CAREER: Uncovering Quantitative Design Principles of RNA Regulators for Synthetic Biology		47.074	MCB-1650040 002	112,057	—
Collaborative Research: Repurposing the translation apparatus for mirror image polypeptide synthesis		47.074	MCB-1716766	127,246	—
Collaborative Research: EAGER: Customized cell biosensors for interrogating cancer cell physiology		47.074	MCB-1745753	8,318	—
EAGER: Toward engineering a synthetic enhancer in Caenorhabditis elegans		47.074	MCB-1748307	36,739	—
Biophysical Studies of Metalloenzymes		47.074	MCB-1906587	226,390	—
RAPID: Collaborative Research: A cell-free synthetic biology platform for water quality monitoring – field testing and validation at the Camp Fire site		47.074	MCB-1925912	41,351	—
Collaborative Research: EAGER: Uncovering the role of Golgi organization on function		47.074	MCB-1935356	93,605	—
Novel determinants of prokaryotic copper homeostasis		47.074	MCB-1938715	193,638	—
Locus specific manipulin of chromatin function		47.074	MCB-2024073	12,398	—
COVID-19: RAPID: Point-of-Need Detection of COVID-19 using CRISPR-Enabled Cell-Free Synthetic Biology		47.074	COVID-19: MCB-2028651	114,365	18,122
NeuroNex: Communication, Coordination, and Control of Neuromechanical Systems (C3NS)	33	47.074	RESS15698/DBI-2015317	238,894	—
				<u>2,270,892</u>	<u>18,122</u>
NSF/SBE-BSF: Integration of kinesthetic and tactile information in perception, action, and learning	175	47.075	81464/CL5296/1632259	57,565	—
The Development of Relational Processing in Infancy		47.075	BCS-1729720	64,225	—
CompCog: Reading as a rational process of visual information gathering		47.075	BCS-1734217	52,939	—
NCS-FO: Collaborative Research: Understanding the neural basis for sensorimotor control loops using whisker-based robotic hardware platforms		47.075	BCS-1734981	81,470	—
Doctoral Dissertation Research: Quantifying the Costs of Human Reproduction using the 'Epigenetic Clock'		47.075	BCS-1751912	30,796	—
Doctoral Dissertation Research: The Role of Socioeconomic and Cultural Variation in Neurotrauma Recovery		47.075	BCS-1756617	4,017	—
Doctoral Dissertation Improvement Grant: Power Relations in the Context of Agricultural Production		47.075	BCS-1818785	1,930	—
Studies of memory reactivation during sleep using intracranial recordings		47.075	BCS-1829414	38,626	—
Doctoral Dissertation Research: Intergenerational effects of prenatal stress on physiological and psychosocial outcomes		47.075	BCS-1849265	6,326	—
LEARNING, CREATIVE PROBLEM-SOLVING, REM SLEEP, AND AWARENESS OF DREAMING.		47.075	BCS-1921678-002	261,646	—
CAREER: Stereotypes of Teens and Adolescent Neuropsychological Development		47.075	BCS-1944644	22,739	—
Memory and context effects on representations of variation in phrasal intonation		47.075	BCS-1944773-001	98,603	—
COVID-19: RAPID: Generating knowledge with next phase serological testing for SARS-CoV-2		47.075	COVID-19: BCS-2035114	137,141	—
From sensation to symptom: The social shaping of functional illness experience		47.075	BCS-2051512	19,842	—
Doctoral Dissertation Research: Role of Prior Knowledge in Consolidation of Novel Phonotactic Patterns for Speech Production		47.075	BCS-2116802	1,495	—
RCN: Building a Community of Practice for Household Water Insecurity Research	210	47.075	M1803245 // BCS-1759972	(9,552)	—
Motor exploration and motor learning during child development	137	47.075	RC107136NU//1654929	804	—
COVID-19: RAPID: Teaming in the Time of Covid-19: Understanding how technology affordances can enable collaboration during sudden workplace disruption		47.075	COVID-19: SAS-2027572	92,528	—
Problem-Solving Sociology Workshops		47.075	SES-1823709	2,312	—
Collaborative Research: International Migration and Fertility: Towards a Multidimensional Understanding		47.075	SES-1918274	24,504	—
Tribal Constitutions: Constructing Power by Developing Structures of Self-Governance		47.075	SES-2044007	10,586	—
The Network Structure of Police Misconduct		47.075	SES-2049513	59,060	—
CAREER: Social Networks, Labor Markets and Agricultural Technology Adoption in Developing Countries		47.075	SES-1254380-005	(320)	(320)
Constructions of Traditional Medicine during Decolonization and the Global Cold War		47.075	SES-1456984-003	6,414	—
Collaborative Research: Time-Sharing Experiments for the Social Sciences (TESS): Proposal for Renewed Support, 2016-2019		47.075	SES-1628057	901,929	871,508
Workshop: Advances in Experimental Political Science		47.075	SES-1822286	24,691	—
Collaborative Research: Using Web Data to Study Campaigns and Representation		47.075	SES-1823696	71,264	—
Fiduciary Duty, Financial Regulation, and the Market for Retirement Products		47.075	SES-1824463	17,454	—
Applications of Dynamic Information Design		47.075	SES-1851883	66,820	—
Collaborative Research: Evidence in Economic Models		47.075	SES-1919494	53,192	—
Collaborative Research: Transparency and the Rule of Law: A Field Experiment in Ukraine		47.075	SES-1921294/002	13,000	—
Doctoral Dissertation Research: Political incivility is a feature, not a bug: Why mediated incivility is not bad for democracy		47.075	SES-1938706	14,852	—
Monotone Methods in Reputations: Behavioral Predictions and Reputation Sustainability		47.075	SES-1947021	58,046	—
Collaborative Research: Time-Sharing Experiments for the Social Sciences (TESS): Proposal for Renewed Support, 2020-2023		47.075	SES-2017561	115,201	—
Understanding the Long-Run Effects of School Desegregation on Political and Social Preferences		47.075	SES-2018869	32,784	—
Collaborative Research: Social Norms, Trust and the Inter-generational Flow of Innovations in a Developing Country		47.075	SES-2019086	1,802	—
Doctoral Dissertation Research in DRMS: Assembling Teams Supported by Augmented Intelligence		47.075	SES-2021117	12,893	—
COVID-19: RAPID: The Social and Behavioral Impact of COVID-19		47.075	COVID-19: SES-2027278	58,425	—
COVID-19: RAPID: Quantifying the Downstream Effects of COVID-19 Online Misinformation on Risk Perceptions, Decision-making, Policy Preferences, and Preventive Health Behaviors		47.075	COVID-19: SES-2031705	110,721	—
COVID-19: Surveying the Effect of COVID-19 on Trust		47.075	COVID-19: SES-2051194	75,350	—
COVID-19: The Next Normal for Teaming: Transitioning Out of COVID-19		47.075	COVID-19: SES-2052366	2,399	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
A Large-Scale Analysis of Mergers and Merger Simulations		47.075	SES-2116934	\$ 1,294	—
Collaborative Research: Understanding Team Success and Failure		47.075	SMA-1829344	73,826	—
Integration of Science Outreach into the Research Enterprise: Data-Driven Perspectives	181	47.075	SMA-1854018	3,558	—
Safe Bets and Risky Propositions: Leveraging Rich Data to Understand Scientific Diversity, Impact, and Potential of Teams		47.075	SMA-1856090	103,644	—
Production, Migration, & Differentiation: Analyzing the Co-Evolution of Careers & Knowledge Production		47.075	SMA-1934313	69,998	—
SCISIPBIO: A data-science approach to evaluating the likelihood of fraud and error in published studies		47.075	SMA-1956338	86,786	—
Collaborative Research: Identifying Reproducible Research Using Human-in-the-loop Machine Learning		47.075	SMA-2022466	96,054	—
COVID-19: RAPID: Impact of the Covid-19 Pandemic on the Biomedical Research Workforce: Productivity and Progress in Academia		47.075	COVID-19: SMA-2035112 AMD 001	61,451	—
				<u>3,192,930</u>	<u>871,188</u>
Teachers and Students Synergistic Learning Through Youth Participatory Science	245	47.076	16774-00 // DRL 1720856	2,301	—
AGEP National Research Conference 2020: Sustaining, Institutionalizing and Scaling AGEP Alliance Models and Initiatives	23	47.076	450002984//HRD-1841978	34,317	—
Preparing Future Faculty to Improve STEM Education: Broadening the National Impact of the CIRTL Network	284	47.076	795K406//1726625	6,278	—
Collaborative Research: NSF INCLUDES Alliance: An Alliance to Develop an Inclusive and Diverse National Faculty for Broadening Success of Underrepresented 2-Year and 4-Year STEM Students		47.076	Agmt 5/16/19//HRD-1834518	9,748	—
Doctoral Dissertation Research: A Geospatial Analysis of Alpine Glacial Variability	15	47.076	BCS-1812764	126	—
Graduate Research Fellowship Program (GRFP)		47.076	DGE – 1842165-003	5,054,841	—
NRT-URoL: Synthesizing Biology Across Scales – A Convergent Synthetic Biology Training Program		47.076	DGE 2021900	101,959	—
NRT-DESE: Training in Data-Driven Discovery – From the Earth and the Universe to the Successful Careers of the Future		47.076	DGE-1450006-004	660,072	—
Collaborative Research: Advancing Early STEM Learning Opportunities Through Tinkering and Reflection		47.076	DRL-1515788-002	(3,837)	—
Collaborative Research: Mixing Learning Experiences for Computer Programming Across Museums, Classrooms, and the Home Using Computational Music		47.076	DRL-1612619	(948)	—
Collaborative Research: Group-Based Cloud Computing for STEM Education Project		47.076	DRL-1614745	44,339	40,247
A Whole-School Model for Integrating Computational Thinking in High School Science and Mathematics		47.076	DRL-1640201 004	29,353	(2,646)
SPReAD: Broadening implementation of an innovative STEAM learning environment: Scaling up FUSE Studios through two models of partnership engagement with industry and schools		47.076	DRL-1657438	177,918	35,984
Collaborative Research: Mechanisms of Visuospatial Thinking in STEM		47.076	DRL-1661264 002	4,519	—
An investigation of the impact of culture and experience on reasoning about complex ecological phenomena among students from diverse backgrounds		47.076	DRL-1713368	143,077	—
EAGER: MAKER: A Cultural Framework for Equity in Maker Practices		47.076	DRL-1723750	17,238	—
Collaborative Research: Adapting and Implementing a Geospatial High School Course in Career and Technical Education Clusters in Urban Settings		47.076	DRL-1759360	199,174	—
Collaborative Research: Next Generation Science Standards (NGSS) and Designing School System Educational Infrastructure to support Elementary School Science Instruction		47.076	DRL-1761057	301,698	—
Using hyperlocal and networked strategies to support computer science education for middle grade students in Chicago		47.076	DRL-1824551	88,035	—
Broadening Participation in Computer Science Through Music, Dance, and Coding Across Learning Spaces		47.076	DRL-1837661	306,382	—
Methods for assessing replication		47.076	DRL-1841075	241,884	—
"CT-flying" the High-School Science Curriculum to Broaden Participation in Computational Science		47.076	DRL-1842374	869,032	—
Building theories of scientific phenomena: Comparing and Integrating aggregate pattern-based and agent-based computational approaches		47.076	DRL-1842375	422,538	65,899
Collaborative Research: Strategies: Building a Learning Ecology to Increase STEM Participation Among Middle School Girls		47.076	DRL-1850543	413,423	—
Collaborative Research: Making Space for Story-Based Tinkering to Scaffold Early Informal Engineering Learning		47.076	DRL-1906808	107,743	—
Collaborative Research: Investigating a Nested Mentoring Model Designed to Support STEM Skill and Identity Development for Middle School Youth, Scientist		47.076	DRL-1906971	215,684	86,458
Collaborative Research: Modern Meta-Analysis Research Institute		47.076	DRL-1937633	29,765	—
Improving Evaluations of R&D in STEM Education		47.076	DRL-1937719	24,933	—
An investigation of the impact of culture and experience on reasoning about complex ecological phenomena among students from diverse backgrounds		47.076	DRL-1946478	235,571	56,793
Computational Thinking and Physical Computing in Physical Education		47.076	DRL-2031467	137,459	—
Collaborative Research: IUOE: EHR – Inclusive Learning and Teaching in Undergraduate STEM Instruction		47.076	DUE-1821684/003	265,658	47,490
Collaborative Research: AGEP Transformation Alliance: CIRTL AGEP – Improved Academic Climate for STEM Dissertators and Postdocs to Increase Interest in Faculty Careers		47.076	HRD-1647146-005	32,920	—
CAREER: Investigation of Undergraduate Learning Contexts Considering Ethical, Racial, and Disciplinary Identities of Students in Engineering and Computer Science		47.076	HRD-1855494-002	226,998	—
Barry University Engaged STEM Scholars (ESS) Program	16	47.076	NSF-1930076 ESS-Sub 1//DUE-1930076	37,335	—
Facilitating Teacher Learning with Video Clips of Instruction in Science	67	47.076	R000002/72//2000833	4,729	—
Learning in Places: Field Based Science in Early Childhood Education	283	47.076	UWSC11018//DRL-1720578 AM 004	61,546	—
				<u>10,503,608</u>	<u>330,225</u>
Seasonality of Abrupt Climate Change over Greenland: Direct Tests for the Younger Dryas and 8.2 ka event using Paleolimnology		47.078	OPP-2002515	43,892	—
COVID-19: Investigating the Association between Smoking Status and COVID-19 Outcomes, Collecting Data from Health Systems Affiliated with the National Cancer Institute's Cancer Center Cessation Initiative (C3I)	284	47.079	COVID-19: 000001070//OISE-20-66590-1	42,273	—
PIRE: Computationally Based Imaging of Structure in Materials (CuBISM)		47.079	OISE-1743748	627,068	98,031
				<u>669,341</u>	<u>98,031</u>
PIRE: Integrated Computational Materials Engineering for Active Materials and Interfaces in Chemical Fuel Production	246	47.083	077340-1 580 Amd. 03//OISE-1545907	109,705	—
RAISE: C-Accel Pilot – Track A1: Northwestern Open Access to Court Records Initiative (NOACRI)		47.083	OIA-1937123	213,265	—
A1: An open knowledge network to transform the transparency and accessibility of court records		47.083	OIA-2033604 002	1,817,255	99,540
				<u>2,140,225</u>	<u>99,540</u>
ACME III: Advanced Cold Molecule Electron Electric Dipole Moment Search	299	47.RD	GR107174CON-80001859//1912513	227,395	—
National Science Foundation Total				<u>54,627,320</u>	<u>3,212,139</u>
U.S. Agency for International Development:					
Agency for International Development:					
MOMENTUM 2C – ACCEL	80	98.001	115423.5116109//7200AA20CA00003	59,416	—
Comparing HIV Mucosal Targets in US and Kenyan Populations	103	98.001	7503// AID-OAA-A-16-00032	62,549	—
Global Security Act: Policy Analysis and Measurement	184	98.001	825060//7200AA18LA00003-02	282,710	—
U.S. Agency for International Development Total				<u>404,675</u>	—
Research and Development Total				<u>\$ 574,053,272</u>	<u>83,631,859</u>

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Student Financial Assistance:					
Department of Education:					
Federal SEOG 2020-2021		84.007	P007A201246	\$ 2,186,241	—
Federal Work-Study 2019-2020		84.033	P033A191246	91,309	—
Federal Work-Study 2020-2021		84.033	P033A201246	2,965,483	—
Federal Work-Study 2021-2022		84.033	P033A21146	84,007	—
Federal Work-Study Administrative Cost Allowance FY21		84.033		286,081	—
				<u>3,406,880</u>	<u>—</u>
Federal Perkins Loans		84.038		14,282,706	—
Federal Pell Grant 2019-2020		84.063	P063P191371	(4,013)	—
Federal Pell Grant 2020-2021		84.063	P063P201371	7,882,692	—
				<u>7,878,679</u>	<u>—</u>
Federal Direct Loan Program 2019-2020		84.268	P268K201371	234,697	—
Federal Direct Loan Program 2020-2021		84.268	P268K211371	210,644,899	—
Federal Direct Loan Program 2021-2022		84.268	P268K221371	6,988,571	—
				<u>217,868,167</u>	<u>—</u>
Health Professionals Student and Primary Care – Outstanding as of 9/1/20		93.342		172,540	—
Department of Education Total				<u>245,795,213</u>	<u>—</u>
Student Financial Assistance Total				<u>245,795,213</u>	<u>—</u>
Other Programs:					
Corporation for National and Community Service:					
Jumpstart Northwestern	113	94.006	Lewis AGMT 12/3/20/210271	59,856	—
Corporation for National and Community Service Total				<u>59,856</u>	<u>—</u>
Department of Commerce:					
United States Patent and Trademark Office:					
Research Conference on Innovation Economics 2020		11.U01	USPTO MOA No. 16147009-0000-005	20,500	—
Department of Commerce Total				<u>20,500</u>	<u>—</u>
Department of Health and Human Services:					
Therapeutic Residential Performance Management Initiative – FY21 Federal Funding	92	93.599	0461569101/20ILCETV	100,316	—
Illinois Perinatal Quality Collaborative (ILPQC) – DHS FY21 Funding – Federal	94	93.667	FCSZU04929	129,510	28,961
Administration for Community Living:					
Age Friendly Chicago – Alzheimer's Disease Program Initiative	39	93.U02	Johnson AGMT 11/4/20	55,474	—
Centers for Disease Control and Prevention:					
Overdose Data to Action, Strategy 2: Statewide Unintentional Drug Overdose Reporting System	95	93.136	#13282005I	372,245	—
Drug User Health and Evaluation of Substance Use Delegate Agencies (TO 35)	40	93.136	(TO 35) 51549-41-TSK-0007//5NU17CE924986-02-00	93,608	—
Collecting Violent Death Information Using National Violent Death Reporting System (NVDRS): Illinois	93	93.136	5 NU1 7CE10031-02-00	169,388	—
Collecting Violent Death Information Using National Violent Death Reporting System (NVDRS): Illinois	12	93.136	901578 – NU//6 NU17CE924941-02-03	48,905	—
Overdose Data to Action, Strategy 2: Statewide Unintentional Drug Overdose Reporting System	12	93.136	916058-NU//NU17CE924980-01-00	22,824	—
				<u>706,970</u>	<u>—</u>
COVID-19: COVID-19 Electronic Health Data Initiative	207	93.421	COVID-19: Agmt# 03/07/21 // NU38OT000316-03-02	81,046	—
Improving the Health of Illinoisans Through Chronic Disease Prevention	95	93.426	03286008H/1NU58DP006511-02-00	20,835	—
Improving the Health of Illinoisans Through Chronic Disease Prevention (ENRICH)	95	93.426	13286008H/NU58DP006511-03-00	74,326	—
				<u>95,161</u>	<u>—</u>
Illinois Cancer Alliance to Reduce mortality and Enhance Screening (CARES)	234	93.800	AWD101193 (SUB00000357)/1 NU58DP006764-00	15,371	—
Assuring Comprehensive Prevention and Treatment for Families Affected by HIV to Eliminate Perinatal HIV Transmission in the United States	261	93.939	34-7220-3001-004//NU65PS923665-02-00 Amnd 2	13,438	—
Center for the Evaluation of the Chicago HIV Services Portfolio	40	93.940	51549 TOR 666/NU62PS924560-01-00	133,133	24,959
Integrated HIV Surveillance and Prevention, Component B – Demonstration Project	40	93.940	98537//5NU62PS924560-02-00	359,011	275,600
Integrated HIV Surveillance and Prevention, Component B – Demonstration Project	40	93.940	98537//5NU62PS924560	437,156	312,280
Ending the HIV Epidemic in Illinois Evaluation Plan Development (TO 20)	40	93.940	Agmt 51549 TOR 20//6 NU65PS923703-01-02	118,719	—
Evaluation of Chicago's Community HIV Services Portfolio	40	93.940	Agreement No. 51549 TOR 668	197,039	6,672
Community Engagement Planning for Ending the HIV Epidemic in Chicago and Cook County (TO 19)	40	93.940	TOR 19 Agmt 51549//6NU65PS923703-01-02	112,727	—
				<u>1,357,785</u>	<u>619,511</u>
Illinois Perinatal Quality Collaborative Working Together for Healthier Moms and Babies in Illinois		93.946	5 NU58DP006360-05-00	150,783	31,622
CDC Supplement: ILPQC MNO Initiative additional support for provider education and safe discharge planning		93.946	6NU58DP006360-03-01	58,497	20,102
				<u>209,280</u>	<u>51,724</u>
The HIV Outpatient Study (HOPS) Activity to Abstract Data from Persons Receiving Ambulatory Care for HIV Infection in the United States (the "Prime Agreement")	36	93.U03	Ag. 12/1/2016 // 200-2015-63931	8,352	—

NORTHWESTERN UNIVERSITY
 Supplementary Schedule of Expenditures of Federal Awards
 Year ended August 31, 2021

Cluster title/Federal grantor/Subagency/Project title	Pass-through ID number	Assistance listing	Sponsor award number	Federal expenditures	Passed-through to subrecipients
Centers for Medicare & Medicaid Services:					
Medicaid 1115 SUD Waiver Evaluation Project	296	93.U04	18-489-NU // BMS2100000007	\$ 6,260	—
MACRA-Provider Resource Network (M-PRN)	7	93.U05	SC-17-009/HHSM-500-2017- 0004C	257,505	36,409
Health Resources and Services Administration:					
I PROMOTE ILLINOIS (Innovations to ImPROve Maternal Outcomes in Illinois)	245	93.110	17747//5U7AMC33720-02-00	76,886	4,423
ACOG Alliance for Innovation on Maternal Health ("AIM")	8	93.110	Agmt 02/06/2020 // UC4MC28042	8,973	—
				<u>85,859</u>	<u>4,423</u>
Mothers and Babies Training and Technical Assistance	94	93.870	FCSZV04131	42,979	—
Mothers and Babies Training and Technical Assistance	94	93.870	FCSAV04131	6,306	—
				<u>49,285</u>	<u>—</u>
Evaluation of HIV Services Portfolio	40	93.914	51549 TOR 666 // H89HA00008	111,901	—
Quality Management of HIV Prevention Services in Chicago	40	93.914	51549 TOR 700 // H89HA00008	632,002	107,664
				<u>743,903</u>	<u>107,664</u>
HRSA/SPNS Evidence-Informed Approaches to Improving Health Outcomes for People Living with HIV	140	93.928	18-SA-321001-848//U90HA31882 Amd.#2	162,902	—
Illinois Perinatal Quality Collaborative (ILPQC) Title V	95	93.994	16380002I/B04MC33835	284,393	121,056
Illinois Perinatal Quality Collaborative (ILPQC) Title V	95	93.994	96380057G_A1	84,547	31,713
				<u>368,940</u>	<u>152,769</u>
Substance Abuse and Mental Health Services:					
Unaccompanied Minor Adaptation of Think Trauma	83	93.234	7430-01//1H79SM083664-01	22,043	—
Center for Child Trauma Assessment, Services and Interventions		93.243	5U79SM080018-05	570,956	—
Department of Health and Human Services Total				<u>5,040,356</u>	<u>1,001,461</u>
Department of State:					
Young African Leaders Initiative 2020	104	19.009	FY20-YALI-BE-NWU-01//S-ECAGD-18-CA-0022	71,992	—
2020 U.S. Fulbright Pre-Departure Orientation Sub-Saharan Africa	98	19.U06	3000192233//SECAGD20CA0008	26,861	—
Department of State Total				<u>98,853</u>	<u>—</u>
National Aeronautics and Space Administration:					
Meteoritic Nanodiamond Analysis by Atom-Probe Tomography	292	43.001	PO#2928922C/WU-18-16 Mod 3//NNX16AD26G	13,585	—
National Aeronautics and Space Administration Total				<u>13,585</u>	<u>—</u>
National Foundation of the Arts and Humanities:					
Institute of Museum and Library Services:					
Beyond the Repository: Integrating Local Preservation Systems with National Distribution Services		45.312	LG-70-18-0168-18	104,615	4,798
National Endowment for the Arts:					
Morning Will Come: Modernity in Indian Cinema		45.024	1858584-34-20	1,875	—
National Endowment for the Humanities:					
Constructing African Medical Heritage: Legacies of Empire and the Geopolitics of Culture, 1890-1990		45.161	RZ-271304-20	20,944	—
National Foundation of the Arts and Humanities Total				<u>127,434</u>	<u>4,798</u>
Other Programs Total				<u>5,360,584</u>	<u>1,006,259</u>
CCDF Cluster:					
Department of Health and Human Services:					
Administration for Children and Families:					
The effect of targeted public pre-K on the broader child care landscape in Illinois		93.575	90YE0214-01-01	2,024	—
The Effect of Targeted Public Pre-K on the Broader Child Care Landscape in Illinois		93.575	90YE0214-02-00	18,459	—
Department of Health and Human Services Total				<u>20,483</u>	<u>—</u>
CCDF Cluster Total				<u>20,483</u>	<u>—</u>
Head Start Cluster:					
Department of Health and Human Services:					
AdministratExpanding the Cycle of Opportunity: Simultaneously Educating Parents and Children in Head Start		93.600	90YR0073-05-03 Amd 3	6,145	6,145
Department of Health and Human Services Total				<u>6,145</u>	<u>6,145</u>
Head Start Cluster Total				<u>6,145</u>	<u>6,145</u>
Medicaid Cluster:					
Department of Health and Human Services:					
Centers for Medicare & Medicaid Services:					
Illinois Medicaid EHR Incentive Program Education and Outreach Program	93	93.778	2020 37-002	1,001,437	313,551
Medicaid Cluster Total				<u>1,001,437</u>	<u>313,551</u>
Grand Total				<u>\$ 826,237,134</u>	<u>84,957,814</u>

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2021

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

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2021

Sponsor full name	Pass-through ID Number
Children's Hospital of Philadelphia	41
Cincinnati Children's Hospital Medical Center	42
CJE SeniorLife	43
Clarix Imaging Corporation	44
Cleveland Clinic Lerner College of Medicine of Case Western Reserve University	45
Columbia University	46
Community Action Project of Tulsa County, Inc.	47
Computing Research Association, Inc.	48
COPD Foundation	49
Cornell University	50
Critical Path Institute	51
Dana-Farber Cancer Institute	52
Dartmouth College	53
Delaware State University	54
DePaul University	55
DermaXon LLC	56
Digital Optics Technologies, Inc.	57
Duke University	58
Durametrix LLC	59
ECOG-ACRIN Medical Research Foundation, Inc.	60
Elorac, Inc.	61
Emmes Company, LLC	62
Emory University	63
Engineering and Software System Solutions, Inc.	64
Fermi Research Alliance, LLC, Fermi National Acceleratory Laboratory	65
Florida International University	66
Florida State University	67
Forsyth Institute	68
Fred Hutchinson Cancer Research Center	69
Frontier Science and Technology Research Foundation	70
Gallaudet University	71
George Mason University	72
George Washington University	73
Georgetown University	74
Georgia Institute of Technology	75
Georgia State University	76
Global Engineering and Materials, Inc.	77
Government of Israel Ministry of Defense Mission to the USA	78
Great Lakes Hemophilia Foundation	79
Harvard University	80

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2021

Sponsor full name	Pass-through ID Number
HDT Expeditionary Systems, Inc.	81
Health Research, Incorporated	82
Heartland Alliance International, LLC	83
Hektoen Institute for Medical Research	84
Helios-NRG, LLC	85
Henry M. Jackson Foundation for the Advancement of Military Medicine	86
Histogen Inc.	87
Honeywell Federal Manufacturing & Technologies, LLC	88
Honeywell International Inc.	89
Icahn School of Medicine at Mount Sinai	90
ICON Clinical Research, LLC	91
Illinois Department of Children and Family Services	92
Illinois Department of Healthcare and Family Services	93
Illinois Department of Human Services	94
Illinois Department of Public Health	95
ImmunoChem Therapeutics, LLC	96
Indiana University	97
Institute of International Education, Inc.	98
Intact Genomics, Inc.	99
Integrated Protein Technologies, Inc.	100
Intelligent Automation, Inc.	101
Intelligent Fiber Optic Systems Corporation	102
International AIDS Vaccine Initiative	103
International Research & Exchanges Board	104
Iowa State University	105
Iowa State University, Ames Laboratory	106
J. Craig Venter Institute	107
Jackson State University	108
Jaeb Center for Health Research	109
Joan and Sanford I. Weill Medical College of Cornell University	110
John Wayne Cancer Institute	111
Johns Hopkins University	112
Jumpstart for Young Children, Inc.	113
Kaiser Foundation Research Institute	114
KBR Wyle Services, LLC	115
Kitware, Inc	116
Krueck & Sexton Architects, LTD	117
Lehigh University	118
Leidos Biomedical Research, Inc.	119
Leidos, Inc.	120

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2021

Sponsor full name	Pass-through ID Number
Louisiana State University Health Sciences Center Shreveport	121
Magee-Womens Research Institute and Foundation	122
Manpower Demonstration Research Corp.	123
Massachusetts General Hospital	124
Massachusetts Institute of Technology	125
Massachusetts Institute of Technology, Lincoln Laboratory	126
Materials Design Inc.	127
Mathematica Policy Research, Inc.	128
Mayo Clinic	129
Mayo Clinic Jacksonville	130
Medical College of Wisconsin	131
Medical University of South Carolina	132
MedStar Health Research Institute	133
Methodist Hospital Research Institute	134
Metis Foundation (TX)	135
Michelin North America, Inc.	136
Michigan State University	137
Monell Chemical Senses Center	138
Montana State University	139
National Alliance of State and Territorial AIDS Directors	140
National Collegiate Inventors and Innovators Alliance, Inc.	141
National Technology and Engineering Solutions of Sandia, LLC	142
Neurodon LLC	143
NeuroKine Therapeutics, LLC	144
New England Research Institutes, Inc.	145
New Mexico Institute of Mining and Technology	146
New York University	147
New York University School of Medicine	148
NexTech Materials, Ltd.	149
Northeastern University	150
Northern California Institute for Research and Education	151
Northrop Grumman Corporation	152
NorthShore University HealthSystem Research Institute	153
Nour, LLC	154
Novinoor, LLC	155
NRG Oncology Foundation, Inc.	156
NuMat Technologies, Inc.	157
Ohio State University	158
Ohio University	159
Old Dominion University Research Foundation	160

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2021

Sponsor full name	Pass-through ID Number
Opto-Knowledge Systems, Inc.	161
Oregon Health & Science University	162
Pacific Northwest National Laboratory	163
PACT & Health LLC	164
Pennington Biomedical Research Center	165
Pennsylvania State University	166
Pennsylvania State University Applied Research Laboratory	167
Photonwares Corporation	168
Princeton University	169
Public Health Institute	170
Purdue University	171
QuesTek Innovations LLC	172
Radiation Monitoring Devices, Inc.	173
RAND Corporation	174
Rehabilitation Institute of Chicago	175
Renalis, LLC	176
Research Corporation	177
Research Foundation for Mental Hygiene, Inc.	178
Research Institute at Nationwide Children's Hospital	179
Research Triangle Institute	180
Rockefeller University	181
Rosalind Franklin University of Medicine and Science	182
Rush University Medical Center	183
Rutgers University, the State University of New Jersey	184
SAFCell, Inc.	185
San Diego State University Foundation	186
Sanford Burnham Prebys Medical Discovery Institute	187
Scientific Consulting Group, Inc.	188
Scripps Research Institute	189
Seattle Children's Hospital	190
SIMmersion LLC	191
SixPoint Materials, Inc.	192
Smart Information Flow Technologies, LLC	193
Smithsonian Astrophysical Observatory	194
Sonica LLC	195
Southern Methodist University	196
Space Telescope Science Institute	197
SRI International	198
Stanford University	199
Stanford University, SLAC National Accelerator Laboratory	200

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2021

Sponsor full name	Pass-through ID Number
State University of New York at Buffalo	201
State University of New York at Stony Brook	202
Stealth Software Technologies, Inc.	203
Steel Founders' Society of America	204
Sustainable Manufacturing Innovation Alliance Corp.	205
Sutter Bay Hospitals	206
Task Force for Global Health, Inc.	207
Tera-Print LLC	208
Texas A&M Engineering Experiment Station	209
Texas A&M University System	210
Texas Biomedical Research Institute	211
Thomas Jefferson University	212
Triad National Security, LLC, Los Alamos National Laboratory	213
Triton Systems, Inc.	214
Tulane University	215
UChicago Argonne, LLC, Argonne National Laboratory	216
UES, Inc.	217
UI Labs	218
Universities Space Research Association	219
University Health Network (Toronto)	220
University of Abuja	221
University of Alabama at Birmingham	222
University of Alberta	223
University of Arkansas for Medical Sciences	224
University of Botswana	225
University of California, Davis	226
University of California, Irvine	227
University of California, Lawrence Berkeley National Laboratory	228
University of California, Los Angeles	229
University of California, Riverside	230
University of California, San Diego	231
University of California, San Francisco	232
University of California, Santa Barbara	233
University of Chicago	234
University of Cincinnati	235
University of Colorado	236
University of Colorado Denver	237
University of Connecticut	238
University of Connecticut Health Center	239
University of Delaware	240

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2021

Sponsor full name	Pass-through ID Number
University of Florida	241
University of Georgia	242
University of Houston	243
University of Ibadan	244
University of Illinois at Chicago	245
University of Illinois at Urbana-Champaign	246
University of Iowa	247
University of Jos	248
University of Kentucky	249
University of Lagos	250
University of Louisiana at Lafayette	251
University of Maryland, Baltimore	252
University of Massachusetts Amherst	253
University of Massachusetts Medical School	254
University of Memphis	255
University of Miami	256
University of Michigan	257
University of Minnesota	258
University of Missouri-Columbia	259
University of Nebraska at Omaha	260
University of Nebraska Medical Center	261
University of New Hampshire	262
University of North Carolina at Chapel Hill	263
University of North Texas Health Science Center at Fort Worth	264
University of Notre Dame	265
University of Oregon	266
University of Pennsylvania	267
University of Pittsburgh	268
University of Rochester	269
University of South Carolina	270
University of South Florida – Tampa	271
University of Southern California	272
University of Tennessee Health Science Center	273
University of Texas at Austin	274
University of Texas at Dallas	275
University of Texas at El Paso	276
University of Texas at San Antonio	277
University of Texas Health Science Center at Houston	278
University of Texas M. D. Anderson Cancer Center	279
University of Texas Southwestern Medical Center at Dallas	280

NORTHWESTERN UNIVERSITY

Supplementary Schedule of Expenditures of Federal Awards

Legend for Pass-Through Award Prime Recipients

Year ended August 31, 2021

Sponsor full name	Pass-through ID Number
University of Utah	281
University of Virginia	282
University of Washington	283
University of Wisconsin-Madison	284
University of Wisconsin-Milwaukee	285
UT-Battelle, LLC, Oak Ridge National Laboratory	286
Vanderbilt University	287
Vanderbilt University Medical Center	288
Vignet Inc.	289
Volxion, Inc.	290
Wake Forest University Health Sciences	291
Washington University in St. Louis	292
Water Research Foundation	293
Wayne State University	294
Wearifi, Inc.	295
West Virginia University	296
WestEd	297
Wisconsin Department of Transportation	298
Yale University	299

NORTHWESTERN UNIVERSITY

Notes to Supplementary Schedule of Expenditures of Federal Awards

Year ended August 31, 2021

(1) Organization and Scope of Operations

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

(2) Summary of Significant Accounting Policies

Basis of Accounting – The accompanying supplementary schedule of expenditures of federal awards (the Schedule) summarizes the expenditures of the University and its subsidiaries under programs of the federal government for the year ended August 31, 2021. 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 Assistance Listing (AL) 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 indirect cost 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 consolidated 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 Indirect Cost Rate for Subawards – The University applies the 10% de minimis indirect cost rate to modified total direct costs (MTDC) to subawards if the subrecipient does not receive an approved negotiated indirect cost 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, 2021

(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, 2021, are summarized as follows:

Federal Perkins Loan Program (AL 84.038)	\$	—
Federal Direct Student Loans (AL 84.268)		217,868,167
HPSL Primary Care Loans (AL 93.342)		<u>—</u>
Total Federal Student Loan Programs	\$	<u>217,868,167</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 (AL 84.038) and HPSL (AL 93.342) programs were \$10,803,614 and \$170,583, respectively, at August 31, 2021. The University incurred \$286,081 in administrative expenses under the Federal Work Study program, and \$0 under the Federal Supplemental Educational Opportunity Grant and Perkins programs for the year ended August 31, 2021.



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

The Board of Trustees
Northwestern University:

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the consolidated financial statements of Northwestern University, which comprise the consolidated statement of financial position as of August 31, 2021, 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 20, 2021. Our report contains an emphasis of matter paragraph referring to the University's adoption, in 2021, of Financial Accounting Standards Board Accounting Standards Update No. 2016-02, *Leases (Topic 842)*, as amended.

Internal Control Over Financial Reporting

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

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

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

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the University's consolidated financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the consolidated financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.



Purpose of this Report

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

KPMG LLP

Chicago, Illinois
December 20, 2021



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Independent Auditors' Report on Compliance for Each 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 the Major Federal Program

We have audited Northwestern University's (the University) compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on the University's major federal program for the year ended August 31, 2021. The University's major federal program is identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

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

Auditors' Responsibility

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

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

Opinion on Each Major Federal Program

In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on its major federal program for the year ended August 31, 2021.

Report on Internal Control Over Compliance

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the University's internal control over compliance with the types of requirements that could have a direct and material effect on a major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for the major



federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the University's internal control over compliance.

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

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

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

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, 2021, and have issued our report thereon dated December 20, 2021, which contained an unmodified opinion on those consolidated financial statements. Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying 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 20, 2022

NORTHWESTERN UNIVERSITY
Schedule of Findings and Questioned Costs
Year ended August 31, 2021

(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: None reported
- (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): No
- (g) Major program:
 - Research and Development Cluster – Various AL 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

(3) Findings and Questioned Costs Relating to Federal Awards

None