THE JACKSON LABORATORY

Independent Auditors' Reports, as Required by Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* and *Government Auditing Standards* and Related Information

Year Ended December 31, 2018

THE JACKSON LABORATORY

Independent Auditors' Reports as Required by Title 2
U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* and *Government Auditing Standards* and Related Information

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

The Board of Trustees
The Jackson Laboratory:

Report on Compliance for Major Federal Program

We have audited The Jackson Laboratory's (the Laboratory's) compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on the Laboratory's major federal program for the year ended December 31, 2018. The Laboratory'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 Laboratory'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 Laboratory'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 Laboratory's major federal program. However, our audit does not provide a legal determination of the Laboratory's compliance.

Opinion on Major Federal Program

In our opinion, the Laboratory 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 December 31, 2018.

Other Matter

The results of our auditing procedures disclosed an instance of noncompliance, which is required to be reported in accordance with the Uniform Guidance and which is described in the accompanying schedule of findings and questioned costs as item 2018-001. Our opinion on the Laboratory's major federal program is not modified with respect to this matter.

The Laboratory's response to the noncompliance finding identified in our audit is described in the accompanying schedule of findings and questioned costs. The Laboratory's response was not subjected to the auditing procedures applied the audit of compliance and, accordingly, we express no opinion on the response.

Report on Internal Control Over Compliance

Management of the Laboratory 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 Laboratory's internal control over compliance with the types of requirements that could have a direct and material effect on its major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for its 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 Laboratory's internal control over compliance.

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

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that have not been identified. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, we did identify a deficiency in internal control over compliance, described in the accompanying schedule of findings and questioned costs as item 2018-001, which we consider to be a significant deficiency.

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

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

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

We have audited the financial statements of the Laboratory as of and for the year ended June 30, 2018, and have issued our report thereon dated May 17, 2019, which contained an unmodified opinion on those financial statements. Our audit was conducted for the purpose of forming an opinion on the 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 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 financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the 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 financial statements as a whole.

KPMG LLP

June 14, 2019

KPMG LLP
Two Financial Center
60 South Street
Boston, MA 02111

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
The Jackson Laboratory:

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 The Jackson Laboratory (the Laboratory), which comprise the consolidated balance sheet as of December 31, 2018, the related consolidated statements of activities and consolidated cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated May 17, 2019.

Internal Control over Financial Reporting

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

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's 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 audits 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 Laboratory's consolidated financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of consolidated financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Laboratory'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 Laboratory's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

May 17, 2019

THE JACKSON LABORATORY

Schedule of Findings and Questioned Costs

Year ended December 31, 2018

(1) Summary of Auditors' Results

Financial Statements

a) Type of report issued on whether the 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 financial statements:

- Material weaknesses: **No**
- Significant deficiencies: **None reported**

c) Noncompliance material to the financial statements: **No**

Federal Awards

d) Internal control deficiencies over major program disclosed by the audit:

- Material weaknesses: **No**
- Significant deficiencies: **Yes, 2018-001**

e) Type of report issued on compliance for major program: **Unmodified**

f) Audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?: **Yes, 2018-001**

g) Major program:

- Research and Development Cluster – various CFDA numbers

h) Dollar threshold used to distinguish between Type A and Type B programs: **$2,271,322**

i) Auditee qualified as a low-risk auditee: **No**

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

None.

(3) Findings and Questioned Costs Relating to Federal Awards

Reference Number 2018-001:

Federal Agency:	Department of Health and Human Services
Pass-Through Agency:	Direct
Program Name:	Research and Development Cluster
CFDA #:	93.279, 93.398, 93.853
Federal Award Numbers:	P50 DA039841A, U54 NS105539A, R25 CA172010A, R01 DA037927A
Federal Award Year:	January 1, 2018 – December 31, 2018

Criteria

Non-federal entities must follow the procurement standards set out at 2 CFR sections 200.318 through 200.326, and must use their own documented procurement procedures, provided that the procurement conform to applicable Federal statutes and the procurement requirements identified in 2 CFR part 200. Specifically, a non-Federal entity must:

1) Meet the general procurement standards in 2 CFR section 200.318, which include oversight of contractor's performance, maintaining written standards of conduct for employees involved in contracting, awarding contracts only to responsible contractors, and maintaining records to document history of procurements;

2) Conduct all procurement transactions in a manner providing full and open competition, in accordance with 2 CFR section 200.319;

3) Use micro-purchase and small purchase methods only for procurements that meet the applicable criteria under 2 CFR sections 200.320(a) and (b). Micro-purchases may be awarded without soliciting competitive quotations if the non-Federal entity considers the price to be reasonable (2 CFR section 200.320(a)). If small purchase procedures are used, price or rate quotations must be obtained from an adequate number of qualified sources (2 CFR section 200.320(b));

4) Use one of the following procurement methods for acquisitions exceeding the simplified acquisition threshold: (1) sealed bid method, (2) competitive proposals method, or (3) the noncompetitive proposals method, only when one of four conditions are met in accordance with 2 CFR section 200.320(f);

5) Perform a cost or price analysis in connection with every procurement action in excess of the simplified acquisition threshold; and

6) Ensure that every purchase order or other contract includes applicable provisions required by 2 CFR section 200.326.

(Continued)

Conditions Found

We selected a total of 10 of the Laboratory's procurements that occurred during the year ended December 31, 2018 in excess of the micro-purchase threshold. We noted that four of the procurements selected were subject to small purchase procedures under applicable regulations, however the Laboratory could not provide documentation that price or rate quotations were obtained from an adequate number of sources. In each individual instance, the procurement was sole-sourced from one vendor.

Possible Asserted Cause and Effect

The Laboratory did not have the appropriate processes, procedures and internal controls to comply with Federal procurement requirements, specifically those related to sole-sourcing of procurements.

Questioned Costs

None.

Statistical Sampling

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

Repeat Finding

This was not a finding in the prior year.

Recommendation

We recommend that the Laboratory review its policies, procedures and controls related to federal procurements to ensure procurements are made in accordance with the methods prescribed under 2 CFR sections 200.318 through 200.326. Specifically, we recommend the Laboratory strengthen its policies and procedures related to sole sourcing of procurements and ensure that an adequate number of price or rate quotations are obtained and documented. Further, we recommend that the Laboratory implement a secondary review process over procurements in-excess of the micro-purchase threshold.

View of Laboratory Officials

Management agrees with the finding and is in the process of taking the following steps in line with the recommendation:

1) The Controller's Office has hired a new Sr. Manager of Supply Chain & Procurement; This individual who commences employment on May 28, 2019, will closely manage, design and oversee the strengthening of procurement department control and business processes to enhance compliance with 2 CFR sections 200.318 through 200.326.

(Continued)

2) The Controller's Office has employed a Uniform Guidance consultant who is performing the following:

   a. In-depth training of the procurement department management and personnel on compliance with all manner of Uniform Guidance requirements, including, but not limited to 2 CFR sections 200.318 through 200.326;

   b. Assistance to the Sr. Manager of Supply Chain & Procurement on business process re-design to ensure consistent, ongoing regulatory compliance in all manner of procurement department procedures, including integrated procedures and communication with Grants Accounting in Sponsored Research Administration;

   c. Assistance to the procurement department with the development of improved sole-source justification form and related processes;

   d. Assistance to the Controller's Office and the procurement department, and partnering with Sponsored Research Administration, in the design and roll-out of the new procurement program to the Laboratory's principal stakeholders including faculty, management and laboratory staff.

Management intends for the development and training of the procurement department management and staff to be concluded by the end of July 2019. The roll-out of the new procurement program is earmarked for the end of the third quarter and/or early 4th quarter of 2019.

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Independent Auditors' Report

The Board of Trustees
The Jackson Laboratory:

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of The Jackson Laboratory (the Laboratory), which comprise the consolidated balance sheets as of December 31, 2018 and 2017, and the related consolidated statements of activities and consolidated 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 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 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 consolidated financial position of the Laboratory as of December 31, 2018 and 2017, and the changes in its consolidated net assets and its consolidated cash flows for the years then ended, in accordance with U.S. generally accepted accounting principles.

Emphasis of Matter

As disclosed in Note 2(n) to the consolidated financial statements, during the year ended December 31, 2018, the Laboratory adopted Financial Accounting Standards Board Accounting Standards Update (ASU) No. 2016-14, *Not-for-Profit entities (Topic 958): Presentation of Financial Statements of Not-for-Profit Entities*. Our opinion is not modified with respect to this matter.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated May 17, 2019, on our consideration of the Laboratory'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 Laboratory'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 Laboratory's internal control over financial reporting and compliance.

KPMG LLP

May 17, 2019

THE JACKSON LABORATORY

Consolidated Balance Sheets

December 31, 2018 and 2017

(Dollars in thousands)

Assets		**2018**	**2017**
Cash and equivalents	$	8,406	8,288
Working capital investments, at fair value		194,234	199,401
Accounts receivable, net		45,190	37,089
Contributions receivable, net		4,457	4,225
Other assets		24,710	24,545
Long-term investments, at fair value		261,889	167,681
Long-lived assets, net		485,875	448,875
Total assets	$	1,024,761	890,104
Liabilities			
Accounts payable and accrued expenses	$	56,567	57,358
Deposits and deferred revenue		9,510	13,621
Bonds and note payable, net		213,548	92,191
Interest rate swaps, at fair value		—	4,256
Connecticut forgivable loans, at fair value		—	3,440
Accrued postretirement obligations		5,192	6,324
Total liabilities		284,817	177,190
Net assets:			
Without donor restrictions		672,815	646,539
With donor restrictions		67,129	66,375
Total net assets		739,944	712,914
Total liabilities and net assets	$	1,024,761	890,104

See accompanying notes to consolidated financial statements.

THE JACKSON LABORATORY

Consolidated Statement of Activities

Year ended December 31, 2018

(Dollars in thousands)

		Without donor restrictions	With donor restrictions	Total
Operating activities:				
Revenue and other support:				
Grants and research contracts	$	96,184	—	96,184
Contributions		1,079	3,218	4,297
Genetic resources and clinical and research services		285,102	—	285,102
Long-term investment return utilized		3,178	1,891	5,069
Other investment return		1,932	—	1,932
Other revenue		2,193	—	2,193
Total revenue		389,668	5,109	394,777
Net assets released from restrictions		4,003	(4,003)	—
Total revenue and other support		393,671	1,106	394,777
Expenses:				
Research		138,642	—	138,642
Genetic resources and clinical and research services		165,051	—	165,051
Training		8,499	—	8,499
Institutional support		54,540	—	54,540
Total expenses		366,732	—	366,732
Increase in net assets from operating activities		26,939	1,106	28,045
Nonoperating activities:				
Grants and contributions for capital and long-term investments		7,855	2,898	10,753
Long-term investment loss above amounts utilized		(17,901)	(3,250)	(21,151)
Realized gain on termination of interest-rate swaps		601	—	601
Realized gain on forgiveness of Connecticut Innovations forgivable loans		8,724	—	8,724
Other		58	—	58
Decrease in net assets from nonoperating activities		(663)	(352)	(1,015)
Increase in net assets		26,276	754	27,030
Net assets, beginning of year		646,539	66,375	712,914
Net assets, end of year	$	672,815	67,129	739,944

See accompanying notes to consolidated financial statements.

THE JACKSON LABORATORY

Consolidated Statement of Activities

Year ended December 31, 2017

(Dollars in thousands)

	Without donor restrictions	With donor restrictions	Total
Operating activities:			
Revenue and other support:			
Grants and research contracts	$ 87,906	—	87,906
Contributions	1,149	2,338	3,487
Genetic resources and clinical and research services	256,705	—	256,705
Long-term investment return utilized	2,716	1,441	4,157
Other investment return	15,022	—	15,022
Other revenue	3,704	—	3,704
Total revenue	367,202	3,779	370,981
Net assets released from restrictions	3,905	(3,905)	—
Total revenue and other support	371,107	(126)	370,981
Expenses:			
Research	131,886	—	131,886
Genetic resources and clinical and research services	147,568	—	147,568
Training	8,269	—	8,269
Institutional support	47,433	—	47,433
Total expenses	335,156	—	335,156
Increase (decrease) in net assets from operating activities	35,951	(126)	35,825
Nonoperating activities:			
Grants and contributions for capital and long-term investments	7,017	1,684	8,701
Net assets released from restrictions for capital purposes	1,853	(1,853)	—
Long-term investment return above amounts utilized	15,578	5,334	20,912
Unrealized net gain on interest-rate swaps	1,207	—	1,207
Adjustment to fair value of Connecticut forgivable loans	13,084	—	13,084
Other	197	—	197
Increase in net assets from nonoperating activities	38,936	5,165	44,101
Increase in net assets	74,887	5,039	79,926
Net assets, beginning of year	571,652	61,336	632,988
Net assets, end of year	$ 646,539	66,375	712,914

See accompanying notes to consolidated financial statements.

THE JACKSON LABORATORY

Consolidated Statements of Cash Flows

Years ended December 31, 2018 and 2017

(Dollars in thousands)

		2018	2017
Cash flows from operating activities:			
Increase in net assets	$	27,030	79,926
Adjustments to reconcile increase in net assets to cash provided by operating activities:			
Depreciation and amortization		35,494	34,733
Adjustment to fair value of Connecticut forgivable loans		—	(13,084)
Gain on forgiveness of Connecticut forgivable loans		(8,724)	—
Loss on debt extinguishment		508	—
Termination of interest rate swap agreements		(3,655)	—
Realized and unrealized net investment loss/(gains)		30,700	(31,621)
Realized and unrealized net gains on interest-rate swaps		(601)	(1,207)
(Gain)/loss on disposal of long-lived assets		(795)	431
Contributions restricted for long-term investment and assets		(2,328)	(2,585)
Changes in operating assets and liabilities		(13,855)	28,414
Net cash provided by operating activities		63,774	95,007
Cash flows from investing activities:			
Acquisition and construction of long-lived assets		(71,964)	(102,745)
Net cash designated as working capital from bond proceeds		(44,646)	—
Proceeds from investments		204,302	91,263
Purchases of investments		(279,397)	(92,886)
Net cash used in investing activities		(191,705)	(104,368)
Cash flows from financing activities:			
Repayment of bonds		(36,925)	(3,605)
Proceeds from bonds		159,585	—
Bond issuance costs		(1,419)	—
Repayment of note payable		(127)	(122)
Draws under Connecticut Innovations forgivable loans prior to loan forgiveness		886	9,189
Contributions from Connecticut Innovations restricted for long-term assets subsequent to loan forgiveness		3,721	—
Contributions restricted for long-term investment and assets		2,328	2,585
Net cash provided by financing activities		128,049	8,047
Net increase/(decrease) in cash and equivalents		118	(1,314)
Cash and equivalents, beginning of year		8,288	9,602
Cash and equivalents, end of year	$	8,406	8,288
Cash paid for interest	$	4,651	4,318

See accompanying notes to consolidated financial statements.

(1) Background

The Jackson Laboratory (the Laboratory) is a not-for-profit independent research organization focusing on research to advance human health. The purposes of the Laboratory are scientific, medical, charitable, and educational. The Laboratory strives to discover precise genomic solutions for disease and empower the global biomedical community in its shared quest to improve human health. This mission is carried out through: (1) conducting basic biomedical research; (2) training and educating scientists worldwide; and (3) developing and providing scientific services, genetic resources, and genetic and clinical information related to genetic resources to the global scientific community.

On November 12, 2018 the Laboratory established a wholly owned US subsidiary, Jackson Laboratory Holdings, LLC (LLC) and its wholly owned subsidiary, The Jackson Laboratory Medical Science and Technology (Shanghai) Co., Ltd. (JAX Shanghai), incorporated under Chinese law. The Laboratory's financial results include the operations of LLC and JAX Shanghai. All intercompany transactions have been eliminated in consolidation.

(2) Summary of Significant Accounting Policies

(a) Basis of Presentation

The Laboratory presents its consolidated financial statements on the accrual basis in accordance with U.S. generally accepted accounting principles (GAAP). All amounts presented in the notes to the financial statements are in thousands.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities, at the dates of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates. Management estimates, requiring the application of significant judgments, include obligations under a postretirement plan, liabilities under self-insured plans, allowances for uncollectible receivables, certain alternative investments, valuations of interest-rate swaps, and Connecticut Innovations, Inc. (CI) forgivable loans.

(b) Classification of Net Assets

The Laboratory follows the reporting requirements of GAAP which require that net assets be classified for reporting purposes based on the existence or absence of donor-imposed restrictions. This is accomplished by classifying net assets into two classes: without donor restrictions and with donor restrictions. Descriptions of the two net asset categories and the types of transactions affecting each category follow:

- Without Donor Restrictions – Net assets that are not subject to donor-imposed restrictions. This net asset category principally consists of revenues and related expenses associated with the core activities of the Laboratory: conduct of sponsored research, genetic resources and clinical and research services, and training. Additionally, changes in this category include the gain on forgiveness of and adjustments to the fair value of CI forgivable loans, investment returns on funds without donor restrictions, including those designated by the Board of Trustees (the Board) to function as an endowment, and restricted gifts whose donor-imposed restrictions were met during the fiscal year, as well as previously restricted gifts and grants for buildings and equipment that have been placed in service.

- With Donor Restrictions – Net assets subject to donor-imposed restrictions that will be met either by actions of the Laboratory or the passage of time. This net asset category consists of gifts for which donor-imposed restrictions have not been met in the year of receipt, including gifts and grants for buildings and equipment not placed in service; endowment, pledges, and investment return on endowments funds; and endowments where the principal may be expended over a stated period of time (term endowments). Expirations of restrictions on net assets with donor restrictions are reported as net assets released from restrictions.

  Also included in this category are net assets subject to donor-imposed restrictions, including gifts and pledges wherein donors stipulate that the corpus of the gift be held in perpetuity and that only the income be made available for program operations and other purposes.

Revenue is reported as an increase in net assets without donor restrictions unless its use is limited by donor-imposed restrictions or it is a pledge and included in net assets with donor restrictions until collected. Expenditures of net assets with donor restrictions are reported in the program where expended with the release of the restriction shown as a decrease in net assets with donor restrictions and an offsetting increase in net assets without donor restrictions.

(c) Revenue from Provision of Genetic Resources and Clinical and Research Services

Revenue from providing genetic resources and clinical and research services is recognized when the resources are shipped or the services are provided and is included in Genetic Resources and Clinical and Research Services revenue. Accounts receivable from such activities are reported net of allowance for uncollectible accounts.

(d) Revenue from Grants and Research Contracts

The Laboratory recognizes revenue from grants and research contracts as related costs are incurred. Payments received in advance of expenditures are recorded as deferred revenue until expended. The Laboratory received approximately 78% and 75%, respectively, of its revenue from grants and contracts from the National Institutes of Health (NIH) for the years ended December 31, 2018 and 2017. CI research and operating grants provided 15% and 18% of the grant revenue in 2018 and 2017, respectively. Indirect costs are billed and recovered in accordance with the terms of the grant and represented $31,447 and $26,255, respectively, of revenue from grants for the years ended December 31, 2018 and 2017. Most NIH grants reimburse for indirect costs at an agreed percentage of direct costs incurred. CI reimburses eligible costs up to an annual maximum amount. The Laboratory applies the CI grant funds first to direct costs and then to indirect costs.

(e) Revenue from Contributions

Contributions, including unconditional promises to give, are recognized at fair value and increase net assets in the period received. Written promises to give that are scheduled to be received after the balance sheet date are shown as increases in net assets with donor restrictions and are reclassified to net assets without donor restrictions when the purpose or time restrictions are met. Promises to give subject to donor-imposed stipulations that the corpus be maintained permanently are recognized as increases in net assets with donor restrictions. Conditional promises to give are not recognized until they become unconditional, that is, when the conditions on which they depend are substantially met. Contributions of cash and publicly traded securities are classified in Level 1 of the fair value hierarchy (see note 2(n)). Contributions of assets other than cash or publicly traded securities are recorded at their estimated fair value at the date of gift. As no market for future contributions exists, pledges are classified in Level 3 of the fair value hierarchy. Contributions to be received after one year are discounted at rates commensurate with the estimated risk of receipt of the pledge. Amortization of the discount is recorded as additional contribution revenue in the appropriate net asset category.

Contributions of cash or other assets that must be used to acquire long-lived assets or the contribution of long-lived assets are reported in nonoperating support as a component of net assets with donor restrictions until the assets are placed in service.

Donor-directed changes made in subsequent periods to their original restrictions are reported as reclassifications between the applicable net asset classes.

(f) Functional Classification of Expenses

Program services consist of research, genetic resources and clinical and research services, and training. Expenses are presented on the consolidated statements of activities on a functional or programmatic basis, consisting of direct costs and indirect facility-related costs. Facility-related expenses, including costs for the operation and maintenance of long-lived assets, financing costs and depreciation, are allocated on the basis of square footage utilized by each of the programs. Facility-related costs related to information technology are allocated primarily on the basis of the estimated level of effort.

Functional expenses incurred by type for the years ended December 31, 2018 and 2017 are presented below:

	December 31, 2018				
	Research	Genetic resources and clinical and research services	Training	Institutional support	Total
Salaries and wages	$ 63,335	64,529	2,806	25,683	156,353
Benefits	18,826	19,181	834	7,634	46,475
Employee recruitment, training, memberships and subscriptions	1,292	590	86	2,170	4,138
Purchased services and stipends	8,733	3,111	1,571	7,712	21,127
Supplies and shipping	15,219	38,245	556	1,179	55,199
Maintenance, utilities and insurance	11,039	12,574	676	3,300	27,589
Travel and meals	2,310	3,070	999	2,593	8,972
Interest expense	1,168	3,516	57	270	5,011
Depreciation	16,554	15,662	838	2,705	35,759
Other expenses	166	4,573	76	1,294	6,109
Total	$ 138,642	165,051	8,499	54,540	366,732

	December 31, 2017				
	Research	Genetic resources and clinical and research services	Training	Institutional support	Total
Salaries and wages	$ 57,757	56,618	2,772	22,000	139,147
Benefits	17,668	17,320	848	6,729	42,565
Employee recruitment, training, memberships and subscriptions	1,345	459	44	2,784	4,632
Purchased services and stipends	10,430	3,715	1,561	5,416	21,122
Supplies and shipping	15,030	33,211	574	546	49,361
Maintenance, utilities and insurance	9,712	11,076	637	2,928	24,353
Travel and meals	2,075	2,757	796	1,555	7,183
Interest expense	1,868	3,015	65	369	5,317
Depreciation	15,894	15,905	855	2,405	35,059
Other expenses	107	3,492	117	2,701	6,417
Total	$ 131,886	147,568	8,269	47,433	335,156

All direct and indirect costs of fundraising are expensed as incurred and are included in institutional support in the consolidated statements of activities. Direct fundraising expenses were $5,074 and $3,129 for the years ended December 31, 2018 and 2017, respectively.

(g) Operating and Nonoperating Activities

The consolidated statements of activities report changes in net assets from operating and nonoperating activities.

Operating activities consist of the Laboratory's ongoing research and training programs, including the provision of genetic resources and clinical and research services. Included in operating revenue is investment return appropriated to support operations under the endowment income spending formula approved by the Board, as described in note 5(c). Also included in operating revenue are research grant reimbursements of $444 and $188 for the years ended December 31, 2018 and 2017, for the purchase of equipment that became the property of the Laboratory upon acquisition. Depreciation charged to operating activities from research grant-funded equipment was $383 and $497 for the years ended December 31, 2018 and 2017, respectively.

Nonoperating revenue includes items not related to the Laboratory's recurring activities or revenue that may not be used for operations. Contributions for the acquisition of long-lived assets, net assets released from restrictions for the acquisition of long-lived assets, unrestricted bequests, investment return in excess of the amount appropriated under the Laboratory's spending formula, and grants to acquire land, buildings, and equipment are all reported as nonoperating activities. The gain from the forgiveness of the CI forgivable loans, as well as changes in fair value of the loans, interest-rate swaps, and postretirement plan charges above periodic benefit costs, are also all presented as nonoperating activities.

(Continued)

(h) Cash and Equivalents

For the purpose of the statement of cash flows the Laboratory considers cash equivalents as investments with maturities at date of purchase of three months or less.

(i) Self-Insurance Reserves

The Laboratory is self-insured for healthcare benefits offered to active employees who meet eligibility requirements. These costs are accounted for on an accrual basis, which requires estimates to be made for claims incurred but not yet reported as of the consolidated balance sheet date.

(j) Long-Lived Assets

Long-lived assets are reported at cost at date of acquisition or at fair value at date of donation in the case of gifts. For assets placed in service, depreciation is provided using the straight-line method over the estimated useful lives of the assets. The cost of normal maintenance and repairs that does not add to the value of the asset or materially extend asset lives is not capitalized.

Depreciation is provided on a straight-line basis over the following estimated useful lives:

	Years
Buildings and improvements	15–50
Land improvements	5–15
Equipment and software	3–15

Management reviews long-lived assets for impairment whenever events or circumstances indicate that the carrying value of a long-lived asset may not be recoverable. Management determined that no long lived assets were impaired as of December 31, 2018 and 2017.

The Laboratory receives awards from various granting agencies that allow for the purchase of certain assets, scientific equipment and construction of buildings. These assets are depreciated in accordance with the aforementioned policy. The assets become the property of the Laboratory upon acquisition, unless the grant or funding agreement specifically states otherwise. Grant-funded assets are typically restricted as to use and disposal.

(k) Derivative Instruments

As disclosed in note 8(d), prior to March 19, 2018 the Laboratory utilized interest-rate swap agreements with various counterparties to essentially convert its variable-rate debt to fixed rates and not for speculative purposes. The swaps’ fair values and changes therein were recognized in the Laboratory’s consolidated financial statements. Differences between the fixed and variable interest rates in effect were settled net monthly under each swap, increasing or decreasing interest expense. The estimated fair value of each swap was measured at each reporting date and presented as an asset (liability) based on the termination value as of that date using techniques such as discounted cash flow analysis and option pricing models that incorporate assumptions about future market interest rates.

(Continued)

(l) Income Taxes

The Laboratory is a not-for-profit organization as described in Section 501(c)(3) of the Internal Revenue Code (the Code), as amended, and is generally exempt from income taxes pursuant to the Code. In accordance with GAAP, the Laboratory assesses whether there are uncertain tax positions and determined that there were no uncertain tax positions that would have a material effect on the consolidated financial statements.

(m) Fair Value Measurements

The Laboratory determines fair value based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels:

- **Level 1 inputs:** Unadjusted quoted prices for identical assets or liabilities in active markets accessible to the entity at the measurement date.
- **Level 2 inputs:** Other than quoted prices included in Level 1, inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.
- **Level 3 inputs:** Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date.

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3 inputs. In determining fair value, the Laboratory utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. Levels are determined based on the aforementioned hierarchy, except for investments measured using net asset value (NAV) as a practical expedient to estimate fair value, as described in note 3.

It is the Laboratory’s policy to review and reflect transfers between levels as of the consolidated financial statement reporting date. Transfers between different levels of the fair value hierarchy are recorded as of the end of the reporting period.

The categorization of an investment within the fair value hierarchy is based on the inputs described above and does not necessarily correspond to the Laboratory’s management’s perceived risk of that investment. Moreover, the methods used by management may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Laboratory believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments and nonfinancial assets and liabilities could result in a different fair value measurement at the reporting date.

(n) Recent Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which outlines a single comprehensive model for recognizing revenue and supersedes most existing revenue recognition guidance, including guidance specific to the not-for-profit industry. ASU 2014-09 requires an entity to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects consideration to which the entity expects to be entitled in exchange for those goods or services. In July 2015, the FASB approved the deferral of this new standard's effective date by one year. The new standard is effective for the Laboratory's fiscal year beginning January 1, 2018, and did not have a significant impact on the Laboratory's results of operations.

In June 2018, the FASB issued ASU No. 2018-08, *Clarifying the Scope and Accounting Guidance for Contributions Received and Contributions Made* (ASU 2018-08), which addresses practice issues by helping an entity evaluate whether it should account for a grant (or similar transaction) as a contribution or as an exchange transition. ASU 2018-08 clarifies how an entity determines whether a resource provider is receiving commensurate value and expands the criteria for determining whether a contribution is conductional. The Laboratory has early adopted the new standard, which would otherwise be effective for the Laboratory's fiscal year beginning January 1, 2019. ASU 2018-08 did not have a significant impact on the Laboratory's operations.

During 2018 the Laboratory retrospectively adopted Accounting Standards Update (ASU) No. 2016-14, *Not-for-Profit Entities: Presentation of Financial Statements of Not-for-Profit Entities* (ASU 2016-14). ASU 2016-14 reduces the number of net asset categories from three to two: net assets without donor restrictions, previously reported as unrestricted net assets, and net assets with donor restrictions, previously reported as temporarily restricted net assets and permanently restricted net assets. Other provisions of ASU 2016-14 include the recognition of underwater endowment funds as a reduction in net assets with donor restrictions. ASU 2016-14 also enhances disclosures concerning Board-designated amounts, composition of net assets without donor restrictions, liquidity, and expenses by their natural and functional classification.

A summary of net asset reclassifications resulting from the adoption of ASU 2016-14 as of January 1, 2017 are as follows:

Net assets, beginning of year as disclosed in the consolidated statement of activities for the year ended December 31, 2017		**ASU 2016-14 classifications**		
		Without donor restrictions	**With donor restrictions**	**Total**
As previously presented:				
Unrestricted	$	571,598	—	571,598
Temporarily restricted		—	41,210	41,210
Permanently restricted		—	20,180	20,180
Net assets as previously presented		571,598	61,390	632,988
Reclassification to adopt ASU 2016-14:				
Underwater endowments		54	(54)	—
Net assets as reclassified	$	571,652	61,336	632,988

(o) Reclassification of Prior Year Amounts

Certain other amounts as disclosed in the prior year have been reclassified to conform to the current year presentation.

(3) Investments

(a) Overall Investment Objective

The overall investment objective of the Laboratory is to invest its long-term assets in a prudent manner to achieve a long-term rate of return sufficient to fund a portion of its annual operating activities, and increase investment value after inflation. The investment objective for working capital investments is preservation of value and liquidity, relying primarily on highly rated short-term interest-bearing investments. The Laboratory diversifies its long-term investments among various asset classes incorporating multiple strategies and managers. The Investment Committee oversees the Laboratory's endowment in accordance with the investment policy statement.

(b) Basis of Reporting

Investments, including endowment and operating investments without donor restrictions are reported at estimated fair value. If an investment is held directly by the Laboratory and an active market with quoted prices exists, the market price of an identical security is used as the reported fair value. Reported fair values for shares in registered mutual funds are based on share prices reported by the funds as of the last business day of the fiscal year. The Laboratory's interests in commingled investment funds (multiple strategies) are generally reported at the net asset value (NAV) reported by the fund managers, which is used as a practical expedient to estimate the fair value of the Laboratory's interest therein, unless it is probable that all or a portion of the investment will be sold for an amount different from NAV.

(c) Classification in the Fair Value Hierarchy

The Laboratory owns interests in alternative investment funds that are generally reported at the NAV reported by the fund managers, unless the fund has a readily determinable fair value that is used as a practical expedient to estimate the fair value of the Laboratory's interest therein, or it is probable that all or a portion of the investment will be sold for an amount different from the NAV. Such valuations are determined by fund managers who generally consider variables such as operating results, comparable earnings multiples, projected cash flows, recent sales prices, and other pertinent information, and also may reflect discounts for the liquid nature of certain investments held. As of December 31, 2018 and 2017 the Laboratory had no plans or intentions to sell investments at amounts different from NAV.

The inputs or methodology used for valuing or classifying investments for financial reporting purposes are not necessarily an indication of the risk associated with investing in those investments or a reflection on the liquidity of each fund's underlying assets and liabilities.

There were no transfers between Level 1 and Level 2 for the fiscal years ended December 31, 2018 and 2017.

The following tables summarize the Laboratory's investments and other assets by major category in the fair value hierarchy as of December 31, 2018 and 2017, as well as related strategy, liquidity and funding commitments:

	December 31, 2018			
	Level 1	Level 2	NAV or equivalent	Total
Working capital investments:				
Cash, money market accounts and certificates of deposits[1]	$ 118,578	—	—	118,578
Corporate bonds	—	1,011	—	1,011
U.S. and global fixed income funds	—	74,645	—	74,645
Total working capital investments	118,578	75,656	—	194,234
Long-term investments (endowment):				
Money market accounts and certificates of deposit	617	—	—	617
U.S. and global fixed income funds	21,421	—	—	21,421
Equities:				
U.S. mid and large cap value funds	70,190	—	—	70,190
Global large cap	70,261	—	—	70,261
Total equities	140,451	—	—	140,451
Multiple hedged strategies[2]	78,582	—	9,940	88,522
Private equity and real assets[2]	—	—	10,878	10,878
Total long-term investments	241,071	—	20,818	261,889
Total	$ 359,649	75,656	20,818	456,123

[1] Includes $44,646 in cash from 2018 bond proceeds designated for working capital purposes (note 8a).

[2] The redemption or liquidation is monthly to locked up. The lock-up periods have various terms with extensions of one to two years. As of December 31, 2018, the average remaining life of these partnerships is approximately eight years.

	December 31, 2017				
		Level 1	**Level 2**	**NAV or equivalent**	**Total**
Working capital investments:					
Cash, money market accounts and certificates of deposit	$	31,762	—	—	31,762
U.S. government agency bonds		—	2,017	—	2,017
Corporate bonds		—	20,039	—	20,039
U.S. and global fixed income funds		—	23,859	—	23,859
Multiple strategies		121,724	—	—	121,724
Total working capital investments		153,486	45,915	—	199,401
Long-term investments (endowment):					
Money market accounts and certificates of deposit		8,716	—	—	8,716
U.S. and global fixed income funds		20,229	—	—	20,229
Equities:					
U.S. mid and large cap value funds		50,266	—	—	50,266
Global large cap		33,118	—	—	33,118
Total equities		83,384	—	—	83,384
Multiple hedged strategies[1]		48,203	—	1,226	49,429
Private equity and real assets[1]		—	—	5,923	5,923
Total long-term investments		160,532	—	7,149	167,681
Total	$	314,018	45,915	7,149	367,082

[1] The redemption or liquidation is monthly to locked up. The lock-up periods have various terms with extensions of one to two years. As of December 31, 2017, the average remaining life of these partnerships is approximately nine years.

(d) Commitments

Private equity investments are generally made through private limited partnerships. Under the terms of the partnership agreements, the Laboratory makes a commitment of a specific amount of capital to a partnership and is obligated to remit committed funding periodically when capital calls are exercised by the General Partner as the partnership executes on its investment strategy. Private equity funds are typically structured with investment periods of three-to-seven years. The aggregate amounts of unfunded commitments associated with private limited partnerships as of December 31, 2018 and 2017 were $21,205 and $25,360, respectively. The timing and amount of future capital calls expected to be exercised in any particular future year is uncertain.

(4) Financial Assets and Liquidity Resources

As of December 31, 2018 financial assets and liquidity resources available within one year for general expenditure, such as operating and program expenditure, scheduled principal and interest payments on debt, and capital constructions costs not financed with debt, were as follows:

		2018
Financial assets:		
Cash and cash equivalents	$	8,406
Contributions and accounts receivable, net		46,839
Working capital investments		149,588
Budgeted 2019 endowment payouts:		
Board-designated		3,651
Donor-restricted		2,015
Total financial assets available within one year		210,499
Liquidity resources:		
Bank line of credit		25,000
Total financial assets and liquidity resources available within one year	$	235,499

The Laboratory actively manages its resources utilizing a combination of short, medium and long-term operating investment strategies to align its cash inflows with anticipated outflows in accordance with policies approved by the Board. As disclosed in note 8(a), the Laboratory may draw upon an unsecured revolving credit facility that expires on December 31, 2019, to manage cash flows.

Additionally, as of December 31, 2018, the Laboratory had an additional $200,463 in Board-designated endowments not budgeted for spending in 2019, which is available for general expenditure with Board approval.

(5) Endowment

The Laboratory's endowment consisted of approximately 72 individual donor-restricted funds, as well as Board-designated funds held for the long-term support of the Laboratory's mission.

In November 2017 the Board of Trustees set a single long-term investment return objective and risk parameter for donor-restricted and Board-designated endowment funds. Accordingly in 2018 both donor-restricted and Board-designated endowment funds were invested with a total return objective and long-term goal of attaining an average annualized nominal return equal to, or above the rate of inflation, based on the Consumer Price Index (CPI), plus the Laboratory's spending rate.

(Continued)

In 2017 donor-restricted funds were invested with an investment objective of a real total return of 5%. In contrast, Board-designated funds were invested with an investment objective of preserving value over the medium term while maintaining liquidity in the short term, defined as two years. The investment return objective was also an average annual real total return of 4%.

(a) Interpretation of Relevant Law

The Laboratory is subject to the Maine Uniform Prudent Management of Institutional Funds Act (MUPMIFA).

For reporting purposes the Laboratory classifies as net assets with donor restrictions the historical value of donor-restricted endowment funds, which includes: (a) the original value of gifts donated to the endowment, (b) the original value of subsequent gifts to the endowment, and (c) changes to the endowment made in accordance with the direction of the applicable donor instrument. Also included in net assets with donor restrictions is accumulated appreciation on donor-restricted endowment funds which are available for expenditure in a manner consistent with the standard of prudence prescribed by MUPMIFA, and deficiencies associated with funds where the value of the fund has fallen below the original value of the gift as disclosed in note 5(d).

(b) Investment Strategies

The endowment provides financial support for programs through the generation of income and gains while preserving capital for future support. The endowment is managed to maximize long-term, risk-adjusted investment returns. The investment objective for both donor-restricted and Board-designated funds can be met through a common investment pool with liquidity sufficient to meet the needs of the Laboratory. Only the Board-designated funds may be used to meet liquidity covenants as required by the Laboratory's creditors or bondholders.

(c) Endowment Spending Policy

The Laboratory employs a total-return approach to endowment management. Income and dividends are used to fund spending first, with net realized and unrealized appreciation providing incremental funding as needed. Taking into consideration the factors continued in MUPMIFA for the appropriation and accumulation of endowment funds, the annual spending policy distribution rate from the endowment shall be a target percentage as adopted by the Investment Committee from time to time, of the twelve-quarter moving average market value, with the final quarter in the spending formula determined on December 31 of the last audited year preceding the fiscal year of spending. The spending distribution is reviewed and approved annually by the Investment Committee in conjunction with the recommended adoption of the annual budget by the Finance Committee.

(d) Funds with Deficiencies

From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below the historic dollar value of permanently restricted contributions. Deficiencies of this nature are reported in net assets with donor restrictions when they occur. Deficiencies totaled $53 and $0 at December 31, 2018 and 2017, respectively.

(e) *Net Assets by Type of Fund and Changes in Endowment Investments*

Net assets by type of fund consisted of the following at December 31, 2018 and 2017:

	2018			
	Without donor restrictions	With donor restrictions		Total
		Underwater funds	Other funds	
Donor-restricted endowments:				
Historical gift value	$ —	1,636	20,738	22,374
(Depreciation)/appreciation	—	(48)	35,449	35,401
Board-designated endowments	204,114	—	—	204,114
Total	$ 204,114	1,588	56,187	261,889

	2017			
	Without donor restrictions	With donor restrictions		Total
		Underwater funds	Other funds	
Donor-restricted endowments:				
Historical gift value	$ —	—	20,047	20,047
Appreciation	—	—	38,707	38,707
Board-designated endowments	108,927	—	—	108,927
Total	$ 108,927	—	58,754	167,681

Changes in endowment assets for the years ended December 31, 2018 and 2017 are as follows:

	December 31, 2018		
	Without donor restrictions	With donor restrictions	Total
Endowment, December 31, 2017	$ 108,927	58,754	167,681
Cash contributions	—	2,328	2,328
Board transfer from operating funds to endowment	113,050	—	113,050
Investment return	(14,723)	(1,357)	(16,080)
Long-term investment return utilized	(3,178)	(1,891)	(5,069)
In-transit transactions	38	(59)	(21)
Endowment, December 31, 2018	$ 204,114	57,775	261,889

(Continued)

		December 31, 2017		
		Without donor restrictions	**With donor restrictions**	**Total**
Endowment, December 31, 2016	$	91,769	50,986	142,755
Cash contributions		—	2,585	2,585
Board transfer from operating funds to endowment		1,500	—	1,500
Investment return		18,294	6,775	25,069
Long-term investment return utilized		(2,716)	(1,441)	(4,157)
In-transit transactions		80	(151)	(71)
Endowment, December 31, 2017	$	108,927	58,754	167,681

In-transit transactions are due to timing of transfers between the Laboratory's operational accounts and endowment accounts for gifts received and reimbursement of expenditures. Gifts are shown as the amount of cash received and therefore include the collection of pledge payments and exclude uncollected pledges.

(6) Accounts Receivable

Accounts receivable consisted of the following as of December 31, 2018 and 2017:

		2018	**2017**
Due from provision of genetic resources and services	$	32,092	27,133
Amounts reimbursable under grants and contracts		9,275	9,157
Miscellaneous accounts receivable		5,503	1,911
		46,870	38,201
Less allowance for uncollectibles		(1,680)	(1,112)
Accounts receivable, net	$	45,190	37,089

(7) Long-Lived Assets

Long-lived assets consisted of the following as of December 31, 2018 and 2017:

		2018	2017
Land and improvements	$	11,226	11,226
Buildings and improvements		619,676	510,422
Construction in progress		45,004	99,161
Equipment and software		171,398	155,109
		847,304	775,918
Less accumulated depreciation		(361,429)	(327,043)
Long-lived assets, net	$	485,875	448,875

The change in accounts payable for acquisition and construction of long-lived assets was a decrease of $7,303 for the year ended December 31, 2018 and an increase of $9,905 for the year ended December 31, 2017.

Commitments to third parties for the purchase of equipment, space renovation and construction projects were $15,424 and $32,258 as of December 31, 2018 and 2017, respectively.

(8) Debt

(a) Bonds and Note Payable

Bonds and note payable consisted of the following as of December 31, 2018 and 2017:

		2018	2017
Series 2018 taxable bonds	$	157,520	—
Finance Authority of Maine Revenue Bonds (FAME Series 2012 Bonds)		—	33,165
Association of Bay Area Government for California fixed rate revenue bonds (ABAG Series 2012 bonds)		52,080	53,775
		209,600	86,940
Less unamortized discount		—	(169)
Plus unamortized premium		3,753	4,108
Debt issuance costs		(1,566)	(577)
Bonds payable, net		211,787	90,302
Note payable for real estate purchase		1,761	1,889
Bonds and note payable, net	$	213,548	92,191

On March 19, 2018, the Laboratory issued taxable bonds in the amount of $159,585. A portion of the proceeds were utilized to refund $33,165 of the Series 2012 FAME bonds. The remainder of the proceeds are intended for capital improvements. The bonds have a stated rate of fixed interest ranging from 2.25% to 4.334%, payable semiannually, over a 30 year term. Interest expense incurred during 2018 on the taxable bonds totaled $4,891, of which $3,113 is included in accrued expenses on the consolidated balance sheet at December 31, 2018. The remaining bond proceeds on hand of $44,646 at December 31, 2018 are included in working capital on the consolidated balance sheet.

The FAME Series 2012 bonds refunded by the Laboratory during 2018 carried a variable interest rate and were scheduled to mature serially through July 1, 2031. A bank purchased the FAME Series 2012 bonds under a 10-year bond purchase agreement and supplemental letter agreement under which the Laboratory paid 67% of one-month LIBOR plus 1.02%. The agreements contained certain restrictive covenants, including meeting a semi-annual liquidity test, limits on incurring additional debt, and not allowing liens on property. These covenants were eliminated with the refund of the bonds.

The ABAG Series 2012 bonds were issued with a par amount of $60,290 and a premium of $6,066 at fixed interest rates ranging from 2.5% to 5% over a 25-year term. The proceeds were used to refund existing ABAG bonds and fund the further fit-out of the Laboratory’s Sacramento facility.

In connection with the purchase of property located contiguous to the Laboratory’s Bar Harbor campus, the Laboratory entered into a $2,260 fifteen year note with the seller of the property. The note bears a fixed interest rate of 4% and requires monthly mortgage amortization payments.

On May 16, 2018, the Laboratory entered into a one-year $25,000 unsecured line of credit, extended through December 31, 2019, with a financial institution to provide general working capital needs and other corporate purposes. Interest is payable monthly at the rate of LIBOR plus 0.45%. The Laboratory did not utilize the unsecured line of credit during the year ended December 31, 2018. The Laboratory is required to maintain certain financial, rating agency and reporting covenants.

(b) CI Forgivable Loans

On January 5, 2012, the Laboratory entered into several agreements with various sub-units of the state of Connecticut to build a 183,500 square foot laboratory and operate a genomics medicine research program in Farmington, Connecticut. The major agreements include a funding agreement with CI, a ground lease with the University of Connecticut Health Center (UCHC), and a collaboration agreement with the University of Connecticut (UConn).

The CI funding agreement provides a $145,000 forgivable loan to construct a building and fit it out; a $46,685 forgivable loan for the purchase of equipment over 10 years; and $99,000 in grant commitments to support research and development over ten years. The loans will be forgiven if the Laboratory meets an employment goal of 300 employees for a period of six months, including a minimum of 90 senior scientists with an average wage exceeding a minimum target. In order for forgiveness to occur, the employment goal must be reached within ten years, or within the extended period if the Laboratory exercises an option to extend. The loans accrue simple interest at 1% per year, which is forgivable according to the same terms as the loans. If the Laboratory does not meet the employment goal, CI may elect that the Laboratory forfeit the building and equipment. In the event this election is made, the Laboratory reserves the right to lease the facility from CI for an initial period of five years, followed by an optional renewal period of five years. The loans are non–recourse to the Laboratory.

On June 26, 2018 the Laboratory met the employment goal pursuant to the CI funding agreement and CI forgave the outstanding loans. The Laboratory realized a net gain on loan forgiveness of $8,724, representing the fair value of the loan balances plus additional loan draws through and accrued interest as of June 26, 2018. The gain is included in the nonoperating section of the consolidated statement of activities for the year ended December 31, 2018.

As part of the transaction, UCHC provided a 99-year ground lease for the building site. The ground lease contains a provision whereby the land will transfer to the Laboratory upon reaching 600 employees in Connecticut. The ground lease also includes limitations on the sale and use of the facility. A collaboration agreement with UConn covers joint faculty appointments, grant applications, UConn assignment and funding of faculty to be located at the Laboratory's Farmington site, and other related matters.

As of December 31, 2018 and 2017, the Laboratory had incurred $169,656 and $161,328, respectively, in project-related costs, which are included in construction in progress, buildings and improvements, and equipment. Subsequent to loan forgiveness, the Laboratory may continue to draw funds up to an amount equivalent to the original loan amounts without incurring additional debt. The Laboratory drew funds totaling $3,721 subsequent to June 26, 2018, which is realized as a contribution and is included in the nonoperating section of the consolidated statement of activities for the year ended December 31, 2018. As of December 31, 2018 the Laboratory has an available balance of $21,849 for future draws under the agreement. The advances include no funds held in escrow by CI as retainage as of December 31, 2018 and 2017.

Prior to the loan forgiveness on June 26, 2018, the Laboratory elected, under FASB ASC Topic 825, to report the forgivable loans at fair value. Therefore, the fair value of the loans was based on the probability that the Laboratory will meet the employment goals and the projected value of the underlying assets which collateralize the loans. An independent third-party valuation firm used a Monte Carlo simulation of key business plan assumptions to develop the fair value presented in the balance sheet. The change between funds drawn through December 31, 2017 under the loans and the fair value as of December 31, 2017 is included in the nonoperating section of the statement of activities as an adjustment to fair value of CI forgivable loans for the year ended December 31, 2017.

(c) Maturities of Long-Term Debt

Maturities of long-term debt as of December 31, 2018, were as follows:

		Amounts due
Year ending December 31:		
2019	$	6,548
2020		6,743
2021		6,969
2022		7,194
2023		7,131
Thereafter		176,776
Total	$	211,361

(d) Interest-Rate Swaps

Subsequent to the bond issuance on March 19, 2018 as disclosed in note 8(a), the Laboratory utilized $3,655 of bond proceeds to terminate the outstanding interest-rate swaps related to the former 2012 FAME bonds. The Laboratory recognized a gain on the termination of the swaps of $601, resulting from the excess of the swaps' fair value of $4,256 at December 31, 2017 over the termination fees paid in 2018. The gain is included as a nonoperating item in the consolidated statement of activities for the year ended December 31, 2018.

The Laboratory originally entered into interest-rate swap agreements, including forward-starting swaps, to essentially convert the variable rate on the $33,165 of the former 2012 FAME borrowings outstanding to various fixed rates. The swaps' notional amounts amortize at the same rate as and cover the entire related debt principal throughout the term of the former bonds, which were scheduled to mature in 2031.

Because the swap fair values are primarily based on observable inputs, such as the interest yield curve, that are corroborated by market data, the swap fair values are categorized as Level 2 in the fair value hierarchy at December 31, 2017. The estimated fair value shown in the consolidated financial statements at December 31, 2017 is based on the estimated termination value as of the end of 2017.

(9) Employee Benefits

(a) Defined Contribution Retirement Plan

Subject to meeting certain eligibility requirements, all employees participate in a defined contribution 403(b) retirement plan administered by the Laboratory. Contribution expense was $12,702 and $10,936 for the years ended December 31, 2018 and 2017, respectively.

(b) Postretirement Medical Plan

The Laboratory maintains a postretirement medical plan covering certain retired employees with hire dates before 2003 and faculty members eligible to retire on May 31, 2008, and their dependents. Other than the payment of current benefits totaling $498 and $552 in the years ended December 31, 2018 and 2017, respectively, the Laboratory has not funded the postretirement plan.

Benefit obligations and funded status of the plan for the years ended December 31, 2018 and 2017 were as follows:

		Year ended December 31	
		2018	**2017**
Changes in benefit obligations:			
Benefit obligation at beginning of year	$	6,324	6,321
Interest cost		228	256
Total actuarial (gain)/loss		(948)	329
Medicare Part D subsidy with adjustment		86	(30)
Benefits paid, net of employee contributions		(498)	(552)
Benefit obligation at end of year		5,192	6,324

		Year ended December 31	
		2018	**2017**
Changes in plan assets:			
Fair value of plan assets at beginning of year	$	—	—
Employer contributions		498	552
Employee contributions		48	48
Benefits paid		(546)	(600)
Fair value of plan assets at end of year		—	—
Accrued benefit cost recognized in the balance sheet	$	(5,192)	(6,324)

Net periodic benefit cost consisted of the following components for the years ended December 31, 2018 and 2017:

		Year ended December 31	
		2018	**2017**
Interest cost	$	228	256
Medicare Part D subsidy		(69)	(67)
Amortization of net actuarial loss		141	113
Net periodic benefit cost recorded	$	300	302

The net loss and prior service credit for the postretirement plan that will be amortized into net periodic benefit cost in 2018 is $141. The weighted average assumptions related to the discount rate used to determine benefit obligations for 2018 and 2017 were 3.91% and 3.25%, respectively.

The discount rates used to determine net periodic benefit cost for the years ended December 31, 2018 and 2017 were 3.25% and 3.66%, respectively.

The assumed health care cost trend rates at December 31, 2018 and 2017 were as follows:

	2018	**2017**
Healthcare cost trend rate assumed for next year	5.4 %	6.0 %
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	3.8	3.8
Year that the rate reaches the ultimate trend rate	2076	2076

The Laboratory's estimated future benefit payment obligation for the retiree medical benefit pension plan future benefit payment obligations are as follows:

		Retiree medical benefits
Year ending December 31:		
2019	$	419
2020		416
2021		412
2022		406
2023		398
2024 through 2028		1,823

(c) Deferred Compensation Program

The Laboratory maintains a nonqualified salary deferral plan (the 457(b) Plan) authorized under Section 457(b) of the Internal Revenue Code. The Laboratory holds an investment approximately matching the employee investment selections to assure funding is available to meet future liabilities. The liability of $5,422 and $5,626 at December 31, 2018 and 2017, respectively, is included in accounts payable and accrued expenses. The investments valued at $5,459 and $5,626 at December 31, 2018 and 2017, respectively, are included in other assets.

The Laboratory also maintains a deferred compensation program under Section 457(f) of the Internal Revenue Code for management and certain highly compensated employees under which a portion of the employee's compensation is deferred and vested over time. The liability of $628 and $417 at December 31, 2018 and 2017, respectively, is included in accounts payable and accrued expenses, and the corresponding assets are included in other assets.

(10) Net Assets, Pledges Receivable and Remainder Trusts

(a) Composition of Net Assets

Net assets without donor restrictions include Board-designated endowments that are used to support the Laboratory’s strategic initiatives and general operations. The Laboratory classifies gift pledges based on donor purpose restriction. Unrestricted pledges are shown as a component of net assets with donor restrictions until collected. Net assets with donor restrictions consisted of the following at December 31:

		2018	2017
Donor-restricted endowments:			
Research	$	17,612	15,887
Training		939	511
Other programs		877	873
General purpose		2,947	2,776
Pledges receivable for endowment		2,395	1,819
Total endowment		24,770	21,866
Purpose and time-restricted, and other:			
Unappropriated return		35,401	38,707
Other		6,958	5,802
Total net assets with donor restrictions	$	67,129	66,375

(b) Pledges Receivable and Remainder Trusts

As of December 31, net assets restricted for the following purposes included outstanding pledges and remainder trusts, net of allowance for uncollectible pledges and time-value discounts:

		2018	2017
Donor-restricted for research, training, and other programs	$	1,855	2,020
Pledges receivable for endowment		2,395	1,819
	$	4,250	3,839

(11) Commitments and Contingencies

(a) Leases

The Laboratory leases laboratory and office space and other equipment under leases accounted for as operating leases. Some of these leases have renewal options. Total rental expense was $321 and $179 for the years ended December 31, 2018 and 2017, respectively. Estimated future minimum lease payments under noncancelable facility and equipment operating leases as of December 31, 2018 are as follows:

		Amounts due
Year ending December 31:		
2019	$	415
2020		342
2021		348
2022		312
2023		194
Thereafter		240
Total	$	1,851

(12) Legal Claims

The Laboratory is subject to certain legal proceedings and claims that arise in the ordinary course of conducting its activities. While it is not possible to predict accurately or determine the eventual outcome of such actions, management believes that the outcome of proceedings will not have a material adverse effect on the Laboratory’s financial position.

(13) Related Party Transactions

Members of the Laboratory’s Board and senior management may, from time to time, be associated, either directly or indirectly, with companies doing business with the Laboratory. The Laboratory has a written conflict of interest policy that requires, among other things, that no member of the Board may participate in any decision in which he or she has a material financial interest.

Each member of the Board and senior management is required to certify compliance with the conflict of interest policy on an annual basis as well as disclose any potential related party transactions to the General Counsel’s Office and the Audit and Enterprise Risk Management Committee.

(14) Subsequent Events

The Laboratory has evaluated subsequent events from the consolidated balance sheet date of December 31, 2018 through May 17, 2019, the date on which the consolidated financial statements were issued, and determined there are no other items to disclose.

THE JACKSON LABORATORY

Supplementary Schedule of Expenditures of Federal Awards

Year ended December 31, 2018

Federal grantor/pass-through grantor/program title	Federal CFDA number	Direct or pass-through identifying number	Passed through to subrecipients	Total federal expenditures
Research and Development Cluster:				
Department of Health and Human Services:				
Direct awards, National Institutes of Health (NIH):				
Environmental Health	93.113	ES029916A	$ —	154
Human Genome Research	93.172	HG000330H	—	4,313,810
Human Genome Research	93.172	HG007053B	—	74,835
Human Genome Research	93.172	HG007497B	1,046,698	2,010,363
Human Genome Research	93.172	HG007631A	—	3,605
Human Genome Research	93.172	HG009409A	238,800	2,556,952
Human Genome Research	93.172	HG009900A	—	711,355
Human Genome Research	93.172	HG008179B	—	240,252
Research Related to Deafness and Communication Disorders	93.173	DC004301D	57,087	535,436
Research Related to Deafness and Communication Disorders	93.173	DC005827D	—	229
Research Related to Deafness and Communication Disorders	93.173	DC015242A	—	452,750
Research Related to Deafness and Communication Disorders	93.173	DC017388A	—	38,094
Research Related to Deafness and Communication Disorders	93.173	DC016376B	—	77,989
Alcohol Research Programs	93.273	AA018776B	102,979	315,450
Drug Abuse and Addiction Research Programs	93.279	DA028420B	—	377,806
Drug Abuse and Addiction Research Programs	93.279	DA032192C	—	27,850
Drug Abuse and Addiction Research Programs	93.279	DA037927A	—	969,008
Drug Abuse and Addiction Research Programs	93.279	DA041668A	—	375,218
Drug Abuse and Addiction Research Programs	93.279	DA039841A	799,709	3,090,780
Drug Abuse and Addiction Research Programs	93.279	DA045401A	—	244,052
Drug Abuse and Addiction Research Programs	93.279	DA043573A	—	84,198
Drug Abuse and Addiction Research Programs	93.279	DA043809A	2,442	143,574
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	EB022365A	—	36,649
Trans-NIH Research Support	93.310	OD023222B	—	205,799
Trans-NIH Research Support	93.310	EB022365A	15,000	87,949
Trans-NIH Research Support	93.310	DK107967A	34,997	670,527
Trans-NIH Research Support	93.310	GM123516A	—	182,519
Trans-NIH Research Support	93.310	GM126893A	—	205,966
Research Infrastructure Programs	93.351	OD023222B	—	5,822,606
Research Infrastructure Programs	93.351	OD011102D	—	861,705
Research Infrastructure Programs	93.351	OD010920E	—	24,105
Research Infrastructure Programs	93.351	OD010921B	—	1,605,489
Research Infrastructure Programs	93.351	OD011190B	—	628,014
Research Infrastructure Programs	93.351	OD020351A	155,804	1,967,873
Research Infrastructure Programs	93.351	OD020205A	446	39,449
Research Infrastructure Programs	93.351	OD021325A	—	903,255
Research Infrastructure Programs	93.351	OD023800A	—	170,057
Research Infrastructure Programs	93.351	OD024941A	—	142,820
Research Infrastructure Programs	93.351	OD023803A	—	49,179
Research Infrastructure Programs	93.351	OD026635A	—	55,670
21st Century Cures Act – Beau Biden Cancer Moonshot	93.353	CA224067A	107,506	652,469
Cancer Cause and Prevention Research	93.393	CA190121B	134,821	330,868
Cancer Treatment Research	93.395	CA219880A	5,436	636,167
Cancer Biology Research	93.396	CA089713D	—	937,421
Cancer Biology Research	93.396	CA195712A	91,852	124,444
Cancer Biology Research	93.396	CA191848A	—	30,300
Cancer Biology Research	93.396	CA178206B	—	249,189
Cancer Biology Research	93.396	CA188093B	—	288,166
Cancer Biology Research	93.396	CA224422A	71,978	168,026
Cancer Biology Research	93.396	CA230031A	—	239,001
Cancer Center Support Grants	93.397	CA034196G	—	2,749,262
Cancer Research Manpower	93.398	CA122819C	—	17,159
Cancer Research Manpower	93.398	CA122819D	—	146,432
Cancer Research Manpower	93.398	CA174584B	—	8,592
Cancer Research Manpower	93.398	CA172010A	—	91,583
Cancer Research Manpower	93.398	CA226387A	—	82,338
Cardiovascular Diseases Research	93.837	HL077796C	—	392,898
Blood Diseases and Resources Research	93.839	HL134043A	149,682	738,014
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR049288D	—	39,403
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK046266E	—	464,279
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK095735B	1,530	2,370
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK095735C	9,160	460,457
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK100692B	4,664	352,786
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK102918B	61,530	492,968
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK112947A	—	89,419
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK118072A	—	166,437
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK117137A	—	32,748
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK120298A	—	13,339
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS054154D	—	422,855
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS064013B	—	306,361
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS098523A	—	374,241
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS098540A	—	11,601
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS100328A	—	28,076
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS102633A	67,585	95,230
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS102414A	330,928	747,693
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS105539A	408,827	1,717,561
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS105116A	12,793	55,437
Allergy and Infectious Diseases Research	93.855	AI119231A	—	22,641
Allergy and Infectious Diseases Research	93.855	AI124297A	42,152	684,587
Allergy and Infectious Diseases Research	93.855	AI121920A	55,685	303,342
Allergy and Infectious Diseases Research	93.855	AI133440A	—	117,893
Allergy and Infectious Diseases Research	93.855	AI135221A	—	83,994
Biomedical Research and Research Training	93.859	GM070683C	212,848	639,019
Biomedical Research and Research Training	93.859	GM099640B	—	1,365,554

Federal grantor/pass-through grantor/program title	Federal CFDA number	Direct or pass-through identifying number	Passed through to subrecipients	Total federal expenditures
Biomedical Research and Research Training	93.859	GM113979A	$ —	48,686
Biomedical Research and Research Training	93.859	OD020205A	8,427	364,645
Biomedical Research and Research Training	93.859	GM115518A	—	353,065
Biomedical Research and Research Training	93.859	GM110332B	—	185,850
Biomedical Research and Research Training	93.859	GM124922A	21,933	457,166
Biomedical Research and Research Training	93.859	GM124998A	108,911	412,472
Biomedical Research and Research Training	93.859	GM128717A	—	145,514
Biomedical Research and Research Training	93.859	GM125736A	—	73,270
Child Health and Human Development Extramural Research	93.865	HD007065H	—	178,095
Child Health and Human Development Extramural Research	93.865	HD033816F	—	25,984
Child Health and Human Development Extramural Research	93.865	HD062499B	—	2,185,247
Child Health and Human Development Extramural Research	93.865	HD073077B	—	228,777
Child Health and Human Development Extramural Research	93.865	HD079344A	—	113,448
Child Health and Human Development Extramural Research	93.865	HD093778A	—	233,552
Aging Research	93.866	AG022308C	—	1,872,558
Aging Research	93.866	AG038070B	15,098	959,364
Aging Research	93.866	AG051496A	279,663	633,752
Aging Research	93.866	AG050645A	—	221,304
Aging Research	93.866	AG052608A	68,092	543,066
Aging Research	93.866	AG054180A	42,218	544,972
Aging Research	93.866	AG057914A	191,370	1,528,945
Aging Research	93.866	AG059778A	—	337,042
Aging Research	93.866	AG055104A	22,522	245,018
Aging Research	93.866	AG060708A	1,701	29,640
Vision Research	93.867	EY011721D	—	492,713
Vision Research	93.867	EY011996D	—	568,966
Vision Research	93.867	EY019943B	—	531,528
Vision Research	93.867	EY027860A	31,917	464,869
Vision Research	93.867	EY027305A	—	550,495
Vision Research	93.867	EY028175A	—	304,539
Vision Research	93.867	EY028561A	—	296,881
Vision Research	93.867	EY027894A	—	40,579
Medical Library Assistance	93.879	LM012615A	—	46,499
Total direct awards, NIH			5,014,791	62,494,512
Pass-through awards, NIH:				
Brigham and Women's Hospital				
Environmental Health	93.113	ES024804A BWH	—	8,830
Children's Hospital Medical Center				
Oral Diseases and Disorders Research	93.121	DE027557A CHMC	—	63,867
University of Connecticut Health Center				
Oral Diseases and Disorders Research	93.121	DE021989B UCHC	—	54,161
University of Washington				
Human Genome Research	93.172	HG010169A UW	—	3,620
California Institute of Technology				
Human Genome Research	93.172	HG002223E CIT	—	273,605
California Institute of Technology				
Human Genome Research	93.172	HG002223E CIT	—	20,052
University of Southern California				
Human Genome Research	93.172	HG002273F USC	—	526,714
Stanford Junior University				
Human Genome Research	93.172	HG001315F Stanford	—	109,270
The Broad Institute, Inc				
Human Genome Research	93.172	HG009435A Broad Inst	—	398,151
Purdue University				
Research Related to Deafness and Communication Disorders	93.173	DC016732A Purdue	—	8,077
University of Southern California				
Research on Healthcare Costs, Quality and Outcomes	93.226	HS025690A USC	—	41,168
Shoreline Biome, LLC.				
Drug Abuse and Addiction Research Programs	93.279	DA043947A Shoreline	—	29,996
Emory University				
Drug Abuse and Addiction Research Programs	93.279	DA042103A Emory U	—	15,847
Virginia Commonwealth University				
Drug Abuse and Addiction Research Programs	93.279	DA045299A VCU	—	58,417
Emory University				
Drug Abuse and Addiction Research Programs	93.279	DA042742A Emory U	—	1,656
University of North Carolina				
Trans-NIH Research Support	93.310	OD025464A UNCCH	—	121,691
Oregon Health & Science University				
National Center for Advancing Translational Sciences	93.350	OD011883B OSU	—	73,376
Johns Hopkins University School of Medicine				
National Center for Advancing Translational Sciences	93.350	TR002019A JHU	—	125,018
Oregon Health & Science University				
National Center for Advancing Translational Sciences	93.350	TR002306A OHSU	—	289,524
Tufts University School of Medicine				
National Center for Advancing Translational Sciences	93.350	TR001064B Tufts	—	7,119
Tufts University School of Medicine				
National Center for Advancing Translational Sciences	93.350	TR002544A Tufts	—	7,390
Tufts University School of Medicineicine				
National Center for Advancing Translational Sciences	93.350	TR002544A Tufts	—	11,210
University Of Massachusetts				
Research Infrastructure Programs	93.351	OD018259A UMA	—	37,893
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL HR	—	43,397
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL_2 HR	—	43,397

THE JACKSON LABORATORY

Supplementary Schedule of Expenditures of Federal Awards

Year ended December 31, 2018

Federal grantor/pass-through grantor/program title	Federal CFDA number	Direct or pass-through identifying number	Passed through to subrecipients	Total federal expenditures
The Pennsylvania State University				
Cancer Treatment Research	93.395	1 CA171983B PennSt	$ —	65,099
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL LIU	—	92,674
Cyteir Therapetics, Inc.				
Cancer Treatment Research	93.395	CA183197B Cyteir	—	343,566
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL PR	—	5,150
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL CW	—	18,122
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL GR	—	17,500
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL HR	—	17,368
Baylor College of Medicine				
Cancer Biology Research	93.396	CA198320A Baylor	—	2,246
Washington University at St. Louise				
Cancer Biology Research	93.396	CA204115A WU	—	113,410
University California San Diego				
Cancer Biology Research	93.396	CA220341A UCSD	—	14,220
Cold Spring Harbor Laboratory				
Cancer Biology Research	93.396	CA224013A CSHL PR	—	196,307
Yale University				
Cancer Biology Research	93.396	CA227473A Yale	—	5,307
The University of Texas MD Anderson				
Cancer Centers Support Grants	93.397	CA016672K UT MDACC	—	4,702
University of Pittsburgh				
Cardiovascular Diseases Research	93.837	HL132024A Upitt	—	83,632
Washington University at St. Louise				
Cardiovascular Diseases Research	93.837	HL098115A Wash Univ	—	57,726
Trustees of the University of Pennsylvania				
Cardiovascular Diseases Research	93.837	HL094307B PENN	—	48,614
Trustees of the University of Pennsylvania				
Cardiovascular Diseases Research	93.837	HL094307B PENN	—	34,417
University of North Carolina				
Cardiovascular Diseases Research	93.837	HL142479A UNCCH	—	126,374
University of Connecticut Health Center				
Cardiovascular Diseases Research	93.837	HL142787A UCHC	—	144,672
University Of Pittsburgh				
Cardiovascular Diseases Research	93.837	HL142788A Upitt	—	9,568
Trustees of Indiana University				
Lung Diseases Research	93.838	HL121831A Indiana Univ	—	87,271
Washington University at St. Louise				
Lung Diseases Research	93.838	HL130876A Wash Univ	—	1,593
Washington University at St. Louise				
Lung Diseases Research	93.838	HL098098A Wash Univ	—	16,208
Thomas Jefferson University				
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	1 AR055225C THOMJE	—	30,220
Joan & Sanford I Weill Medical College of Cornell University				
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR070594A Cornell	—	132,601
Joan & Sanford I Weill Medical College of Cornell University				
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR070594A Cornell	—	742,025
University of Connecticut Health Center				
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR060636C UCHC	—	377,618
Thomas Jefferson University				
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	1 AR072695A ThomJe	—	12,799
The Research Foundation of SUNY				
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR071878A SUNY	—	317
University Of Wisconsin				
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK101573A UW C	—	126,139
Medical College of Wisconsin				
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK088831B MCW	—	154,927
The Trustees of Columbia University				
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS091118B COLUMBIA	—	46,146
University California San Diego				
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS094637B UCSD	—	31,329
University of Iowa				
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS055272E Iowa	—	53,888
University of Connecticut Health Center				
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS102633B UCHC	—	4,291
University Of Massachusetts				
Allergy and Infectious Diseases Research	93.855	AI111809A UMA	—	16,099
University Of Massachusetts				
Allergy and Infectious Diseases Research	93.855	DK104218A UMA	—	180,181
The University of Chicago				
Allergy and Infectious Diseases Research	93.855	AI117535A UC C	—	162
University of Massachusetts				
Allergy and Infectious Diseases Research	93.855	AI132963A UMA	—	310,998
Nationwide Children's Hospital				
Allergy and Infectious Diseases Research	93.855	AI131386A NCH	—	492,530
Tufts University School of Medicineicine				
Allergy and Infectious Diseases Research	93.855	AI115038A Tufts	—	8,741

THE JACKSON LABORATORY

Supplementary Schedule of Expenditures of Federal Awards

Year ended December 31, 2018

Federal grantor/pass-through grantor/program title	Federal CFDA number	Direct or pass-through identifying number	Passed through to subrecipients	Total federal expenditures
New England Blood Center				
Allergy and Infectious Diseases Research	93.855	AI124260A NYBC	$ —	28,998
Yale University				
Allergy and Infectious Diseases Research	93.855	AI136942 Yale	—	11,094
University of Delaware				
Biomedical Research and Research Training	93.859	GM080646D UDL	—	146,037
MDI Biological Laboratory				
Biomedical Research and Research Training	93.859	GM103423D MDIBL	—	46,007
Georgia Regents University				
Biomedical Research and Research Training	93.859	GM121551A UGA	—	51,830
University of Michigan				
Biomedical Research and Research Training	93.859	GM124251A U Michigan	—	193,489
University of Connecticut Health Center				
Biomedical Research and Research Training	93.859	GM120453B UCHC	—	181,685
MDI Biological Laboratory				
Biomedical Research and Research Training	93.859	GM104318C	—	28,829
Massachusetts General Hospital				
Child Health and Human Development Extramural Research	93.865	HD068250B MGH Bult	—	180,638
Trustees of Indiana University				
Aging Research	93.866	AG054345AIU	—	2,999,781
University of Connecticut Health Center				
Aging Research	93.866	AG048023A Uconn	—	28,496
Trustees of Indiana University				
Aging Research	93.866	AG054345A Indiana	—	24,426
Georgia Regents University				
Aging Research	93.866	AG053309A UGA	—	34,560
Duke University				
Aging Research	93.866	AG056925A Duke	—	314,478
The Trustees of Columbia University				
Aging Research	93.866	AG057473A Columbia U	—	108,168
University of Connecticut Health Center				
Aging Research	93.866	AG052962A UCHC	—	210,310
University of Arizona				
Aging Research	93.866	AG057931A Arizona	—	11,075
Trustees of Indiana University				
Aging Research	93.866	AG060900A Indiana Univ	—	1,987
The Trustees of Columbia University				
Vision Research	93.867	EY023839A Columbia Univ	—	7,409
Northwestern University				
Vision Research	93.867	EY025799A NWU C02	—	77,825
Northwestern University				
Vision Research	93.867	EY025799A NWU C03	—	49,783
University of Rochester				
Vision Research	93.867	EY027701A Univ Rochester	—	211,728
Total pass-through awards, NIH			—	11,548,836
Total Department of Health and Human Services			5,014,791	74,043,348
National Science Foundation (NSF):				
Pass-through awards, NSF:				
Colby College				
Computer and Information Science and Engineering	47.070	ACI 1659142 Colby	—	15,880
Total NSF			—	15,880
Department of Defense (DOD):				
Direct awards, DOD:				
Military Medical Research and Development	12.420	DOD STITZEL W81XWH-16-1-0130	—	104,991
Military Medical Research and Development	12.420	DOD A Palucka W81XWH-17-1-0010	—	416,613
Military Medical Research and Development	12.420	DOD E Liu W81XWH-17-1-0005	—	407,524
Military Medical Research and Development	12.420	DOD G Ren W81XWH-18-1-0013	—	165,311
Military Medical Research and Development	12.420	DOD Stitzel W81XWH-18-1-0401	—	261,799
Military Medical Research and Development	12.420	DOD Oh W81XWH1810229	—	79,750
Military Medical Research and Development	12.420	DOD Ucar W81XWH-18-1-0402	—	49,800
Total direct awards, DOD			—	1,485,788
Pass-through awards, DOD:				
University of Connecticut Health Center				
Military Medical Research and Development	12.420	DOD W81XWH-17-1-0163 UCHC	—	43,112
Total pass-through awards, DOD			—	43,112
Total Department of Defense			—	1,528,900
Total Research and Development Cluster			5,014,791	75,588,128
Economic Development Cluster				
Economic Development Administration (EDA):				
Direct awards, EDA:				
Public Works and Economic Development Facilitites	11.300	EDA 01-01-14689	—	122,600
Total Economic Development Cluster			—	122,600
Total expenditures of federal awards			$ 5,014,791	75,710,728

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

(1) Definition of Reporting Entity and Basis of Presentation

The accompanying schedule of expenditures of federal awards presents expenditures of all federal awards programs of The Jackson Laboratory (the Laboratory), including awards passed through to the Laboratory from other organizations (i.e., primary recipients), for the year ended December 31, 2018. The schedule is presented using the cash basis of accounting. Negative amounts (if any) on the schedule represent cash transfer adjustments to expenditures reported in a prior year. The Laboratory has not elected to utilize the 10% de minimus indirect cost rate in Part 200.514 of the Uniform Guidance.

For purposes of the schedule, federal awards include grants, contracts, and similar agreements entered into directly between the Laboratory and agencies and departments of the federal government and all subawards to the Laboratory by nonfederal organizations pursuant to federal grants, contracts, and similar agreements. The awards are categorized in accordance with the provisions of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Because the schedule presents only a selected portion of the operations of the Laboratory, it is not intended to and does not present the financial position, changes in net assets or cash flows of the Laboratory.