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THE JACKSON LABORATORY

Independent Auditors’ Reports, as Required by
Title 2 U.S. Code of Federal Regulations
Part 200, and Related Information

Year ended December 31, 2016

THE JACKSON LABORATORY

Independent Auditors' Reports as Required by
Title 2 U.S. Code of Federal Regulations Part 200,
and Related Information

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

Exhibit I

Independent Auditors' Report on Compliance for Each Major Federal Program and Report on Internal Control over Compliance Required by 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, 2016. 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 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, 2016.

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 2016-001. Our opinion on the 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 in the audit of compliance and, accordingly, we express no opinion on the response.

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Exhibit I

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.

Our consideration of internal control over compliance was for the limited purpose described in the preceding paragraph 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 were not identified. However, as discussed below, we identified certain deficiencies in internal control over compliance that we consider to be material weaknesses.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. We consider the deficiency in internal control over compliance described in the accompanying schedule of findings and questioned costs as item 2016-001 to be a material weakness.

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.

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 response was 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.

KPMG LLP

May 30, 2017

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

Exhibit II

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 financial statements of The Jackson Laboratory (the Laboratory), which comprise the balance sheet as of December 31, 2016, the related statements of activities and cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated May 12, 2017.

Internal Control over Financial Reporting

In planning and performing our audit of the 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 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 financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

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Exhibit II

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 12, 2017

THE JACKSON LABORATORY

Schedule of Findings and Questioned Costs

Year ended December 31, 2016

(1) Summary of Auditors' Results

Financial Statements

a) Type of report issued on whether the financial statements were prepared in accordance with 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 programs disclosed by the audit:

- Material weaknesses: **Yes, finding 2016-001**
- Significant deficiencies: **None reported**

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

f) Audit findings that are required to be reported in accordance with 2 CFR 200.516(a): **Yes, finding 2016-001**

g) Major programs:

- Research and Development Cluster – various CFDA numbers

h) Dollar threshold used to distinguish between Type A and Type B programs: **$1,764,828**

i) Auditee qualified as a low-risk auditee: **Yes**

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

None reported.

THE JACKSON LABORATORY

Schedule of Findings and Questioned Costs

Year ended December 31, 2016

(3) Findings and Questioned Costs Relating to Federal Awards

Finding No.:	2016-001
Program Information:	Research and Development Cluster
Federal Agency:	National Institute of Health
CFDA Number:	Various
Federal Award Year:	Various
Compliance Requirement:	Equipment and Real Property Management

Condition or Requirement

Non-federal entities other than states must follow 2 CFR sections 200.313(c) through (e) which require that property records must be maintained and include various information including, but not limited to, a description of the property, a serial number or identification number, the location, use and condition of the property, and any ultimate disposition data including the date of disposal (2 CFR section 200.313(d)(1). Further, 2 CFR section 200.313(d)(2) required that a physical inventory of the property must be taken and the results reconciled with the property records at least once every 2 years.

When original or replacement equipment acquired under a federal award is no longer needed for a federal program, the non-federal entity must request disposition instructions from the federal awarding agency if required by the terms and conditions of the award.

Condition Found

40 items of equipment were selected from all equipment acquired under federal awards from the Laboratory's property records and were physically inspected for safeguarding and proper maintenance.

Of the 40 items selected, we noted 4 items that the Laboratory could not locate or provide evidence of proper identification and an additional 7 items that were disposed of without proper tracking in accordance with the requirements outlined above.

Possible Asserted Cause and Effect

The Laboratory does not have the appropriate processes, procedures and internal controls to timely and appropriately maintain accurate equipment records.

Identification of Questioned Costs

$1,514, the net book value of equipment items exceptions noted.

THE JACKSON LABORATORY

Schedule of Findings and Questioned Costs

Year ended December 31, 2016

Whether Sampling was Statistically Valid

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

Repeat Finding

No.

Recommendation

We recommend that the Laboratory review its current policies and procedures to ensure that equipment acquired under federal awards is appropriately inventoried and records are updated to ensure compliance with federal regulations.

Management's Response

The Laboratory agrees with the finding. We note, however, that although 4 items lacked appropriate identification, they were located during the audit. Of the seven items disposed of without proper tracking, all of these items were over 10 years old and were fully depreciated. The Laboratory has already begun taking steps to address the root cause. To address the finding we will create a clean ledger of fixed assets, which includes a comprehensive list of inventory and location, and an improved system of tracking and accounting for fixed assets.

The following steps will be taken to address the finding:

1) <u>Review and revise fixed asset policy as needed – VP& CFO, Controller, Director, Sponsored Research Administration</u>
    a. Timeline: Q2-Q3 2017
        i. The Laboratory has a fixed asset policy which while comprehensive, requires review and the development of corresponding internal procedures.
2) <u>Redistribute policy, and reeducate staff – Controller, Director, Sponsored Research Administration, VP Research Administration, Scientific Directors, Procurement Manager</u>
    a. Timeline: Q3-Q4 2017
        i. The fixed asset policy will be shared with Laboratory staff, and staff will be trained on adherence to Laboratory policy.

3) <u>Clean up fixed asset ledger – Controller, Sr. Accountant</u>
    a. Timeline: Q2-Q3 2017
        i. A thorough analysis will be conducted to identify fixed assets which have been disposed but are still on the Laboratory's ledger. Any assets identified as having been disposed will be removed from the ledger in accordance with the Laboratory's policy.

THE JACKSON LABORATORY

Schedule of Findings and Questioned Costs

Year ended December 31, 2016

4) Inventory equipment – Controller, Director of Sponsored Research Administration, Manager of Sponsored Project Accounting
    a. Timeline: Q3-Q4 2017
        i. Following the cleanup of the fixed asset ledger, individuals identified as overseeing fixed assets in various parts of the Laboratory will be provided with a list of fixed assets which they are responsible for. They will be given 30 days to identify each fixed asset on their list and will be responsible for communicating the status and location of each asset to Financial Services. Financial Services will tag equipment as needed and update the fixed asset system.

5) Inventory fixed assets – Controller, CFO
    a. Timeline: Q4 2017
        i. The Laboratory will hire an independent third party to conduct a physical inventory of fixed assets.

6) Consider using an alternate method of tagging equipment – Sr. Director Facilities Services, Engineering Controller, Procurement Manager
    a. Timeline: Q2-Q3 2017
        i. The Laboratory will explore other asset tagging options including, but not limited to barcodes and RFID chips.

7) Conduct a fixed asset inventory and cleanup annually – CFO, Controller
    a. Timeline: Ongoing
        i. Fixed asset inventory is currently looked at on a biennial basis. The Laboratory will consider conducting this inventory count and cleanup annually.

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60 South Street
Boston, MA 02111

Exhibit IV

Independent Auditors' Report

The Board of Trustees
The Jackson Laboratory:

Report on the Financial Statements

We have audited the accompanying financial statements of The Jackson Laboratory (the Laboratory), which comprise the balance sheets as of December 31, 2016 and 2015, and the related statements of activities and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these 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 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 financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the 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 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 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 financial statements referred to above present fairly, in all material respects, the financial position of the Laboratory as of December 31, 2016 and 2015, and the changes in its net assets and its cash flows for the years then ended, in accordance with U.S. generally accepted accounting principles.

Exhibit IV

Other Matter

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis, as required by Title 2 U.S. Code of Federal Regulations, Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards,* 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 schedule of expenditure of federal awards is fairly stated, in all material respects, in relation to the financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated May 12, 2017, 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 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 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 12, 2017, except for the supplementary
schedule of expenditures of federal awards,
as to which the date is May 30, 2017

Exhibit IV

THE JACKSON LABORATORY

Balance Sheets

December 31, 2016 and 2015

(Dollars in thousands)

Assets		**2016**	**2015**
Cash and equivalents	$	9,602	4,375
Working capital investments, at fair value		191,083	171,833
Funds held in escrow		—	326
Accounts receivable, net		32,739	32,988
Contributions receivable, net		5,838	6,067
Other assets		22,133	14,979
Long-term investments, at fair value		142,755	132,699
Long-lived assets, net		391,524	391,073
Total assets	$	795,674	754,340
Liabilities			
Accounts payable and accrued expenses	$	38,336	41,022
Accrued postretirement obligations		6,321	5,659
Interest rate swaps, at fair value		5,463	6,454
Deposits and deferred revenue		10,562	7,157
Bonds and note payable, net		96,244	100,151
Connecticut forgivable loans, at fair value		5,760	7,270
Total liabilities		162,686	167,713
Net assets:			
Unrestricted		571,598	527,883
Temporarily restricted		41,210	40,348
Permanently restricted		20,180	18,396
Total net assets		632,988	586,627
Total liabilities and net assets	$	795,674	754,340

See accompanying notes to financial statements

Exhibit IV

THE JACKSON LABORATORY

Statement of Activities

Year ended December 31, 2016

(Dollars in thousands)

	Unrestricted	Temporarily restricted	Permanently restricted	Total
Operating activities:				
Revenue and other support:				
Grants	$ 81,791	—	—	81,791
Contributions	1,309	918	—	2,227
Genetic resources and services	230,818	—	—	230,818
Long-term investment return utilized	366	614	—	980
Other investment return	7,874	—	—	7,874
Other revenue	3,309	—	—	3,309
Total revenue	325,467	1,532	—	326,999
Net assets released from restrictions	1,713	(1,715)	2	—
Total revenue and other support	327,180	(183)	2	326,999
Expenses:				
Research	108,045	—	—	108,045
Genetic resources and services	129,570	—	—	129,570
Training	7,588	—	—	7,588
Institutional support	55,105	—	—	55,105
Total expenses	300,308	—	—	300,308
Increase (decrease) in net assets from operating activities	26,872	(183)	2	26,691
Nonoperating activities:				
Grants and contributions for capital and long-term investments	2,280	19	1,782	4,081
Long-term investment return above amounts utilized	5,945	1,026	—	6,971
Unrealized net gain on interest-rate swaps	991	—	—	991
Adjustment to fair value of Connecticut forgivable loans	7,748	—	—	7,748
Other	(121)	—	—	(121)
Increase in net assets from nonoperating activities	16,843	1,045	1,782	19,670
Increase in net assets	43,715	862	1,784	46,361
Net assets, beginning of year	527,883	40,348	18,396	586,627
Net assets, end of year	$ 571,598	41,210	20,180	632,988

See accompanying notes to financial statements.

Exhibit IV

THE JACKSON LABORATORY

Statement of Activities

Year ended December 31, 2015

(Dollars in thousands)

	Unrestricted	Temporarily restricted	Permanently restricted	Total
Operating activities:				
Revenue and other support:				
Grants	$ 82,052	—	—	82,052
Contributions	1,147	3,377	—	4,524
Genetic resources and services	209,836	—	—	209,836
Long-term investment return utilized	—	548	—	548
Other investment return	801	—	—	801
Other revenue	2,565	—	—	2,565
Total revenue	296,401	3,925	—	300,326
Net assets released from restrictions	1,736	(1,738)	2	—
Total revenue and other support	298,137	2,187	2	300,326
Expenses:				
Research	102,407	—	—	102,407
Genetic resources and services	121,245	—	—	121,245
Training	5,958	—	—	5,958
Institutional support	51,933	—	—	51,933
Total expenses	281,543	—	—	281,543
Increase in net assets from operating activities	16,594	2,187	2	18,783
Nonoperating activities:				
Grants and contributions for capital and long-term investments	138	168	3,064	3,370
Long-term investment return above amounts utilized	(517)	(757)	—	(1,274)
Unrealized net gain on interest-rate swaps	355	—	—	355
Change in funded status of pension and post-retirement benefit plans	490	—	—	490
Adjustment to fair value of Connecticut forgivable loans	75,936	—	—	75,936
Other	(4,143)	124	—	(4,019)
Increase (decrease) in net assets from nonoperating activities	72,259	(465)	3,064	74,858
Increase in net assets	88,853	1,722	3,066	93,641
Net assets, beginning of year	439,030	38,626	15,330	492,986
Net assets, end of year	$ 527,883	40,348	18,396	586,627

See accompanying notes to financial statements.

Exhibit IV

THE JACKSON LABORATORY

Statements of Cash Flows

Years ended December 31, 2016 and 2015

(Dollars in thousands)

		2016	2015
Cash flows from operating activities:			
Increase in net assets	$	46,361	93,641
Adjustments to reconcile increase in net assets to cash provided by operating activities:			
Depreciation and amortization		35,091	33,313
Adjustment to fair value of Connecticut forgivable loans		(7,748)	(75,936)
Realized and unrealized net investment (gains)/losses		(6,568)	6,753
Unrealized net (gains) on interest-rate swaps		(991)	(355)
Loss on disposal of long-lived assets		662	4,281
Contributions restricted for long-term investment and assets		(1,846)	(4,830)
Changes in actuarial assumptions		—	(490)
Changes in operating assets and liabilities		(4,805)	(4,201)
Net cash provided by operating activities		60,156	52,176
Cash flows from investing activities:			
Acquisition and construction of long-lived assets		(34,273)	(37,791)
Proceeds from investments		69,456	135,834
Purchases of investments		(93,440)	(175,678)
Net cash used in investing activities		(58,257)	(77,635)
Cash flows from financing activities:			
Repayment of bonds		(3,470)	(3,345)
Repayment of note payable		(101)	(130)
Decrease in funds held in escrow		326	7,048
Draws under Connecticut forgivable loans		4,727	14,232
Contributions restricted for long-term investment and assets		1,846	4,830
Net cash provided by financing activities		3,328	22,635
Net increase/(decrease) in cash and equivalents		5,227	(2,824)
Cash and equivalents, beginning of year		4,375	7,199
Cash and equivalents, end of year	$	9,602	4,375
Cash paid for interest	$	3,800	3,972

See accompanying notes to 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.

(2) Summary of Significant Accounting Policies

(a) Basis of Presentation

The Laboratory presents its 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 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 judgment include Connecticut forgivable loans, obligations under postretirement plan, liabilities under self-insured plans, allowances for uncollectible receivables, valuations of interest-rate swaps, and certain alternative investments.

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 financial statements.

(b) Classification of Net Assets

Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Subtopic 958-205, *Classification of Donor Restricted Endowment Funds Subject to an Enacted Version of the Uniform Prudent Management of Institutional Funds Act* (ASC 958-205), provides guidance on the net asset classification of donor-restricted endowment funds, and requires comprehensive disclosures regarding both donor-restricted endowment funds and board-designated (quasi) endowment funds. The Laboratory is subject to the Maine Uniform Prudent Management of Institutional Funds Act (MUPMIFA) and, accordingly, classifies as temporarily restricted net assets the unappropriated and unspent balance above historic dollar value of its donor-restricted endowment funds. See note 5 for more information about the Laboratory's endowment.

The financial statements have been prepared to focus on the Laboratory as a whole and to present balances and transactions according to the existence or absence of donor-imposed restrictions. Accordingly, net assets and changes therein are classified as follows:

- Unrestricted Net Assets – Net assets not subject to donor-imposed stipulations but which may be designated for specific purposes by the Laboratory's Board of Trustees.
- Temporarily Restricted Net Assets – Net assets subject to donor-imposed stipulations that may or will be released upon actions of the Laboratory meeting the donor-imposed stipulations and/or the passage of time. In addition, unspent appreciation of donor-restricted endowment funds in excess of their historic dollar value is classified as temporarily restricted net assets until appropriated by the Laboratory and spent in accordance with the standard of prudence imposed by MUPMIFA.
- Permanently Restricted Net Assets – Net assets subject to donor-imposed stipulations that they be maintained in perpetuity. Generally, the donors permit the Laboratory to use all or part of the income earned and/or capital gains, if any, on related investments for general or specific purposes.

Revenue is reported as an increase in unrestricted net assets unless its use is limited by donor-imposed restrictions or it is a gift pledge or remainder trust and included in temporarily restricted revenue until collected. Expenditures of temporarily restricted funds are reported in the program where expended with the release of the restriction shown as a decrease in temporarily restricted net assets and an offsetting increase in unrestricted net assets.

(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 & 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 73% and 73%, respectively, of its revenue from grants and contracts from the National Institutes of Health (NIH) for the years ended December 31, 2016 and 2015. Connecticut Innovations, Incorporated (CI) research and operating grant provided 19% and 18% of the grant revenue in 2016 and 2015, respectively. Indirect costs are billed and recovered in accordance with the terms of the grant and represented $25,411 and $28,676, respectively, of revenue from grants for the years ended December 31, 2016 and 2015. 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 to direct costs and then to indirect costs. The loss or significant reduction of Connecticut funding or federal programs could have a material adverse effect on the Laboratory's operations. However, the Laboratory is not aware that any federal programs will be materially reduced. In addition, direct and indirect costs charged to federal programs are subject to audit and possible future adjustment. Management believes that the Laboratory is in compliance with applicable laws and regulations and that any possible adjustments would not be material to the financial statements.

(Continued)

THE JACKSON LABORATORY

Notes to Financial Statements

December 31, 2016 and 2015

(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 temporarily restricted net assets and are reclassified to unrestricted net assets 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 permanently restricted net assets. 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(m)). 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 as temporarily restricted nonoperating support until the assets are acquired or 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) Programmatic Expenses

Expenses are presented on the 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.

Expenses incurred by type for the years ended December 31, 2016 and 2015 are presented below:

		December 31, 2016				
Program		**Research**	**Genetic resources and services**	**Training**	**Institutional support**	**Total**
Salaries and wages	$	43,500	46,232	2,368	24,614	116,714
Benefits		13,424	14,267	731	7,596	36,018
Employee recruitment, training, memberships and subscriptions		1,283	394	32	3,396	5,105
Purchased services and stipends		10,276	4,762	1,191	6,353	22,582
Supplies and shipping		12,246	30,586	528	1,801	45,161
Maintenance, utilities and insurance		7,023	10,296	628	5,635	23,582
Travel and meals		1,559	2,564	792	1,713	6,628

(Continued)

Program		December 31, 2016 Research	Genetic resources and services	Training	Institutional support	Total
Financing costs	$	1,899	3,013	91	371	5,374
Depreciation		16,792	15,119	1,133	2,422	35,466
Other expenses		43	2,337	94	1,204	3,678
Total	$	108,045	129,570	7,588	55,105	300,308

Program		December 31, 2015 Research	Genetic resources and services	Training	Institutional support	Total
Salaries and wages	$	43,453	44,747	2,247	24,246	114,693
Benefits		12,423	12,792	642	6,931	32,788
Employee recruitment, training, memberships and subscriptions		1,012	453	58	2,313	3,836
Purchased services and stipends		8,112	5,199	856	3,831	17,998
Supplies and shipping		11,107	26,267	425	2,819	40,618
Maintenance, utilities and insurance		6,783	10,173	427	6,109	23,492
Travel and meals		1,478	2,508	599	1,494	6,079
Financing costs		1,895	3,102	54	371	5,422
Depreciation		16,067	13,916	584	3,119	33,686
Other expenses		77	2,088	66	700	2,931
Total	$	102,407	121,245	5,958	51,933	281,543

All direct and indirect costs of fundraising are expensed as incurred and are included in institutional support in the statements of activities. Direct fundraising expenses were $3,033 and $2,966 for the years ended December 31, 2016 and 2015, respectively.

(g) Operating and Nonoperating Activities

The 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 services. Included in operating revenue is investment return appropriated to support operations under the endowment income spending formula approved by the Board of Trustees, as described in note 5(b). Also included in operating revenue are research grant reimbursements of $493 and $171 for the years ended December 31, 2016 and 2015, 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 $1,368 and $828 for the years ended December 31, 2016 and 2015, respectively.

(Continued)

Nonoperating revenue includes items not related to the Laboratory’s recurring activities or revenue that may not be used for operations. Accordingly, 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. Changes in fair value of Connecticut forgivable loans and interest-rate swaps, as well as postretirement plan charges above periodic benefit costs, are also all presented as nonoperating activities.

(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 worker’s compensation claims for a portion of its worker’s compensation program, and certain other healthcare benefits offered to active employees. 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 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, which are classified in Level 3 of the fair value hierarchy. 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, 2016 and 2015.

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) Bonds and Notes Payable

Forgivable loans are valued at fair value, reflecting the probability of forgiveness. All other debt is carried at cost.

Certain items related to the issuance of debt such as accounting, legal and auditing, as well as debt issuance costs and original issue discounts or premium are amortized over the period the related obligation is outstanding, generally using the interest method.

(l) Derivative Instruments

The Laboratory utilizes 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 are recognized in the Laboratory's financial statements. Differences between the fixed and variable interest rates in effect are settled net monthly under each swap, increasing or decreasing interest expense. The estimated fair value of each swap is 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. See footnote 8(d) for additional information on the interest rate swaps.

(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 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) Fair Value of Financial Instruments

The Laboratory discloses fair value information about all financial instruments, whether or not recognized in the balance sheets, for which it is practicable to estimate fair value. The Laboratory's financial instruments not carried at fair value are carried at net realizable value, which approximates fair value. Such financial instruments consist of cash equivalents, receivables from customers, and accounts payable and accrued expenses, which would be classified in Level 1 of the fair value hierarchy (excluding employee benefit obligations, which are not financial instruments).

(3) Investments

(a) Overall Investment Objective

The overall investment objective of the Laboratory is to invest its long-term assets in a prudent manner that is intended 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 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 Finance Committee, which oversees the Laboratory's investment program in accordance with Board of Trustee approved investment policy, relies on the Investment Subcommittee to recommend investment policy and implement the approved policy.

(b) Investment Strategies

The endowment is invested a manner that emphasizes the diversification of assets across categories of asset classes with differing sources of return and risk drivers. Fees are minimized through the use of indexed funds and direct purchases of short-term bonds and notes. The restricted assets may be invested with less liquidity and seek longer term returns through nonmarketable assets. The Laboratory may hold shares or units in institutional stock and fixed income funds as well as in alternative investment funds involving hedged strategies, private equity and real asset strategies. Funds with hedged strategies generally hold securities or other financial instruments for which a ready market exists and may include stocks, bonds, put or call options, swaps, currency hedges, credit default swaps and other instruments, and are valued accordingly. Private equity funds focus on investments not available in the public equity market. Real asset funds generally hold interests in commercial real estate, natural resources, or timber assets. Private equity and real asset strategies therefore often require the estimation of fair values by the fund managers in the absence of readily determinable market values. Because of the inherent uncertainties of valuation, these estimated fair values may differ significantly from values that would have been used had a ready market existed. Such valuations are determined by fund managers and generally consider variables such as operating results, comparable earnings multiples, projected cash flows, recent sales prices, and other pertinent information, and may reflect discounts for the illiquid nature of certain investments held.

(c) Basis of Reporting

Investments, including endowment and unrestricted operating investments 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.

(d) Classification in the Fair Value Hierarchy

The Laboratory owns interests in alternative investment funds rather than in the securities underlying each fund and has therefore applied the provisions of Accounting Standards Update (ASU) 2009-12, *Investments in Certain Entities that Calculate Net Asset Value (NAV) per Share (or its Equivalent)*. This standard allows for the estimation of the fair value of investments in investment companies for which the investment does not have a readily determinable value using NAV per share or its equivalent as a practical expedient. The Laboratory has utilized the NAV reported by each of the underlying funds as a practical expedient to estimate the value of the investment. In 2016, the Laboratory retrospectively adopted ASU 2015-07, *Disclosures for Investments in Certain Entities that Calculate NAV per Share (or its Equivalent)(ASU 2015-07)*, which clarified how investments valued using NAV as a practical expedient within the fair value hierarchy should be classified. ASU 2015-07 removes the requirement to classify within the fair value hierarchy table in Levels 2 or 3 investments in certain funds measured at NAV or its equivalent as a practical expedient to estimate fair value. The adoption did not impact the Laboratory's balance sheet, statement of activities, or statement of cash flows and resulted only in changes to the investment footnote disclosures.

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, 2016 and 2015.

(Continued)

The following tables summarize the Laboratory's investments and other assets by major category in the fair value hierarchy as of December 31, 2016 and 2015, as well as related strategy, liquidity and funding commitments:

	December 31, 2016					
	Level 1	Level 2	NAV or equivalent	Total	Redemption or liquidation	Days' notice
Working capital investments:						
Money market accounts and certificates of deposit	$ 31,621	—	—	31,621	Daily	One
U.S. government agency bonds	—	3,046	—	3,046	Daily	One
Corporate bonds	—	25,357	—	25,357	Daily	One
U.S. and global fixed income funds	—	23,628	—	23,628	Daily	One
Multiple strategies	107,431	—	—	107,431	Daily	One
Total working capital investments	139,052	52,031	—	191,083		
Long-term investments (endowment):						
Money market accounts and certificates of deposit	2,089	—	—	2,089	Daily	One
U.S. and global fixed income funds	27,307	—	—	27,307	Daily	One
Equities:						
U.S. mid and large cap value funds	52,363	—	—	52,363	Daily	One
Global large cap	26,345	—	—	26,345	Daily	One
Global – developed markets	13,302	—	—	13,302	Daily	One
Global – emerging markets	—	—	—	—	Daily	One
Total equities	92,010	—	—	92,010		
Multiple hedged strategies	4,840	—	12,877	17,717	Daily to locked-up	One to n/a

	December 31, 2016					
	Level 1	Level 2	NAV or equivalent	Total	Redemption or liquidation	Days' notice
Private equity and real assets	$ —	—	3,632	3,632	Locked-up[1]	N/A
Total long-term investments	126,246	—	16,509	142,755		
Total	$ 265,298	52,031	16,509	333,838		

[1] The lock-up periods have various terms with extensions of one to two years. As of December 31, 2016, the average remaining life of these partnerships is approximately nine years.

	December 31, 2015					
	Level 1	Level 2	NAV or equivalent	Total	Redemption or liquidation	Days' notice
Working capital investments:						
Money market accounts and certificates of deposit	$ 42,250	—	—	42,250	Daily	One
U.S. government agency bonds	—	8,398	—	8,398	Daily	One
Corporate bonds	—	38,430	—	38,430	Daily	One
U.S. and global fixed income funds	—	23,297	—	23,297	Daily	One
Multiple strategies	59,458	—	—	59,458	Daily	One
Total working capital investments	101,708	70,125	—	171,833		
Long-term investments (endowment):						
Money market accounts and certificates of deposit	3,880	—	—	3,880	Daily	One
U.S. and global fixed income funds	22,792	—	—	22,792	Daily	One

	December 31, 2015					
	Level 1	**Level 2**	**NAV or equivalent**	**Total**	**Redemption or liquidation**	**Days' notice**
Equities:						
U.S. mid and large cap value funds	$ 46,519	—	—	46,519	Daily	One
Global large cap	24,427	—	—	24,427	Daily	One
Global – developed markets	13,246	—	—	13,246	Daily	One
Global – emerging markets	778	—	—	778	Daily	One
Total equities	84,970	—	—	84,970		
Multiple hedged strategies	4,978	—	12,820	17,798	Daily to locked-up	One to n/a
Private equity and real assets	—	—	3,259	3,259	Locked-up[1]	N/A
Total long-term investments	116,620	—	16,079	132,699		
Total	$ 218,328	70,125	16,079	304,532		

[1] The lock-up periods have various terms with extensions of one to two years. As of December 31, 2015, the average remaining life of these partnerships is approximately eight years.

(e) 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, 2016 and 2015 were $12,587 and $3,370, respectively. The timing and amount of future capital calls expected to be exercised in any particular future year is uncertain.

Aggregate investment liquidity as of December 31, 2016 and 2015 is presented below based on redemption or sale period:

		Investment fair values	
		2016	2015
Investment redemption or sale period:			
Daily	$	317,329	288,453
Quarterly		4,909	10,047
Semi-annually to annually		7,402	1,651
Locked up		4,198	4,381
Total	$	333,838	304,532

(4) Investment Return

The following summarizes investment return for the years ended December 31, 2016 and 2015:

		2016	2015
Investment return:			
Interest and dividends	$	9,257	6,828
Realized net losses		(241)	(803)
Unrealized net gains/(losses)		6,809	(5,950)
Investment return	$	15,825	75

Investment returns are included in the statements of activities as follows for the years ended December 31, 2016 and 2015:

		2016	2015
Investment return:			
Operating:			
Long-term investment return utilized	$	980	548
Other investment return		7,874	801
Nonoperating activities:			
Long-term investment return above amounts utilized		6,971	(1,274)
Investment return	$	15,825	75

Investment return is net of bank and advisory fees, which were $367 and $394 for the years ended December 31, 2016 and 2015, respectively.

(5) Endowment

The Laboratory's endowment consisted of approximately 62 individual donor-restricted funds, as well as Board-designated funds held for the long-term support of the Laboratory's mission.

In 2016, the Board of Trustees set separate long-term investment return objectives and risk parameters for donor-restricted and Board-designated funds. For 2016 and 2015, 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 is also an average annual real total return of 4%. Actual returns in any given year may vary from this amount.

(a) Interpretation of Relevant Law

The Laboratory classifies as permanently restricted net assets the original value of gifts made to establish donor–restricted endowment funds and any additions to such funds. The remaining portion of a donor-restricted endowment fund that is not classified as permanently restricted net assets is classified as temporarily restricted net assets until appropriated for expenditure by the Laboratory in a manner consistent with the standard of prudence prescribed by MUPMIFA.

(b) Endowment Spending Policy

Endowment net assets classified as unrestricted include funds designated by the Board as endowment (also referred to as quasi-endowment), including any accumulated return thereon. For donor-restricted endowment funds, the Laboratory follows the provisions of the Maine Uniform Prudent Management of Institutional Funds Act (MUPMIFA). The Laboratory reports as permanently restricted net assets an amount equal to the value of each permanent donor-restricted endowment fund at the time it became an endowment fund, and subsequent contributions and accumulations pursuant to the applicable gift instrument. Unless otherwise explicitly stipulated by the donor, return on investments in donor-restricted endowment funds is reported as temporarily restricted net assets until appropriated for expenditure by the Laboratory. The Laboratory considers several factors in making a determination to appropriate or accumulate donor-restricted endowment funds, including the individual endowment fund's purpose, duration and preservation, the possible effect of inflation (or deflation), and expected total return.

(c) 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 unrestricted net assets when they occur. Deficiencies totaled $54 and $124 at December 31, 2016 and 2015, respectively. Under MUPMIFA, spending from certain endowment funds with deficiencies as of December 31, 2016 is allowed for fiscal year 2017.

THE JACKSON LABORATORY

Notes to Financial Statements

December 31, 2016 and 2015

(d) Endowment Activity

The Laboratory's endowment consisted of the following at December 31, 2016 and 2015:

		2016			
		Unrestricted	Temporarily restricted	Permanently restricted	Total
Donor-restricted	$	(54)	33,578	17,462	50,986
Board-designated		91,769	—	—	91,769
Total	$	91,715	33,578	17,462	142,755

		2015			
		Unrestricted	Temporarily restricted	Permanently restricted	Total
Donor-restricted	$	(124)	32,565	15,947	48,388
Board-designated		84,311	—	—	84,311
Total	$	84,187	32,565	15,947	132,699

Changes in endowment assets for the years ended December 31, 2016 and 2015 are as follows:

		December 31, 2016			
		Unrestricted	Temporarily restricted	Permanently restricted	Total
Endowment, December 31, 2015	$	84,187	32,565	15,947	132,699
Cash contributions		—	—	1,513	1,513
Board transfer from operating funds to endowment		1,500	—	—	1,500
Investment return		6,287	1,640	—	7,927
Long-term investment return utilized		—	(614)	—	(614)
Adjustment for underwater endowments		70	(70)	—	—
Net assets transferred per restrictions		—	(2)	2	—
In-transit transactions		(329)	59	—	(270)
Endowment, December 31, 2016	$	91,715	33,578	17,462	142,755

(Continued)

		December 31, 2015			
		Unrestricted	Temporarily restricted	Permanently restricted	Total
Endowment, December 31, 2014	$	81,813	33,197	11,600	126,610
Cash contributions		—	—	4,349	4,349
Board transfer from operating funds to endowment		3,000	—	—	3,000
Investment return		(518)	(210)	—	(728)
Long-term investment return utilized		—	(548)	—	(548)
Adjustment for underwater endowments		(124)	124	—	—
Net assets transferred per restrictions		—	2	(2)	—
In-transit transactions		16	—	—	16
Endowment, December 31, 2015	$	84,187	32,565	15,947	132,699

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, 2016 and 2015:

		2016	2015
Due from provision of genetic resources and services	$	25,225	26,675
Amounts reimbursable under grants and contracts		6,485	4,885
Miscellaneous accounts receivable		1,894	2,589
		33,604	34,149
Less allowance for uncollectibles		(865)	(1,161)
Accounts receivable, net	$	32,739	32,988

(7) Long-Lived Assets

Long-lived assets consisted of the following as of December 31, 2016 and 2015:

		2016	2015
Land and improvements	$	10,591	10,468
Buildings and improvements		506,449	501,560
Construction in progress		29,774	14,192
Equipment and software		144,202	131,175
		691,016	657,395
Less accumulated depreciation		(299,492)	(266,322)
Long-lived assets, net	$	391,524	391,073

The change in accounts payable for acquisition and construction of long-lived assets was an increase of $2,303 and a decrease of ($6,641) for the years ended December 31, 2016 and 2015, respectively.

Commitments to third parties for the purchase of equipment, space renovation and construction projects were $29,596 and $7,959 as of December 31, 2016 and 2015, respectively.

(8) Bonds and Note Payable

(a) Bonds and Note Payable

Bonds and note payable consisted of the following as of December 31, 2016 and 2015:

		2016	2015
Finance Authority of Maine Revenue Bonds (FAME Series 2012 Bonds)	$	35,155	37,075
Association of Bay Area Government for California fixed rate revenue bonds (ABAG Series 2012 bonds)		55,390	56,940
		90,545	94,015
Less unamortized discount		(180)	(192)
Plus unamortized premium		4,481	4,865
Debt issuance costs		(613)	(649)
Bonds payable, net		94,233	98,039
Note payable for real estate purchase		2,011	2,112
Bonds and note payable, net	$	96,244	100,151

The FAME Series 2012 bonds carry a variable interest rate and 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 pays 67% of one-month LIBOR plus 1.02%. The agreements contain certain restrictive covenants, including meeting a semi-annual liquidity test, limits on incurring additional debt, and not allowing liens on property. Annually, in connection with providing the audited financial statements, the Laboratory may request an extension of the purchase agreement for up to nine additional years. In 2016, the Laboratory requested, and the bank granted a one year extension of the term of the original purchase agreement until 2026.

Should the financial institution holding the bonds under a direct purchase agreement accelerate the maturities of the obligation due to a subjective clause, under which conditions are not objectively determinable, the Laboratory would consider those obligations to be short-term in nature.

The Laboratory was in compliance with all financial covenants as of December 31, 2016 and 2015.

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 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.

(b) Connecticut Innovations, Incorporated 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 Connecticut Innovations, Incorporated (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.

The Laboratory elected, under FASB ASC Topic 825, to report the forgivable loans at fair value. Therefore, the fair value of the loans is 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 difference between funds drawn through December 31 under the loans and the fair value is included in the nonoperating section of the statement of activities as an adjustment to fair value of Connecticut forgivable loans.

As part of the transaction, UCHC provided a 99-year ground lease for the building site. The ground lease contains a provision whereby the property 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, 2016 and 2015, the Laboratory had incurred $152,139 and $151,684, respectively, in project-related costs, which are included in construction in progress, buildings and improvements, and equipment. As of December 31, 2016 and 2015, the Laboratory had cumulatively received advances and accrued interest under the Connecticut forgivable loans of $156,444 and $150,205, respectively. The advances include $0 and $326 held in escrow by CI as retainage as of December 31, 2016 and 2015, respectively. The funds held in escrow are included in Funds Held in Escrow in the accompanying financial statements.

The following table summarizes the valuation techniques and significant unobservable inputs used by the Laboratory that are categorized within Level 3 of the fair value hierarchy as of December 31:

	Fair value at December 31, 2016	Valuation technique	Unobservable inputs	Range (weighted average)
Connecticut forgivable loans	$ 5,760	Third-party valuation based on Monte Carlo simulations	Employee annual salaries by position	$45–$228 ($80k)
			Employee annual salaries increases	1%–2.5% (1.7%)
			Employee benefits as a% of salaries	23.5%–26.5% (25%)
			Weighted case scenario probabilities	75%–90% (83.33%)

	Fair value at December 31, 2015	Valuation technique	Unobservable inputs	Range (weighted average)
Connecticut forgivable loans	$ 7,270	Third-party valuation based on Monte Carlo simulations	Employee annual salaries by position	$28–$333 ($153k)
			Employee annual salaries increases	1%–2.5% (1.7%)
			Employee benefits as a% of salaries	23.5%–26.5% (25%)
			Weighted case scenario probabilities	65%–90% (78.33%)

(c) Maturities of Long-Term Debt

Maturities of long-term debt as of December 31, 2016, were as follows:

	Amounts due
Year ending December 31:	
2017	$ 3,727
2018	3,882
2019	4,043
2020	4,208
2021	4,389
Thereafter	224,446
Total	$ 244,695

Included in “Thereafter” in the above table is $152,139 drawn through December 31, 2016 under the nonrecourse Connecticut loan agreements described in note 8(b). Such balance would be forgiven if the Laboratory meets certain employment goals as defined in the agreements.

(d) Interest-Rate Swaps

The Laboratory entered into interest-rate swap agreements, including forward-starting swaps, to essentially convert the variable rate on the $37,075 of 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 bonds, which 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. The estimated fair value shown in the financial statements is based on the estimated termination value as of the end of the year.

As of December 31, 2016 and 2015, the following interest-rate swap agreements were outstanding:

	2016							
Counterparty	**Issue date**	**Effective date**	**Expiration date**		**Remaining notional amount**	**Swap fixed rate**		**Fair value asset (liability)**
1	6/12/2002	7/1/2002	7/1/2022	$	9,385	3.920 %	$	(1,151)
2	6/11/2003	7/1/2003	7/1/2031		10,255	2.860		(1,076)
3	5/5/2005	7/1/2005	7/1/2031		6,130	3.271		(812)
4	6/20/2003	7/1/2012	7/1/2031		9,385	4.140		(1,865)
5*	6/20/2003	7/1/2022	7/1/2031		5,905	4.000		(559)
Totals							$	(5,463)

* As of December 31, 2016, represents a separate forward swap that effectively extends the initial swap expiration date through the related debt maturity date.

	2015							
Counterparty	**Issue date**	**Effective date**	**Expiration date**		**Remaining notional amount**	**Swap fixed rate**		**Fair value asset (liability)**
1	6/12/2002	7/1/2002	7/1/2022	$	9,900	3.920 %	$	(1,452)
2	6/11/2003	7/1/2003	7/1/2031		10,800	2.859		(1,297)
3	5/5/2005	7/1/2005	7/1/2031		6,475	3.271		(970)
4	6/20/2003	7/1/2012	7/1/2031		9,900	4.140		(2,181)
5*	6/20/2003	7/1/2022	7/1/2031		5,905	4.000		(554)
Totals							$	(6,454)

* As of December 31, 2015, represents a separate forward swap that effectively extends the initial swap expiration date through the related debt maturity date.

The variable-rate side of the swaps is based on 67% of one-month LIBOR plus 1.02%. Swap agreements 3 and 4 contain a requirement for the Laboratory to post cash collateral if the aggregate mark-to-market value of the swaps exceeds a $5,000 liability as of any month-end. Swap agreements 1, 2, and 5 contain a requirement for the Laboratory to post cash collateral if the aggregate mark-to-market value of the swaps exceed an $8,000 liability as of any month end. The mark-to-market threshold amounts are exclusive. The counterparties are required to maintain a minimum credit rating as per the individual agreements.

Interest rate volatility, remaining outstanding principal and time to maturity will affect each swap's fair value at subsequent reporting dates. To the extent the Laboratory holds a swap through its expiration date, the swap's fair value will reach zero.

(9) Employee Benefits

(a) Defined Contribution Retirement Plan and Other Benefits

Subject to meeting certain eligibility requirements, all employees participate in a defined contribution 403(b) retirement plan administered by the Laboratory. Contribution expense was $9,414 and $8,685 for the years ended December 31, 2016 and 2015, respectively.

In addition, the Laboratory has supplemental pension obligations under employment agreements. The present value of the obligations is included in accrued expenses and is funded primarily through a split-interest life insurance arrangement. The cash value of the insurance policy is included in other assets. Life annuities were purchased to meet another obligation to provide additional retirement income. The cost of these annuities is included in other assets and is being amortized over the vesting period after which the annuity contracts transfer to the employee.

(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 $490 and $489 in the years ended December 31, 2016 and 2015, respectively, the Laboratory has not funded the postretirement plan.

The impact of the changes in actuarial assumptions was a decrease in the liability resulting in a gain of $880 and a loss of $490 for the years ended December 31, 2016 and 2015, respectively, included in the nonoperating section of the statements of activities.

(Continued)

Benefit obligations and funded status of the plan for the years ended December 31, 2016 and 2015 were as follows:

		Year ended December 31	
		2016	2015
Changes in benefit obligations:			
Benefit obligation at beginning of year	$	5,659	6,329
Interest cost		235	239
Total actuarial (gain) loss		870	(372)
Medicare Part D subsidy with adjustment		47	(48)
Benefits paid, net of employee contributions		(490)	(489)
Benefit obligation at end of year		6,321	5,659
Changes in plan assets:			
Fair value of plan assets at beginning of year		—	—
Actual return on plan assets		—	—
Employer contributions		490	489
Employee contributions		52	52
Benefits paid		(542)	(541)
Fair value of plan assets at end of year		—	—
Accrued benefit cost recognized in the balance sheet	$	(6,321)	(5,659)

Net periodic benefit cost consisted of the following components for the years ended December 31, 2016 and 2015:

		Year ended December 31	
		2016	2015
Interest cost	$	235	239
Medicare Part D subsidy		(73)	(61)
Amortization of net actuarial loss		43	69
Net periodic benefit cost recorded	$	205	247

The net loss and prior service credit for the postretirement plan that will be amortized into net periodic benefit cost in 2016 is $43. The weighted average assumptions related to the discount rate used to determine benefit obligations for 2016 and 2015 were 3.66% and 3.69%, respectively.

The discount rates used to determine net periodic benefit cost for the years ended December 31, 2016 and 2015 were 3.69% and 3.42%, respectively.

(Continued)

The assumed health care cost trend rates at December 31, 2016 and 2015 were as follows:

	2016	2015
Healthcare cost trend rate assumed for next year	6.0 %	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

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

		One-point increase	One-point decrease
Effect on total of service and interest cost	$	19	17
Effect on total on postretirement benefit obligation		620	535

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:		
2017	$	434
2018		436
2019		434
2020		436
2021		436
2022 through 2026		2,106

(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 at December 31, 2016 and 2015 was $4,294 and $3,792, respectively, and is included in accounts payable and accrued expenses. The investments valued at $4,294 and $3,792 as of December 31, 2016 and 2015, respectively, and are included in other assets.

(Continued)

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 $684 and $430 at December 31, 2016 and 2015, respectively, is included in accounts payable and accrued expenses, and the corresponding assets are included in other assets.

(10) Restricted Net Assets

The Laboratory classifies gift pledges based on donor purpose restriction. Unrestricted pledges are shown as time restricted until collected.

(a) Temporarily Restricted Net Assets

Temporarily restricted net assets consisted of the following as of December 31, 2016 and 2015:

		2016	2015
Time-restricted	$	1,133	1,140
Unappropriated return on donor-restricted endowments		33,578	32,554
Restricted for acquisition and construction of long-lived assets		1,833	1,814
Restricted for research, training and other programs		4,666	4,840
	$	41,210	40,348

(b) Permanently Restricted Net Assets

Permanently restricted net assets consisted of the following as of December 31, 2016 and 2015:

		2016	2015
Research	$	13,343	11,890
Training		486	436
Other programs		865	853
General purposes		2,768	2,768
Total endowment		17,462	15,947
Pledges receivable		2,718	2,449
	$	20,180	18,396

(Continued)

(c) 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:

		2016	2015
Time-restricted only	$	790	1,180
Restricted for acquisition or construction of long-lived assets		—	321
Restricted for research, training, and other programs		1,944	2,126
Permanently restricted		2,718	2,449
	$	5,452	6,076

(d) Net Assets Released from Restrictions

Net assets released from restrictions consisted of the following for the years ended December 31, 2016 and 2015:

		Year ended December 31	
		2016	2015
Operating activities:			
Research programs	$	1,045	821
Training programs		528	627
Other		137	66
Collection of unrestricted pledges		3	222
Transfer to permanently restricted		2	2
	$	1,715	1,738

(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 $473 and $96 for the years ended December 31, 2016 and 2015, respectively.

(Continued)

THE JACKSON LABORATORY

Notes to Supplementary Schedule of Expenditures of Federal Awards

Year ended December 31, 2016

Estimated future minimum lease payments under noncancelable facility and equipment operating leases as of December 31, 2016 are as follows:

		Amounts due
Year ending December 31:		
2017	$	78
2018		5
Total	$	83

(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 of Trustees 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 of Trustees may participate in any decision in which he or she has a material financial interest.

Each trustee and member of 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 Audit Committee.

(14) Subsequent Events

The Laboratory has evaluated subsequent events from the balance sheet date of December 31, 2016 through May 12, 2017, the date on which the financial statements were issued, and determined there are no other items to disclose.

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Supplementary Schedule of Expenditures of Federal Awards

Year ended December 31, 2016

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):				
Human Genome Research	93.172	HG000330G	$ 83,937	$ 1,563,821
Human Genome Research	93.172	HG000330H	43,862	3,207,202
Human Genome Research	93.172	HG002273D	1,142,426	1,341,903
Human Genome Research	93.172	HG002273E	1,886,467	2,552,531
Human Genome Research	93.172	HG006332A	66,915	1,755,793
Human Genome Research	93.172	HG007053A	—	3,723
Human Genome Research	93.172	HG007053B	—	61,155
Human Genome Research	93.172	HG007497A	1,450,741	1,983,621
Human Genome Research	93.172	HG007497B	306,955	580,668
Human Genome Research	93.172	HG007554A	—	188,089
Human Genome Research	93.172	HG007631A	—	58,360
Research Related to Deafness and Communication Disorders	93.173	DC004301D	80,741	406,394
Research Related to Deafness and Communication Disorders	93.173	DC005827D	53,237	297,528
Research Related to Deafness and Communication Disorders	93.173	DC015242A	—	20,525
Research Related to Deafness and Communication Disorders	93.173	DC015737A	—	36,095
Alcohol Research Programs	93.273	AA018776B	129,038	486,621
Drug Abuse and Addiction Research Programs	93.279	DA028420B	—	489,617
Drug Abuse and Addiction Research Programs	93.279	DA032192B	—	23,356
Drug Abuse and Addiction Research Programs	93.279	DA037927A	—	898,604
Drug Abuse and Addiction Research Programs	93.279	DA039841A	2,786	84,083
Drug Abuse and Addiction Research Programs	93.279	DA041668A	—	249,636
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	EB022365A	33,970	18,333
Trans-NIH Research Support	93.310	DK107967A	65,171	822,474
Trans-NIH Research Support	93.310	EB022365A	—	134,270
Trans-NIH Research Support	93.310	GM123516A	—	15,347
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD010920D	—	11,071
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD010920E	—	17,114
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD010921B	—	1,439,247
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD010972H	—	101,607
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD011102D	—	712,767
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD011190B	71,565	731,207
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD016473A	—	49,843
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD016473B	—	164,920
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD020205A	5,811	91,894
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD020351A	190,303	2,598,960
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD021325A	—	160,547
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD023222B	—	1,950,750
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	RR016049C	—	198,183
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	RR033367A	—	2,346,923
Cancer Cause and Prevention Research	93.393	CA186714A	—	308,632
Cancer Treatment Research	93.395	CA184704A	37,868	282,354
Cancer Biology Research	93.396	CA089713C	—	253,735
Cancer Biology Research	93.396	CA089713D	—	490,869
Cancer Biology Research	93.396	CA178206B	—	87,887
Cancer Biology Research	93.396	CA184851A	—	95,752
Cancer Biology Research	93.396	CA191848A	—	250,625
Cancer Biology Research	93.396	CA195712A	292,909	638,570
Cancer Centers Support Grants	93.397	CA034196G	—	1,537,181
Cancer Research Manpower	93.398	CA122819B	—	98,699
Cancer Research Manpower	93.398	CA122819C	—	11,504
Cancer Research Manpower	93.398	CA172010A	—	75,072
Cancer Research Manpower	93.398	CA174584A	—	177
Cancer Research Manpower	93.398	CA174584B	—	54,097
Cardiovascular Diseases Research	93.837	HL077796C	—	643,501
Blood Diseases and Resources Research	93.839	HL134043A	—	192,758
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR049288C	198,779	500,778
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR049288D	—	180,215
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR054170B	61,207	527,872
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR054170C	—	203,636
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR056635A	—	43,954
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR063781A	—	121,296
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK046266E	—	290,552
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK085441A	—	112,797
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK092251B	—	246,700
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK095735A	2,240	97,766
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK095735B	5,078	382,390
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK097610A	—	849,348
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK100692B	—	308,034
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK111078A	—	16,778
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS031348F	—	1,899
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS054154C	—	223,731
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS054154D	—	285,363
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS064013B	—	501,358
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS078795B	—	43,439
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS082658A	—	42,036
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS082666A	—	176,532
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS087351A	—	114,644
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS090030A	113,736	139,105
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS091118A	—	12,238
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS091571A	—	127,209
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS094637A	—	20,607
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS098523A	—	25,305
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS098725A	—	15,000
Allergy, Immunology and Transplantation Research	93.855	AI065303D	—	223,573

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Supplementary Schedule of Expenditures of Federal Awards

Year ended December 31, 2016

Federal grantor/pass-through grantor/program title	Federal CFDA number	Direct or pass-through identifying number	Passed through to subrecipients	Total federal expenditures
Allergy, Immunology and Transplantation Research	93.855	AI119231A	$ —	$ 148,244
Allergy, Immunology and Transplantation Research	93.855	AI121920A	68,269	432,973
Allergy, Immunology and Transplantation Research	93.855	AI124297A	42,214	382,325
Biomedical Research and Research Training	93.859	GM061364D	—	131,452
Biomedical Research and Research Training	93.859	GM070683C	172,304	589,495
Biomedical Research and Research Training	93.859	GM076468B	234,869	1,548,105
Biomedical Research and Research Training	93.859	GM078452B	—	133,239
Biomedical Research and Research Training	93.859	GM099640A	—	280,397
Biomedical Research and Research Training	93.859	GM099640B	—	868,793
Biomedical Research and Research Training	93.859	GM110332B	—	7,575
Biomedical Research and Research Training	93.859	GM113979A	—	69,301
Biomedical Research and Research Training	93.859	GM115518A	—	69,817
Child Health and Human Development Extramural Research	93.865	HD007065G	—	21,568
Child Health and Human Development Extramural Research	93.865	HD007065H	—	71,095
Child Health and Human Development Extramural Research	93.865	HD033816E	—	65,373
Child Health and Human Development Extramural Research	93.865	HD033816F	—	181,247
Child Health and Human Development Extramural Research	93.865	HD062499A	—	1,080,887
Child Health and Human Development Extramural Research	93.865	HD062499B	—	1,161,061
Child Health and Human Development Extramural Research	93.865	HD073077A	—	130,810
Child Health and Human Development Extramural Research	93.865	HD073077B	—	243,563
Child Health and Human Development Extramural Research	93.865	HD078485A	—	38,386
Child Health and Human Development Extramural Research	93.865	HD079344A	—	103,171
Child Health and Human Development Extramural Research	93.865	HD083521A	—	127,078
Aging Research	93.866	AG022308C	—	2,058,121
Aging Research	93.866	AG032333A	—	3,937
Aging Research	93.866	AG038070B	76,963	903,837
Aging Research	93.866	AG038560A	—	148,394
Aging Research	93.866	AG050645A	—	294,914
Aging Research	93.866	AG051496A	422,234	790,106
Aging Research	93.866	AG052608A	16,320	100,198
Vision Research	93.867	EY011721D	—	784,556
Vision Research	93.867	EY011996D	—	529,294
Vision Research	93.867	EY019943B	—	435,239
Vision Research	93.867	EY021525A	—	3,937
Vision Research	93.867	EY021525B	—	450,454
Total direct awards, NIH			7,358,915	53,099,292
Pass-through awards, NIH:				
Brigham And Women's Hospital				
Environmental Health	93.113	ES024804A BWH	—	85,829
Geisinger Clinic				
Human Genome Research	93.172	HG006834A Geisinger	—	18,579
California Institute of Technology				
Human Genome Research	93.172	HG002223D CalTech	—	104,327
California Institute of Technology				
Human Genome Research	93.172	HG002223E CIT	—	53,032
Trustees of the University of Pennsylvania				
National Center on Sleep Disorders Research	93.233	HL111725A PENN	—	60,539
Stanford Junior University				
Trans-NIH Research Support	93.310	DK102556A Stanford	—	1,122,440
Johns Hopkins University School of Medicine				
National Center for Advancing Translational Sciences	93.350	TR002019A JHU	—	5,346
Oregon Health & Science Univerity				
National Center for Advancing Translational Sciences	93.350	OD011883B OHSU	—	20,454
University of Massachusetts				
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD018259A UMA	—	298,797
University Of North Carolina				
Special Programs for the Aging - Title III, Part D - Disease Prevention and Health Promotion Services	93.351	OD016465B UNC	—	13,885
University Of Michigan				
Cancer Detection and Diagnosis Research	93.394	CA085878D MICHIGAN	—	14,442
The Pennsylvania State University				
Cancer Treatment Research	93.395	CA171983B PennSt	—	131,008
Cyteir Therapetics, Inc.				
Cancer Treatment Research	93.395	CA183197B Cyteir	—	46,491
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL LIU	—	91,295
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL CJB	—	11,212
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL JHC	—	7,704
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL MGH	—	16,235
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL PR	—	19,412
Cold Spring Harbor Laboratory				
Cancer Treatment Research	93.395	CA180944A CSHL MGH-CJB	—	1,575
Baylor College of Medicine				
Cancer Biology Research	93.396	CA198320A Baylor	—	2,237
University Of Pittsburgh				
Cardiovascular Diseases Research	93.837	HL132024A UPitt	—	31,309
Washington Univ At St Louise				
Cardiovascular Diseases Research	93.837	HL130876A Wash Univ	—	2,917
Washington Univ At St Louise				
Lung Diseases Research	93.837	HL098115A Wash Univ	—	2,478
Trustees of Indiana University				
Lung Diseases Research	93.838	HL121812A Indiana Univ	—	29,993
Trustees of Indiana University				
Lung Diseases Research	93.838	HL121831A Indiana Univ	—	159,170

THE JACKSON LABORATORY

Supplementary Schedule of Expenditures of Federal Awards

Year ended December 31, 2016

Federal grantor/pass-through grantor/program title	Federal CFDA number	Direct or pass-through identifying number	Passed through to subrecipients	Total federal expenditures
Thomas Jefferson University				
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR055225A THOMJE	$ —	$ 11,457
University of Connecticut Health Center				
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	AR063702A UConn	—	147,931
Georgia Regents University				
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK076169B GRU	—	62,968
Medical College of Wisconsin				
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK088831A MCW	—	532,368
Medical College of Wisconsin				
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK088831B MCW	—	184,075
Medical College of Wisconsin				
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK097605A MCW	—	13,116
University of Wisconsin				
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	DK101573A UW	—	111,087
Trustees of Columbia University				
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS091118A COLUMBIA	—	91,311
University California San Diego				
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	NS094637B UCSD	—	21,079
University of Massachusetts				
Allergy, Immunology and Transplantation Research	93.855	DK104218A UMA	—	233,813
Mt. Sinai School of Medicine				
Allergy, Immunology and Transplantation Research	93.855	AI095611A MTSINAI	—	32,259
University of Massachusetts				
Allergy, Immunology and Transplantation Research	93.855	AI046629C UMA	—	49,495
University of Massachusetts				
Allergy, Immunology and Transplantation Research	93.855	AI112321A UMASS	—	21,404
The University of Chicago				
Allergy, Immunology and Transplantation Research	93.855	AI117535A UC	—	8,766
University of Massachusetts				
Allergy, Immunology and Transplantation Research	93.855	AI111809A UMA	—	88,384
Mayo Clinic				
Allergy, Immunology and Transplantation Research	93.855	AI089859A Mayo	—	96,789
Yale University School of Medicine				
Allergy, Immunology and Transplantation Research	93.855	AI110776A Yale	—	5,966
Baylor Research Institute				
Allergy, Immunology and Transplantation Research	93.855	AR070594A Baylor	—	123,498
Baylor Research Institute				
Allergy, Immunology and Transplantation Research	93.855	AI089987A Baylor	—	2,632
MDI Biological Laboratory				
Biomedical Research and Research Training	93.859	GM103423D MDIBL	—	70,075
University of Delaware				
Biomedical Research and Research Training	93.859	GM080646C UDL	—	65,298
University of Delaware				
Biomedical Research and Research Training	93.859	GM080646D UDL	—	45,241
Tufts University School of Medicine				
Biomedical Research and Research Training	93.859	GM101010A Tufts	—	80,007
Massachusetts General Hospital				
Child Health and Human Development Extramural Research	93.865	HD068250A MGH Bult	—	65,768
Massachusetts General Hospital				
Child Health and Human Development Extramural Research	93.865	HD068250A MGHLee	—	32,351
University Of Washington				
Child Health and Human Development Extramural Research	93.865	U54 HD042454C UW	—	493,943
Trustees of Indiana University				
Aging Research	93.866	AG054345A IU	—	166,355
Brigham and Women's Hospital				
Vision Research	93.867	EY010123D BWH	—	26,962
Northwestern University				
Vision Research	93.867	EY025799A NWU	—	35,111
The Trustees of Columbia University				
Vision Research	93.867	EY023839A Columbia Univ	—	14,729
Total pass-through awards, NIH			—	5,284,944
Total Department of Health and Human Services			7,358,915	58,384,236
National Science Foundation (NSF):				
Direct awards, NSF:				
Biological Sciences	47.074	DBI 1262049	—	111,008
Total direct awards, NSF			—	111,008
Pass-through awards, NSF:				
University of Connecticut				
Biological Sciences	47.074	IIS-1447711 Uconn	—	22,304
Total pass-through awards, NSF			—	22,304
Total NSF			—	133,312
Direct awards, other Federal:				
Economic Development Administration				
Public Works and Economic Development Facilities	11.300	EDA 01-01-14689	—	73,238
Department of Defense:				
Military Medical Research and Development	12.420	DOD YUN	—	174,562
Military Medical Research and Development	12.420	DOD M Stitzel	—	62,259
Total direct other Federal awards			—	310,059
Total Research and Development Cluster			$ 7,358,915	$ 58,827,607

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

THE JACKSON LABORATORY

Notes to Supplementary Schedule of Expenditures of Federal Awards

Year ended December 31, 2016

(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, 2016. The schedule is presented using the accrual 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% deminimus 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.

The Jackson Laboratory
Leading the search for tomorrow's cures

June 01, 2017

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

Ladies and Gentlemen:

We are providing this letter to outline our formal corrective action plan in response to the material weakness identified in the Independent Auditor's Reports as Required by Title 2 U.S. Code of Federal Regulations Part 200, and Related Information for the year ended December 31, 2016.

Material Weakness Identified:
The Laboratory does not have the appropriate processes, procedures, and internal controls to timely and appropriately maintain accurate equipment records.

Response:

The Laboratory agrees with the finding. We note, however, that although four items lacked appropriate identification, they were located during the audit. Of the seven items disposed of without proper tracking, all of these items were over 10 years old and were fully depreciated. The Laboratory has already begun taking steps to address the root cause and effects that were created. The process of addressing this finding will take several months, and we expect the result of our efforts will be a clean ledger of fixed assets, which includes a comprehensive list of inventory and location, and an improved system of tracking and accounting for fixed assets.

The following steps will be taken to address the finding:

1) Review and revise fixed asset policy as needed – Controller, CFO
    a. Timeline: Pending
        i. The Laboratory has a fixed asset policy which is comprehensive and which, if adhered to, will eliminate the material weakness which was noted during this audit.
        ii. The policy will be reviewed and revised as necessary.

2) Redistribute policy, and reeducate staff – Controller, Procurement Manager
    a. Timeline: Q3-Q4 2017
        i. The fixed asset policy will be shared with Laboratory staff, and staff will be trained on adherence to Laboratory policy.

3) Clean up fixed asset ledger – Controller, Sr. Accountant
    a. Timeline: Q2-Q3 2017
        i. A thorough analysis will be conducted to identify fixed assets which have been disposed but are still on the Laboratory's ledger. Any assets identified as having been disposed will be removed from the ledger in accordance with the Laboratory's policy.

4) Inventory equipment – Controller, Manager of Sponsored Project Accounting
    a. Timeline: Q3 2017
        i. Following the cleanup of the fixed asset ledger, individuals identified as overseeing fixed assets in various parts of the Laboratory will be provided with a list of fixed assets for which they are responsible. They will be given two months to identify each fixed asset on their list and will be responsible for communicating the status and location of each asset to Financial Services. Financial Services will tag equipment as needed and update the fixed asset system.

5) Inventory fixed assets – Controller, CFO
    a. Timeline: Q4 2017
        i. The Laboratory will consider bringing in an independent third party to conduct a physical inventory of fixed assets.

6) Consider using an alternate method of tagging equipment – Controller, Procurement Manager
    a. Timeline: Q2-Q3 2017
        i. The Laboratory will explore other asset tagging options including, but not limited to, barcodes and RFID chips.

7) Consider conducting a fixed asset inventory and cleanup annually – Controller
    a. Timeline: Ongoing
        i. Fixed asset inventory is currently reviewed on a biennial basis. The Laboratory will consider conducting this inventory count and cleanup annually.

S. Catherine Longley
Vice President and Chief Financial Officer