

INSTITUTE FOR SYSTEMS BIOLOGY

Single Audit Reports

For the Year Ended December 31, 2024

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**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***

Independent Auditor's Report

**To the Board of Directors
Institute for Systems Biology
Seattle, Washington**

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 (*Government Auditing Standards*), the financial statements of the Institute for Systems Biology (the Institute), which comprise the statement of financial position as of December 31, 2024, and the related statements of activities, functional expenses, and cash flows for the year then ended, and the related notes to the financial statements, which collectively comprise the Institute's basic financial statements, and have issued our report thereon dated June 2, 2025.

Report on Internal Control Over Financial Reporting

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

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

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



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Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Institute'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 financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of This Report

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

Clark Nuber P.S.

Certified Public Accountants
June 2, 2025

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

Independent Auditor's Report

**To the Board of Directors
Institute for Systems Biology
Seattle, Washington**

REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM

Opinion on Each Major Federal Program

We have audited the Institute of Systems Biology (the Institute)'s compliance with the types of compliance requirements identified as subject to audit in the OMB *Compliance Supplement* that could have a direct and material effect on each of the Institute's major federal programs for the year ended December 31, 2024. The Institute's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

In our opinion, the Institute complied, in all material respects, with the compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended December 31, 2024.

Basis for Opinion on Each Major Federal Program

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America (GAAS); the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*); 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). Our responsibilities under those standards and the Uniform Guidance are further described in the Auditor's Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of the Institute and to meet our other ethical responsibilities, in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for each major federal program. Our audit does not provide a legal determination of the Institute's compliance with the compliance requirements referred to above.



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Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation, and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules and provisions of contracts or grant agreements applicable to the Institute's federal programs.

Auditor's Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on the Institute's compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS, *Government Auditing Standards*, and the Uniform Guidance will always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material, if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about the Institute's compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with GAAS, *Government Auditing Standards*, and the Uniform Guidance, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the Institute's compliance with the compliance requirements referred to above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of the Institute's internal control over compliance relevant to the audit in order to design audit procedures that are appropriate in the circumstances 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 the Institute's internal control over compliance. Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

Other Matters

The results of our auditing procedures disclosed instances of noncompliance which are required to be reported in accordance with Uniform Guidance and which are described in the accompanying schedule of findings and questioned costs as item 2024-001. Our opinion on each major federal program is not modified with respect to these matters.

Government Auditing Standards requires the auditor to perform limited procedures on the Institute's response to the noncompliance findings identified in our audit described in the accompanying schedule of findings and questioned costs. The Institute's response was not subjected to the other auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

REPORT ON INTERNAL CONTROL OVER COMPLIANCE

Our consideration of internal control over compliance was for the limited purpose described in the Auditor's Responsibilities for the Audit of Compliance section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies in internal control over compliance and therefore, material weaknesses or significant deficiencies may exist that were not identified. We did not identify any deficiencies in internal controls over compliance that we consider to be material weaknesses. However, as discussed below, we did identify a certain deficiency in internal control over compliance that we consider to be a significant deficiency.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance. We consider the deficiency in internal control over compliance described in the accompanying schedule of findings and questioned costs as item 2024-01, to be a significant deficiency.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

Government Auditing Standards requires the auditor to perform limited procedures on the Institute's response to the internal control over compliance findings identified in our compliance audit described in the accompanying schedule of findings and questioned costs. The Institute's response was not subjected to the other auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

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

REPORT ON SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS REQUIRED BY THE UNIFORM GUIDANCE

We have audited the financial statements of the Institute as of and for the year ended December 31, 2024, and have issued our report thereon dated June 2, 2025, which contained an unmodified opinion on those financial statements. Our audit was performed 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 the Uniform Guidance and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the financial statements as a whole.

Clark Nuber P.S.

Certified Public Accountants
June 2, 2025

INSTITUTE FOR SYSTEMS BIOLOGY

Schedule of Expenditures of Federal Awards For the Year Ended December 31, 2024

Program Title/Federal Grantor/Pass-Through Grantor	Assistance Listing Number	Pass-Through Number	Passed Through to Subrecipients	Fiscal Year Expenditures
Research and Development Cluster				
U.S. Department of Health and Human Services:				
Oral Diseases and Disorders Research- Passed through University of Washington	93.121	UWSC14543	\$ -	\$ 153,151
NIH Cloud Platform Interoperability Passed through RTI International	93.10T20D034190	75-312-0218952-67788L		75,507
Systems Biology of Influenza Virus Infection and Vaccination- Passed through Guidehouse, Inc	93.75N98020D00086	CSA-NIAID_ISB-2022-001/ 24053-147		402,019
ML/AI-Aided Therapeutic Repurposing in extended uses Passed through Every Cure	93.AAH23010007	140D042490001		76,937
Cancer Genomics Cloud Resource- Passed through The Brigham & Women's Hospital, Inc.	93.HHSN261200800001E	19X037Q		776,691
Passed through Leidos Biomedical Research, Inc.	93.HHSN261200800001E	17X148		1,444,631
Total for 93.HHSN261200800001E				2,221,322
Human Genome Research	93.172		548,954	1,959,003
Trans-NIH Research Support- Passed through Ohio State University	93.310	GR112506		35,160
Passed through Ohio State University	93.310	60072805		17,219
Total for 93.310				52,379
National Center for Advancing Translational Sciences- Direct	93.350		233,874	1,142,090
Passed through Oregon Health and Science University	93.350	P0500A-A		370,078
Total for 93.350			233,874	1,512,168
21st Century Cures Act - Beau Biden Cancer Moonshot- Passed through Dana Farber Cancer Institute	93.353	1288401		423,485
Passed through Dana Farber Cancer Institute	93.353	1342901		199,913
Total for 93.353				623,398
Cancer Detection and Diagnosis Research- Direct	93.394		392,956	1,677,318
Passed through Fred Hutchinson Cancer Center	93.394	1166468		169,243
Total for 93.394			392,956	1,846,561
Cancer Treatment Research- Passed through University of Washington	93.395	UWSC16204		41,829
Cancer Biology Research- Direct	93.396		227,265	648,722
Passed through University of Utah	93.396	10065194-01-ISB		90,808
Passed through University of Texas	93.396	UTA18-000299		13,364
Total for 93.396			227,265	752,894
Cancer Centers Support Grants	93.397		1,115,056	2,891,725
Cardiovascular Diseases Research- Passed through University of Washington	93.837	UWSC12831		87,814
Lung Diseases Research- Passed through The Brigham & Women's Hospital, Inc.	93.838	127699		603,582
Passed through NYU Grossman School of Medicine	93.838	ADU-13-21	2,642,845	3,204,349
Passed through NYU Grossman School of Medicine	93.838	PATHO-PH1-SUB _08_22	125,106	396,301
Total for 93.838			2,767,951	4,204,232

See independent auditor's report and notes to schedule of expenditures of federal awards.

INSTITUTE FOR SYSTEMS BIOLOGY

Schedule of Expenditures of Federal Awards (Continued) For the Year Ended December 31, 2024

Program Title/Federal Grantor/Pass-Through Grantor	Assistance Listing Number	Pass-Through Number	Passed Through to Subrecipients	Fiscal Year Expenditures
Blood Diseases and Resources Research- Passed through University of Washington	93.839	UWSC13164		106,332
Diabetes, Digestive and Kidney Diseases Extramural Research- Direct	93.847		746,093	1,969,162
Passed through Fred Hutchinson Cancer Center	93.847	1162836		43,139
Passed through University of Utah	93.847	10063484-01-ISB		286,157
Passed through University of Washington	93.847	15042		15,579
Total for 93.847			746,093	2,314,037
Allergy and Infectious Diseases Research- Direct	93.855		882,243	4,033,092
Passed through Seattle Biomedical Research Institute	93.855	12556SUB		2,845
Passed through University of Washington	93.855	UWSC12892		35,225
Passed through University of Washington	93.855	UWSC13071		96,372
Passed through University of Georgia Research Foundation	93.855	SUB00003569		90,771
Total for 93.855			882,243	4,258,305
Biomedical Research and Research Training- Direct	93.859			880,051
Passed through Johns Hopkins University	93.859	Pending		52,917
Passed through University of Washington	93.859	UWSC14026		67,725
Passed through University of California, San Diego	93.859	706601		155,342
Passed through Northwestern University	93.859	60062094 ISB		17,302
Total for 93.859				1,173,337
Child Health and Human Development Extramural Research- Direct	93.865		5,252	231,393
Passed through Seattle Biomedical Research Institute	93.865	12879SUB		35,895
Total for 93.865				267,288
Aging Research- Direct	93.866			230,892
Passed through Duke University	93.866	A030700		2,366
Passed through Oregon Health & Science University	93.866	1013336_ISB		(46,292)
Passed through California Pacific Medical Center	93.866	280201018-S228	18,550	175,694
Passed through California Pacific Medical Center	93.866	280201018-S242		137,443
Passed through California Pacific Medical Center	93.866	280201024-S293		239,659
Passed through California Pacific Medical Center	93.866	280201018-S303		78,941
Passed through Mayo Clinic Jacksonville	93.866	INS-273172		63,897
Passed through Mayo Clinic Jacksonville	93.866	INS-305006		19,193
Passed through Translational Genomics Research	93.866	SCHORK-25-05		50,634
Passed through University of Washington	93.866	UWSC11600		44,515
Passed through University of Washington	93.866	UWSC15714		6,185
Passed through Sage Bionetworks	93.866	2022.4		114,897
Total for 93.866				1,118,024
Total U.S. Department of Health and Human Services			6,938,194	26,138,262
National Science Foundation:				
Biological Sciences	47.074			1,511,820
Polar Programs- Passed through University of Washington	47.078	UWSC14033		22,851
NSF Technology, Innovation, and Partnerships- Passed through University of California, San Francisco	47.084	14946sc		60,346
Total National Science Foundation				1,595,017

See independent auditor's report and notes to schedule of expenditures of federal awards.

INSTITUTE FOR SYSTEMS BIOLOGY

Schedule of Expenditures of Federal Awards (Continued) For the Year Ended December 31, 2024

Program Title/Federal Grantor/Pass-Through Grantor	Assistance Listing Number	Pass-Through Number	Passed Through to Subrecipients	Fiscal Year Expenditures
U.S. Department of Defense:				
Global Proteomic Analysis	12.W81XWH22C0158			159,868
MircroRNA Biomarkers of Cumulative Blast-Mild Traumatic Brain Injury- Passed through Seattle Institute for Biomedical and Clinical Research	12.HT94252310755	MJ23-ISB-1		100,572
Advancing Precision Psychiatry- Passed through NYU Grossman School of Medicine	12.W81XWH2220078	22-A0-00-1008054		500,578
Military Medical Research and Development- Direct	12.420			357,031
Passed through McGill University	12.420	9188		188,579
Total for 12.420				545,610
Total U.S. Department of Defense				1,306,628
U.S. Department of Energy:				
Office of Science Financial Assistance Program- Passed through University of Washington	81.049	UWSC14091		230,764
Experimental Design, Implementation- Passed through Lawrence Berkeley National Lab	81.DE-AC02-05CH11231	7541491		1,207,927
Total U.S. Department of Energy				1,438,691
Total Research and Development Cluster/ Expenditures of Federal Awards			\$ 6,938,194	\$ 30,478,598

See independent auditor's report and notes to schedule of expenditures of federal awards.

INSTITUTE FOR SYSTEMS BIOLOGY

Notes to Schedule of Expenditures of Federal Awards For the Year Ended December 31, 2024

Note 1 - Method of Accounting

The accompanying schedule of expenditures of federal awards (the "Schedule") includes the federal award activity of the Institute for Systems Biology (the Institute) under programs of the federal government for the year ended December 31, 2024. The information in this Schedule is presented in accordance with the 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)*. Because the Schedule presents only a selected portion of the operations of the Institute, it is not intended to and does not present the financial position, changes in net assets or cash flows of the Institute.

Note 2 - Significant Accounting Policies

Expenditures reported on the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement. The Institute has elected not to use the 10-percent de minimis indirect cost rate allowed under the Uniform Guidance. Negative amounts shown on the Schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures in prior years.

INSTITUTE FOR SYSTEMS BIOLOGY

Schedule of Findings and Questioned Costs For the Year Ended December 31, 2024

Section I - Summary of Auditor's Results

Financial Statements

Type of auditor's report issued:

Unmodified

Internal control over financial reporting:

- Material weaknesses identified?

☐ Yes

☒ No

- Significant deficiencies identified?

☐ Yes

☒ None reported.

Noncompliance material to financial statements noted?

☐ Yes

☒ No

Federal Awards

Internal control over major programs:

- Material weaknesses identified?

☐ Yes

☒ No

- Significant deficiencies identified?

☒ Yes

☐ None reported.

Type of auditor's report issued on compliance
for major programs:

Unmodified

Any audit findings disclosed that are required to
be reported in accordance with 2 CFR
200.516(a)?

☒ Yes

☐ No

Identification of Major Programs

Assistance Listing Numbers

12.420 12.HT94252310755
12.W81XWH22C0158 12.W81XWH2220078
47.074 47.078 47.084 81.DE-AC02-05CH11231
81.049 93.121 93.172 93.310
93.350 93.353 93.394 93.395
93.396 93.397 93.837 93.838
93.839 93.847 93.855 93.859
93.865 93.866 93.HHSN261200800001E
93.75N98020D00086 93.10T20D034190
93.AAH23010007

Name of Federal Program or Cluster Research and Development Cluster

Dollar threshold used to distinguish between
Type A and Type B programs:

\$ 914,358

Auditee qualified as low-risk auditee?

☒ Yes

☐ No

INSTITUTE FOR SYSTEMS BIOLOGY

Schedule of Findings and Questioned Costs (Continued) For the Year Ended December 31, 2024

Section II - Financial Statement Findings

No matters reported.

Section III - Findings and Questioned Costs for Federal Awards

Finding 2024-001

Instance of noncompliance and significant deficiency in internal controls related to equipment and real property management.

Federal Agency:	U.S. Department of Health and Human Services, National Science Foundation, U.S. Department of Defense, U.S. Department of Energy
Program Title:	Research and Development Cluster - All Awards
Assistance Listing Number:	Various
Award Numbers:	All awards within the Research and Development Cluster
Award Periods:	Various

Criteria

Per equipment and real property management compliance requirements contained in the Uniform Guidance, Subpart D - Post-Federal Award Requirements and Contents of Federal Awards, Section 200.313, non-federal entities must perform a physical inventory of the property at least once every two years.

Condition/Context

The Institute's internal control over equipment and real property management includes procedures to complete inventory counts every two years. However, the last count took place during 2022. As such, the Institute was not following their policies over equipment and real property management.

Questioned Costs

Not applicable.

Cause

The Institute's internal controls related to the equipment and real property management compliance requirements were not sufficient to ensure compliance with the standards.

Effect/Potential Effect

The effect is the property records for the Institute may have discrepancies and changes in the status or condition of equipment on hand may not be captured in a timely manner.

Repeat Finding

Not applicable.

Recommendation

We recommend management implement procedures to ensure that documentation of a physical inventory and verification of condition for all equipment is received at least once every two years.

Views of Responsible Officials

Management agrees with the finding and has provided the accompanying corrective action plan.



INSTITUTE FOR SYSTEMS BIOLOGY (ISB)
Corrective Action Plan
For the Year Ended December 31, 2024

Finding Number 2024-001

Contact Person(s):

Shanna Braga	Director, Facilities and Operations	shanna.braga@isbscience.org
Gary Streicher	Director of Finance	gary.streicher@isbscience.org

Explanation and specific reasons for disagreement with the audit findings or that corrective action is not required (if applicable): Not applicable, management agrees with audit findings.

Corrective action Planned:

In Q2 2025, the Facilities and Finance teams initiated a full inventory of all active equipment and other fixed assets funded by Federal awards. This process is being conducted to confirm the current location and status of each item, including whether it is still in service or has been disposed of. The findings will be used to update the Institute's fixed asset accounting system accordingly.

Inventory results will be documented with detailed records of status and location for each asset. Supporting documentation will be retained in accordance with Federal recordkeeping requirements

The Institute will conduct a biannual inventory of Federally funded equipment, and a separate biannual inventory of all other active equipment and fixed asset Anticipated time frame of the inventor procedures would be Q2-Q3 of every other year; the next inventory will be done 2026.

Anticipated completion date: July 15, 2025 (current inventory of Federally funded fixed assets)