

INSTITUTE FOR SYSTEMS BIOLOGY

Single Audit Reports

For the Year Ended December 31, 2023

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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, 2023, 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 17, 2024.

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 17, 2024

**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, 2023. 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, 2023.

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.

REPORT ON INTERNAL CONTROL OVER COMPLIANCE

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

Our consideration of internal control over compliance was for the limited purpose described in the 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. Given these limitations, during our audit we did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above. However, material weaknesses or significant deficiencies in internal control over compliance may exist that were not identified.

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.

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, 2023, and have issued our report thereon dated June 17, 2024, 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 17, 2024

INSTITUTE FOR SYSTEMS BIOLOGY

**Schedule of Expenditures of Federal Awards
For the Year Ended December 31, 2023**

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	\$ -	\$ 89,894
Systems Biology of Influenza Virus Infection and Vaccination- Passed through Medical Science and Computing Passed through Guidehouse, Inc	93.75N98020D00086 93.75N98020D00086	CSA-NIAID_ISB-2022-001/ 24053-147 CSA-NIAID_ISB-2022-001/ 24053-147		145,066 <u>200,010</u>
Total for 93.75N98020D00086				345,076
Cancer Genomics Cloud Resource- Passed through Brigham & Women's Hospital Passed through Leidos Biomedical Research, Inc.	93.HHSN261200800001E 93.HHSN261200800001E	19X037Q 17X148		797,137 <u>1,601,609</u>
Total for 93.HHSN261200800001E				2,398,746
Human Genome Research	93.172		391,057	1,959,648
Trans-NIH Research Support- Passed through Ohio State University Passed through Ohio State University	93.310 93.310	GR112506 60072805		103,998 <u>107,100</u>
Total for 93.310				211,098
National Center for Advancing Translational Sciences- Direct Passed through Oregon Health and Science University	93.350 93.350		195,623	1,242,367 <u>396,514</u>
Total for 93.350		P0500A-A	195,623	1,638,881
21st Century Cures Act - Beau Biden Cancer Moonshot- Passed through Dana Farber Cancer Institute	93.353	1288401		544,826
Cancer Cause and Prevention Research- Passed through Sage Bionetworks	93.393	1041384		1,379
Cancer Detection and Diagnosis Research- Direct Passed through Fred Hutchinson Cancer Center	93.394 93.394		403,640	1,796,011 <u>13,594</u>
Total for 93.394		1166468	403,640	1,809,605
Cancer Biology Research- Direct Passed through Utah State University Passed through University of Texas Passed through Sage Bionetworks	93.396 93.396 93.396 93.396		262,711	755,103 33,295 210,113 <u>20,164</u>
Total for 93.396		10065194-01-ISB UTA18-000299 990885	262,711	1,018,675
Cancer Centers Support Grants	93.397		578,440	2,149,293
Cancer Research Manpower	93.398			6,254
Cardiovascular Diseases Research- Passed through University of Washington	93.837	UWSC12831		102,857
Lung Diseases Research- Passed through The Brigham & Women's Hospital, Inc. Passed through The Brigham & Women's Hospital, Inc. Passed through NYU Grossman School of Medicine Passed through NYU Grossman School of Medicine	93.838 93.838 93.838 93.838	117046 127699 ADU-13-21 PATHO-PH1-SUB_08_22		9,422 468,185 4,287,797 <u>379,949</u>
Total for 93.838			3,776,803	5,145,353
Blood Diseases and Resources Research- Passed through University of Washington	93.839	UWSC13164		46,079

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, 2023**

Program Title/Federal Grantor/Pass-Through Grantor	Assistance Listing Number	Pass-Through Number	Passed Through to Subrecipients	Fiscal Year Expenditures
Arthritis, Musculoskeletal and Skin Diseases Research- Passed through University of Washington	93.846	UWSC13161		47,856
Diabetes, Digestive and Kidney Diseases Extramural Research- Direct	93.847		477,763	1,384,607
Passed through Fred Hutchinson Cancer Center	93.847	1162836		6,346
Passed through Utah State University	93.847	10063484-01-ISB		261,600
Total for 93.847			477,763	1,652,553
Allergy and Infectious Diseases Research- Direct	93.855		650,951	3,837,099
Passed through Seattle Biomedical Research Institute	93.855	12259SUB		168,753
Passed through Seattle Biomedical Research Institute	93.855	12556SUB		37,245
Passed through University of Washington	93.855	UWSC12892		6,789
Passed through University of Washington	93.855	UWSC13071		60,131
Total for 93.855			650,951	4,110,017
Biomedical Research and Research Training- Direct	93.859		61,692	1,312,030
Passed through University of Texas	93.859	3001510855		15,984
Passed through University of Washington	93.859	UWSC14026		97,168
Passed through University of California, San Diego	93.859	706601		205,033
Passed through Northwestern University	93.859	60062094 ISB		64,574
Total for 93.859			61,692	1,694,789
Child Health and Human Development Extramural Research- Direct	93.865			37,215
Passed through Seattle Biomedical Research Institute	93.865	12879SUB		20,749
Total for 93.865				57,964
Aging Research- Direct	93.866			146,378
Passed through Duke University	93.866	A030700		51,371
Passed through Duke University	93.866	303000170		19,782
Passed through Oregon Health & Science University	93.866	1013336-ISB		1,911,539
Passed through California Pacific Medical Center	93.866	280201018-S228		254,730
Passed through California Pacific Medical Center	93.866	280201018-S242		295,080
Passed through California Pacific Medical Center	93.866	280201024-S293		82,300
Passed through Mayo Clinic Jacksonville	93.866	INS-273172		199,116
Passed through Mayo Clinic Jacksonville	93.866	INS-305006		21,236
Passed through Mayo Clinic Jacksonville	93.866	ISB-281091		201,720
Passed through Translational Genomics Research	93.866	SCHORK-19-05		(348)
Passed through University of Washington	93.866	UWSC11600		113,286
Passed through Sage Bionetworks	93.866	2022.4		97,607
Total for 93.866				3,393,797
Total U.S. Department of Health and Human Services			6,798,680	28,424,640
National Science Foundation:				
Geosciences	47.050			15,812
Biological Sciences- Direct	47.074			1,506,309
Passed through Cornell University	47.074	89335-11264		210,595
Total for 47.074				1,716,904
Polar Programs- Passed through University of Washington	47.078	UWSC14033		32,880
NSF Technology, Innovation, and Partnerships- Passed through University of California, San Francisco	47.084	14946sc		3,356
Total National Science Foundation				1,768,952

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, 2023**

<u>Program Title/Federal Grantor/Pass-Through Grantor</u>	<u>Assistance Listing Number</u>	<u>Pass-Through Number</u>	<u>Passed Through to Subrecipients</u>	<u>Fiscal Year Expenditures</u>
U.S. Department of Defense:				
Inflammatory Mediators Testing	12.W81XWH18C0158			1,275
Global Proteomic Analysis	12.W81XWH22C0158			277,021
MircroRNA Biomarkers of Cumulative Blast-Mild Traumatic Brain Injury- Passed through Seattle Institute for Biomedical and Clinical Research	12.HT94252310755	MJ23-ISB-1		16,275
Advancing Precision Psychiatry- Passed through NYU Grossman School of Medicine	12.W81XWH2220078	22-A0-00-1008054		220,172
Military Medical Research and Development- Direct	12.420			272,935
Passed through McGill University	12.420	9188		<u>31,705</u>
Total for 12.420				304,640
Basic Scientific Research- Passed through Harvard College	12.431	124045-5104226		<u>158,241</u>
Total U.S. Department of Defense				977,624
U.S. Department of Energy:				
Office of Science Financial Assistance Program- Passed through University of Washington	81.049	UWSC14091		184,246
Experimental Design, Implementation- Passed through Lawrence Berkeley National Lab	81.DE-AC02-05CH11231	7541491	<u>9,837</u>	<u>1,069,517</u>
Total U.S. Department of Energy			<u>9,837</u>	<u>1,253,763</u>
Total Research and Development Cluster/ Expenditures of Federal Awards			<u>\$ 6,808,517</u>	<u>\$ 32,424,979</u>

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, 2023

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, 2023. 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, 2023**

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

<u>Assistance Listing Numbers</u>	<u>Name of Federal Program or Cluster</u>
12.420 12.431	12.HT94252310755
12.W81XWH18C0158	12.W81XWH22C0158
12W81XWH2220078	47.050
47.074 47.078 47.084	81.DE-AC02-05CH11231
81.049 93.121 93.172	93.310
93.350 93.353 93.393	93.394
93.396 93.397 93.398	93.837
93.838 93.839 93.846	93.847
93.855 93.859 93.865	93.866
93.HHSN261200800001E	93.75N98020D00086

Dollar threshold used to distinguish between Type A and Type B programs: \$ 972,749

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, 2023**

Section II - Financial Statement Findings

No matters reported.

Section III - Findings and Questioned Costs for Federal Awards

No matters reported.