

INSTITUTE FOR SYSTEMS BIOLOGY

Single Audit Reports

For the Year Ended December 31, 2022

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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, 2022, 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 14, 2023.

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 14, 2023

**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, 2022. 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, 2022.

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, 2022, and have issued our report thereon dated June 14, 2023, 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 14, 2023

INSTITUTE FOR SYSTEMS BIOLOGY

**Schedule of Expenditures of Federal Awards
For the Year Ended December 31, 2022**

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:				
Systems Biology of Influenza Virus Infection and Vaccination- Passed through Medical Science and Computing	93.HHSN2722015000151	CSA-NIAID-ISB-17-2017-006	\$ -	\$ 43,558
Systems Biology of Influenza Virus Infection and Vaccination- Passed through Medical Science and Computing	93.75N98020D00086	CSA-NIAID_ISB-2022-001/ 24053-147		186,471
Cancer Genomics Cloud Resource- Passed through Brigham & Women's Hospital	93.HHSN261200800001E	19X037Q		680,350
Passed through Leidos Biomedical Research, Inc.	93.HHSN261200800001E	17X148		1,308,345
Total for 93.HHSN261200800001E				1,988,695
Human Genome Research	93.172		107,350	985,094
Trans-NIH Research Support- Passed through Ohio State University	93.310	GR112506		97,457
Passed through Ohio State University	93.310	60072805		121,678
Total for 93.310				219,135
National Center for Advancing Translational Sciences- Direct	93.350		349,117	1,452,005
Passed through Oregon Health and Science University	93.350	P0500A-A		427,288
Total for 93.350			349,117	1,879,293
21st Century Cures Act - Beau Biden Cancer Moonshot- Passed through Dana Farber Cancer Institute	93.353	1288401		510,135
COVID-19: Biomedical Advanced Research and Development Authority (BARDA), Biodense Medical Countermeasure Development- Passed through Merck	93.360	HHSO10020160031C		(1,292)
Cancer Cause and Prevention Research- Passed through Fred Hutchison Cancer Research Center	93.393	1041384		51,581
Passed through Sage Bionetworks	93.393	1041384		79,293
Total for 93.393				130,874
Cancer Detection and Diagnosis Research-	93.394		65,288	1,107,850
Cancer Biology Research- Direct	93.396		113,956	791,431
Passed through Fred Hutchison Cancer Research Center	93.396	990885		12,555
Passed through University of Texas	93.396	UTA18-000299		149,333
Passed through Sage Bionetworks	93.396	990885		38,835
Total for 93.396			113,956	992,154
Cancer Center Support Grants	93.397			238,712
Cancer Research Manpower	93.398			74,616
Cardiovascular Diseases Research- Passed through University of Washington	93.837	UWSC12831		93,741
Lung Diseases Research- Passed through The Brigham & Women's Hospital, Inc.	93.838	117046		314,199
Passed through The Brigham & Women's Hospital, Inc.	93.838	127699		119,688
Passed through NYU Grossman School of Medicine	93.838	ADU-13-21	1,651,024	2,072,020
Passed through NYU Grossman School of Medicine	93.838	PATHO-PH1-SUB_08_22		18,567
Total for 93.838			1,651,024	2,524,474
Blood Diseases and Resources Research- Passed through University of Washington	93.839	UWSC13164		6,284

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, 2022**

<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>
Arthritis, Musculoskeletal and Skin Diseases Research- Passed through University of Washington	93.846	UWSC13161		4,022
Diabetes, Digestive and Kidney Diseases Extramural Research- Direct	93.847		162,942	865,710
Passed through Utah State University	93.847	10063484-01-ISB		10,676
Total for 93.847			162,942	876,386
Allergy and Infectious Diseases Research- Direct	93.855		751,669	3,767,019
Passed through Seattle Biomedical Research Institute	93.855	12259SUB		363,037
Passed through Seattle Biomedical Research Institute	93.855	12556SUB		54,434
Passed through University of Washington	93.855	UWSC12892		114,614
Passed through University of Washington	93.855	UWSC13071		61,120
Total for 93.855			751,669	4,360,224
Biomedical Research and Research Training- Direct	93.859		124,854	1,512,729
Passed through University of Washington	93.859	UWSC9891		19,390
Passed through University of Washington	93.859	UWSC14026		25,554
Total for 93.859			124,854	1,557,673
Child Health and Human Development Extramural Research- Passed through Seattle Biomedical Research Institute	93.865	12879SUB		8,916
Passed through University of Florida	93.865	138656		95,416
Total for 93.865				104,332
Aging Research- Passed through Duke University	93.866	A030700		91,016
Passed through Duke University	93.866	303000170		63,430
Passed through Oregon Health & Science University	93.866	1013336_ISB		3,072,826
Passed through California Pacific Medical Center	93.866	280201018-S228		440,805
Passed through California Pacific Medical Center	93.866	280101018-S242		268,488
Passed through California Pacific Medical Center	93.866	280201024-S293		46,094
Passed through Mayo Clinic Jacksonville	93.866	INS-273172		335,597
Passed through Mayo Clinic Jacksonville	93.866	INS-305006		1,161
Passed through Mayo Clinic Jacksonville	93.866	ISB-281091		486,627
Passed through Translational Genomics Research	93.866	SCHORK-19-05		(335)
Passed through University of Washington	93.866	UWSC11600		128,525
Passed through Sage Bionetworks	93.866	2022.4		17,735
Total for 93.866				4,951,969
Total U.S. Department of Health and Human Services			3,326,200	22,834,400
National Science Foundation:				
Geosciences	47.050			103,739
Biological Sciences- Direct	47.074			1,129,672
Passed through Cornell University	47.074	89335-11264		257,983
Total for 47.074				1,387,656
Polar Programs- Passed through University of Washington	47.078	UWSC14033		24,055
Integrative Activities- Passed through University of California, San Francisco	47.083	12428sc		172,903
Total National Science Foundation				1,688,353

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, 2022**

<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			99
Global Proteomic Analysis	12.W81XWH22C0158			15,973
High Throughput Platform- Pass through the Geneva Foundation	12.W911NF-18-20056	V-10585-02		25,000
Advancing Precision Psychiatry- Passed through NYU Grossman School of Medicine	12.W81XWH2220078	22-A0-00-1008054		4,122
Military Medical Research and Development	12.420			297,877
Basic Scientific Research- Passed through the Geneva Foundation	12.431	S-10585-01		24,608
Passed through Harvard College	12.431	124045-5104226		357,293
Total for 12.431				<u>381,900</u>
Total U.S. Department of Defense				724,972
U.S. Department of Energy:				
Office of Science Financial Assistance Program- Passed through University of Washington	81.049	UWSC14091		46,057
Experimental Design, Implementation- Passed through Lawrence Berkeley National Lab	81.DE-AC02-05CH11231	7541491	1,466	666,376
Total U.S. Department of Energy				1,466
Total Research and Development Cluster/ Expenditures of Federal Awards			\$ 3,327,666	\$25,960,157

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, 2022

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, 2022. 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, 2022**

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.W81XWH18C0158	Research and Development Cluster
12.W81XWH22C0158 12W81XWH2220078	
12.W911NF-18-20056 47.050	
47.074 47.078 47.083 81.DE-AC02-05CH11231	
81.049 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.HHSN272201500015I	
93.HHSN261200800001E 93.75N98020D00086	
93.HHSO10020160031C	

Dollar threshold used to distinguish between Type A and Type B programs: \$ 778,805

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, 2022**

Section II - Financial Statement Findings

No matters reported.

Section III - Findings and Questioned Costs for Federal Awards

No matters reported.

INSTITUTE FOR SYSTEMS BIOLOGY

Summary Schedule of Prior Audit Findings For the Year Ended December 31, 2022

Section II - Financial Statement Findings

No matters were reported.

Section III - Findings and Questioned Costs for Federal Awards

Finding 2021-001

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

Condition/Context for Evaluation

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 2018. As such, the Institute was not following their policies over equipment and real property management.

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.

Current Year Status

The Institute has implemented new processes in 2022 to address this area. The finding is not repeated in 2022.

Finding 2021-002

Instance of noncompliance and significant deficiency in internal controls related to special tests and provisions.

Condition/Context for Evaluation

During testing, it was noted that one selection did not have the proper allocation of wages to the federal award due to the improper allocation of the salary cap. This resulted in \$11 being overcharged to the federal award for the pay-period selected for testing. Management reviewed all employees over the National Institute of Health's salary cap for 2021 and noted one additional instance of the salary cap not being appropriately applied. The second instance resulted in an error of \$527 over a 3.5-month period. The Institute's internal control over the allocation of the salary cap, as required by the National Institutes of Health, did not include a proper allocation when an employee took paid time off. This was not a statistical sample.

Recommendation

We recommend management implement procedures to ensure that the salary cap, as required by the National Institutes of Health, is properly by pay period.

Current Year Status

The Institute has implemented new processes in 2022 to address this area. The finding is not repeated in 2022.