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NIST Scientific Integrity Program *Annual Report*

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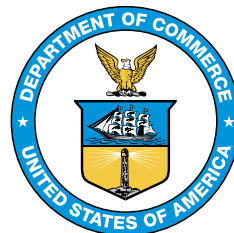
NIST Scientific Integrity Program
Annual Report

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Abstract

This report summarizes the findings of the National Institute of Standards and Technology Scientific Integrity Program assessment of the program for Fiscal Year 2024 (FY24) and the period between 1 October 2023 and 30 September 2024. It provides an assessment of the current state of the program and activities that occurred during the program period.

Keywords

Assessment; Evaluation; Scientific Integrity.

Table of Contents

Executive Summary	1
1. Introduction	2
1.1. Scientific Integrity at NIST	2
1.2. Research Protections Office	2
1.3. Scientific Integrity Program Directives	3
1.3.1. Responding to Scientific Integrity Concerns	3
2. Scientific Integrity Program Initiatives	4
2.1. Committee Participation	4
2.1.1. NSTC Subcommittee on Scientific Integrity	4
2.1.2. Department of Commerce Bureau Working Group	4
2.2. Program Updates	5
2.2.1. Directives	5
3. Program Evaluation	5
4. Conclusions	5
References	6

List of Tables

Table 1. Current Scientific Integrity Program Directives.	4
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List of Figures

Fig. 1. (a) Research Protections Office Programs (b) Scientific Integrity Program Initiatives: NIST and Interagency	3
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Executive Summary

The National Institute of Standards and Technology (NIST) Scientific Integrity Program was formally established in policy in 2011. This annual report provides a summary of activities and updates about the program status for Fiscal Year 2024 (FY24) and the period between 1 October 2023 and 30 September 2024. The program directives were updated, approved and posted to the NIST internal and public websites. The Scientific Integrity Officer (SIO) tested and began implementation of an awareness training program. Finally, during this year, there were 5 cases brought to the SIO for consultation or review.

1. Introduction

1.1. Scientific Integrity at NIST

It is NIST's policy to promote scientific integrity by creating a culture of personal and organizational responsibility where the practice and management of scientific research and its products are free from undue influences that are not essential to the practice of science, such as personal or social allegiances, beliefs, or interests. NIST's dedication to scientific integrity is highlighted with this assertion on the internal website: *NIST is an organization with strong values, reflected both in our history and our current work.* NIST leadership and staff will uphold these values to ensure a high-performing environment that is safe and respectful of all.

Perseverance: We take the long view, planning the future with scientific knowledge and imagination to ensure continued impact and relevance for our stakeholders.

Integrity: We are ethical, honest, independent, and provide an objective perspective.

Inclusivity: We work collaboratively to harness the diversity of people and ideas, both inside and outside of NIST, to attain the best solutions to multidisciplinary challenges.

Excellence: We apply rigor and critical thinking to achieve world-class results and continuous improvement in everything we do.

1.2. Research Protections Office

The Research Protections Office (RPO) is dedicated to supporting NIST researchers and ensuring their research is conducted with integrity. With this goal in mind, the RPO coordinates and implements several research compliance programs at NIST, including the Human Research Protections Program, the Humane Care and Treatment of Vertebrate Animals Program, the Export Control and Compliance Program, the Publication Clearance Program, and the Scientific Integrity Program.

The Publication Clearance Program was moved to RPO during FY24. RPO conducted an evaluation of that program to assess ways to improve efficiency, clarity and compliance with the program policies. Several notable findings from the scientific integrity survey from FY23 were related to the publication clearance process. The program has been updated and will be effective in FY25 and these program improvements should alleviate some of the concerns identified in the survey.

Like the NIST cultural foundation of scientific integrity, scientific integrity principles are woven into each of the RPO programs. Program managers and staff work together to ensure the principles are easily understood by NIST staff members and are harmonized with other programs across NIST. In addition, RPO staff serve as members on a variety of federal committees and working groups to advance the programs.

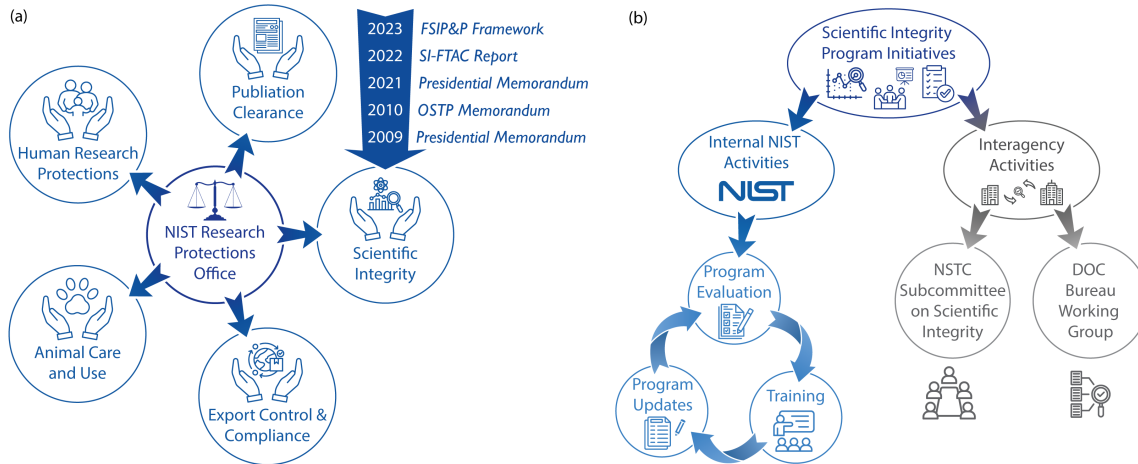


Fig. 1. (a) Research Protections Office Programs (b) Scientific Integrity Program Initiatives: NIST and Interagency

The RPO supports the Scientific Integrity Program with two staff members. The RPO Director serves as the NIST SIO. The Research Protections Analyst assists with Scientific Integrity Program management. In addition, the Scientific Integrity Program includes a NIST staff expert in program evaluation and survey methodology. The Associate Director for Laboratory Programs serves as the Chief Science Officer (CSO) and oversees the Scientific Integrity Program.

1.3. Scientific Integrity Program Directives

NIST's Scientific Integrity Program directives are based on direction and guidance found in:

- 2009 Presidential Memorandum [1],
- 2010 OSTP Memorandum [2],
- 2021 Presidential Memorandum [3],
- the 2022 National Science and Technology Council Report of the Scientific Integrity Fast Track Action Committee, Protecting the Integrity of Government Science (SI-FTAC Report) [4],
- the 2023 Framework for Federal Scientific Integrity Policy and Practice [5].

NIST handles allegations related to violations of scientific integrity and research misconduct under separate policies. In addition, NIST developed guidance specific to authorship separate from research misconduct unless concerns extend to the broader context of one or more of the other policies. Table 1 contains the list of current Scientific Integrity Program policies. All policies are currently under review and will be updated in 2024.

1.3.1. Responding to Scientific Integrity Concerns

Between 1 October 2023 and 30 September 2024, 5 concerns about scientific integrity were brought to the SIO. Two were related to undue influence, two were related to authorship questions and one was related to research misconduct. The allegations regarding undue influence were both related to delays in approvals, however the delays were found to not be related to undue influence. The authorship questions were addressed through consultation and guidance. The research misconduct concern involved potential plagiarism. That case was dismissed when it became clear it was an honest error. Additional education was provided to the entire work section.

2. Scientific Integrity Program Initiatives

2.1. Committee Participation

The NIST SIO actively participated in several committees that will help strengthen scientific integrity across the Federal government, the Department of Commerce, and NIST.

2.1.1. NSTC Subcommittee on Scientific Integrity

NIST is well-represented on the National Science and Technology Council (NSTC) Subcommittee on Scientific Integrity (SOSI). The NIST SIO serves as a SOSI co-chair. One staff member is a member of the Survey Working Group. Two staff members serve as Executive Secretaries for SOSI. One staff member serves on the Implementation and Evaluation Working Group.

2.1.2. Department of Commerce Bureau Working Group

This group developed the Department’s scientific integrity policy that will apply to the entire Department while also supporting the established policies at NIST and the National Oceanic and Atmospheric Administration (NOAA).

The NIST SIO is a member of this group.

Table 1. Current Scientific Integrity Program Directives.

Number	Title	Updated
P ^a 5100.00	Scientific Integrity Policy	2024
O ^b 5100.00	Scientific Integrity	2024
PR ^c 5101.01	Reporting and Resolving Allegations Regarding Violations of Scientific Integrity	2024
P 5200.00	Responsible Conduct of Research	2024
O 5201.00	Responsible Conduct of Research Order	2024
PR 5201.01	Procedures in Response to Allegations of Research Misconduct	2024
G ^d 5201.01	Guidance for Authorship of Scholarly and Technical Publications	2018

^aP=Policy; ^bO=Order; ^cPR=Procedure; ^dG=Guidance

2.2. Program Updates

2.2.1. Directives

The NIST directives were updated, approved and have been published to NIST's public and internal websites.

3. Program Evaluation

NIST conducts program evaluation of the Scientific Integrity Program by seeking ongoing feedback and implementing a survey every two years. The next survey will be conducted in FY2025. For this past year, the training program was developed and slowly implemented. Attendees at the first sessions were asked for their feedback which was used to iteratively update the module.

4. Conclusions

NIST's dedication to integrity is strong. While the program updates are still being implemented, it is clear that staff are becoming more aware of it.

References

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