

Scientific Integrity Program

NIST O 5101.00
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PURPOSE

This directive describes the requirements and responsibilities for the NIST Scientific Integrity Policy. It describes principles to guide and ensure the integrity of the scientific process at NIST, to ensure the integrity of scientific information, and to engender public trust in NIST's efforts to advance measurement science, standards, and technology.

APPLICABILITY

This Order applies to all NIST staff members (Federal and Associates), political appointees, trainees, interns, and advisory committee members in their capacity as special government employees, when they propose, conduct, or review science or communicate about science and scientific activities and all levels of staff members who manage or supervise scientific activities and use scientific information in decision making at or for NIST.

REFERENCES

- [5 USC 73 and 75](#) Adverse Actions
- [5 USC 1214 – Discipline of federal employee by agency](#)
- [5 USC 2302\(b\)\(8\)](#), as amended by the Whistleblower Protection Act of 1989 and [7 USC 2131 et seq.](#), Animal Welfare Act, Pub. L. No. 89-544 (1966), as amended
- [15 USC §§ 3724](#) The Crowdsourcing and Citizen Science Act of 2016
- [5 USC. Appendix 2, Federal Advisory Committee Act of 1972](#)
- [5 CFR 735, Employee Responsibilities and Conduct](#)
- [5 CFR 724 – No FEAR Act](#)
- [15 CFR 27 – Common Rule for the Protection of Human Subjects](#)
- [42 CFR 93.103 Research Misconduct](#)
- [65 FR 76260-76264](#), Federal Policy on Research Misconduct
- [Information Quality Act \(Public Law 106-554\)](#)

- [Whistleblower Protection Enhancement Act of 2012 \(Public Law 112-199\)](#) (governing disclosures of violations of any law, rule, or regulation, gross mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public health or safety)
- [Evidence Act \(PL 115-435\)](#)
- [America Competes Act \(PL 117-167\)](#)
- [Executive Order 13526 - Classified National Security Information](#)
- [Presidential Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking, dated 1/27/2021](#)
- Department of Commerce
 - [Department Administrative Order \(DAO\) 202-751, Discipline](#)
 - [DAO 219-1, Public Communications](#)
 - [DAO 218-1, Legislative Activities](#)
 - [DAO 218-2, Legislative and Intergovernmental Affairs](#)
 - [DAO 218-3, Reports to Congress Required by Law](#)
 - [DAO 219-4, Publications and Audiovisuals Control System](#)
 - DAO TBD, Scientific Integrity
- [NIST P 5100.00 Scientific Integrity](#)
- [NIST O 1014.00 Institutional Membership in Professional Organizations](#)
- [NIST O 1801.00 Review of Fundamental Research Communications](#)
- [NIST O 3120.00 Disciplinary/Adverse Actions](#)
- [National Institute of Standards and Technology Guidelines, Information Quality Standards, and Administrative Mechanism](#)
- [Other policies and procedures that intersect with Scientific Integrity are listed in Appendix A](#)

DEFINITIONS

Scientific integrity - is the adherence to professional practice, ethical behavior, and the principles of honesty, objectivity, and transparency when conducting, managing, using the results of, and communicating about science and scientific activities. Inclusivity and protection from inappropriate influence are hallmarks of scientific integrity.

The following are taken into account in considering scientific integrity:

- NIST political appointees and agency leadership have legitimate obligations in setting research priorities or the priorities of other scientific activities in support of NIST’s mission. However, they should not be used to suppress scientific findings that may affect individual, corporate or other interests.
- There may be legitimate constraints on the practice and management of scientific research related to contractual obligations related to the conduct of the research, terms of employment of researchers engaged in specific scientific research, and other legal constraints that necessarily dictate aspects of the research.

Good faith allegation – An allegation made with the honest belief that a violation of scientific integrity may have occurred. An allegation is not in good faith if it is made with reckless disregard for or willful ignorance of facts that would disprove the allegation.

Inappropriate influence - The attempt to shape or interfere in scientific activities or the communication about, or use of scientific activities or findings against well-accepted scientific methods and theories without scientific justification.

Political interference – A type of inappropriate influence that is interference conducted by political officials and/or motivated by political considerations or interference that is made for partisan, ideological, or regional advantage.

Research misconduct – Fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. Research misconduct does not include honest error or differences of opinion. Research misconduct is conduct that may be committed intentionally, knowingly, or recklessly. Allegations of Research Misconduct are handled under NIST P 5200.00, Responsible Conduct of Research.

PRINCIPLES AND REQUIREMENTS

Integrity is a core value at NIST and is essential for performing the NIST mission at the highest level. To instill and enhance a culture of scientific integrity, NIST shall post its Scientific Integrity policy prominently on its public and internal websites and take other measures (e.g., All Hands meetings, written and oral communications) to keep scientific integrity visible and educate all NIST staff members on their rights and responsibilities related to scientific integrity.

Scientific Integrity Program Principles:

To promote scientific integrity at NIST, this Order outlines seven specific areas and their specific integrity considerations.

1. Protecting Scientific Processes
2. Ensuring the Free Flow of Scientific Information
3. Supporting Decision Making Processes
4. Ensuring Accountability

5. Protecting Scientists
6. Professional Development for Government Scientists
7. Federal Advisory Committees

Protecting Scientific Processes

Scientific Integrity fosters honest scientific investigation, open discussion, refined understanding, and a firm commitment to evidence. Science, and public trust in science, thrives in an environment that shields scientific data and analyses and their use in policymaking from political interference or inappropriate influence. Consistent with this Order, NIST shall:

- Prohibit the intrusion of political interference or inappropriate influence into the design, conduct, management, evaluation, and reporting of scientific research and activities.
- Require that leadership and management ensure that staff members engaged in scientific activities are able to conduct their work free from reprisal or concern for reprisal.
- Require reasonable efforts to ensure the accuracy of the scientific record and to correct identified inaccuracies that pertain to their contribution to any scientific records.
- Require that staff members represent their contributions to scientific work fairly and accurately and neither accept or assume unauthorized and/or unwarranted credit for another's accomplishments.
- Ensure independent review of facilities, methodologies, and other scientific activities as appropriate to ensure scientific integrity.
- Require staff members show appropriate diligence toward preserving and maintaining research resources, such as records of data and results that are entrusted to them.
- Prohibit research misconduct and the use of improper or inappropriate methods or processes in conducting research. Prohibit processes that lack adherence to practices that ensure research quality such as quality assurance systems.
- Require that staff members design, conduct, manage, evaluate, and report scientific research honestly and thoroughly, and disclose any conflicts of interest to their supervisor or other appropriate agency official(s) for their determination as to whether a recusal, disclaimer, or other appropriate notification shall be included.
- Require that research involving human subjects and the use of non-human animals is conducted in accordance with applicable ethical standards, regulations, and laws.

- Ensure, as feasible and appropriate, that scientific processes, participation, and dissemination of results include underrepresented groups.

Ensuring the Free Flow of Scientific Information

Open communication of NIST science plays a valuable role in building public trust and understanding of NIST work. NIST shall facilitate the free flow of scientific and technological information and support scientific integrity in the communication of scientific activities, findings, and products. Scientific and technological information shall be disseminated to the extent allowed by and consistent with privacy and classification standards, as well as responsible communication of scientific information.

- Ensure that scientific findings and products are not suppressed or altered for political purposes and must not be subjected to inappropriate influence.
- Ensure that mechanisms are in place to resolve disputes that arise from decisions to proceed or not to proceed with proposed interviews or other public information related activities.
- Ensure that the work and conclusions of agency scientists are accurately represented in agency communications. If documents significantly rely on a scientist's research, identify them as an author, or represent their scientific opinion, the scientist(s) shall be given the option to review the scientific content of proposed documents.
- Ensure that agency scientists may communicate their scientific findings (data and results) objectively without political interference or inappropriate influence, while at the same time complying with agency policies and procedures for planning and conducting scientific activities, reporting scientific findings, and reviewing and releasing scientific products. Scientific communications (e.g., manuscripts for scientific journals, presentations for workshops, conferences, and symposia) shall adhere to NIST technical review procedures.
- Allow the reporting of scientific findings or communicating with the media or the public in their official capacities as NIST staff members. However, NIST scientists shall refrain from making or publishing statements in official communications, per DAO 219-1, that could be construed as being judgments of, or recommendations on the Department or any other Federal Government policy, unless they have secured appropriate prior approval to do so. Such communications shall remain within the bounds of their scientific or technological findings, unless otherwise authorized.
- Allow scientists to communicate with the media or the public in their personal capacities subject to limitations of government ethics rules. NIST scientists may express their personal views and opinions. However, they shall not claim to officially represent the agency or its policies or use the Department or other Federal Government seals, logos or official emails and shall use appropriate written or oral

disclaimers. Personal or private activities may not violate Federal ethics rules or 5 USC § 2635.101.

- Require that agency officials, including public affairs officers, shall neither ask nor direct that agency scientists and technology experts alter the presentation of their scientific findings in a manner that may compromise the objectivity or accurate representation of those findings.
- In response to media requests about the scientific or technological dimensions of their work, agencies shall offer knowledgeable spokespersons who can, in an objective and nonpartisan fashion, describe these dimensions.
- Require that technical review and clearance processes include provisions for timely clearance and expressly forbid censorship, unreasonable delay, and suppression of objective communication of data and results.
- Ensure that Congressional inquiries, testimony, and other requests that include scientific information accurately represent the science.
- Ensure that the work and conclusions of agency scientists are accurately represented in agency social media communications and that agency scientists are appropriately guided on use of social media, which includes but is not limited to blogs, social networks, forums, and micro blogs (e.g., Twitter).
 - When communicating on social media in their personal capacities, and subject to limitations of government ethics rules, NIST scientists may express their personal views and opinions and may name their agency, in the context of biographical information, as long as it is clear in context that they are not speaking on behalf of, or as a representative of, the agency.
 - If staff members choose to disclose their affiliation with NIST on their personal social media, a disclaimer clarifying that the account or communication represents personal views may be appropriate.
 - Social media managers are responsible for correction of any errors pointed out by scientists whose work is represented in Department or NIST social media.

Supporting Decision Making Processes

NIST is mission-driven. All scientific activities are carried out so that NIST's decisions and policies are informed by the best available data, analysis, and information. Therefore, leadership, management, and staff members must ensure the quality, accuracy, and transparency of scientific information used to support policy and decision making including:

- Use scientific information that is derived from well-established scientific processes.
- Ensure that scientific data and research used to support policy decisions undergo review by qualified experts, where feasible and appropriate, and consistent with law.

- Adhere to the Office of Management and Budget Final Information Quality Bulletin for Peer Review.¹ When independent peer reviews of scientific products are conducted by contractors, a conflict of interest review shall be conducted for all reviewers
- Reflect scientific information appropriately and accurately; and make scientific findings or conclusions considered or relied on in policy decisions publicly available online and in open formats, to the extent practicable, consistent with the Open Government Initiative, the Freedom of Information Act, the Administrative Procedure Act, and other applicable statutes, regulations or document-handling procedures and policies. Where feasible and appropriate, the following will also be provided: information on the specific approach, data, and models used to develop such scientific conclusions, including a clear explanation of inferential procedures and, where appropriate, probabilities associated with a range of projections or scenarios.

Ensuring Accountability

Consistent with this Order, NIST shall:

- Ensure accountability to assure correction of the scientific record and administrative actions when allegations of a loss of scientific integrity are substantiated.
- Encourage and facilitate early consultation with the Scientific Integrity Official to seek advice on preventing a situation of concern, to determine if it is a potential violation of the Scientific Integrity Policy, and to ascertain if it should be referred elsewhere in the agency for resolution.
- Provide clear guidance on how to formally report allegations of Scientific Integrity Policy violations. Individuals who report allegations need not be directly involved or witness a violation.
- The procedures for assessing allegations of loss of scientific integrity are detailed in NIST PR 5101.01, Reporting and Resolving Allegations Regarding Violations of Scientific Integrity.

Protecting Scientists

To assure a culture of scientific integrity, it is critical to protect and preserve the work of NIST's science professionals. Consistent with this Order, NIST shall:

- Select and retain candidates for scientific and technical positions based on the candidate's scientific and technical knowledge, credentials, experience, and integrity,

¹ Office of Management and Budget. "Final Information Quality Bulletin for Peer Review." *Federal Register*. Doc. 05-769. Available at: <https://www.federalregister.gov/documents/2005/01/14/05-769/final-information-quality-bulletin-for-peer-review>

and hold them, their supervisors, and/or sponsors to the highest standard of professional and scientific ethics.

- Protect individuals who report allegations of compromised scientific integrity in good faith, as well as agency staff members alleged to have compromised scientific integrity in the absence of a finding that the individual compromised scientific integrity from prohibited personnel practices (as defined in 5 U.S.C. 2302(b)).
- Prevent supervisors and managers or other agency leadership from intimidating or coercing scientists to alter scientific data, findings, or professional opinions or inappropriately influencing scientific advisory boards.
- Comply with the Whistleblower Protection Act (WPA), as amended
 - Protecting staff members from prohibited personnel practices (as defined in 5 U.S.C. 2302(b)) but especially staff members who uncover and report allegations of loss of scientific integrity in good faith, as well as NIST staff members alleged to have compromised scientific integrity in the absence of a finding that the individual compromised scientific integrity; and
 - Comply with the requirements of the WPA of 1989, and its expanded protections enacted by PL 103-424 and the WPEA of 2012.

Ensuring Professional Development for Government Scientists

It is the policy of NIST to encourage scientists and other staff members involved in scientific activities to interact with the broader scientific community, in a manner that is consistent with Federal rules of ethics, job responsibilities, and to the extent that is practicable given the availability of funding to support such interactions and any budgetary restraints. NIST shall also ensure hiring and promotion of these individuals is conducted in accordance with merit principles and applicable rules, laws, regulations, and policies. Consistent with this Order, NIST shall:

- Encourage publication of research such as in peer-reviewed, professional, scholarly journals, Department technical reports and publications or other outlets.
- Encourage the sharing of scientific activities, findings, and materials through appropriate avenues including on digital repositories.
- Encourage attendance and presentation of research at professional meetings including workshops, conferences, and symposia.
- Allow service on editorial boards, as peer reviewers, or as editors of professional or scholarly journals.

- Allow participation in professional societies, committees, task forces, and other specialized bodies of professional societies, including removing barriers to serving as officers or on governing boards of such societies, to the extent allowed by law.²
- Nominate scientists for and allow them to receive honors and awards for contributions to scientific activities, discoveries, to accrue the professional recognition of such honors or awards.
- Allow scientists to perform outreach and engagement activities, such as speaking to community groups and underrepresented student groups, as part of their job.

Federal Advisory Committees

Federal Advisory Committees (FACs) are an important tool within NIST for ensuring the credibility, quality, and transparency of agency science. NIST shall adhere to the Federal Advisory Committee Act and develop policies, in coordination with the General Services Administration and consistent with the guidance on lobbyists serving on FACs for convening FACs tasked with giving scientific advice, consistent with the following:

- The recruitment process for new FAC members shall be as transparent as practicable.
- NIST shall, when practicable and appropriate, announce FAC member vacancies widely, including notification in the Federal Register with an invitation for the public to recommend individuals for consideration and for self-nominations to be submitted.
- Professional biographical information (including current and past professional affiliations) for appointed committee members shall be made widely available to the public (e.g., via a website) subject to Privacy Act and other statutory/regulatory considerations. Such information shall clearly illustrate the individuals' qualifications for serving on the committee.
- The selection of members to serve on a scientific or technical FAC shall be based on expertise, knowledge, and contribution to the relevant subject area. Additional factors that may be considered are availability of the member to serve, diversity among members of the FAC, and the ability to work effectively on advisory committees. Committee membership shall be fairly balanced in terms of points of view represented with respect to the functions to be performed by the FAC.
- Except when prohibited by law, NIST shall appoint members of scientific and technical FACs as Special Government Employees (SGEs) and make all Conflict-of-Interest waivers granted to these committee members publicly available.

² The “Guidelines for Authorizing Department of Commerce Employees to Serve as Officers or Board Members of Nonprofit Organizations on Behalf of the Government” can be found at chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ogc.commerce.gov/sites/default/files/official_service_with_nonprofits-6-29-16.pdf.

- Except when explicitly stated in a prior agreement between an agency and a FAC, all reports, recommendations, and products produced by FACs shall be treated as solely the findings of such committees rather than of the U.S. Government, and thus are not subject to intra- or inter-agency revision.
1. NIST shall comply with current standards governing conflict of interest as defined in statutes and implementing regulations.

Scientific Integrity Program Requirements:

Allegation Handling

The procedures for addressing allegations regarding violations of scientific integrity are described in NIST PR 5101.01, Reporting and Resolving Allegations Regarding Violations of Scientific Integrity. The Scientific Integrity Officer SIO shall bear primary responsibility for adjudicating allegations regarding violations of scientific integrity for NIST staff. If an allegation involves NIST leadership within the Director's Office, the Chief Science Officer (CSO) or SIO shall refer adjudication of the allegation to the DOC SIO or to an appropriate outside organization.

Training

All NIST staff members (Federal and Associates), political appointees, trainees, interns, and advisory committee members in their capacity as special government staff members, shall receive scientific integrity information or training biennially. New staff members will receive training within their first full performance cycle after they are hired. Current staff members will receive training within one year of this Order approval. Training will be tracked to ensure compliance. The SIO will develop and implement a training plan for all staff members subject to this directive.

Monitoring and Evaluation

The SIO shall develop and implement an evaluation plan to regularly monitor and evaluate ongoing scientific integrity activities and outcomes.

- The evaluation plan will include a roadmap of activities and expected outcomes, the steps needed to assess the processes and outcomes, the methods and metrics used to evaluate the activities and outcomes, and how the data will be analyzed on a regular basis and used for ongoing improvement of SI processes and procedures.
- The plan will also include a timeline for implementation and frequency of data collection, analysis, review, and recommendations.
- Evaluation results, recommendations, and policy/procedure changes based on results will be reported to agency leadership and will be made available to agency staff members and the public in a timely manner.

Reporting

The SIO shall provide an annual report to NIST leadership that shall not be edited in substance by leadership before release.

- The SIO is responsible for generating the annual report and posting it to the public and internal websites.
- The report shall highlight scientific integrity successes and accomplishments across NIST (such as any new scientific integrity hires, training, enhancements to scientific integrity policies, etc.), identify areas for improvement and develop a plan for addressing critical weaknesses, if any.
- The report will also include the number of formal administrative inquiries, investigations and appeals involving alleged or actual deviations from the Scientific Integrity Policy and the number of investigations and pending appeals.
- The annual report may also include anonymized individual closed scientific integrity case summaries. These summaries can be posted in a timely manner after completion of inquiries and/or incorporated into the annual report. The identities of complainants, respondents, witnesses, and others involved in the investigations shall be protected.

RESPONSIBILITIES

NIST Director

- Provides leadership for the agency on scientific integrity such as leading through example, upholding scientific integrity principles and regularly communicating the importance of scientific integrity.
- Ensures that all agency activities associated with scientific and technological processes are conducted in accordance with the policy.
- Ensures all supervisors and managers comply with the Scientific Integrity Policy and ensure accountability for those who do not.
- Designates a senior agency career staff member with agency-appropriate qualifications and scientific credentials for the role of chief science officer, science advisor, or chief scientist (“Chief Science Officer” or CSO) as applicable and support their role as advisor on scientific issues.
- Ensures that the scientific-integrity policy considers, supplements, and supports agency plans for forming evidence-based policies, including the evidence-building plans required by 5 U.S.C. 312(a) and the annual evaluation plans required by 5 U.S.C. 312(b).
- Provides adequate resources and funding to fully implement this Order, including staffing, annual evaluation and reporting, and training.
- Supports and respects the SIO’s independence, recommendations, and designation of and agency compliance with corrective scientific actions when violations of this policy are substantiated.

NIST Associate Director for Laboratory Programs (ADLP)

- Serves as the Chief Scientist or Chief Science Officer and appoints the NIST Scientific Integrity Officer (SIO).
- Authorized by the Director to determine how the NIST Scientific Integrity Policy is implemented to meet expectations and create the desired environment.
- Ensures the implementation of notices, orders, procedures and guidance related to scientific integrity in the Directive Management System.
- Monitors the institutional environment to maintain and improve the culture of scientific integrity.
- Administers processes and procedures that promote and protect scientific integrity.
- Serves as the Deciding Official (DO) for scientific integrity investigations. This role may be delegated to another NIST executive with appropriate scientific expertise relevant to the case.

NIST Scientific Integrity Officer (SIO)

- The SIO has primary responsibility for implementation of the institution's Scientific Integrity Program which includes responsible conduct of research and scientific integrity policies and procedures.
- Reports to the ADLP on all matters involving scientific integrity.
- Keeps the NIST Director and ADLP informed on the status of the implementation of this directive.
- Oversees implementation and iterative improvement of scientific-integrity policies and processes providing leadership, acting to champion scientific integrity, and serving as the primary Agency-level contact for questions regarding scientific integrity and ensuring scientific integrity is appropriately monitored and evaluated.
- Leads training and outreach initiatives to facilitate staff member awareness and understanding of this policy.
- Serves as a neutral point of contact for receiving scientific integrity questions and concerns regarding, and allegations of compromised scientific integrity.
- Conducts an initial assessment of allegations and submitted materials following established procedures, to determine whether the allegations pertain to compromised scientific integrity and the appropriate handling of said allegations. Provides oversight of agency responses to allegations of compromised scientific integrity referred for an investigation, including:
 - Reviewing agency-submitted reports of allegations and their disposition; and

- Maintaining a status report of responses to allegations as a means of monitoring the progress toward resolution.
- Coordinates with the Office of the Chief Counsel (OCC), Office of Inspector General (OIG), the Department of Commerce Ethics Law and Programs Office, the Office of Human Resources Management (OHRM), Public Affairs Office, the Chief Information Officer, and other offices, as necessary.
- Reports any potentially criminal behavior to OIG that is uncovered while responding to an allegation of compromised scientific integrity and coordinate as appropriate related to the referral provided to OIG.
- Publishes an annual report on the Scientific Integrity Program.
- Leads efforts for the iterative improvement of this policy and scientific integrity initiatives overall including development and implementation of an evaluation plan to regularly monitor and evaluate ongoing scientific integrity activities and outcomes.
- To the extent possible, be involved in discussions and planning on the recruitment, retention, development, and advancement of scientists—especially scientists from underrepresented communities—to help ensure that scientific integrity is appropriately and carefully considered.

OU Directors, Managers and Supervisors

- Ensure implementation of compliance with and accountability for the aspects of the NIST Scientific Integrity Policy for which they are responsible in accordance with procedures issued under this order.
- Provide leadership in support of responsible scientific conduct.
- Report any knowledge of potential losses of scientific integrity to the Scientific Integrity Official or designee.
- Protect from prohibited personnel practices (as defined in 5 U.S.C. 2302(b)) those agency staff members who uncover and report allegations of compromised scientific integrity in good faith, as well as those agency staff members alleged to have compromised scientific integrity in the absence of a finding that the individual compromised scientific integrity.
- Consult with OHRM or sponsor host organizations regarding disciplinary procedures or remedial actions as necessary.
- Consult as appropriate with the SIO.

NIST Staff members (Federal and Associates), Political Appointees, Trainees, Interns, and Advisory Committee Members in Their Capacity as Special Government Employees

- Shall be aware of the principles contained in the Scientific Integrity Policy and this Order, and how this Order applies to their duties.

- Comply with this Order.
- Adhere to accepted professional values and practices of the relevant research/scientific communities to ensure scientific integrity.
- Report to the SIO any knowledge of compromised scientific integrity.

DIRECTIVE OWNER

604 – Research Protections Office

APPENDICES

Appendix A: Related and Supporting Policies

Appendix B: Revision History

APPENDIX A:

RELATED AND SUPPORTING POLICIES

SCIENTIFIC INTEGRITY POLICY INTERSECTIONS WITH RELATED AND SUPPORTING POLICIES

Scientific integrity officials shall have an awareness of policies and programs that intersect with the development of the culture of scientific integrity within the agency. The following lists include many of these policies and programs.

Policies Related to Past Scientific Integrity Presidential and OSTP Memos

- Integrity in Public Science Communications. Scientists are encouraged to speak with the public and the media about scientific and technical matters based on their scientific work and in their areas of expertise. Policies on media and communications must be consistent with the December 17, 2010, Office of Science and Technology Policy (OSTP) memorandum on scientific integrity.
- Professional Development and Advancement of Scientists. The December 17, 2010, OSTP memorandum on scientific integrity asked agencies to establish policies for the professional development of government scientists and engineers.
- Credibility of the Science Workforce. The December 17, 2010, OSTP memorandum on scientific integrity informed agencies of the need to ensure that the selection of candidates for scientific positions in the executive branch is based primarily on their scientific and technological knowledge, credentials, experience, and integrity.
- Credibility of the Science to Support Policy Decisions. The December 17, 2010, OSTP memorandum on scientific integrity informed agencies of the need to ensure that scientific data and research used to support policy decisions undergo independent peer review by qualified experts, where feasible and appropriate, and consistent with the law. The January 27, 2021, Presidential Memorandum reinforces this stating that scientific or technological information considered in policy decisions should be subjected to well-established scientific processes.

Related Policies that Can Intersect with Scientific Integrity

- Integrity in Advice from Scientific and Technical Federal Advisory Committees. Products, reports, and recommendations to the agency from Federal Advisory Committees are the findings of the Committee, not the agency, and are not subject to agency revision. Committee membership recruitment should be as transparent as practicable and selection to serve on a scientific or technical Federal Advisory Committee should be based upon expertise, knowledge, and contribution to the relevant subject area taking into account other factors, such as availability, diversity, the ability to work effectively on advisory committees, and balanced viewpoints. The selection process should be overseen by career agency officials based upon best practices, unless otherwise specified in applicable statutes and regulations. Waivers of COI shall be prominently displayed on agency websites and reviewed at the start of every meeting.

- Whistleblower protections. The Whistleblower Protection Act, as amended, provides whistleblower protection for government scientists who challenge censorship of scientific information or make whistleblower disclosures related to the integrity of scientific processes and ensures coverage of employees of government contractors, subcontractors, grant recipients, subgrantees and personal services contractors.
- Human Subjects Research. Protection for human subjects of research and clinical investigations are provided in the Federal Policy for Protection of Human Research Subjects outlined in 15 C.F.R. §§ 27.101-124 and the FDA Policy for the Protection of Human Subjects outlined in 21 C.F.R. §§ 50, 56, 312 and 812.
- Animal Research. The United States Department of Agriculture Animal Welfare Act (AWA) and regulations (AWAR), the Public Health Service Policy on Humane Care and Use of Laboratory Animals (PHS Policy) administered by the National Institutes of Health (when and if appropriate), Office of Laboratory Animal Welfare, and the Guide for the Care and Use of Laboratory Animals.
- Scientific Research Security. Scientists are encouraged to interact with the broader scientific community, engage with collaborators, and commit to transparency, honesty, equity, fair competition, objectivity, and democratic values. Unfortunately, some foreign governments work through both licit and illicit means. Policies for protecting research security must harmonize with scientific integrity policies by maintaining the core values that drive American leadership in science, technology, and innovation.

APPENDIX B

REVISION HISTORY

Revision	Date	Responsible Person	Description of Change
Initial Draft	8/14/2012	Richard Cavanagh (SPO)	First Draft
Rev. .01	12/7/2012	Dan Cipra	Incorporated changes and moved Appendix A to the references section
Rev .02	12/18/2012	Dan Cipra	Incorporated OCC comments.
Rev. .03	1/4/2013	Richard Cavanagh	Incorporated DRB comments
Rev. 1.01	4/11/2017	Dan Cipra	Updated version
Rev 2.0	7/6/2022	Anne Andrews	Periodic updates and incorporated changes related to Pres Memo 1/27/2021
Rev 2.1	9/29/2022	Anne Andrews	Incorporated OCC comments
Rev 2.2	7/20/2023	Anne Andrews	Incorporated OSTP comments related to Pres Memo requirements and additional edits to ensure 5100 and 5200 series were consistent in formatting. The Presidential Memo and SOSI framework included many new requirements for policy elements
Rev 2.3	2/12/2024	Anne Andrews	Incorporated DRB review comments Updated version to 3.0
Rev. 2.4	1/30/2025	Anne Andrews	Removed verbiage in the “Protecting Scientists” section and Appendix A to comply with EO (Defending Women)