Employee Survey on the NIST Scientific Integrity and Responsible Conduct of Research Programs

We would appreciate your time in completing this survey on NIST's Scientific Integrity and Research Programs.

NIST has separate directives in support of the Scientific Integrity Policy (NIST P 5100, first issued in 2011) and Responsible Conduct of Research (NIST P 5200, first issued in 2014). The purpose of this survey is to assess NIST staff's awareness and understanding of both sets of policies. The results of this survey will be shared with NIST leadership and will be used to inform the programs.

No identifying information about you will be collected. Survey data will be summarized, and aggregated results will be included in presentations and publications which may be shared with NIST management, staff and the public. The raw, individual data will be accessed only by the team administering this survey, which is led by Dr. Anne Andrews.

At the end of the survey, you will be asked if you would like to participate in follow-up focus groups to discuss the updated Scientific Integrity Program in more detail.

The survey is completely voluntary. If you have any questions, please contact Dr. Anne Andrews, Director, Research Protections Office, and also NIST Scientific Integrity Officer. anne.andrews@nist.gov or 301.975.5445
OMB Control # 0693-0043
Expiration Date 8/31/2028

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995 unless the information collection has a currently valid OMB Control Number. The approved OMB Control Number for this information collection is 0693-0043. Without this approval, we could not conduct this survey/information collection. Public reporting for this information collection is estimated to be approximately 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. All responses to this information collection are voluntary. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the NIST at: 100 Bureau Drive, Gaithersburg, MD 20899, ATTN: Anne Andrews.

* Indicates required question

1. Which statement below best describes your current role at NIST? (select all that apply) *

Check all that apply.

- [ ] Conduct science through original research or analysis of existing data
- [ ] Utilize scientific data or conclusions to inform NIST actions or decisions, or develop policies, guidance, or regulations that affect science at NIST
- [ ] Communicate science through any type of media
- [ ] Manage science, scientists, or technical activities involving personnel performing technical activities
- [ ] Other position not directly involved with scientific activities (e.g., plant, facilities, etc.)

Knowledge of Scientific Integrity Policy

It is NIST Policy to promote scientific integrity by creating a culture of personal and organizational responsibility where the practice and management of scientific research and of its products are free from personal, political or social allegiances, beliefs or interests that are not essential to the practice of science.

2. How familiar are you with NIST's Scientific Integrity Policy?

Mark only one oval.

- ◯ I am aware there is a policy, and I have read it
- ◯ I am aware there is a policy, but have not read it
- ◯ I was not aware there is a policy until I saw this survey

3. How did you learn about the Scientific Integrity Policy? (select all that apply)

Check all that apply.

- [ ] Onboarding / training
- [ ] NIST website / NIST internal communications
- [ ] My OU / Division meeting
- [ ] My supervisor
- [ ] My colleagues
- [ ] Scientific Integrity Officer
- [ ] This survey
- [ ] Other: _____

4. Do you know how to report instances or allegations about scientific integrity?

Mark only one oval.

- ◯ Yes
- ◯ No

5. To whom would you feel comfortable reporting instances or allegations about scientific integrity? (select all that apply)

Check all that apply.

- [ ] Someone in my management chain (not necessarily my direct supervisor)
- [ ] Union
- [ ] Ombudsperson
- [ ] Office of Inspector General (OIG)
- [ ] Scientific Integrity Officer
- [ ] Office of Chief Counsel
- [ ] I do not feel comfortable reporting instances or allegations about scientific integrity
- [ ] Other: _____

Knowledge of Research Conduct Policy

It is NIST Policy to strive for and promote excellence and rigor in its research activities. Research misconduct is defined as the fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results. It does not include honest error or differences of opinion.

6. How familiar are you with NIST's Research Conduct Policy?

Mark only one oval.

- ◯ I am aware there is a policy, and I have read it
- ◯ I am aware there is a policy, but have not read it
- ◯ I was not aware there is a policy until I saw this survey

7. How did you learn about the Research Conduct Policy? (select all that apply)

Check all that apply.

- ☐ Onboarding / training
- ☐ NIST website / NIST internal communications
- ☐ My OU / Division meeting
- ☐ My supervisor
- ☐ My colleagues
- ☐ Scientific Integrity Officer
- ☐ This survey
- ☐ Other: _____

8. Do you know how to report instances or allegations of research misconduct?

Mark only one oval.

- ◯ Yes
- ◯ No

9. To whom would you feel comfortable reporting instances or allegations of research misconduct? (select all that apply)

Check all that apply.

- [ ] Someone in my management chain (not necessarily my direct supervisor)
- [ ] Union
- [ ] Ombudsperson
- [ ] Office of Inspector General (OIG)
- [ ] Scientific Integrity Officer
- [ ] Office of Chief Counsel
- [ ] I do not feel comfortable reporting instances or allegations about scientific integrity
- [ ] Other: _____

Beliefs about the culture of scientific integrity and ethical conduct of research at NIST

Please indicate to what extent you agree or disagree with the following statements.

10. The work of NIST is informed by robust science

Mark only one oval.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ No basis to judge or don't know

11. Scientific findings are generated, reviewed, and shared in a timely manner

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

12. The public appreciates and understands NIST's work

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

13. Scientists are able to do their best work knowing they are protected from intimidation or coercion to alter scientific data or findings

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

Attitudes towards the culture of scientific integrity and ethical conduct of research at NIST

Please indicate to what extent you agree or disagree with the following statements

14. In my official capacity at NIST, I can openly express my scientific opinions about NIST's scientific work without fear of retaliation

Mark only one oval.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ No basis to judge or don't know

15. In my personal capacity, I can freely express my scientific views provided I specify that I am not speaking on behalf of, or as a representative of, the agency

Mark only one oval.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree
- ◯ Strongly Disagree
- ◯ No basis to judge or don't know

16. My management chain consistently stands behind scientific staff who put forth scientifically defensible positions that may be controversial

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

17. I have the right to review, correct, and approve the scientific content of a NIST document, before public dissemination, that significantly relies on my scientific research, identifies me as an author, or represents my scientific opinion

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

18. The scientific or technical products to which I contribute are released to the public in a timely fashion

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

19. NIST policies regarding speaking to the news media support accurate representation of my scientific research to the general public

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

Beliefs about the release of scientific information to the public

Please indicate to what extent you agree or disagree with the following statements

20. The Publication Clearance (formerly the Editorial Review Board) process is consistent

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

21. The clearance procedure for scientific papers is transparent

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

22. I can accurately predict the amount of time it will take to clear a scientific paper

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

23. The process in my office for deciding who can attend and participate in meetings sponsored by scientific or professional societies is transparent

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

24. I am provided with the appropriate time and encouragement to keep up with advances in my profession, including attending conferences and engaging with scientific or professional societies

Mark only one oval.

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- No basis to judge or don't know

25. If you have had training on how to communicate scientific topics to the media, please indicate where you received that training. (select all that apply)

Check all that apply.

- [ ] Through training at NIST
- [ ] Through training at another federal organization
- [ ] Through a professional society
- [ ] Through an academic institution
- [ ] Communicating scientific topics to the media is not something my job requires me to do
- [ ] Other training elsewhere
- [ ] I have not received training

Tenets of Gold Standard Science

The Executive Order for Gold Standard Science established 9 tenets that are essential to research that is transparent, rigorous, and impactful. The following questions assess your knowledge or understanding of each of the tenets.

26. Which of the following statements best describes **reproducibility**? (select all that apply)

Check all that apply.

- [ ] Reproducibility demonstrates that scientific claims hold across different methods and researchers, ensuring findings are broadly valid.
- [ ] Reproducibility means repeating the exact same experiment under the same conditions and getting the same result.
- [ ] Both reproducibility and replicability are essential to ensuring scientific results are not due to chance, bias, or error.

27. Which of the following statements best describes **replicability**? (select all that apply)

Check all that apply.

- [ ] Replicability refers to obtaining the same results when repeating an experiment under the same methods and conditions.
- [ ] Replicability tests whether results hold across multiple methods and independent researchers.
- [ ] Both reproducibility and replicability are essential to ensuring scientific results are not due to chance, bias, or error.

28. Which of the following statements best describes **transparency**? (select all that apply)

Check all that apply.

- [ ] Transparency requires making research methods, data, and tools openly accessible so others can scrutinize and reuse them.
- [ ] Transparency complements reproducibility by ensuring the necessary materials and processes are clearly reported and available.
- [ ] Transparency in science involves simplifying results for the public rather than sharing detailed methods or data.

29. Which of the following statements best describes the **communication of error and uncertainty**? (select all that apply)

Check all that apply.

- [ ] Communicating error and uncertainty requires researchers to report statistical uncertainties, methodological limitations, and potential biases.
- [ ] Once researchers provide final results, reporting assumptions and biases is unnecessary for advancing discovery.
- [ ] Communicating error and uncertainty focuses only on statistical calculations, without requiring explanations of methodological or practical limitations.

30. Which of the following statements best describes research that is **collaborative and interdisciplinary**? (select all that apply)

Check all that apply.

- [ ] Collaborative and interdisciplinary science integrates diverse expertise and methods to address complex problems that go beyond a single field.
- [ ] Effective interdisciplinarity relies on open communication, shared resources, and inclusive frameworks to foster synergy and innovation.
- [ ] Interdisciplinary approaches eliminate the need for shared terminology, since each field can retain its own language and practices.

31. Which of the following statements best describes being **skeptical of findings and assumptions**? (select all that apply)

Check all that apply.

- [ ] Constructive skepticism in science involves critically evaluating findings, methods, and assumptions to ensure validity and robustness.
- [ ] Avoiding confirmation bias is an essential part of maintaining skepticism, since it helps prevent favoring only evidence that supports existing beliefs.
- [ ] Skepticism undermines scientific progress by discouraging exploration of alternative hypotheses or refinement of methods.

32. Which of the following statements best describes research being **structured for the falsifiability of a hypothesis**? (select all that apply)

Check all that apply.

- [ ] Falsifiability requires hypotheses to be formulated as precise, testable predictions that can be disproven by empirical evidence.
- [ ] Designing experiments with measurable outcomes and rigorous methods ensures scientific claims can be systematically challenged.
- [ ] Effective falsifiability focuses mainly on generating broad, unmeasurable claims that encourage open interpretation.

33. Which of the following statements best describes **unbiased peer review**? (select all that apply)

Check all that apply.

- [ ] Unbiased peer review involves independent evaluation by qualified experts to ensure research validity, quality, and credibility.
- [ ] Peer review is primarily intended to promote the visibility of researchers rather than to evaluate methodological rigor or credibility.
- [ ] The purpose of peer review is mainly to confirm that findings align with existing scientific consensus rather than to test their validity.

34. Which of the following statements best describes research that is **accepting of negative results as positive outcomes**? (select all that apply)

Check all that apply.

- [ ] Publication bias can be reduced by accepting and reporting null or unexpected findings, leading to more comprehensive scientific knowledge.
- [ ] Transparent documentation and sharing of null findings using accepted methodologies are crucial for encouraging open science and preventing redundant research efforts.
- [ ] Null findings should only be reported when they support a hypothesis in order to maintain scientific progress.

35. Which of the following statements best describes research conducted **without conflict of interest**? (select all that apply)

Check all that apply.

- [ ] Independent expert reviews and stringent ethical standards help maintain scientific credibility by preventing external influences from compromising the research process.
- [ ] Conflicts of interest in research are inevitable and do not significantly affect the credibility of scientific results.
- [ ] Research results are still trustworthy as long as they are published in reputable journals, regardless of potential conflicts of interest.

Comments

Please use this section to provide any comments or thoughts. However, please do not provide any sensitive information such as personally identifiable information or allegations. Please contact Anne Andrews, anne.andrews@nist.gov, to discuss anything sensitive or potential allegations.

36. Do you have any additional comments about NIST's Scientific Integrity Policy that you would like to include?

37. Do you have any additional comments about NIST's Research Conduct Policy that you would like to include?

Demographic Information

38. What is your employment status?

Mark only one oval.

- ◯ Federal employee
- ◯ NIST Associate
- ◯ Contractor
- ◯ Other: _____

39. What is your career path?

Mark only one oval.

- ◯ ZP
- ◯ ZS
- ◯ ZT
- ◯ ZA
- ◯ ST/SES/SEL
- ◯ Other: _____

40. What is your band?

Mark only one oval.

- ◯ I
- ◯ II
- ◯ III
- ◯ IV
- ◯ V
- ◯ Other: _____

41. How many years have you worked at NIST in any capacity? This can include positions such as student, contractor, Associate or Federal employee.

Mark only one oval.

- ◯ <1 year
- ◯ 1-5 years
- ◯ 6-10 years
- ◯ 11-15 years
- ◯ 16-20 years
- ◯ >20 years

42. What is your highest level of education?

Mark only one oval.

- ◯ High school
- ◯ Bachelor's
- ◯ Master's
- ◯ JD
- ◯ PhD
- ◯ Other: _____

43. Are you a supervisor?

Mark only one oval.

- ◯ Yes
- ◯ No

Thank you!

Focus group discussions

As part of this program evaluation, we plan to conduct a series of follow-up focus group discussions to better understand the NIST staff's awareness of the updated Scientific Integrity Program.

If you would like to participate in follow-up focus groups to discuss the updated Scientific Integrity Program in more detail, contact us directly by sending an email to Dr. Anne Andrews at anne.andrews@nist.gov.

Thank you!

Thank you for your time completing this survey. Summary results of this survey will be shared with NIST leadership and posted to the NIST webpage.