Regeneron ISEF 2025 Scientific Integrity Report

Each year the Society for Science staff and our volunteers spend considerable time and resources reviewing finalist research and documentation to verify scientific integrity. In our inaugural Scientific Integrity Report, we are pleased to detail the additional resources devoted to the effort in 2025 as well as the multi-step process used to review and approve projects at Regeneron ISEF.

The Society holds our Regeneron ISEF community to a high standard, and we are pleased to report that the majority of our finalists met and exceeded those expectations. This result underscores that our efforts – those of the Society and our larger ISEF community – to hold ourselves to high ethical standards are having an impact.

Regrettably, three students were found to have violated the Society's policies and had their finalist statuses revoked. While most students upheld the standards we expect, we remain committed to upholding the integrity of ISEF and to strengthening our shared culture of scientific integrity.

Overview

Society for Science put a renewed focus on scientific integrity throughout the Regeneron ISEF 2025 experience to do all that we could to ensure a fair judging process and the selection of deserving student winners.

Steps taken throughout the process included:

- Questions were added to the Finalist Questionnaire to understand the independence of the research and the support received.
- The citation requirements for the public display virtually and in-person -- were updated to be more stringent and thoroughly checked by the Display & Safety Committee and staff.
- A Scientific Integrity Officer was hired (Feb 2025) and Dr. Jenna DeLuca immediately began to work with the team on reviewing projects and investigating any allegations that we received.
- We added guidance to affiliated fairs and asked that they partner with us to verify the authenticity of the projects from their own delegations by reviewing ISEF documentation and consulting with educators and mentors involved with each project.
- Society staff ran proprietary integrity screening on abstracts and project materials throughout the competition cycle. Over 70 hours of staff time were dedicated to this effort.

 A letter was sent to all finalists, fair directors and adults-in-charge on Tuesday afternoon prior to judging to emphasize the importance of scientific integrity and the obligations that they have as young researchers. (Appendix 1)

These points of emphasis were implemented above and beyond the already stringent screening processes of the ISEF Scientific Review Committee and the Display & Safety Committee that review all projects prior to competition.

A total of 1,657 finalists submitted 1,334 projects from 361 fairs representing 63 countries, regions and territories to Regeneron ISEF 2025. Ultimately, three finalists, who were found to be in violation of the Regeneron ISEF Ethics Statement, Code of Conduct and/or Harassment Policy were contacted by the Society at the conclusion of Regeneron ISEF. Their finalist status was revoked, and they are no longer eligible to participate in Society for Science programs.

Of note, one of the finalists whose status was revoked engaged in cyberbullying which is in violation of the Society's Code of Conduct and Harassment Policy. The Society has seen a rise in cyberbullying and is taking steps to address the issue.

Scientific Review Committee (SRC) Review

SRC members and readers began reviewing ISEF documentation during the third week of February and concluded the process on Monday, May 12.

- The SRC sent 463 emails to 318 finalists, their adult sponsors and fair directors to gather information, request missing forms or seek clarification.
- At least 20 projects were identified as needing continuation paperwork after initial submission and were required to provide the documentation and in many cases meet with the ISEF SRC to understand the differences between the prior year's work and the project being presented at Regeneron ISEF 2025.
- The ISEF SRC had 60 scheduled zoom interviews for over 20 hours across several dates: April 9, April 23-26, May 6 and onsite.
 - The majority of the interviews focused on seeking clarity around biosafety conditions or the use of human participants.
 - Many interviews were the result of an overstatement of student contributions and lack of detail in the research plan.

There were 1,304 projects approved for competition, and 10 projects that failed to qualify.

Display & Safety Committee (D&S) Review

The Display & Safety Committee reviewed the virtual booths of Finalists on ProjectBoard from mid-March through April 30. Their emphasis of review this year was to confirm that finalists properly cited every graphic provided in their project materials. There were over 1,000 infractions given throughout the process of virtual project review. Committee members also catalogued any potential integrity issues that arose during virtual review.

Once onsite, finalists were required to go through a two-phase Display & Safety inspection that verified the information being presented – on the poster and at the booth – had been properly reviewed and met the requirements. During on-site inspections, the Display & Safety committee again ensured that all graphics were properly cited.

Allegations and Investigations

To date, the Society for Science staff has received allegations against 17 projects that were competing at Regeneron ISEF 2025.

The Society staff along with the ISEF SRC reviewed the project information and materials available to us and took several actions as were warranted:

- Requested additional documentation
- Consulted with the Affiliated Fair Director, their SRC and Judging leadership
- Had subject-matter experts review the concerns
- Interviewed the students/project to address the concern

The majority of these allegations were made by fellow student competitors who were not privy to the full ISEF documentation. Many allegations came from individuals who chose to remain anonymous and threatened public action if their concerns were not addressed. The allegations did not include credible evidence sufficient to warrant removing any finalists from the competition.

At the conclusion of the fair, the Society also received several concerns raised regarding the judging process and about discussions between finalists and judges following judging. Verified misconduct by any identified judge will result in not being accepted as a judge for future competitions.

Conclusion

While a small number of students violated Society policies, we are pleased that the vast majority upheld our expected standards of scientific integrity. Moving forward, the Society will publish an annual report on scientific integrity at ISEF.

We will continue to refine and improve our rules and processes each year as technology and scientific practices evolve.

Appendix 1. Scientific Integrity Letter sent to Finalists, Fair Directors and Adults-in-Charge on Tuesday, May 13 prior to judging day at Regeneron ISEF 2025

Dear Regeneron ISEF Community,

I'm Jenna DeLuca, the Society for Science's first Scientific Integrity Officer. Before I joined the Society, I worked at the National Institutes of Health where I was a Postdoctoral Research Fellow in the Translational Immunobiology Unit.

I started out just like you, competing in my regional science and engineering fairs. From there I went on to conduct research in college, graduate school, and at the NIH. Now with over 10 years of research experience, in my opinion, scientific integrity is the foundation of effective scientific investigation, and I am thrilled to be a part of the Society's work to uphold this value.

As a Regeneron ISEF finalist, you carry moral and ethical responsibilities that began with your first research project and will continue through your education and career. Your conduct as a research scientist, mathematician, engineer, and member of the STEM community should reflect the highest level of responsibility, maturity, personal honesty and integrity.

That's why all finalists are required to sign an <u>Ethics Statement</u>, a <u>Code of Conduct</u> and a <u>Harassment Policy</u> affirming their commitment to present their research ethically and honestly.

The Society's staff works diligently behind the scenes to ensure projects comply with our rules. Here are some of the steps we take to ensure our high standards for scientific integrity are met:

- **ISEF-affiliated science fairs:** All affiliated science fairs sign an agreement to follow the International Rules & Guidelines and maintain compliant review practices to conduct a fair competition, including:
 - Screening projects at the local and state level,
 - Providing qualified judges when selecting finalists for Regeneron ISEF and
 - Confirming through a thorough review that all projects selected for Regeneron ISEF appropriately represent the student's own work.
- • The ISEF Scientific Review Committee (SRC) and the ISEF Display & Safety Committee update and implement the competition's rules annually, review all ISEF finalist projects prior to competition and verify that projects are presented ethically.
- The Society conducts a plagiarism check on all abstracts and reviews all finalist paperwork along with conducting other proprietary integrity screenings. This year, the Society introduced new requirements mandating that all images on the project materials (virtual and physical boards) must be properly cited. This has been a point of emphasis during our reviews.

If a concern is raised about a project at any point in this process, the Society staff
works with the ISEF SRC and additional information is required or an interview takes
place.

To ensure a fair and effective review, we ask that individuals submitting a report do so in good faith and as an identifiable source of information. While we understand the desire for anonymity, anonymous allegations — particularly those lacking context, evidence or full disclosure of relevant relationships — can hinder our ability to investigate thoroughly and fairly. The Society will investigate all credible concerns to the best of our ability, and we take every measure to protect those who come forward responsibly.

For more information about the Society's commitment to scientific integrity, please visit www.societyforscience.org/scientific-integrity/.

Thank you for your dedication to ethical research and for being a part of this inspiring community. Good luck!

Sincerely,

Jenna DeLuca, Ph.D.