



Career Advice for Women and Men



How do we tackle such an enormous issue rooted so deeply in unfavorable societal, cultural, and systemic constructs?

IWISE: The New York Stem Cell Foundation's Strategies for Advancing Women in Science

The mission of the New York Stem Cell Foundation (NYSCF) is to accelerate cures for the major diseases of our time through stem cell research, and we believe that gender equality in science, medicine, and engineering is a key component to making treatments and cures available to all patients as quickly as possible.

With the support and enthusiasm of the scientific community, NYSCF launched its Initiative on Women in Science and Engineering (IWISE) in 2014 with the

inaugural meeting of the IWISE Working Group—originally composed of a small group of established women scientists, representative of multiple career stages, disciplines, and institutions—to identify ways to

ensure that women not just enter science, but remain, compete, and truly excel in scientific careers. This group was later expanded to include men.

Approaching the Problem

But how do we do this? How do we tackle such an enormous issue rooted so deeply in unfavorable societal, cultural, and systemic constructs? The Working Group refused to back away from the complexity of the problem. Instead, they proposed that we respond with sustained, coordinated, and deliberate efforts, both small and large, and they worked to outline just what those kinds of efforts should look like.

During the first meeting, the Working Group developed an outline for an article, “Seven actionable strategies for advancing women in science, medicine, and engineering,” which

was subsequently published in March 2015.¹

In putting together the list of strategies, the Working Group wanted to pull together the right mix of easy-to-implement approaches (i.e., low-cost or no-cost strategies) and proven strategies that have the potential for great impact and return on investment.

The first two strategies focus on direct financial support:

1. Implement flexible family care spending. This strategy would enable grantees to use award funds for family-related expenses, such as

childcare and eldercare, which would allow individuals to travel to meetings, conferences, and workshops that may be important for early career advancement. All grantees, regardless of gender, would be able to utilize these funds. The Working Group called for other biomedical funders to implement this policy.

2. Provide “extra hands” awards. This recommendation suggests that grant-making organizations and institutions set up gender-neutral award programs that would provide funding for individual scientists to hire extra help, such as technicians, administrative assistants, or postdoctoral fellows, when they become primary caregivers.

The following three strategies focus on psychological and cultural change:

3. Recruit gender-balanced external review committees and speaker selection committees. Organizations that fund research and convene meetings should assemble gender-balanced review and speaker selection committees. Research has shown that the presence of even one woman on a speaker selection committee correlates with a much higher proportion of invited female speakers.



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The Working Group believed that women on review committees would see similar results with a higher proportion of female applicants being awarded grants.

4. Incorporate implicit bias statements.

To mitigate the subtle and unconscious gender biases that exist throughout society, and specifically in science, the group suggested that grant-making organizations include “implicit bias statements” in their external review processes.

5. Focus on education as a tool.

Institutions, grant makers, and scientists must commit to education as a tool to make progress toward gender equality. For example, they could host training seminars, workshops, and discussions and find ways to share these resources as widely as possible with the scientific and lay community.

The final recommendations include two major collaborative and international initiatives:

6. Create an institutional report card for gender equality. The Working Group recommended that a set of quantifiable criteria be analyzed to develop an Institutional Report Card for Gender Equality that would evaluate institutions on a specified set of practices resulting in assignment of a gender equality grade. Eventually, grant-making organizations should implement policies that would require potential grantee institutions to maintain a certain grade to be eligible for funding.

7. Partner to expand upon existing, searchable databases of women in science, medicine, and engineering. The final recommendation suggested that funders, journals, and institutions should partner with existing organizations to develop and expand existing, searchable databases of women in science, engineering, and medicine. These resources will make it easier for search committees, conference organizers, institutions, and others to easily identify women scientists for positions and activities such as speaking opportunities, participation in review committees, and serving on advisory boards.

It was important that at least some of the recommendations would not require substantial effort, persuasion, or funding to implement; they are, as the Working Group referred to them, “low-barrier” strategies. These strategies include things like incorporating an implicit bias statement and focusing on education as a tool. The Working Group hoped that by

including these low-barrier strategies in the list, they could achieve some quick successes and get people and organizations thinking more seriously about gender equality and just how important it is to the future of science and medicine.

On the other hand, the Working Group purposefully put forward lofty and aspirational projects to undertake, such as the Institutional Report Card for Gender Equality, and while NYSCF and the IWISE Working Group may not necessarily be able to execute these initiatives and ideas on their own, there may be other organizations or institutions that are already working on these projects and/or have time and resources to dedicate to them.

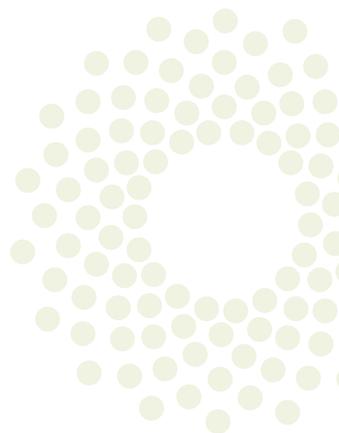
NYSCF’s Implementation of the Strategies

When the article was published, we were pleased to see that it elicited a strong, positive response from the scientific community. Media outlets around the world shared the content of the article, and the Working Group’s recommendations were widely disseminated. But that was just the beginning. We felt that we could not simply create a list of recommendations; we needed to start implementing them ourselves.

So what has NYSCF done since the seven strategies were published?

Importantly, NYSCF has traveled nationally and internationally to spread the word about the IWISE Working Group’s recommendations, and we continue to focus on education as a tool to promote gender equality in science (strategy number 5). We have briefed U.S. senators, the National Institutes of Health, numerous academic institutions, professional societies, our own staff and grantees, and many major biomedical research funders around the world on the strategies and NYSCF’s goals for the recommendations.

We also incorporated the Institutional Report Card for Gender Equality (strategy number 6) into the application process for all of our extramural grant program awards. This means that to be eligible for funding from NYSCF, each application must be accompanied by a report card. The report card must be filled out by, or on behalf of, the candidate’s department chair. It is important to note that in the pilot phase of the report card, the data reported, which includes things like the gender



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breakdown of students, faculty, and tenure and promotion committees, to name a few, does not affect the score for the application.² It affects the application only if it is not completed, and its absence renders the application incomplete. Across all of our extramural grant award programs, candidates and their institutions have readily complied with this new requirement.

Additionally, we have incorporated the implicit bias statement³ (strategy number 4) into all of our extramural review processes any time we are selecting individuals to speak at events, such as the NYSCF Conference and other symposia that we organize throughout the year. We provide a written statement to reviewers during the review process, and we provide a verbal statement at the start of each review committee meeting.

Including an implicit bias statement is a strategy that is low-cost and easy for other funders to implement. Many biomedical research funders and academic institutions reported that they have adopted this strategy and use an implicit bias statement during hiring processes, tenure and promotion discussions, and awards committee meetings.

In addition to the implicit bias statement, we continue to strive to ensure that we recruit and retain gender-balanced speaker selection committees and grant review committees (strategy number 3). Although it often requires additional effort to recruit diverse, broadly represented committees, we feel that it is critical to achieving thoughtful, balanced discussion and outcomes.

Furthermore, we allow flexible family spending on our early career investigator awards (strategy number 1), so that our grantees can use a portion of their award to pay for childcare, eldercare, or other family-related expenses associated with travel to give invited lectures or attend scientific meetings and conferences. We believe that this flexible spending permits our grantees greater freedom to attend workshops and courses, critical for career advancement.

It has been two years since the IWISE

Working Group published the seven strategies. What have we learned?

■ **We cannot do it alone.** We need a true community of individuals, academic institutions, scientific societies, governmental organizations, and biomedical research funders willing to demand change and insist that we move toward gender equality in science.

■ **Change is difficult.** It takes time and deliberate, persistent effort to make a difference.

■ **There are many ways to solve a problem, and that is a good thing.** Along the way, people and organizations will disagree with what you are trying to do and how you are trying to do it. Listen, and keep working to solve the problem.

While the challenges are many, there is no doubt that we—institutions, scientists, patients, all of us—will have better outcomes and faster progress with full participation by all genders in science and medicine, and NYSCF hopes that everyone will continue to do their small—or large—part to continue to make progress. ■

—Kristin A. Smith, Michael P. Yaffe, and Susan L. Solomon, *The New York Stem Cell Foundation*

References

¹Smith KA, Arlotta P, Watt F, the IWISE Working Group, Solomon SL (2015). Seven actionable strategies for advancing women in science, engineering, and medicine. *Cell Stem Cell* 16, 221–224.

²The full report card can be found at <http://bit.ly/2qUk0pU>.

³NYSCF's implicit bias statement: As an institution, The New York Stem Cell Foundation seeks to promote gender equality and increase diversity, in all of its forms, throughout its programs. Studies have demonstrated that often subtle, unconscious, and implicit biases exist in academic science, which have the potential to negatively impact outcomes in review processes. To that end, please be aware of potential implicit biases when reviewing, scoring and discussing candidates and applications throughout the review process so that we can work together to combat their potential negative impact.