

Women in cell biology: a seat at the table and a place at the podium

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ABSTRACT The Women in Cell Biology (WICB) committee of the American Society for Cell Biology (ASCB) was started in the 1970s in response to the documented underrepresentation of women in academia in general and cell biology in particular. By coincidence or causal relationship, I am happy to say that since WICB became a standing ASCB committee, women have been well represented in ASCB's leadership and as symposium speakers at the annual meeting. However, the need to provide opportunities and information useful to women in developing their careers in cell biology is still vital, given the continuing bias women face in the larger scientific arena. With its emphasis on mentoring, many of WICB's activities benefit the development of both men and women cell biologists. The WICB "Career Column" in the monthly *ASCB Newsletter* is a source of accessible wisdom. At the annual ASCB meeting, WICB organizes the career discussion and mentoring roundtables, childcare awards, Mentoring Theater, career-related panel and workshop, and career recognition awards. Finally, the WICB Speaker Referral Service provides a list of outstanding women whom organizers of scientific meetings, scientific review panels, and university symposia/lecture series can reach out to when facing the proverbial dilemma, "I just don't know any women who are experts."

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Although women are approaching parity in earning PhD and MD degrees, studies of their underrepresentation in academia, as principal investigators in funded science and in leadership positions, have led to the conclusion that gender schemas (Valian, 1999) work against women and diminish their success. This picture is supported by the National Academy of Sciences' (NAS) report *Beyond Bias and Barriers*, which concludes that "Neither our academic institutions nor our nation can afford such underuse of precious human capital in science and engineering" (NAS, 2007) A *New Yorker* cartoon captures the scene at too many scientific gatherings (Figure 1).

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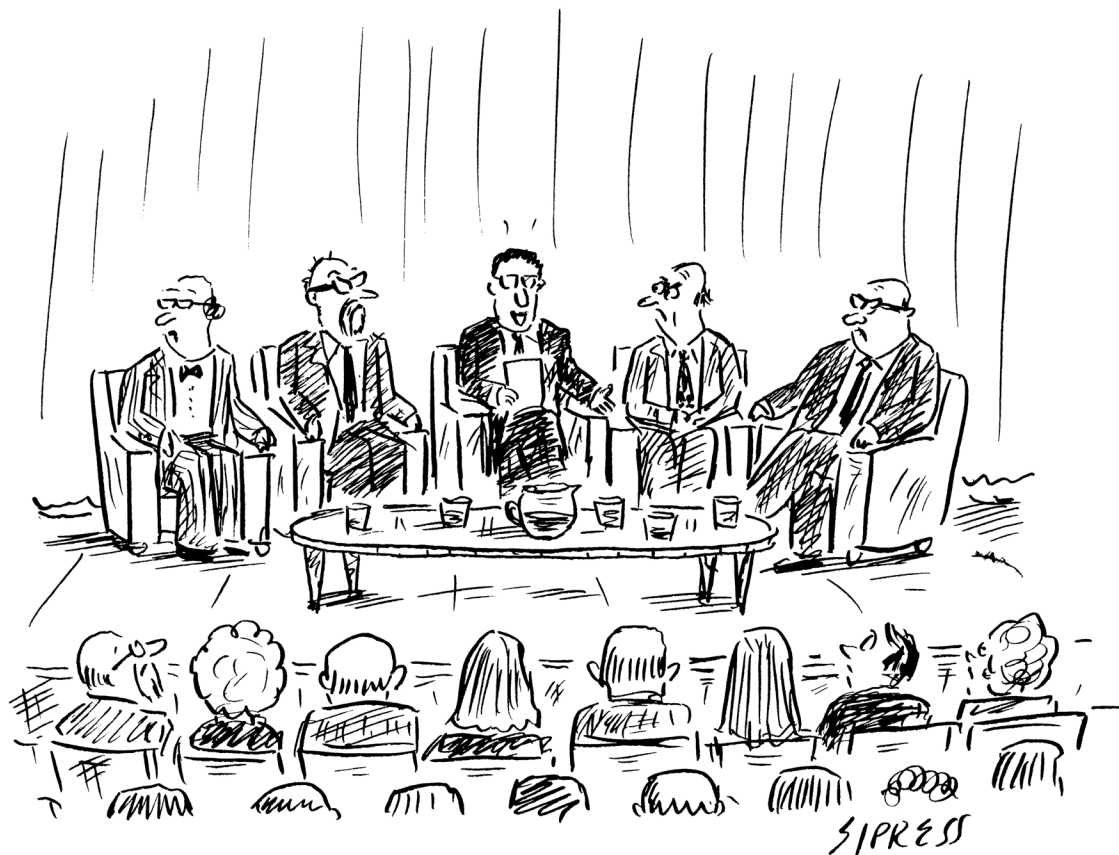
Abbreviations used: ASCB, American Society for Cell Biology; CV, curriculum vitae; EdComm, ASCB Education Committee; NAS, National Academy of Sciences; WICB, Women in Cell Biology.

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The Women in Cell Biology (WICB) committee was started in the early 1970s with notices of ad hoc meetings posted in women's washrooms during the American Society for Cell Biology (ASCB) annual meeting and a mimeographed newsletter (Williams, 1996a, 1996b). One goal for WICB's "founding mothers" was to achieve more equitable representation as participants within ASCB, including more accurate representation of women within the ASCB leadership and as speakers. Consonant with this goal, WICB was delighted to become a standing committee of the ASCB in 1992. In the 30 years prior to this watershed date, only 13% of ASCB presidents were women. Since 1992, 50% of ASCB presidents have been women. I cannot determine whether this is causal, reflective of a third variable, or pure coincidence. But it is remarkable.

The number of women leaders and speakers within ASCB suggests that WICB's initial goal of more accurate representation of women has been largely achieved. However, the goals of helping women cell biologists successfully juggle career and family, find mentors, and achieve gender equity in job placement continue to be challenges. We have developed multiple WICB-sponsored activities throughout the year, and especially at the annual ASCB meeting, to give cell biologists tools with which to meet these challenges.



"The subject of tonight's discussion is: Why are there no women on this panel?"

FIGURE 1: "The subject of tonight's discussion is: Why are there no women on this panel?" Cartoon by David Sipress from The New Yorker Collection, www.cartoonbank.com. Used under Rights Managed License. Copyright holder Conde Nast.

MENTORING THROUGHOUT THE YEAR

From its inception, a major WICB goal has been to mentor and provide effective career advice. Toward this end, there is a monthly WICB column in the *ASCB Newsletter* that provides advice relating to critical career issues and juggling the competing responsibilities of career and family, concerns faced by both women and men (www.ascb.org/wicbnewsletter.html). WICB also wrote and published *Life Sciences Research and Teaching: Strategies for a Successful Job Hunt* (Goldhor *et al.*, 2002), which, along with compilations of earlier WICB columns, *Career Advice for Life Scientists* (Marincola, 2008; Goodenough and Marincola, 2009), is downloadable as a free PDF from the ASCB website for both members and nonmembers.

The beauty of these downloadable publications is that the advice is available whenever you are wrestling with these challenges, perhaps at 2 am, when you cannot sleep.

The WICB and ASCB Education Committee (EdComm) recently initiated an Internet-based matchmaking service for help in drafting a cover letter, curriculum vitae (CV), résumé, statement on teaching philosophy, or any other document needed for the next step in an ASCB member's career (www.ascb.org/ResumeReview/CareerAssistance.cfm).

WICB PHOTO MONTAGE

In photos posted on the WICB website, students and postdocs can see real cell biologists who have managed to have children and still

do great science. We hope these up-and-coming cell biologists will be encouraged to do the same (<http://ascb.org/wicb/photos.html>).

WICB NETWORK

We established an alliance of members who wish to support, learn about, and participate in WICB activities and initiatives at an informal gathering for information sharing at the annual meeting. Network members also receive periodic emails that contain articles, announcements, and other information. The network provides feedback on topics of interest to the cell biology community, including cross-over of career and life issues.

WICB MENTORING EVENTS AT THE ANNUAL ASCB MEETING

Career discussion and mentoring roundtables

The large annual meeting can be intimidating, especially to young cell biologists, for whom it is critical to find mentors as they progress in their careers. To overcome this, WICB organized career discussion and mentoring roundtables in 1995. Still valid today, they are held during the annual meeting and allow participants to meet informally for roundtable discussions. Topics are those of importance to cell biologists in various stages of their careers. Conversations are moderated by individuals who have experience in various professional areas or with particular issues, including jobs in biotech, establishing your own lab, and dealing with conflict. This event is an excellent

opportunity to disseminate practical information on career choices, discuss strategies for effectively developing a career, and network with others who share career interests and concerns. Our experience is that enabling ASCB members with common interests and concerns to meet allows each attendee at the career discussion to come away from the annual meeting both enriched by his or her initial contacts and strengthened by feedback and advice on a career issue. Roundtable discussion leaders, who represent some of our most eminent ASCB members, also find this mentoring opportunity very rewarding. The event typically draws 600–700 women and men.

Saturday workshop or panel presentation

On Saturday at the annual meeting, attendees can take part in a workshop and/or a panel presentation. The workshop focuses on providing practical tools in areas such as dealing with difficult people and situations, acquiring leadership training, negotiating conflicts, and building one's career. The workshop curriculum uses case studies, small group discussions, and role-playing to apply the tools to typical scenarios. In contrast, panel experts provide advice at critical steps in careers for cell biologists or help them choose among diverse career pathways. In 2012, there is a joint panel and workshop, "Packaging Yourself for College Teaching in Your Career," cosponsored by WICB/EdComm.

WICB CAREER RECOGNITION AWARDS

Each year, nominations for career recognition awards are solicited from members and their institutions. Winners are presented plaques and a monetary award during the annual meeting and are given an opportunity to briefly describe their career moves and mentors. Interestingly, we have found that the nomination process itself generates information packets that can be used, with minor editing, for successful nominations for other awards.

The Junior Award is given to a woman in an early stage of her career (generally fewer than 5 years in an independent position at the time of nomination) who is making exceptional scientific contributions to cell biology and who exhibits the potential for continuing a high level of scientific endeavor and leadership. Some awardees have subsequently won MacArthur Foundation "genius" awards and National Institutes of Health Pioneer Awards.

The Lifetime Achievement Award (formerly the Senior Award) honors a woman or man at a later career stage (generally full professor or equivalent) whose outstanding scientific achievements are coupled with a long-standing record of active support for, and outstanding mentorship of, both men and women in scientific careers.

The Sustained Excellence in Research Award will be given for the first time in 2013. It was established when we became concerned that awards focus on junior and senior scientists, but not on the accomplishments of outstanding women cell biologists in a career stage corresponding to associate professor. This award will honor a woman at the midcareer level (~7–15 years in an independent position) who has demonstrated a track record of exceptional scientific contributions to cell biology and/or has effectively translated cell biology across disciplines and who exemplifies a high level of scientific impact and leadership.

MENTORING THEATER—USING HUMOR TO DEAL WITH COMPLEX PROBLEMS

Satire and humor can be effective in highlighting inept solutions to problems that scientists face. In the WICB Mentoring Theater at the annual meeting, eminent scientists who are willing to make fun of

themselves act out scenarios of career challenges, including effective self-promotion, developing self-esteem, dealing with funding problems, publishing, negotiating for a job, and feeling overwhelmed. After the performance, the audience is invited to engage in a question-and-answer session with the senior scientists/theatians to identify effective strategies.

CHILDCARE AWARDS

Initially with funding from the Elsevier Foundation and an anonymous donor, and currently with support from Nature Publishing Group, WICB gives grant support to members in order to help offset the cost of childcare, thus enabling scientists (women or men) with dependent children to attend the ASCB annual meeting. Applicants are required to present a talk and/or poster at the meeting. Funds can be used to cover travel for a caregiver or childcare expenses incurred at home or at the meeting.

WICB SPEAKER REFERRAL SERVICE

Working toward an impact outside ASCB: "I didn't know the name of any woman who could speak on this topic."

After attending the superb ASCB meetings, at which 30–40% of symposia speakers are women and both women and men receive major awards, other scientific meetings can feel like *déjà vu* and an episode of *Mad Men* in the degree to which women are underrepresented among featured speakers or as awardees, as illustrated by that *New Yorker* cartoon (Figure 1).

We offer two services to help meeting organizers identify superb, tested women cell biologists as speakers and awardees. The first is a do-it-yourself process, whereby meeting organizers can download a PDF listing previous ASCB annual meeting symposia speakers, minisymposia coauthors, and awardees (www.ascb.org/WICBspeakerref.html).

Alternatively, we offer a referral process, in which you send a brief description of the planned conference, symposium, lecture series, or review panel to WICB committee member and ASCB past president, Harvey Lodish (Lodish@wi.mit.edu). Harvey will respond rapidly with the names of potential women speakers who are appropriate for the conference or panel, will locate the websites of these women, will confirm they are research-active and appropriate, and will compile a list that includes title, institution, research description, and contact information (www.ascb.org/WICBspeakerref.html).

Both versions of the Speaker Referral Service are great resources, so use them and get them into the hands of organizers early.

In "Why So Slow? The Advancement of Women," Virginia Valian presents data showing that women face unconscious bias in the workplace (Valian, 1999). Similarly, the NAS report *Beyond Bias and Barriers* points out that "Women are a small portion of the science and engineering faculty members at research universities, and they typically receive fewer resources and less support than their male colleagues" (NAS, 2007). The report continues: "It is not lack of talent, but unintentional biases and outmoded institutional structures that are hindering the access and advancement of women." More recently, a article in the *Proceedings of the National Academy of Sciences* demonstrated that science professors at American universities given CVs identical except for gender were less likely to offer the "women" either mentoring or a job. And even if the professors were willing to offer a job, the salary was lower (Moss-Racusin et al. 2012). Clearly, we still have a long way to go.

We hope that these various WICB activities are part of the solution. We understand the adage "you can't have it all," but

we do feel that WICB can provide you with resources and mentors at all stages in your trajectory as a cell biologist, all of which will help you overcome whatever bias-related barriers come your way. The ASCB is an effective agent of diversity and responsible political action that expresses the larger picture of who we are as cell biologists, and WICB is proud to contribute to this cause.

REFERENCES

- Goldhor S, Clutter M, Walbot V (2002). *Life Sciences Research and Teaching: Strategies for a Successful Job Hunt*, Bethesda, MD: American Society for Cell Biology. <http://ascb.org/newsfiles/jobhunt.pdf>.
- Goodenough UW, Marincola E (eds.) (2009). *Career Advice for Life Scientists*, vol. 3, Bethesda, MD: American Society for Cell Biology. www.ascb.org/CareerAdvice2012.html.
- Marincola E (ed.) (2008). *Career Advice for Life Scientists*, vols. 1 and 2, Bethesda, MD: American Society for Cell Biology. www.ascb.org/WICBPublication2012.html.
- Moss-Racusin CA, Dovidio JF, Brescoll VL, Graham MJ, Handelsman J (2012). Science faculty's subtle gender biases favor male students. *Proc Natl Acad Sci USA* 109, 16474–16479.
- National Academy of Sciences (2007). *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering*, Washington, DC: National Academies Press.
- Valian V (1999). *Why So Slow? The Advancement of Women*, Cambridge, MA: MIT Press.
- Williams LA (1996a). The history of WICB: the founding and early years. *ASCB Newsletter* (August). www.ascb.org/index.php?option=com_content&view=article&id=501&Itemid=296.
- Williams LA (1996b). The history of WICB: the later years. *ASCB Newsletter* (October). www.ascb.org/index.php?option=com_content&view=article&id=501&Itemid=296.