

Preface

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Despite remarkable progress in recent decades, women still face many obstacles that prevent them from pursuing and advancing in biomedical careers. Barriers of entrenched social attitudes, outdated institutional systems, financial constraints, family responsibilities, and discrimination continue to hinder women in their efforts to achieve and contribute according to their potential as health care professionals, academicians, and biomedical scientists. This has been particularly true in the surgical specialties of medicine, especially thoracic surgery. Fortunately, today, thanks to the vocal advocacy and purposeful efforts of women and men within organizations such as The Society of Thoracic Surgeons, change is at hand. Indeed, if current trends and initiatives of The Society of Thoracic Surgeons, the National Institutes of Health (NIH), the American Society of Cell Biology, and other professional groups, Federal agencies, and advocacy organizations are realized, the demographic profile of the scientific and health professional communities in the 21st century will truly mirror that of the American populace.

During the past decade, effective advocacy and societal trends have focused unprecedented attention and resources on women's health. The best means of ensuring that research related to women's health remains a visible and active priority in the future is to increase the number of women in advanced and policymaking positions in the biomedical professions, including within medical specialties that few women have traditionally pursued. Recognizing the actual and potential contributions of women to the advancement of medical knowledge and health care is a priority for the Office of Research on Women's Health (ORWH), which was established at the NIH in September 1990 and given the mandate to strengthen and enhance research related to diseases, disorders, and conditions that affect women; to ensure the appropriate inclusion of women and minority members in NIH-supported clinical studies; and to identify barriers and create pathways for women to enter and advance in biomedical careers. To fulfill the third element of this mandate, the ORWH supports a wide range of programs and activities in career development for women and girls across the educational spectrum.

While recruitment of women into biomedical careers has increased steadily in recent years, with women now well represented in graduate and medical degree programs, women are not equally represented in positions of leadership. To that end, the ORWH has initiated a

number of programs and partnerships designed to encourage the interest of young women in the biomedical sciences and professions, to increase the number of women in biomedical careers, and to facilitate their advancement in such careers. Despite the fact that women are gaining overall parity in terms of numbers in medical schools, they have yet to achieve parity in terms of tenure and promotions within academic medicine, nor are they entering the surgical specialties of medicine in numbers on par with men. For example, in 1998 to 1999, only 6.3% of residents in thoracic surgery, 7.2% of residents in orthopedic surgery, 9.6% of residents in neurological surgery, 16.7% of residents in vascular surgery, 19.4% of residents in plastic surgery, 21% of residents in general surgery, and 27.8% of residents in pediatric surgery were women [1].

Acting in accordance with a philosophy expressed by a woman who was a leader—and a trail blazer—in the world of music and civil rights, Marian Anderson, who said "Leadership should be born out of the understanding of the needs of those who would be affected by it" [2], the ORWH convened a public hearing and a workshop to address issues and develop strategies for action to recruit, retain, and advance women in biomedical careers in 1992. The recommendations from this workshop are highlighted in a report, *Women in Biomedical Careers: Dynamics of Change—Strategies for the 21st Century*, available from the ORWH. Central to the workshop was a recognition that the successful training and promotion of women in the biomedical sciences is a continuum, beginning at the formative stages of a woman's education and continuing throughout her career. Role models and mentoring were described as important factors in recruiting women into biomedical careers. The paucity of role models, especially women role models, was cited as a serious disadvantage to women at all career stages in the biomedical profession. Recommendations were offered to increase mentoring, such as developing reward systems, encouraging men to mentor women students, actively recruiting women scientists to positions of visibility and accessibility, and educating and training directors of academic programs on the importance of role models for all future scientists, including women.

In response to these recommendations, the ORWH launched a number of initiatives and programs designed to foster the interest of young girls and women in biomedical careers. Among these is the award-winning video, "Women Are Surgeons," which was developed in collaboration with the NIH Office of Science Education and benefitted from the contributions of Dr Rosalyn Scott, President of Women in Thoracic Surgery. Another ORWH-supported program, Building Interdisciplinary

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Research Careers in Women's Health (BIRCWH), supports research career development of junior faculty members through a mentored research experience leading to an independent scientific career addressing women's health concerns. Other programs foster the training of research scientists who can address the many unanswered questions about women's health and sex and gender differences in health and disease through basic, translational, or clinical and/or health services research.

Recognizing that professional societies can make tremendous contributions to helping to foster women's careers, the ORWH and several other components of the NIH sponsored a workshop in December 1999 and a follow-up meeting in June 2000 with the American Society for Cell Biology to examine women's careers in science and the role of professional societies in promoting women's career advancement. Participants discussed strategies that their societies can employ to foster women's participation in science, to facilitate mentoring relationships, to identify ways to overcome barriers to women's achievement in science, and to develop products that societies can provide to their members concerning careers in science. The report and recommendations—which reflect the participation of members from such organizations as the Association of Women Surgeons, Association for Women in Science, Executive Leadership in Academic Medicine, and the Federation of Organizations for Professional Women—from the workshop are

available from ORWH and online (<http://www4.od.nih.gov/axxs/default.htm>).

The Women in Thoracic Surgery Symposium held on January 31, 2000, at the Annual Meeting of The Society of Thoracic Surgeons and the publication of these proceedings as a supplement to the *Annals of Thoracic Surgery* are important milestones in documenting women's past contributions to—and ever-increasing participation in—the field of thoracic surgery. The ORWH commends the visionary leadership of The Society of Thoracic Surgeons and Women in Thoracic Surgery for recognizing the contributions of women like Dr Nina Starr Braunwald to thoracic surgery and for their institutional commitment to fostering the next generation of women thoracic surgeons. The ORWH looks forward to working with the Society of Thoracic Surgeons and Women in Thoracic Surgery to help every aspiring woman surgeon to realize her potential and contribute to the betterment of our nation's health.

References

1. Association of American Medical Colleges. Data Book 2000. Table F9: Women Residents. Retrieved on the World Wide Web October 3, 2000: <http://www.aamc.org/publications/databook/>
2. Anderson M. New York Times, July 22, 1951.