The American Society of Biochemistry and Molecular Biology (ASBMB) is one of the world’s largest professional Societies for the specific advancement of biochemists and molecular biologists and the disciplines that they represent. Many of its members are internationally recognized in their respective scientific disciplines, and include 97 recipients of Nobel Prizes in chemistry, or physiology and medicine between 1922 and 2009. ASBMB publishes several journals for the dissemination of scientific findings, including the highly prestigious Journal of Biological Chemistry. Moreover, it formally advocates for national funding of basic research and education, supports science education at all levels, and promotes the diversity of individuals pursuing scientific degrees and entering the scientific work force. Nevertheless, it is clear that much more work needs to be done to meet the challenge of integrating people of color fully into its organization and the scientific enterprise at large.

Data on women of color within ASBMB

Currently, ASBMB has an overall membership of ~11,019 word wide. Of the 9132 members who chose to report their gender during 2012 registration and membership renewal (~83%), ~67% are male and ~33% are female. Unfortunately, statistics on ethnicity are not particularly strong because of gross underreporting of that data by registrants. Of the domestic undergraduate members (1762 total), 22 of the 106 females that reported ethnicity are African American, 19 are Asian, 20 are Hispanic, and 4 are Other. Of the domestic graduate members (555 total), 17 of the 127 females that reported ethnicity are African American, 26 are Asian, 15 are Hispanic, and 9 are Other. Of the domestic postdoctoral (Associate) members (520 total) 6 of the 100 females that reported ethnicity are African American, 34 are Asian, 6 are Hispanic, and 7 are Other. Of the domestic regular members (5623 total), 16 of the 243 females who reported ethnicity are African American, 58 are Asian, 8 are Hispanic, and 2 are Other. Similar data are also available for 2011 and 2010. At present, there are no underrepresented women of color (i.e. African Americans, Hispanics, Native Americans etc) who serve as voting members of council, which are positions that are elected by members of the society. However, women of color, typically appointed by the president of the society, play key roles on various society committees.

Challenges or barriers to success that confront women of color in ASBMB
Many of the barriers faced by women of color are also faced by women in general, or people of color from both genders. However, these barriers are often heightened for women of color, who suffer from being a dual minority. Some of the barriers are cultural in nature. For example, Hispanic women in the Southwest, particularly first generation students, find it difficult to leave home to pursue science careers because of familial pressures to remain nearby. Other barriers result from the competitiveness and workload associated with an academic career in science, which interfere with familial responsibilities. Negative stereotypes of women and people of color, as well as low expectations, also present challenges for career advancement for women of color. Although it is not expected that these barriers will fade away in the near future, many can be overcome through effective mentoring.

A lack of a cohesive network among women of color in the sciences is a major obstacle for career advancement. Although it is clear that people from a variety of backgrounds can offer valuable relationships, women of color at large research institutions are often in environments with few minority peers, while faculty at smaller institutions often have few colleagues who can serve as role models and mentors. Professional societies are uniquely positioned to serve women of color by fostering career advancement through mentoring resources, leadership experiences, and networking opportunities. The ASBMB annual meeting serves as a fertile intellectual environment for all scientists making specific efforts to nurture the scientific growth of women, particularly women of color. The society has a standing policy that requires at least 33% female or minority representation among lecturers in the many theme-based scientific programs at the annual meeting. This policy is enforced at an annual meeting of program organizers, wherein each platform is thoroughly vetted by a committee to ensure diversity. Moreover, all members of the annual meeting program-planning committee are actively encouraged to identify potential minority scientists from the society’s database of minority scientists. These policies have inarguably increased the visibility of minorities and women at the annual meeting although the representation of women of color remains limited.

The annual ASBMB meeting is also an ideal place to become apprised of the most current advances within and outside of a scientist’s discipline and to interact with professionals from industry, government, and academics. One such opportunity offered by the ASBMB is the
women’s networking reception that often features a renowned female scientist who leads discussions related to the unique challenges faced by women in the sciences. These interactions are particularly critical for early career scientists. However, the participation of women may be limited by childcare needs. The ASBMB meeting offers affordable, on-site childcare during the annual meeting to meet this need and has previously offered travel subsidies to off-set the additional cost of travel in these cases. The society also understands that sustained awareness of these issues requires adequate representation of women of color in the society’s leadership. In preparing this document, the society agrees that there has been adequate representation of women with four of the past five society presidents being women. A more challenging goal will be adequate representation of women of color in the society’s top leadership posts.

Although all women in academia are challenged with maintaining a balance between career and family, women of color are acutely faced with additional demands, making the advancement up the academic ladder even more arduous. These challenges stem from a diverse array of factors, including cultural differences related to the role of females as the primary caretaker and excessive institutional responsibilities. For example, not only are minority females expected to serve on institutional committees, but also to lead and/or actively champion diversity initiatives. Collectively these challenges can impair advancement towards promotion and tenure. To address this issue, the ASBMB MAC recommends the following: 1) Supplements to support maternity-related absence and 2) Formal mentoring programs to facilitate academic advancement.

**Maternity-Related Supplements**

To facilitate increased retention of women of color in academia and ensure their professional success, supplemental funding is needed to support postdoctoral scientists who are on maternity leave or absent for other child care-related activities. The postdoctoral tenure is a formative period in which one establishes research prominence by exhibiting a strong record of productivity and initiating an independent research program. To ensure that minority women are competitive for assistant professor positions and maximize productivity during maternity leave, funding institutions like NIH and NSF should establish supplements to provide technical support for pregnant postdoctoral scientists who are on maternity leave. This funding mechanism would
allow a PI to hire a technician to carry out studies while the postdoctoral researcher is unable to work in the laboratory. Not only would the supplement benefit the postdoctoral scientist and minimize the risk of low productivity during this critical period, but also ensure that the postdoctoral researcher’s absence does not negatively impact the PI’s research program. In addition to establishing supplements to support postdoctoral scientists who are on maternity leave, mechanisms to extend funding for PIs who are on maternity leave would also increase the likelihood of a successful academic career. This type of funding mechanism may also provide for additional technical support while the PI is on maternity leave.

*Mentorship at Key Transition Points*

Although the number of women of color in academia is very low, this number decreases precipitously with advancement up the career ladder from postdoctoral researcher to full professor. Moreover, the number of women of color in administrative academic positions (e.g. chair, dean) is a very small percentage of the overall scientific academic workforce. These daunting statistics point to an urgent need for mentoring programs that help women of color navigate key transitions in the academic career. While funding agencies like NIH have programs such as the Minority Access to Research Careers and the Predoctoral Ruth Kirschstein-NRSA Fellowships to promote diversity and increase the number of minority undergraduate and graduate students in research, funding mechanisms to support women of color who are independent investigators are nonexistent. Given that mentoring is integral in building a successful academic career, establishing funding mechanisms to support mentor-mentee partnerships that would assist women of color junior faculty navigate the promotion and tenure process, develop effective grant writing skills, negotiate institutional resources, and serve on departmental and institutional committees without undermining the success of their research program are key. Many of these mentor-mentee relationships can be forged through professional societies, which have significantly greater extensive networks that can allow for the most effective pairings.