

Commentary

Underrepresented Minorities in Science: ACNP Strives to Increase Minority Representation and Inclusion

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The need and importance for diversity in science, technology, engineering, and mathematics (STEM) have been recognized and documented for decades as a socioeconomic good. Broadly, diversity of thought is at the heart of successful scientific research. Modern science, by its nature, is largely collaborative and requires the pursuit of the best ideas generated by a team of people. In this context, diversity of thought, of background, and of experience leads to a wider pool of innovative hypotheses for scientists to draw from. Scientists in general pride themselves on their objectivity; nevertheless, point of view, background, and personal experience significantly contribute to what scientific questions are asked and how researchers go about answering them.

Depending on perspective and context, the term diversity can mean different things to different people. For instance, individuals from all over the world with a variety of backgrounds already engage in the scientific enterprise, bringing with them abundant cultural and philosophical inclinations. Within the context of this article, however, we use the term diversity to refer to the inclusion of women and minorities. Minorities, in turn, are defined as certain racial and ethnic groups such as African American, Latino, Native American and Pacific Islander—including people with disabilities and other disadvantaged backgrounds; such populations traditionally underrepresented in science fields. The purpose of this commentary is to give a broad overview of the state of diversification in science; more specifically, minority representation within the American College of Neuropsychopharmacology (ACNP), and on initiatives conducive to attracting, developing, and retaining these scientists within the ACNP.

From the outset, it should be noted that women and underrepresented minorities (URMs) are earning PhDs in science in greater numbers than ever before, reflecting the progress made from years of programmatic investment;

however, despite a national emphasis on diversification, both women and URMs often encounter significant, if not insurmountable, professional challenges, and today remain severely underrepresented in science and engineering (National Research Council, 2007, 2011; National Science Foundation, 2014). Furthermore, according to the National Science Foundation (NSF), women, and URM scientists and engineers are more likely to be unemployed (National Science Foundation, 2014). Indeed, recent reports demonstrate that in spite of notable increases in hiring activity in STEM fields since the year 2000, existing hiring practices have not benefited women and minorities (Neuhauser, 2015; Change the Equation, 2015). Instead, the gender and racial gap in science continues to widen, and our field is, for all intents and purposes, no more diverse now than it was almost two decades ago (Change the Equation, 2015; National Science Foundation, 2014; Neuhauser, 2015).

The National Institutes of Health (NIH) has stated that improving diversity in biomedical research is crucial (Tabak and Collins, 2011). However, although women now earn over half of PhDs in the biomedical sciences and in academic medicine, they represent a third of the tenured and tenure-track faculty in biomedical sciences (Leadley *et al*, 2012), may receive less start-up funding than men (Sege *et al*, 2015), comprise <20% of senior investigators at the NIH (Women Scientist Advisors, 2016), and their numbers in upper management and scientific advisory boards in the biotechnology (McCook, 2013) and pharmaceutical (Deman, 2012) industry are even less admirable. The picture is grimmer for racial/ethnic URMs, who make up only 2% of new tenure-track and tenured faculty at medical schools despite receiving 13% of PhDs in these fields; it is worth noting that these numbers are virtually unchanged from those reported in 1980 (Leadley *et al*, 2012; National Institutes of Health, 2012; National Science Foundation, 2015). Furthermore, women and URMs spend more time in lower academic ranks, are promoted at much lower rates, are paid less (compared with others in similar positions), are less likely to hold senior faculty and administrative positions, and receive <5% of NIH R01 awards (Fang *et al*, 2000; Leadley

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et al, 2012; National Institutes of Health, 2012; Tabak and Collins, 2011). These obstacles may reflect a lack of effective networking opportunities, a lack of committed mentors, or differences in faculty responsibility—that is, women and URMs may be less likely to be given regular opportunities to distinguish themselves. All of these factors may ultimately make women and URMs less visible to key decision-makers (Rodriguez *et al*, 2014, 2015). Deplorably, the deck seems stacked even higher against women of color, as they are likely to face double disadvantage: that of being female and a racial/ethnic minority (Bernstein, 2015).

Recognizing the importance for increased diversity and inclusion, the ACNP implemented targeted initiatives—including the formation of several Task Force groups—to better address issues related to inclusion and retention of women (see Moghaddam and Gur, 2015) and URMs, and to gauge progress. The Minority Task Force (MTF) was charged by then president David Lewis with assessing the current makeup of URM membership and developing ways, if needed, to attract and retain more URMs in the ACNP. Initial efforts in this regard found that URM participation and membership in the ACNP was distressingly low (see MTF Report at www.acnp.org). The report found that of 823 active members (including Associate, Full, and Fellow), only 0.8% identified as African American, 3.4% as Hispanic/Latino, and 0% Pacific Islander or Native Americans. In addition, between 2011 and 2014, URM membership in the college remained flat (~3%; see Figure 1). Of 224 Emeritus members, 0.9% identified as Hispanic and 0% from all the other subgroups (although 29% did not report race/ethnicity).

In addition, data from 2011 to 2014 indicated that of 218 past travel awardees, only 33 (15.1%) were URMs. This low percentage may be partly attributable to significantly low numbers of URM applicants (only seven in 2013). In an effort to increase diversity, the ACNP established a Minority Travel Award in 1991 to facilitate the attendance and participation of URMs at its annual meetings. Recently, more concerted efforts were made, including sending letters to psychiatry and pharmacology chairs, and to NIH directors encouraging URMs to apply. Hearteningly, signs of progress

are starting to emerge. In 2014, 28 URM applications were received, and 12 of the 58 (21%) travel awardees were URMs; in 2015, 44 of the 338 applications received were from URMs, and 9 of the 58 awards (15%) went to URMs.

The MTF also investigated how many URM travel awardees went on to become members of the ANCP. We found that of 65 URM travel awardees between 2008 and 2014, only 2 (3.1%) became Associate or Full members; in contrast, 31 of 257 (12.1%) non-URM travel awardees became Associate or Full members. Although the reason for such disappointing numbers is unclear, it is possible that over a decade of slowdowns in federal research dollars combined with decreased likelihood of success in obtaining NIH grant funding (Ginther *et al*, 2011) may place URM scientists at an even greater disadvantage, thus taking them longer to build a successful application for membership. Nevertheless, these findings clearly suggest that we must engage in much more aggressive efforts to attract, recruit, and retain URMs in the ACNP. These efforts may include tracking URM travel awardees and providing mentorship as they progress in the field, making benchmarks toward membership more transparent, and helping navigate the ‘unstated’ rules for promotion within the college.

Though far from ideal, the current situation is not without hope. Specifically, the ACNP Council, working in conjunction with the MTF, has implemented new short- and long-term initiatives (see MTF Report at www.acnp.org) to increase URM representation and inclusion in the ACNP. Another bright spot is the increased number of accepted panels that include URMs. This was the result of a programmatic change made to the call for proposals that included women (42%) and URMs (6%) in the composition of these panels. Other initiatives include: releasing funds to past URM travel awardees with an invitation to attend the meeting for two additional years (pending adequate and continued progress in the field); the addition of a URM lunch—similar to the women’s—to discuss issues related to increasing diversity and inclusion; the development of guidelines to facilitate mentorships that may go beyond an initial meeting; ongoing discussion of ways to increase URM representation in key committees in the ACNP; and the creation of an ACNP-sanctioned mentoring award to those members making a significant difference in promoting diversity and inclusion in science and within the college.

As noted at the beginning of this commentary, diversity in the sciences is crucial. But simply hoping to increase diversity in numbers without genuine commitment to a strategic plan that also involves inclusion is pointless. We are in a position to make a real difference in terms of offering young URMs the opportunity to be identified early, successfully mentored, and trained in the best programs. As with all eager young scientists, what they make of their opportunity is up to them. Most importantly, the efforts we make now to implement sustainable initiatives that will increase the diversity of the ACNP, so that it truly is a representative membership of high quality scientists will pave the way to a stronger future membership. In addition to the ability to track our progress, any such initiatives should also strive to create an atmosphere of warm and collaborative inclusion within the ACNP. It is in this spirit that we must lend genuine support to these initiatives for them to succeed.

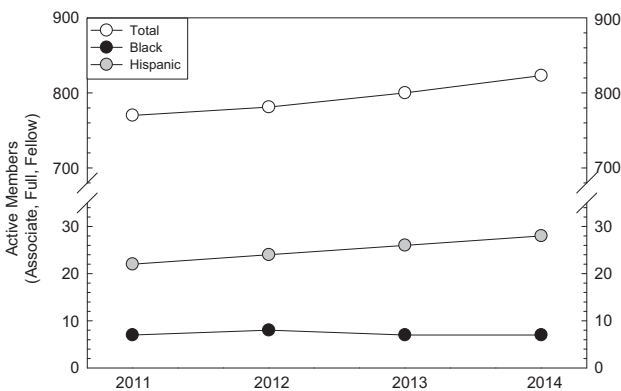


Figure 1 ACNP membership makeup (Associate, Full, and Fellow) for the years 2011–2014 shown as total (open symbols), and by URM subgroups, including Hispanic (gray symbols) and Black (black symbols). Minority Task Force Report on initiatives at www.acnp.org. Data presented include women and men members combined.

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