

# PERSPECTIVE: PERSON-ENVIRONMENT CONGRUENCE: A CALL FOR INCREASED PRECISION IN MATCHING RESEARCH MENTORS AND MENTEES

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## MATCHING RESEARCH MENTORS AND MENTEES

The scientific literature regarding the importance of research mentoring for early career faculty has grown considerably over the past 20 years.<sup>1,2</sup> Multiple studies have produced findings indicating that quality mentoring has a profound positive effect on research careers.<sup>3-5</sup> Early career faculty who have strong mentors tend to reach their career milestones in a timely manner, adeptly navigate academic environments, establish solid track records in scientific publishing and obtain extramural funding. This body of evidence has inspired, in part, the development of mentoring policies,

practices and programs employed by a significant segment of academic institutions and utilized by many federal and state funding agencies interested in academic workforce development.<sup>6,7</sup>

Several studies have examined the characteristics, attributes, and competencies of mentors who work with early-career faculty mentees who are employed in research-intensive institutions;<sup>4</sup> however, a plethora of promising researchers who can enhance the diversity of biomedical scientists also reside in teaching-intensive institutions such as Historically Black Colleges and Universities (HBCUs). Early career faculty members in these settings often require mentors with unique skillsets, knowledge of, and experience as faculty in teaching-intensive institutions, and a deep appreciation for the history, accomplishments, and promise of these institutional environments to educate, impact and encourage racial/ethnic minority students to be prepared for careers in the biomedical field.

Student education continues to be the principal mission of HBCUs, although research has grown to become an integral and important component of their respective missions and an essential part of the tenure and promotion process.<sup>8</sup> Research training and mentoring programs intentionally designed for the unique context of teaching-intensive environments (eg, heavy

teaching and student advising loads, significant community service responsibilities, limited campus-based research training opportunities, and lack of a critical mass of research peers and senior mentors)<sup>8</sup> are needed to fully realize and build upon the significant potential that resides within HBCUs and other teaching-intensive colleges and universities. These training programs need to be supported by skilled research mentors who: 1) understand and appreciate teaching-intensive environments; 2) can design and guide the implementation of strategies to build research careers in various types of academic settings; and 3) are committed to advancing the potential for research careers of early career faculty who have primary teaching responsibilities. This perspective is a call for increased attention to the importance of mentors working with early career faculty in non-research-intensive environments to have: a deep familiarity with the academic institutional culture, experience and appreciation for teaching-intensive institutions; and an awareness of practical and effective mentoring strategies in these particular settings.

Formal mentor training programs at academic medical centers have become standardized through the NIH-funded Clinical Translational and Science Award (CTSA) programs. The metrics for mentoring excellence among these academic medical

centers include success in extramural funding, a vigorous research program, relevant scientific expertise, strong research resources, sufficient stature to help navigate the institution and to network within and across institutions, adequate time for mentorship, and a history of mentoring success.<sup>5</sup> At academic medical centers, clinical responsibilities can present significant challenges for aspiring clinician-scientists and early career investigators are often paired with mentors who have experience with balancing clinical demands with research time. We contend that early career faculty mentees attempting to launch research programs at teaching-intensive institutions should be afforded similar consideration and have opportunities to be mentored by experienced investigators who are knowledgeable about balancing research demands with exceptionally high teaching loads.

The Programs to Increase Diversity among Individuals Engaged in Health-Related Research (PRIDE) program is a long-standing, multi-site research training and mentoring program for early career faculty who are from groups underrepresented in biomedical science, including those with disabilities. Each of the seven training programs, funded by the National Heart, Lung and Blood Institute (NHLBI), specialize in individual areas of research priorities of the NHLBI mission, utilize similar eligibility criteria for potential mentees, and are supported by a Coordination Core.<sup>9,10</sup> The Obesity Health Disparities program (OHD PRIDE) is the only PRIDE site that seeks to identify, recruit and engage with mentees who are graduates of, or ear-

ly career faculty at HBCUs. Mentors identified for this program have successful scholarly track records, experience in working in HBCUs and other teaching-intensive environments, and knowledge and practice in guiding underrepresented minority faculty in the development of productive research careers. OHD PRIDE mentors spend considerable time gathering detailed information about mentees and their environments to identify factors that could slow or impede the development of viable research projects. These skilled advisors use this information to develop personalized mentoring and training plans that help mentees establish research track records while meeting teaching and service responsibilities at their respective institutions. OHD PRIDE mentors outline and train mentees to employ writing schedules aligned with their academic calendars, implement structured writing times, and utilize coaching strategies to provide support and frameworks for enhancing research productivity.

Establishing person-environment congruence for early career researchers at teaching-intensive institution requires a considerable time investment from mentors; however, the yield can be considerable. Strong and committed research mentors who understand the nuances of developing research careers for underrepresented faculty at teaching-intensive institutions, particularly HBCUs, are an essential element to the effort to enhance diversity in biomedical research.

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