

NeuroView

A year in review: Are diversity, equity, and inclusion initiatives fixing systemic barriers?

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<https://doi.org/10.1016/j.neuron.2021.07.014>

Are current diversity, equity, and inclusion initiatives addressing systemic issues? This article highlights the progress thus far and emphasizes the systemic and cultural shifts needed to support and retain historically excluded scientists.

Conversations surrounding diversity, equity, and inclusion (DEI) have been at the forefront within the neuroscience community in recent months. The pervasiveness of anti-Black racism has been a catalyst for many conversations surrounding the culture and climate of science, technology, engineering, and mathematics (STEM) at large. From the global pandemic that has disproportionately affected marginalized people, to the systemic racism and principles within STEM that deter historically excluded trainees from staying in the field, it has been a year of listening and learning, as well as promises for a better environment: one that supports trainees, understands the concept of intersectionality, and aligns academic excellence with DEI principles. Trainee-driven grassroots organizations have led this charge and birthed a discussion on the importance of DEI principles being incorporated within the scientific enterprise. Now, however, it is time for institutions, both federal and university-based, to support and ingrain DEI commitments into funding mechanisms, tenure and promotion, and academic culture—to create actionable change and move beyond acknowledging the existence of DEI issues and shift to addressing these issues within academia, the neuroscience community, and STEM as a whole. Academia is a beacon of knowledge and those within it should be the leading lights for cultivating diverse teams. With ideas and perspectives provided by diverse

scholars, we can better solve problems and advance research. This cannot happen with the prevalence of stagnant, status quo perspectives on diversity. It requires the expansion of the scope of DEI issues beyond just racial and ethnic identities to encompass nationality, religion, socioeconomic status, disability status, sexual orientation, sex, and gender. Thus, it is time to evaluate the progress made since the release of institutional statements, development of action collaboratives, and formation of DEI committees.

Grassroots trainee-driven movements have spearheaded a push to demand change within the scientific enterprise. These organizations have also embodied the mantra commonly passed down from mentor to mentee: “be the change you want to see.” From commencement addresses, panels, conferences, publications, and funding opportunities, the work of early career scientists to improve the culture and climate of academia has been multipronged. Historically excluded scholars have been given a platform to use their voices and share their stories. Conferences hosted by Black In Neuro and NeuroMatch have provided opportunities for scholars to share not just their personal experiences but their scholarly work. This trend has continued with other organizations beginning their own conferences and/or seminar series to highlight the scholarship of Black scientists. Publi-

cations from various scholars emphasize the importance of DEI work and have provided resources on how to improve our community at large (Murray et al., 2021; Singleton et al., 2021; Stevens et al., 2021). Further, funding opportunities for historically excluded groups have also been on the rise including Black in Cancer’s new program to support Black postdoctoral fellows looking for faculty positions and the Ben Barres Fellowship sponsored by the National Organization of Gay and Lesbian Scientists and Technical Professionals Inc for trans, intersex, and nonbinary graduate students and postdoctoral fellows in STEM (<https://gpchemist.acs.org/opportunities/diversity-and-inclusion/ben-barres-fellowship.html>). Collectively, these DEI efforts are empowering trainees on multiple levels: giving students a platform to speak about both their lived experiences and their science, financially supporting them for career growth, and providing spaces to empower the next generation. There are also good-faith efforts in addressing DEI at the faculty level. Cluster hires, from institutes like Mount Sinai’s Icahn School of Medicine, aim to provide a sense of belonging and monetary support to increase the number of historically excluded faculty members in a given institution. Furthermore, the new policy by the National Institute of Health on increasing diverse participants in studies and earmarked funding for Diversity R01 grants are also steps in the



right direction (<https://grants.nih.gov/grants/guide/notice-files/NOT-NS-21-049.html>). Most recently, Indiana University-Purdue University Indianapolis has taken these efforts a step forward and begun approving policies to consider DEI work within the tenure and promotion process (<https://www.insidehighered.com/news/2021/05/14/iupui-creates-path-promotion-and-tenure-based-dei-work>). Collectively, these funding and hiring initiatives prioritize not just the principles of DEI but also high-quality science. These mechanisms also shed light on the importance of resources and money as the academic community embarks on fostering the principles of DEI. By providing these resources in a top-down manner, it signifies that the voices of historically excluded scholars are not just heard but valued and essential to creating a productive and collaborative community. These changes in funding mechanisms, resources, and culture are the stepping stones needed to recruit, retain, and empower minoritized voices within STEM.

Despite these steps forward, many grassroots movements and historically excluded early career scientists have pointed out major difficulties and setbacks with addressing DEI issues within the academic community: (1) paying early career scientists for DEI service; (2) lack of discussion surrounding intersectionality; and (3) training past, current, and future scholars in DEI practices. Often, DEI committees, panels, and conferences are unwilling or unable to pay historically excluded scholars for their perspectives and voices. Whether it be on university-led committees or panels within an academic conference, compensation for trainees' expertise and energy is essential. Just as an honorarium is provided for scientific seminars compensation should be provided for DEI efforts including panels and workshops. Additionally, the current work-from-home model has shed light on ableism, or discrimination against people with disabilities within the scientific community (Peterson, 2021). From a lack of accommodations for disabled scholars to the "return to pre-pandemic life" movement, institutions have failed to learn about accessibility and incorporate it into their DEI initiatives. This should not be surprising as academia and the scientific enter-

prise were not built for or with disabled people in mind. However, in order to truly promote DEI, it is necessary to embrace intersectionality and support people's whole identities including their disabilities. This includes recognizing individual and collective struggles and forging policies to ensure equitable, inclusive, accessible and safe working environments. These policy changes should be implemented for both early career scientists and senior researchers and emphasize training in the principles of DEI and understanding the consequences of maintaining a stagnant community. Interestingly, workshops conducted by the National Academy of Science Engineering and Medicine have demonstrated starkly contrasting opinions from early career scientists and those in positions of power in re-evaluating the training received by postdoctoral fellows specifically (<https://www.nap.edu/read/26169/chapter/1>). When postdoctoral fellows ask for training on personnel management and/or creating research environments enriched and rooted in the principles of DEI, the response is usually dismissive. There is this myth that all, or at least most, of the issues faced by early career scientists could be solved by picking the "right" mentor or simply extricating oneself from a bad environment. This approach ignores systemic issues and power dynamics within academia as a whole, thereby forcing trainees to undertake the task of creating a better future for academia while giving up emotional labor, time, and resources that could otherwise be used for their academic work.

As we pass the one-year mark of the pandemic, the high-profile murders of Black people at the hands of police across the globe and the promises of solidarity, listening, and learning made by academic institutions, programs, and departments have not been forgotten. In fact, numerous people, most notably Black women, have asked via social media where the institutional changes that were supposed to be forged by DEI promises are. It is in these moments that people in positions of power (whether that be PIs, department chairs, editors, deans, provosts, and directors of funding agencies) should consider the value of their DEI efforts. These conversations have begun already with criticism of recent NIH initiatives ([\[statnews.com/2021/06/10/nih-releases-plan-to-confront-structural-racism-critics-say-its-not-enough/\]\(https://www.statnews.com/2021/06/10/nih-releases-plan-to-confront-structural-racism-critics-say-its-not-enough/\)\). Nuanced discussions of all DEI efforts are essential and involve taking a deeper look at each aspect of DEI as it relates to the neuroscience community but also the wider STEM landscape. DEI without the element of diversity results in a homogeneous and unchanging environment dominated by what is considered "normal" and "professional" \(Ali et al., 2021\); that is, white, cis-heteronormative men or male-dominated culture. Without equity, DEI efforts and policies rely on the free labor of minoritized students, thus resulting in pay inequities that intersect in multiple forms of social identity as well as the inevitable hiring gaps and unpaid labor. Without inclusion, DEI efforts promote tokenism and ostracize the very perspectives it hopes to attract. Success in these three domains also depends on representation and accountability, an effort that many early career scientists are focused on. Without representation in DEI efforts, intersectionality is ignored and results in a loss of diverse voices and perspectives, a lack of policies that address issues facing minoritized early career scientists, and an environment without role models for them. This is best summed up in a quote by Marian Wright Edelman, founder and former president of the Children's Defense Fund: "You can't be what you can't see." The repercussions of a lack of representation and intersectionality can most often be seen when white women are the sole source of diversity in a given environment. Lastly, and perhaps most integral, is the principle of accountability. Without accountability, the scientific enterprise will remain rooted in capitalism and white supremacy, which work together to emphasize a publish-or-perish, profit-over-people, "pull yourself up by your bootstraps"-style of toxic mentorship and career advancement.](https://www.</p></div><div data-bbox=)

In the summer of 2020, scientists from historically excluded groups asked the scientific community to acknowledge the extra work, emotional labor, and effort it takes to exist as minoritized scholars at all levels and take meaningful steps to fix it. The answer to addressing these issues is systemic change within the neuroscience community, scientific enterprise, and STEM as a whole. While progress

has been made, there is still a lack of policy and support that addresses the real issue—the culture of academia. From the lack of consequences for racism, sexism, ableism, homophobia, and transphobia to the deficits in funding, tenure, promotion, and citations, there must be a shift at all levels in academic culture from early career scientists to administrative leadership. This systemic change should start by reimagining a future for academia rooted in the principles of DEI. It requires rethinking the promotion and tenure processes so that they reflect the importance of excellent mentorship, a history of celebrating DEI, and high-quality science. An impressive and informative outline of these steps was recently published for the geosciences (Ali et al., 2021). These changes include, at bare minimum, evaluating the current climate; placing Black, Brown, Indigenous, disabled, trans, and/or nonbinary people in positions of power; and giving them the resources and financial support to change policies. Shifting academic culture is also dependent upon providing scientists at all levels with the basic necessities to have fulfilling careers in both STEM and their personal lives. This includes access to proper healthcare, affordable childcare, and parental leave policies, along with salaries and retirement benefits that reflect a livable wage. Making these changes at the graduate level and engaging with those scholars is also critical, since early career scientists often bear the brunt of toxic academic environments (Lambert et al., 2020). As trainees do not possess the power to force change on their own and are often silenced or ignored when they do speak out against instances of harassment or inequality, it is no wonder that high attrition of historically excluded groups occurs at this stage (Allen-Ramdial and Campbell, 2014). From personal experiences and published work, it is clear that minoritized scholars often choose to leave not just STEM but academia as a whole due to the mistreatment and abuse they experience during graduate school (Martin et al., 2015). In order to rectify these injustices and retain early career scientists, an overhaul of the toxicity and inequity as well as academic culture they are exposed to is critical (Montgomery,

2020). Without this framework, DEI will continue to be performative in the eyes of historically excluded scientists and they will continue to leave for careers with better compensation and resources.

The systemic changes described above embrace a shift in culture within the field of neuroscience, the academic community, and STEM in order to work toward a solution where scholars of all identities thrive. We must continue to ask this fundamental question: are current DEI initiatives addressing systemic issues faced by historically excluded scientists? Without a systemic shift and culture change where people and their identities are valued more than data, where the product is the person, and the growth they do throughout their scientific career is appreciated, recognized, and rewarded, the answer will continue to be no. Importantly, the goal is to align the principles of DEI with scientific excellence and rigor, not replace them. In fact, studies have shown how the productivity, success, and innovation of research is uplifted when DEI is celebrated (Freeman and Huang, 2015). By expanding DEI efforts to include representation and accountability, from both top-down and bottom-up movements, the neuroscience community can change our culture, redefine our values, and ensure that the field represents and celebrates the rich differences within personal identities, benefitting everyone that inhabits our institutions.

Inspiration for this systemic and systematic shift can and should come from the trainee-driven grassroots organizations that are focusing on enriching the lives and scholarship of trainees by going beyond “being the change we want to see” and establishing programs and local communities and creating uplifting content that supports minoritized early career scientists (Murray et al., 2021). Organizations such as Black in Neuro, Queer In Neuro, and the Neuroscience Scholars Program are all working to ensure that historically excluded scientists are retained in order to ultimately enrich academia by embracing and expanding DEI efforts. Thus, those at the top must join in this endeavor by making DEI, representation, and accountability a priority structurally as well as an individual requirement for every academic and begin to carry some

of the burden grassroots organizations are currently lifting. DEI changes and policies will never move beyond being performative within the neuroscience community or STEM at large if minoritized early career scientists are continually left to fix the systems of the oppressor. In addition to continuing to listen and learn, action is needed.

ACKNOWLEDGMENTS

This work was supported by grants from National Institute of Health (5K00NS108539-04 to K.S.S. and DA050558-02 to A.J.D) and EPSRC (D.R.K.M.). The authors would like to thank Drs. Victor Faundez and Ubadah Sabbagh for support and feedback.

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