Making cancer research more inclusive

John D. Carpten, Lola Fashoyin-Aje, Levi A. Garraway and Robert Winn

We have been aware for some time that cancer research, from careers to clinical trials, is not as inclusive as it should be. The Black Lives Matter movement and protests against racism have emphasized that the time has come to stop talking about the lack of diversity, health inequities and structural racism in cancer research and instead work towards solutions. In that spirit, and on the basis of a virtual discussion during the American Association for Cancer Research 2020 Annual Meeting, we asked several scientists actively working to increase representation of Black American populations in cancer research how they are addressing these issues.

Q What programmes or strategies have you been working on or have been developed in your institution to increase recruitment and improve training of Black early career researchers or, on a broader scale, to increase recruitment of people from under-represented populations to careers in cancer research?

John Carpten. Several indirect and formal approaches have been used to recruit and train Black early career researchers. Indirectly, a number of our faculty members, including me, are part of an international network of under-represented scientists who attract potential trainees because of a shared perspective and academic excellence. Engagement and participation in associations and societies has helped to catalyse many of these relationships. An example is the [American Association for Cancer Research's \(AACR's\) Minorities in Cancer Research \(MICR\) Council](#). MICR organizes a number of annual activities to coordinate mentoring, training and career development opportunities for under-represented trainees and early stage faculty members. Moreover, my institute has leveraged other mechanisms, including the US National Cancer Institute (NCI) Center to Reduce Cancer Health Disparities-supported [Partnerships to Advance Cancer Health Equity \(PACHE\)](#) programme. A major priority of the overall PACHE programme is to increase recruitment and retention and improve development of early stage under-represented

investigators, and this is an important strategy used in growing this sector of the field. We helped create the [Florida-California Cancer Research Education and Engagement \(CaRE2\) Health Equity Center](#), which is a partnership that includes Florida A&M University, a historically Black college and university, the University of Florida and the USC Norris Comprehensive Cancer Center. Our CaRE2 centre was developed to help facilitate growth of research infrastructure at Florida A&M University, to expand community engagement in the context of cancer disparities research and to provide a platform for recruitment and career development of under-represented minority trainees, including early stage investigators. Additionally, the [NCI Continuing Umbrella of Research Experiences \(CURE\)](#) programme is another example of a formalized platform that we leverage; it provides funded training opportunities to under-represented minority trainees from middle school through to junior faculty positions to help grow and enhance the pool of minorities in cancer research.

Robert Winn. Virginia Commonwealth University (VCU) Massey Cancer Center has recognized that both internal and external partnerships will be critical to bringing diversity to our workforce.

Therefore, we've made significant efforts to create partnerships with groups such as the [National Medical Fellowships](#),

the AACR, Bristol Myers Squibb and the LUNgevity Foundation to set up programmes that will provide trainees with a curriculum that gives them new skills to carry out science and research efforts through a lens of social justice. For instance, at Massey, we acknowledge that social determinants of health can sometimes masquerade as biological — no, African Americans aren't simply genetically predisposed to cancer risk factors such as obesity, diabetes and hypertension, it's systemic issues at play such as redlining that reduces access to healthy food and preventive medical care — and acknowledging these root causes is critical to making a real impact on health equity.

Through these initiatives, we're attempting to train the next generation of clinical trialists to better connect with the communities they serve, and we think that this approach will be very attractive to a number of young trainees.

In addition, we have been working closely with the NCI, especially its [Center to Reduce Cancer Health Disparities](#), to develop pipeline programmes at VCU Massey Cancer Center.

Levi Garraway. To create more equitable pathways into sustainable careers in cancer research, we must dismantle the systemic barriers facing under-represented groups. As a biotech company focused on tackling some of the world's most serious diseases, Genentech, a member of the Roche Group, is addressing this challenge by identifying potential root causes and developing initiatives to help overcome them.

Barriers to talent recruitment may include both insufficient outreach mechanisms and lack of awareness of specific career opportunities within diverse populations. To mitigate these issues, we have pursued a company-wide focus around creating more opportunities for researchers from under-represented groups to have meaningful careers at Genentech and Roche. To help embed this mindset across our organization, we have established a chief diversity officer and a dedicated team that guides our overall diversity and inclusion strategy. In addition, leaders at our company are accountable for creating tailored action

Author contributions

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Robert Winn is Director of the Virginia Commonwealth University Massey Cancer Center as well as a pulmonologist and physician-scientist. His research focuses on lung cancer, health disparities and community-based health care. Additionally, he has served as the principal investigator on several community-based projects, including the All of Us Research Program.

plans to advance diversity, equity and inclusion within and outside our walls.

We also support specialized research training among under-represented groups, which may constitute another important career barrier. For example, we are partnering with the College of Engineering at the University of Michigan and a national network of 250-plus female biomedical engineering faculty members to provide critical research dollars. Here, the goal is to help address the gaping funding disparities regarding R01 grants for Black researchers, which in turn may reduce the likelihood of gaining tenure at research institutions. In addition, we work with professional organizations to build and support programmes that facilitate the transition of under-represented postdoctoral scientists into faculty positions.

An additional systemic barrier pertains to the overall talent pipeline for under-represented populations. Therefore, we also provide support for all stages of pathways to a cancer research career, starting early in the education pipeline. Several such initiatives seek to get elementary and middle school students excited about and confident in doing hands-on science. At the high school level, we are increasing access to industry-aligned career exploration learning. Finally, we provide postsecondary students with financial, academic and career building support and award research grants for early career and mid-career professionals. Towards this end, our most recent open call for grants focused explicitly on breaking down systemic barriers facing Black, Indigenous, Latino and other people of colour in health care and education. This initiative received considerable interest across the United States, with nearly 380 applicants.

In summary, we firmly believe that diversity improves science innovation, and

hence diverse representation is critical — from the laboratory bench to leadership. Building a sustainable workforce of Black and other under-represented cancer researchers requires career-catalysing funding, access to mentors and sponsors, and cultural shifts within research and academic institutions. We also know this requires investment in growing the pipeline and supporting the sustainability of Black faculty members. As a company, we will continue to seek new approaches to create pathways into the life sciences sector through recruitment, talent development, charitable contributions, strategic partnerships and employee volunteerism.

Lola Fashoyin-Aje. There are several programmes that aim to provide exposure to regulatory science and to provide educational opportunities and foster career development in science. Many of these programmes are internal US Food and Drug Administration (FDA) programmes, such as the [Oncology Center of Excellence Summer Scholars Program](#) for high school students in the Washington, DC, area, and programmes for college and graduate school students and postdoctoral fellows. In some cases, the FDA is a key partner in the educational effort, collaborating with external parties such as for fellowships in regulatory policy, wherein the FDA has partnered with Howard University, Genentech and GlaxoSmithKline^{1,2}. In addition to providing opportunities for networking and mentorship, which are critical for a successful research career, these programmes also serve as valuable recruitment opportunities for the FDA to achieve the goal of having a diverse workforce. The FDA Office of Minority Health and Health Equity supports the FDA Pharmacy Student Experiential Program, the National Center

for Toxicological Research summer student research programme ([ORISE](#)) and the Center for Food Safety and Applied Nutrition Professional Development Program in Food Science by funding teachers serving students in underserved communities to learn the accredited ‘Science and Our Food Supply’ curriculum. Along with the US National Institutes of Health and the US National Human Genome Research Institute, the FDA co-sponsors the [Postdoctoral Fellowship in Genomic Science and Health Equity](#), which is designed to prepare fellows to use genetic, genomic and pharmacogenomic approaches to advance minority health and health equity. Trainees from diverse backgrounds and varied institutions, including historically Black colleges and universities and minority-serving institutions, have participated in these programmes.

The best advice given to me is to have one or more champions who can provide coaching through the early stages of one’s career. These champions offer support, help identify opportunities for career development and can leverage their networks for the mentee’s benefit, which is critical for having a successful career. And one can never be too early in one’s career to give back and also be a mentor.

What advice would you give to Black early career researchers or, on a broader scale, early career researchers from under-represented populations?

J.C. Some key advice that I would provide to scientists from under-represented populations and communities is that the road will be challenging in unique ways due to the implicit bias and microaggressions that plague society. This can end up limiting opportunities and leading to some unfairness, which has been well documented. So one must understand that it’s a marathon and not a sprint. Also, there are a few things that you can do towards levelling the playing field. One is that excellence and skill are hard to overlook, so be excellent in all that you do. Also, leveraging and using established networks is important in identifying the best and most appropriate mentor who has your best interest at heart.

L.G. In my experience, the needs of researchers from under-represented backgrounds are often similar to those of the general research population, but the articulation of those needs and the available resources to guide them may differ markedly. Three example guiding principles are noted below.

First, find work that you love and do it well. Success in cancer research is a labour of love that requires a singular commitment. Those who take this road must be prepared to work extremely hard and make sacrifices. When I was a junior faculty member, a large proportion of my grant and paper writing was done at weekends and/or between the hours of 9 p.m. and 2 a.m. Having said that, the fulfilment associated with making scientific advances that could someday benefit patients with cancer is sweet indeed.

Second, pick a great mentor. The importance of outstanding mentorship in scientific research cannot be overstated. Essential characteristics of the best mentors include a track record of outstanding and rigorous science, being worthy of emulation professionally and personally, and having time for the mentee. Although nice to have, it is by no means essential for trainees who are Black or come from ethnically diverse backgrounds to choose a mentor who 'looks like them'. Most of my career mentors can be described as 'old(er) white guys' with hearts of gold!

Third, ask interesting questions by formulating rigorous hypotheses. The esteemed cancer researcher Robert Weinberg once said³ "it is as hard to work on an uninteresting problem as it is to work on an interesting problem." I have found it even harder to work on less interesting problems — they require so much more motivation! However, discerning the most interesting questions and forming cogent hypotheses are learned traits. They require great mentorship (see above) together with critical study of the scientific literature, which is replete with studies that encompass the entire spectrum of relevance and rigor.

R.W. The best advice I could give is the same advice that was handed down to me: be persistent and remain focused on your goals, and, most importantly, have a good dose of humility and a spoonful of grace. These qualities will allow you to have the best chance of seeing through a great idea. Also, most great ideas take a team, and learning how to be a team member is critical to one's long-term success.

How can we better address the problem that the populations that are being enrolled in cancer clinical trials are not reflective of the patients who will ultimately use the drugs being tested?

L.G. Note that we are changing the subject here. Considerations around how to develop a diverse talent pool for cancer research are

largely different from questions of inclusive research — yet in the biopharmaceutical arena these are often lumped together in the 'diversity, equity and inclusion' space as though they are somehow the same. If there is a common thread, it is that maximizing diversity — whether in the workforce or in clinical trial populations — tends to maximize opportunities for discovery and innovation.

Responses to medicines can differ on the basis of factors linked to sex, ethnicity and socio-economic demographics. Thus, it is critical for clinical trial participants to be broadly representative of the populations in which the relevant diseases occur (for example, inclusive research).

For inclusive research to be successful, it must become an explicit priority for a company or institution. This involves measurable goals, an action plan and dedicated personnel. At Genentech and Roche, for example, we established a substantial initiative several years ago to address the under-representation of minority or underserved populations in clinical research. Subsequently, this work evolved to become a global remit staffed by population science and health equity experts. The mission is to augment scientifically driven representation of understudied populations in clinical research, development and personalized health care. The specific focus includes diseases that differentially affect Black people and other people of colour, such as triple-negative breast cancer and multiple sclerosis.

Another key success factor for inclusive research involves bringing the studies to the patients. In particular, clinical trial site location is a crucial determinant of diverse patient access. More than half of all patients with cancer — and a disproportionately higher percentage of ethnically and socio-economically diverse patients — are treated in the community oncology setting. Too often, these community sites lie outside the reach of 'traditional' clinical trial networks. Therefore, focused efforts are required to take more trials directly to diverse community settings and to expand existing trial networks to encompass more inclusive catchment areas. For example, Genentech is working with OneOncology, a network of community-based cancer centres, to bring personalized care to diverse communities. We also must educate patients and investigators about these trials in a culturally competent manner and provide appropriate support, such as reimbursement for travel costs, parking and childcare.

Finally, close partnership with key stakeholders is essential. At our company, relevant partnerships include community and cancer advocacy groups, oncology cooperative groups, professional societies and government agencies, such as the Office of Minority Health and Health Equity at the FDA and the NCI.

L.F.-A. To better address the disparate representation of certain demographic subgroups in clinical trials, consideration of the reasons for intervening is important. Increasing diversity in clinical trials provides historically under-represented groups with the opportunity to contribute to and benefit from the progress made in understanding human disease and treatments for these diseases. For diseases such as cancer, clinical trials provide an important option where in many cases no treatments exist or available treatments provide marginal benefit. In these cases, participation in clinical trials offers the opportunity to access potentially effective treatments. A diverse study population also provides the opportunity to leverage the variability that exists across the population with the disease, and this may help to identify differences in the disease natural history and/or in drug response that may impact outcomes; discovering these variabilities early in the research process promotes efficient research programmes and facilitates understanding of the expected benefits of therapies in a larger population.

For most trials, a key aim is to ensure that the design helps to answer an important scientific question. For trials designed to generate information about a drug's safety, effectiveness and dosage, regulators consider whether the data generated in the trial will be applicable to the population that will use the drug after approval. Diversity in the population that is enrolled in the trials ensures generalizability of study results. There has been recognition that trials that support approval of treatments across therapeutic settings often do not reflect the demographics of the populations using the therapies once they are approved. Both clinical trial-specific and systemic/structural barriers cause and perpetuate this outcome, and these barriers must be addressed to effect change. To increase the likelihood of success, a strategy should be developed prospectively, before an investigation is commenced, to assess what the barriers may be for a particular trial and to develop a plan for what will be done to ensure diverse representation. Early consideration regarding the subgroups that are most

commonly represented among people with the disease and defining measures to specifically ensure their enrolment in the clinical trial is important. As an example, these measures could include addressing eligibility criteria, leveraging data collection in the early stage and the late stage of the development programme to better characterize safety, efficacy and dosage in a broader population, and providing support to mitigate patient logistical barriers associated with participating in clinical trials and, for investigators, ensuring they have the tools and training to enrol a diverse population in the trials. It is critical to consider this early before a trial is commenced and not at the end, when it may be too late to change course.

Numerous structural barriers exist, including site selection for clinical trials. Sponsors of trials may select the same sites with a track record of having the infrastructure to conduct clinical research and of delivering the desired enrolment goals, but these sites may not reflect the desired diversity of study participants. The lack of emphasis on the diversity of participants can make it challenging to identify sites that may be underperforming when it comes to enrolling diverse participants. Therefore, site selection should consider whether a particular site has the capacity to enrol a diverse patient population, and some of these considerations may include whether the following are in place: policies and programmes that engage diverse communities and providers; clinical and research staff who reflect the desired patient diversity and/or who have the appropriate cultural training and linguistic abilities; access to the sites; and availability of financial resources to support a diverse population of patients in clinical research. Site-level interventions may be needed to address these issues. In addition, it may be necessary to support capacity building in clinical settings that are not typically engaged in clinical research but where the majority of racial and ethnic minorities receive their care. This may include community affiliates of the traditional clinical research sites. For example, pharmaceutical companies could collaborate with each other and with institutions that deliver care to underserved populations to build infrastructure that will facilitate the conduct of clinical research in non-academic, non-tertiary care sites. Parallel efforts to use measures that reduce the burdensome administrative and study conduct procedures traditionally associated

with clinical research can also facilitate a broader group of sites that can participate in clinical research.

In addition to addressing these ‘ecosystem’ barriers, clinical trial-specific measures that provide broader access and reduce procedural burdens are needed. There have been efforts to broaden eligibility criteria for clinical trials to enable broader access to clinical trials and to increase the applicability of study results to the types of patients who will use the therapeutic once it is approved⁴. Additionally, it is important to design trials that limit unnecessarily burdensome procedures related to clinical visits, laboratory testing, imaging and so on. Before the COVID-19 pandemic, many efforts were under way to evaluate ways to leverage technology and to implement more pragmatic, streamlined study operating characteristics to design trials that would be less burdensome for patients; it is generally expected that adoption of such measures will improve the feasibility of conducting trials in diverse settings. The COVID-19 pandemic has provided the opportunity to pressure-test approaches that address issues related to long-standing barriers to clinical trial participation (through the use of electronic consent or decentralizing or streamlining some clinical trial procedures, as an example); it will be important to understand how measures perform across diverse populations.

In designing more inclusive research programmes, it is important to think of diversity more broadly than race and ethnicity and to think of the intersectionality of factors that lead to under-representation or marginalization of certain subgroups in research. Implicit or explicit bias hinder clinical trial participation by older adults, sexual and gender minorities, patients with co-morbidities and so on. Exclusion of these subgroups from clinical trials leaves it to individual providers to determine how best to use approved treatments to treat these patients. We must collectively do better in conducting more inclusive research that provides access to potentially promising therapies and that facilitates evidence generation to support the safe use of approved therapies for all.

J.C. This, of course, is a very complicated issue with a broad collection of factors. There are very broad general issues related to limitations in access to true health care innovations, such as clinical trials for novel therapeutic approaches. These innovations typically occur in large academic medical centres, which are financially out of reach for

many individuals from under-represented populations and medically underserved communities. This happens even when those centres are located within these very communities. So aspects related to the financial strain of cancer treatment and inability to access these centres are at the heart of many of these issues. Also, the clinical research community has to consider challenges related to inclusion and exclusion criteria for many trials, which preclude participation in many settings. This is a very complicated situation, but through collaboration and interaction across the key stakeholders in the community, industry, regulatory and policy agencies, and the clinical research community, I believe we can work towards significant improvement in diversifying clinical trials.

R.W. Trust matters. While we have been great at developing the next generation of outstanding clinical trialists, they have been woefully underprepared to connect with and gain the trust of diverse communities. It also likely goes without saying, but increasing the diversity among clinical trialists could have the potential benefit of increasing the diversity of people who will feel comfortable participating in clinical trials. Additionally, we emphasize to our trainees the importance of informing all patients about available clinical trials, rather than making assumptions about their willingness to participate on the basis of race or ethnicity.

Beyond clinical trial enrolment, what else could be done to reduce cancer health disparities?

L.F.-A. It is important to consider that the disparities in enrolment in clinical trials do not occur in a vacuum. There are societal structures that exacerbate disparities and that ultimately impact clinical trial participation. For example, the historical and pervasive under-representation of racial and ethnic subgroups in clinical trials is for the most part a symptom of the inequities that exist related to factors that are mostly external to any given trial, such as geography, insurance coverage and bias. Addressing these issues is a heavy lift for any one stakeholder group, but success will depend on parallel, collaborative efforts across multiple stakeholders — a systems-based approach to defining the problem in the context of each stakeholder group and specifying the measures that will promote accountability. In my view, accountability is a critical component

missing from the current paradigm for addressing this issue.

I think another issue is that everyone wants to reinvent the wheel. We have collected many data that characterize the problem — there is no paucity of white papers, national reports, peer-reviewed journal publications and so on that describe the problem and the steps that should be taken to address it. While the barriers may differ slightly from one locality to the next, we should leverage what we already know instead of starting from scratch each time.

Cancer is increasingly defined by the presence of molecular abnormalities, and treatment decisions are based on results of molecular profiling of tumour samples, which allows clinicians to identify the presence of molecular and genetic signatures or biomarkers, which predict response to therapeutics. Broader testing across the population will enable an understanding of the distribution of these biomarkers across different populations and may help drive therapeutic development. Race and ethnicity are limited in directly denoting this population variability, and so genetic studies should be more representative of ancestry and admixture; in the era of personalized treatments, this information should be taken into account in drug development. Specifically, candidate drug selection practices should consider biomarker prevalence across a broader, more diverse patient population to inform decisions regarding potential targets for drug development as this will help ensure that traditionally under-represented subgroups have trials that are evaluating treatments that address their needs.

J.C. We've touched on a number of key factors that support or exacerbate disparities. Overall, systemic racism is at the heart of the cancer disparities and inequities in overall health care. Until this foundational problem is addressed, disparities will continue to persist. But that doesn't mean that we cannot address other factors contributing to these disparities. I believe efforts and initiatives to strengthen the interface between communities and the health care system are warranted and will help us be more effective in our approach to helping patients by meeting them where they are and understanding the problem from their perspective and point of view.

We also need to diversify research cohorts and reagents such as model systems to understand cancer biology more broadly. It has been well documented that there is an overwhelming bias towards individuals of

European descent in many molecular and genetic cohort studies^{5,6}. There need to be large, funded efforts that are inclusive in the make-up of research teams to develop and apply successful strategies for recruiting patients for cancer research studies. This includes molecular genetic studies, and also in the creation of diverse collections of model systems (for example, cell lines, patient-derived xenograft models and organoids). This will allow us the opportunity to be more accurate in our understanding of the alterations driving cancer risk, initiation and progression. Finally, as discussed, we need to continue to work to diversify the cancer research workforce.

R.W. Beyond diversifying clinical trials and teaching researchers to design and implement trials with under-represented groups in mind, we must also provide trainees with the skill set to better interact with communities when they are taking medical histories or providing care. For instance, I'm a pulmonologist, and I realized that we may be getting an incomplete picture of smoking history if we don't use the terms that patients are familiar with. Rather than asking about how many packs of cigarettes a person smokes, we need to acknowledge that, to stretch their money, some people 'refry' cigarettes — meaning they stub out and light the same cigarette again later — which we know is just as harmful as smoking a new cigarette each time. Or people might be smoking loose cigarettes or blunts, and if a doctor asks a patient how many packs the patient smokes in a day, the person might answer "none" because the person does not ever buy packs of cigarettes. Through understanding the vocabulary of the community, this is one way that doctors are better able to connect with their patients and get the full picture of their health.

L.G. A silver lining of the COVID-19 pandemic has been the ways in which stakeholders came together with a sense of urgency to overcome seemingly insurmountable obstacles. Not only did we see COVID-19 trials designed and executed at unprecedented speed, but we also saw examples of pivotal studies conducted almost entirely within diverse populations⁷. It is intriguing to contemplate what might be achieved if we could apply this same resolve and determination to address disparities in cancer research — and health care overall.

Cancer health disparities are multifaceted and require us to examine and address disparities throughout the health care

ecosystem. These include access to and quality of care, availability of social support for patients, unequal treatment and lack of cultural competence in care. This past year, Genentech dedicated significant charitable investment to address systemic inequities within the health care system. In oncology in particular, we're supporting institutions across the United States with grants to promote equity in care, elevate community voice and power in research, address bias and build empathy in care.

Above all, it is important to remember that striving for diversity — whether in the workplace or in clinical trials — tends to accelerate discoveries relevant to all populations. For example, several years ago, I led a study of somatic genetic alterations in prostate cancer in African Americans⁸. That study catalysed the discovery of a new driver gene mutation that happened to be enriched in a cohort of Black patients but turned out to be relevant in other prostate cancer populations as well⁹. Similarly, the aforementioned study we conducted in underserved, hospitalized patients with COVID-19 may have foreshadowed results that are relevant to some patients from broader populations as well¹⁰. If it is true that "injustice anywhere is a threat to justice everywhere" (Martin Luther King Jr)¹¹, it must also be true that reducing disparities anywhere can boost equity everywhere.

Q *What additional support is needed to achieve racial equity in cancer research?*

J.C. As mentioned, structural racism, societal inequity and injustices are the seeds of inequalities in health care. This permeates all sectors of society. Thus it will be an uphill climb. We need to see consistent and intentional efforts among stakeholders, honest and open dialogue between members of all groups, and action and accountability by those who are in positions to be change agents. Finally, we need to be far more open-minded and intentional in creating and applying new approaches and methods to engage and involve the community in our work. This will include new ways to create funding mechanisms and designing research studies. We have made progress for sure, but we undoubtedly have a long way to go. The issue remains a major challenge to our ability to really make an impact on cancer mortality. But the flip side of every problem is an opportunity! I'm committed.

L.F.-A. This is a complex issue, and the current state of affairs points to an inadequate response so far. There are

obvious areas to focus on: policy change or policy development where none exists, training a more diverse cadre of clinical researchers and providing them with the resources and opportunities to be successful, and changing the research paradigm such that populations that are disproportionately impacted by inequities in cancer research are invited to help define research priorities; this will ensure that the investment matches the needs of the communities. Some companies have embraced this framework, although improvement is needed in terms of the pace and the scope with which these measures are being implemented to really drive change.

R.W. Certainly more resources will be needed to increase and build robust pipeline programmes to achieve racial equity in cancer research. For instance, the newly announced **National Institutes of Health Faculty Institutional Recruitment for Sustainable Transformation (FIRST)** programme is only one example of the types of efforts that will be needed to create and sustain a diverse workforce. However, we will at some point need an open and honest discussion about what it takes to foster real diversity at our various institutions.

Wanting diversity is one thing. Having diversity actually takes work and a commitment to a plan, which is the hardest part but is, without doubt, the most mission-critical component to being successful in our efforts to achieve equity in our field.

Increasing the diversity of our workforce will ultimately improve all of our lives, non-minority and minority alike. The benefits of equity go way beyond just simply having diversity for diversity's sake. Having diverse voices in our field has the potential

to enhance, augment and accelerate our ability to close the undeniable health disparity gap in cancer and other diseases that exists in our country.

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Competing interests

J.D.C. receives honoraria as a current member of the external advisory council for the Genentech (Roche) Advancing Inclusive Research Program, receives honoraria as a current member of the scientific advisory board for Break Through Cancer, receives honoraria as a current member of the scientific advisory council for Stand Up To Cancer, is a current member of the board of directors of the American Association of Cancer Research and is a current member of the board of directors of Tower Cancer Research Foundation. L.A.G. is an employee and shareholder of Roche and is an equity holder of Tango Therapeutics. L.F.-A. and R.W. declare no competing interests.

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