

A mindful mentor

Gary Gibbons, the next director of the US National Heart, Lung, and Blood Institute, hopes to diversify the biomedical workforce.

Amy Maxmen

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Diversity in the US scientific workforce remains a problem even though it is well documented. African Americans constitute almost 13% of the US population, but earned only 3.6% of the country's doctoral degrees in science in 2007, up from 2.5% a decade before¹. And according to a study published last year², African American investigators are 10% less likely than white applicants to win research grants from the US National Institutes of Health (NIH) — even when they have the same number of publications, citations and previous grants.

Addressing the diversity of the biomedical workforce has long been a priority for clinician and physiologist, Gary Gibbons, and he will soon be in a position with hefty influence. On 13 August, Gibbons will become the first black director of the National Heart, Lung, and Blood Institute (NHLBI) at the NIH in Bethesda, Maryland, which has a US\$3-billion annual budget for research into heart disease, asthma, blood and sleep disorders, and more. Gibbons is leaving his post as director of the Cardiovascular Research Institute at the Morehouse School of Medicine in Atlanta, Georgia, to take up his new job. He has also served on the faculties of Stanford University in California and Harvard Medical School in Boston, Massachusetts. He talks to *Nature* about his hopes for his new post.



NIH

Cardiologist Gary Gibbons will take up the reins at the US National Heart, Lung, and Blood Institute this month.

Were you surprised by the study that found racial bias in the NIH grant-reviewing process?

It certainly was a troubling finding, but I must admit that it didn't surprise me. There are a number of factors associated with a higher likelihood of getting research funding that are not related to an investigator's hypothesis, such as the rank of their institution. Better mentorship might help minorities who are applying for NIH grants. I think that institutions should try harder to link minorities to mentors who can encourage their success. One motivation for me to leave Harvard and go to Morehouse was that many of the students at Morehouse are from under-represented minorities. I thought that I could be a helpful mentor.

What did you do at Morehouse?

My challenge was to conduct leading-edge research that addressed cardiovascular health disparities, which are complex, in a setting that doesn't have the legacy or the kind of resources that I could draw on at my previous institutions. In one ongoing project, we're using whole-exome sequencing to discover novel DNA variants that are associated with severe hypertension in African Americans. During the study, we have to remain aware that molecular mechanisms alone won't account for why nearly 1.5 times the proportion of African Americans compared to white Americans have been diagnosed with hypertension³. So, we have to integrate behavioural, social and neighbourhood components into health outcomes.

Will you support such multifactorial studies at the NHLBI?

Yes, because the mission of the NIH is to enable discovery science that ultimately improves public health. I'll be building on a legacy of an institute that has long appreciated multidimensional data sets. More generally, I think that health researchers can now begin to connect the dots by taking a systems approach that integrates different levels of scale — from DNA to cells and organs — and by realizing that individuals are immersed in a social, ecological system. An ecosystem includes, for example, how safe it is to walk a neighbourhood's streets.

I'll also be curious to see how investigators [supported by the NHLBI] will incorporate newly available technologies. There are extraordinary opportunities to get richer data sets that weren't available when the NHLBI began the Framingham Heart Study in 1948. For example, participants in a typical cardiovascular study go through a battery of tests to assess how active they are, but now we have smart phones that can deliver this information and devices to monitor heart rate and sleep habits.

Why are you so committed to public health?

Because of my mother. She was an orphan who made it through college and received a master's degree in education, with help from a stranger who paid most of the expenses after hearing her speak at her high-school graduation. That gave her an appreciation for what caring people could do for someone in need. She founded a church, a nursery school and a house for unmarried teenage mothers. She took kids who were in trouble into our house while I was growing up in the predominantly African American neighbourhood of Germantown, Philadelphia. My mother instilled in me a sense of social responsibility that has stuck. When I was speaking to people about applying for the position at the NHLBI, I realized how much the NIH's mission of giving back to the community resonated with me.

What do you hope one of your legacies will be at the NHLBI?

I have a particular passion for ensuring gender, racial and ethnic diversity in the workforce. The NIH already has training programmes that could contribute along those lines, so the mechanisms are there. Frankly it's largely a matter of leveraging them. The small number of PhDs granted to African Americans right now is pathetic. It's an egregious, systemic failure that extends beyond the NIH. That said, I'm going to do everything I can to get the best and brightest students out there to engage in science.

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References

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