



KAYLAN REDDY

Plant biologist Nokwanda Makunga felt seen and validated during #BlackBotanists week in July 2020.

THE HASHTAGS THAT BROUGHT BLACK SCIENTISTS TOGETHER

Online communities forged last year sparked collaborations and conversations about diversity and equity in academia.

Black researchers in dozens of scientific fields took to social media in 2020 to find, connect with and promote one another using hashtags such as #BlackinCancer, #BlackinPhysics, #BlackBotanists or #BlackinSTEM.

With each field of research taking centre stage for its own week of social-media events, the results challenged institutions to take meaningful steps to recruit more people of colour, and create a more welcoming academic

environment to retain them.

These online initiatives were in response to racial unrest sparked by the murder of George Floyd, an unarmed Black man, by police officer Derek Chauvin in Minneapolis, Minnesota. On 25 May 2020, the day that Floyd was murdered, a white woman made a false accusation of assault against Christian Cooper, a Black bird-watcher in New York City's Central Park. What began with #BlackBirders week evolved into a succession of 20 #BlackinSTEM weeks that

ran until December. They brought together global communities of Black scientists who plan to continue annual social-media events, and have even formed non-profit organizations dedicated to the task.

As the second year of such events gets under way, *Nature* interviewed five researchers who organized and took part in the #BlackinSTEM weeks. They discuss the impacts and rewards, including career opportunities, collaborations and meaningful institutional actions.

NOKWANDA MAKUNGA FEELING MORE VISIBLE AND VALUED

#BlackBotanists was such a wonderful week of joy (6–11 July 2020). Participants shared why they love plants, their favourite plants and their research. Our lead organizer, Tanisha Williams, a postdoctoral botany researcher at Bucknell University in Lewisburg, Pennsylvania, sent out a tweet on the back of #BlackinNature and #BlackBirders weeks, asking who wanted to get involved. #BlackBotanists week was built organically from there, with each person putting their individual skills to use. I coordinated the media package; others facilitated social-media events such as Instagram Live broadcasts.

By the end of the first day, the #BlackBotanists hashtag had been used and/or liked by more than 40,000 people. By the end of the week, the top 50 tweeters had interacted with more than 223,000 people from around the world. To keep the hashtag relevant, all the organizers display it on our profiles and use it periodically, particularly during the monthly talks we have organized. As we warm up for this year's #BlackBotanists week, we are starting to engage with it again. We are striving for global interaction. One thing we are doing differently this year is making an effort to connect with people who aren't academic botanists.

From a personal perspective, I felt seen, validated and valued during that week last year. We were able to create a global community.

I don't see my role as a way of pushing my career. My role as a Black female scientist who works at a university with a long history of apartheid and continuing low diversity is to inspire others who are like me to pursue this career. That said, we did get loads of media attention, which is important to achieve the international standing that's necessary for me to get to the next level of my career.

In South Africa, we have an unusual researcher rating system. Every six years, our scientists get a rating of A, B or C, corresponding to being a leading international researcher, an internationally acclaimed researcher, or an established researcher, respectively. One's rating can affect promotions and grants. I am currently rated C, but I'm hopeful that my international activities since #BlackBotanists will bolster my rating. I was able to give virtual talks to groups at Cornell University in Ithaca, New York; the University of Minnesota in Minneapolis; and the University of Ohio in Athens. Furthermore, as a result of my higher visibility, I have also collaborated with researchers in Canada and elsewhere.

Some things are changing here. At the beginning of this year, the head of my department asked me to be involved with the social-impacts committee, which aims to connect the



PAUL JOSEPH

#BlackinNeuro week boosted networking for neuroscientist Travis Hodges (second from front).

university to the greater community. That could mean developing a 'science week' so prospective students can visit, or raising money for lab coats at local schools that are in need.

She also encouraged me to continue to be a voice for Black botanists. I've always communicated about science, but that doesn't necessarily help my career; some have questioned my seriousness about science itself, so there is a conflict. But that's changing. Funders in South Africa are starting to recognize the importance of science communication and want to see evidence of such activities on grant applications.

Nokwanda Makunga is a plant biologist at Stellenbosch University, South Africa, and an organizer of #BlackBotanists.

TRAVIS HODGES BEING A ROLE MODEL AND FINDING A COMMUNITY

A lot of minorities in the sciences don't know others in STEM (science, technology, engineering and mathematics) who are like them. My gaining visibility from my role in the #BlackinSTEM weeks has helped new students to find me, and helped me to find other researchers in my own field whom I didn't know existed. Undergraduates and prospective graduate students now message me for advice about going to graduate school. I'm so glad they have someone to talk to and get advice from, which I

didn't have. I was the only Black kid in my class besides my cousin, who did an undergraduate degree in psychology. I didn't see any role models out there.

In the University of British Columbia (UBC) psychology department, I'm the only postdoc who is Black. There are a couple of faculty members of colour in neuroscience broadly; one is Black. They are creating a diversity, equity and inclusivity (DEI) task force to hire more people of colour. I've been invited to join it, as well as UBC's diversity and inclusivity task force for women's-health researchers, an international group that formed here. We are trying to create new ways to be more inclusive, primarily by raising funds to offer lab experience to students of colour. Without that, it's hard to advance in a science career. I've shared the obstacles I faced, including people telling me that I wouldn't be able to get a PhD, or discouraging me from finishing my degrees. It's also important to explain to white colleagues why these responsibilities can't always fall to one person.

I point potential allies to the International Behavioral Neuroscience Society's website, which has resources, including talks on YouTube, highlighting the experiences of people of colour and suggestions for making science more inclusive in future. That list of resources did not exist a year ago.

We are just now starting to ask why the UBC psychology department doesn't have anything about DEI on its website, and trying to implement some changes. I know the process is going to be tough. Faculty members who

don't want to change have built walls around themselves. I do see a willingness to change among the higher administration officials; I'm thankful for that.

The #BlackinNeuro hashtag is enduring and is being integrated into neuroscience conferences. We are using it in outreach to pull in more students of colour. As the hashtag gets embedded into professional societies, it will continue to bring in people and sustain itself. I think it's here to stay.

On a personal level, more people are ready to collaborate with me, and finding each other is easier. I also get a lot more views on LinkedIn and ResearchGate. For me, networking is the biggest thing that came out of this; having this community during the pandemic had special meaning. My own research on the negative health impacts of stress in rats has shown me how important it is to have a good support system to defend against anxiety. Having that support rise up during the pandemic was amazing, and has helped me to get through.

Travis Hodges participated in #BlackinNeuro and is a neuroscience postdoctoral fellow at the University of British Columbia in Vancouver, Canada.

NIKEA PITTMAN MAKING CONNECTIONS, FINDING MENTORS

The door is open for conversations about race now. Most people probably still aren't comfortable with the subject. The biggest change I've seen at institutions is a lot of committees and task forces rising up to address not only the recruitment but, just as importantly, the retention, of trainees of colour. There's been a rush for big institutions and professional societies to show that they care about recruitment and retention of Black academics in science, technology, engineering and mathematics (STEM), but a lot of that didn't feel genuine: if that message comes out only whenever a Black person is shot or an Asian person is assaulted, it's not genuine. It is nice to see that more people – although I wouldn't say it's a majority – are now aware that being an ally means investing the time and taking on the work, as opposed to pushing labour back on to people of colour.

I noticed that the University of Washington in Seattle started an anti-racism summer reading programme for its incoming medical students, which included a mandatory assignment on race in academia. That inspired me to go to the head of my graduate programme and suggest we pitch a mini course for first-year PhD students on racial identity and its impact on their training. It started out as a small dream, but I recruited eight other postdocs

to develop a curriculum and we ran a course for 120 incoming PhD students; we are expanding it next year.

The biggest shock of the #BlackinMicro(biology) week (28 September to 4 October 2020) was suddenly realizing that my white-majority colleagues have had a certain level of support and networking all along – and I'd been missing out. It doesn't exist for a lot of under-represented scientists; often, the feeling of 'otherness' can make it hard to network at conferences. By using the #BlackinSTEM hashtags when seeking help, I don't feel as if I have to first prove myself to be a good scientist despite my race. For example, using the #BlackinChem hashtag, I posted a question to structural biologists about metal-binding enzymes, and I got several responses within a day.

I made tons of connections with other Black postdocs and faculty members. I continue to meet people through the groups that have arisen since then; for example, #BlackinMicro is now a non-profit organization. It's one of the first times I've felt I could have professional connections with Black female colleagues who experience the same challenges as I do. Surprisingly, almost all the connections I made were with Black women, not men.

The other surprise was the number of people who invited me to give research talks, although a lot of these invitations seemed off target, unrelated to the work I do. I also had two invitations to apply for tenure-track positions, even though I was just finishing the first year of a postdoc. Maybe their intentions were in the right place, but I felt as if people didn't always take the time to check my career stage.



Biochemist Nikea Pittman launched a course.

I replied to both, saying that I'm still working on my research plan and that I'd appreciate an opportunity next year. One invitation turned into a real conversation; the sender said they had looked at my qualifications and were trying to establish working relationships earlier than they had in the past.

It's been eye-opening to see how much each #BlackinSTEM group accomplished, often with a handful of organizers, all of whom treated it as a second or third 'job', and to compare that with progress at institutions. The contrast is stark. Each #BlackinSTEM group started with zero funding and no organization, and with people who didn't know each other and 'met' on a hashtag. But it's a challenge for institutions to show what they have achieved over the past year, and what they will do going forward.

Nikea Pittman is an organizer of #BlackinMicro and a postdoc in biochemistry at the University of North Carolina at Chapel Hill.

SIGOURNEY BELL BECOMING FOUNTS OF KNOWLEDGE

I co-created #BlackinCancer week (11–17 October 2020) along with Henry Henderson, an oncology consultant at the biopharmaceutical company AbbVie, in Nashville, Tennessee. We met on Twitter (I'm based in Cambridge, UK) and had a conversation about bringing together a network of Black cancer researchers, which led to further conversations about the range of challenges Black biomedical scientists face – most notably, that we grapple with the Black community's inherent distrust of the biomedical community. As Black cancer researchers, we become the fount of knowledge for our own communities.

While we started organizing, I had a Zoom call with Angeline Dukes, president of the #BlackinNeuro organization and a PhD student at University of California, Irvine. Since #BlackinNeuro was one of the first groups to have its week of events, the members were a go-to source of information for all the other weeks that were being organized, and they kept a calendar to help avoid overlaps. She explained what had gone well and what hadn't. Following that call, we committed to making everything accessible to all communities; we added closed captioning to all the talks and image descriptions for blind users with screen readers, to make sure our adverts and posters were as accessible as possible.

We used Slack, the online collaboration platform, to assemble what ended up being a 16-person organizing committee. And we focused on a different theme each day – from cancer myths to the legacy of Black scientists

Work / Careers

of the past. We created resources, from seminars on cancer basics to videos featuring Black survivors of cancer, to inform our family and friends so that they could be empowered around their own health care and help to bring more Black researchers into the pipeline. (In the United States, Black people have higher death rates than all other racial and ethnic groups for some types of cancer.)

The 7,270 #BlackinCancer tweets by 2,328 participants were seen 80.5 million times on Twitter. I personally gained around 500 or 600 Twitter followers, mostly fellow scientists, during our week. I now spend at least 4–5 hours a week in #BlackinCancer meetings or talks, including a biweekly board meeting for the foundation we are creating as a result of the initiative.

Even before #BlackinCancer week, we were reaching out to organizations. We have our own channel on the Nature Portfolio Communities website to promote scientists with publications. We also helped to put together a programme of events, including a public panel discussion and videos or slides to be shared using the #BlackFamCan hashtag, for the US Food and Drug Administration's National Black Family Cancer Awareness Week in June. Between last October and now, I've given probably 15–20 talks – largely on equity, diversity and inclusion for research organizations and pharmaceutical companies, or to inform students about what we do and how we can support them.

Following #BlackinCancer week, the Emerald Foundation, a private biomedical-research foundation based in New York City, contacted us and ended up funding a new US\$75,000, two-year postdoctoral fellowship award. The award can also be used to transition to a tenure-track position, in which case it will increase to \$100,000. It is a genuine step forward in boosting the number of Black researchers in science.

#BlackinCancer will be an annual thing for the foreseeable future. We don't want this year's week to be a replica of last year's, so we are aiming for more engagement rather than just pumping information out there. Cancer Research UK (CRUK) has been a big funder of #BlackinCancer week and has taken this very seriously; we are working with them on increasing diversity in clinical trials. We are also working to develop a mentorship programme for Black students in the United Kingdom and the United States. We will be able to offer undergraduates training in science communication, awards for presentation, and the opportunity to secure a paid eight-week laboratory placement.

During #BlackinCancer week, I felt hyper-visible, yet it's still really hard to find Black researchers in the United Kingdom, as I am. I have yet to meet anyone else who works on paediatric brain tumours as I do. Our



TUNRAYO ADELEKE-LARODO

Theoretical physicist Luke Davis hopes that #BlackinSTEM will challenge existing hierarchies.

organizing committee is made up of me and 15 Americans.

Cancer Research UK asked me for quotes about our work and put them on social media. Unfortunately, there were a handful of antagonistic responses – for example, asking why we don't have a white history month or someone saying they would never donate to CRUK again. It was really hard for me to read these; I cried over the comments.

For the first few weeks after George Floyd's death, I didn't go a day without crying. It was a million times more real for me, because of my boyfriend, a tall Black man – as Floyd was – who lives in Houston, Texas, where Floyd grew up. As the only Black person in my research group now, and in my institute at the time, it's been helpful to have a community to turn to and say, 'I'm really struggling right now.'

Sigourney Bell is a co-founder of #BlackinCancer and a PhD student studying paediatric cancer at Cancer Research UK's Cambridge Institute.

LUKE DAVIS ALLIES, BE EMBOLDENED TO TAKE ACTION

I made the move from the United Kingdom to Luxembourg in October 2020 to accept a postdoctoral research position at the University of Luxembourg. The institution, inaugurated only in 2003, seems to have a focus on diversity, because it has pushed that from the get-go. However, as with all institutions in Europe, there is still a lot of work to be done to create an equitable academic

environment for people of colour.

I know of two other Black theoretical physicists here, which is quite a lot because I knew only one other PhD physics student who identified as Black when I was at University College London.

Although the #BlackinPhysics and #BlackinMath weeks (26 October to 1 November and 9–15 November 2020, respectively) helped to alleviate the burden of lockdown, they also hit me on a deeper level. The transatlantic nature of the connections was able to bridge the gaps between Black American, Black UK and Black European scientists. I estimate that my Twitter followers increased by about 30% as a result.

I've always been honest on social media with my opinions about race; I'm blunt. One thing I tweet about is the power hierarchy at the top. If we can't get to the top, then nothing will happen.

My hope is that potential allies will be emboldened by the #BlackinSTEM movement to take specific steps to increase equity and inclusion in academia. If you are on a promotion committee, make sure the deliberations are transparent.

Challenge the system to enforce rational metrics for promotions or new faculty hires instead of allowing potentially prejudiced decisions. Take the energy from the #BlackinSTEM weeks, and use it day to day – that's true allyship.

Luke Davis participated in #BlackinMath and #BlackPhysics, and is a postdoctoral researcher in theoretical physics at the University of Luxembourg.

Interviews by Virginia Gewin. Interviews have been edited for clarity and length.