

Black in Microbiology: From Successful Hashtag to Burgeoning Nonprofit in Six Months

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When microbiologists Ariangela Kozik, PhD and Kishana Taylor, PhD decided to launch #BlackInMicrobiology, they had no idea that in less than a year, they'd be at the helm of a nonprofit, taking their goals to the next level. Now, this nonprofit—the [Black Microbiologists Association](#)—has a growing membership, a wide scope for progress, and the momentum to carry their movement forward. Indeed, as we enter year two of a pandemic, the need for such an organization of

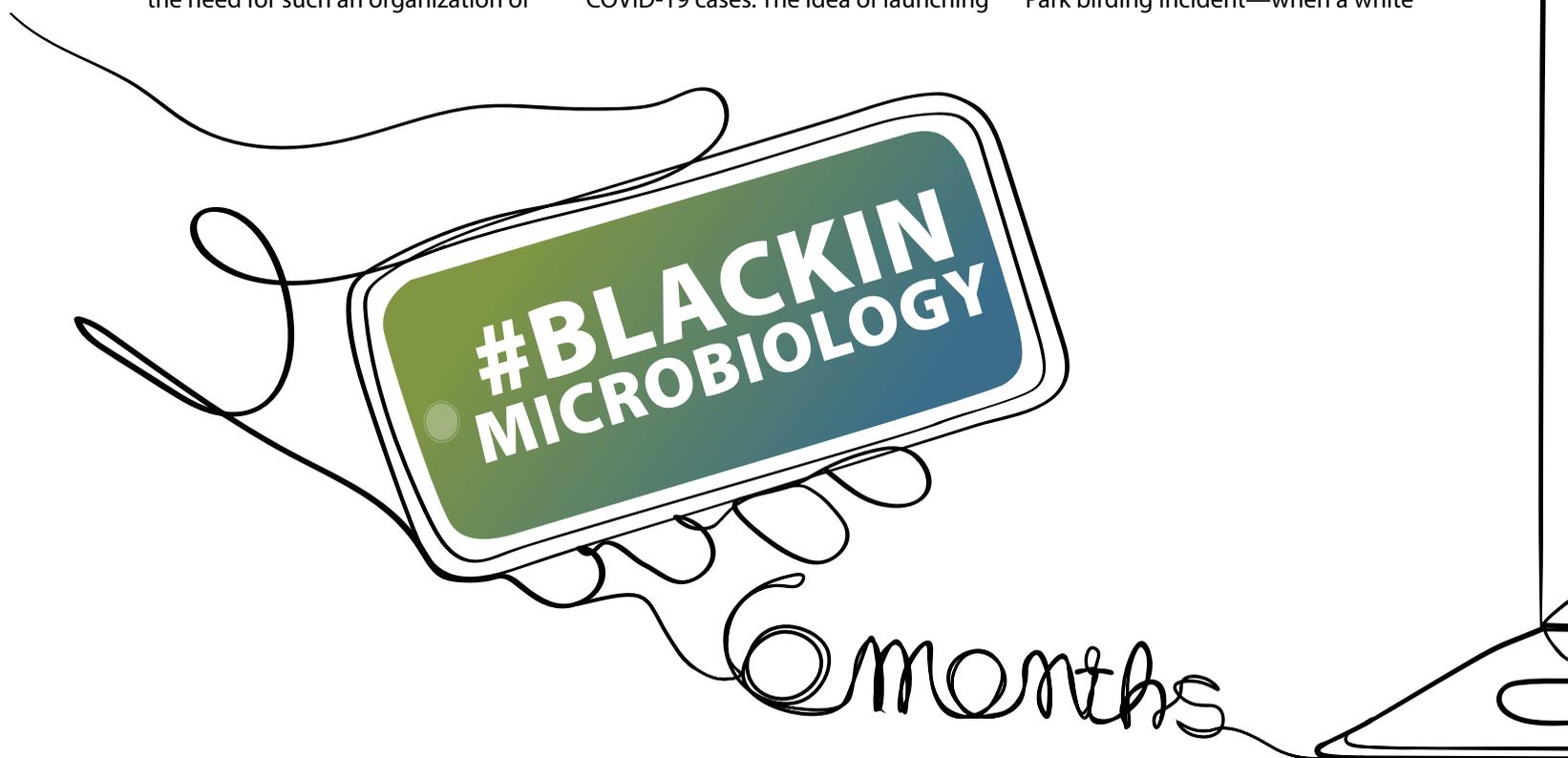
Black microbiologists has perhaps never been greater.

Microbiology and the “Black in X” Movement

Dr. Kozik and Dr. Taylor are both postdoctoral researchers in microbiology and members of AWIS. Dr. Kozik studies host-microbiome relationships in people with asthma, and Dr. Taylor has shifted her research focus from the evolution of influenza viruses to an examination of severe COVID-19 cases. The idea of launching

#BlackInMicrobiology occurred to them in the summer of 2020, as COVID-19 cases soared and protests of police violence against Black people continued.

Their idea was part of a broader, contemporaneous movement. Earlier in the summer, Corina Newsome and Anna Gifty Opoku-Agyeman created [#BlackBirdersWeek](#), an [online campaign that successfully brought attention](#) both to the racist Central Park birding incident—when a white



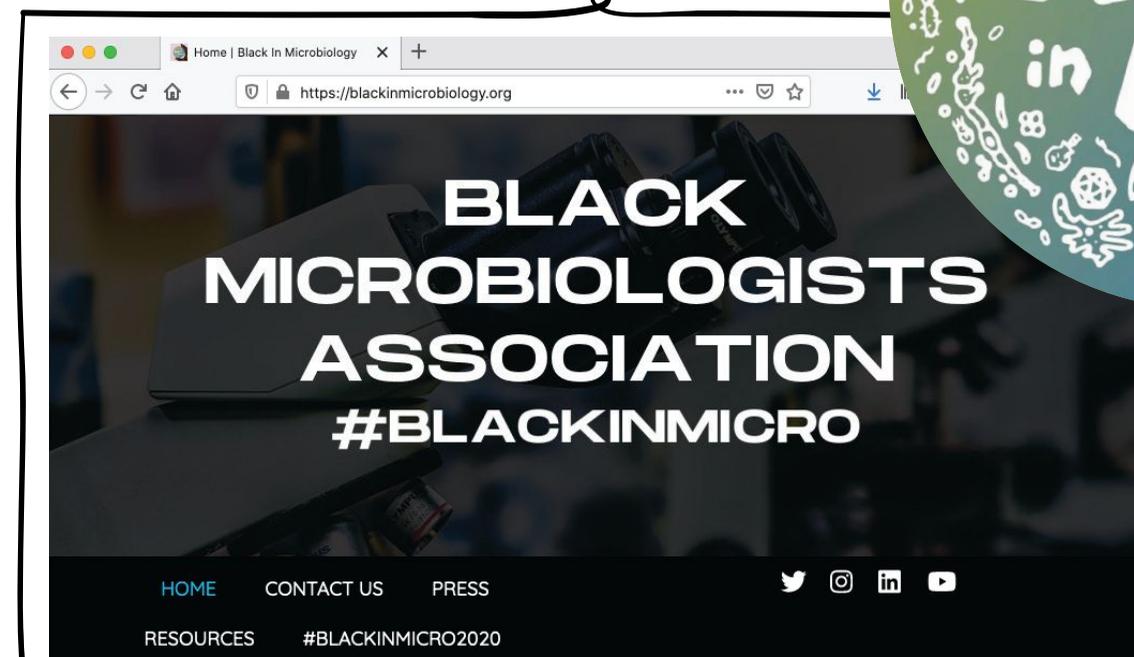
woman, walking her dog, verbally threatened a Black bird watcher—and to the Black birding community in general. The Twitter account and hashtag [#BlackInTheIvory](#), established last summer by communications scholars Shadré Davis and Joy Melody Woods, highlighted the challenges Black scholars face in the “ivory tower” of academia. These academics and others created a decentralized online movement, and the rest of the year saw week after week of Twitter campaigns highlighting Black researchers in myriad STEM fields—marine science, neuroscience, geology, and more. Their disciplines and specific goals varied, but they had some general goals in common: building community, changing stereotypes about who is in science, and raising Black scientists’ visibility.

And these goals are crucial. While the numbers of Black scholars in STEM fields have been rising (incrementally) over the past several decades, scientific scholarship remains overwhelmingly white. In 2018, the biological and biomedical sciences—the umbrella field for microbiology—included [306](#) Black/African American PhD recipients in total, up from 188 in 2008. (Demographic statistics specifically for Black microbiologists are not currently available through the National Science Foundation.) But before #BlackInMicrobiology, those scientists weren’t necessarily aware of each other’s presence in their field.

The momentum of other “Black in X” organizations, the visibility of Black communities, and the pressing need for

experts in microbiology (“Because, pandemic!” as [Dr. Kozik wrote to AWIS–Michigan](#), her member chapter, in September 2020) made the timing for #BlackInMicrobiology perfect. Drs. Taylor and Kozik knew they wanted to launch the initiative, despite the amount of work they knew this would entail—at least, despite the workload that they *thought* was coming.

“I knew it was going to be a big commitment, but I didn’t think it was going to evolve into us starting a nonprofit organization,” Dr. Taylor said.



In September 2020, Dr. Kozik already had an eye on the future and a sense for how important this endeavor would be: “Black in Microbiology is here to stay!” she [wrote](#).

While the two colleagues formed #BlackInMicrobiology in the context of the broader “Black in X” movement and social moment, their idea also provided a long-sought solution to problems they faced during their own time in academia. It created a sense of community that had been missing up until this point, for them and for many other Black students and researchers.

“Now, my day is filled with these amazing people who I didn’t know ahead of time,” Dr. Kozik said. “And I’m just like, how did I make it through graduate school and three years of a postdoc by myself? I know that experience is not unique to me. Other people have said similar things. So I’m very aware that there was a void that we found and then filled.”

The rest of the community saw that need being met too. #BlackInMicrobiology week was a success, providing networking opportunities and a chance to share personal experiences. The Twitter handle gained thousands of followers, and Dr. Kozik estimated that several hundred people actively participated throughout the week. People began asking when Drs. Taylor and Kozik would turn their concept into a nonprofit, a long-running organization that could provide more for its members. At first, the microbiologists brushed the comments aside, not taking the suggestions too seriously. They were both busy with research, preparing to transition out of postdoctoral life, doing outreach work, and engaging with their families—as they had been even before launching

They aim to accomplish the deceptively simple goal of “access” by focusing on three elements: building community; providing professional support and opportunities; and promoting advocacy and outreach.

#BlackInMicrobiology. But for Dr. Kozik, the work felt too pressing to abandon.

“We couldn’t just not continue to provide that community, because it’s really important,” she said.

“We really enjoyed the work that we did, and we saw the need for it,” Dr. Taylor added. “And we kept getting the emails anyway. So we thought we might as well just go ahead and get the nonprofit going.”

From Hashtag to Nonprofit

With this impetus, the Black Microbiologists Association (BMA) was born, first officially open to members in February 2021, a mere five months after #BlackInMicrobiology week’s success. As Dr. Kozik described it, she and Dr. Taylor are hoping to provide members “access, across the board.” They aim to accomplish the deceptively simple goal of “access” by focusing on three elements: building

community; providing professional support and opportunities; and promoting advocacy and outreach.

Building a supportive community of people with similar experiences may be the first goal people think of when they hear of organizations like BMA or #BlackInMicrobiology week, and this support is undoubtedly crucial for well-being in academia. But to successfully move through the academic ranks, mere social support isn’t enough. Scientists need professional networks too—colleagues who will help write grants, read drafts of papers, and troubleshoot experiments. Just as in business, it’s often about who you know. That’s where field-specific groups like BMA come in. During graduate school, Dr. Taylor found a group of Black women who were all pursuing their doctorates, but mostly not in STEM fields. That difference matters.



Microbiologist Ariangela Kozik, Co-lead Organizer, blackinmicrobiology.org



Microbiologist Kishana Taylor, PhD, Co-lead Organizer, blackinmicrobiology.org

"I felt like they had been missing in my life up until that point," Dr. Taylor recalled. "It's very rare to have 25 Black women all pursuing their PhDs, but there was no one else in microbiology, someone who really understood the crux of what my research was and what I was doing. So while those women are still friends with me today, there was still a piece missing."

Drs. Taylor and Kozik hope that BMA will help future generations of Black microbiologists form those critical professional relationships. But beyond that, transformative change is needed to truly move academia and science forward, they point out. Efforts need to be bigger than individual collaboration and action.

"The advocacy part of BMA is just as [important], if not the most important part," Dr. Kozik said. "The conversation

that we've been having in academia, writ large, is that if you can have all the people you want in the pipeline, but if they don't have support at the places where they need to have support, then they're not going to make it through."

Dr. Taylor added, "Ideally, we're laying the groundwork for that next generation, but it still requires a lot of structural change that we have no control over, right? We can support each other, but if we still are not getting funded as much as other groups of scientists, or if we're still not getting faculty jobs at the same rates as other groups of scientists... I mean, yes, it's still helpful. But I think if we don't get structural changes, we would still lose a large percentage of what we're trying to do."

The structural changes that Dr. Taylor references—discrepancies in funding,

hiring, and tenure rates for Black academics—persist across STEM fields. In 2011, [a study](#) found that Black/African American researchers were awarded prestigious R01 grants from the U.S. National Institutes of Health at a 7% lower rate than white researchers were. That gap has since narrowed but stubbornly remains. (One possible [explanation](#) is that Black researchers are more likely to propose work that focuses on and benefits communities—like studying community disease spread rather than a molecular-level mechanism in a lab—and therefore may not be reviewed as positively as its lab-based competition.) Drs. Kozik and Taylor believe that if we don't address these daunting, structural problems that keep Black academics from reaching the top tiers and staying there, and from getting sufficient funding, the work BMA does for individuals can

only go so far. It takes collective, focused advocacy to push those structural issues to the forefront of institutional and legislative policy.

“In order to do effective advocacy, part of that is building power,” Dr. Kozik said. “And it is hard to build power as an individual who is already marginalized in a space that is designed to undercut the power of individuals. We need to have a collective so that we can say, ‘These are the things that we need now. How are you going to meet these needs?’ and start to apply that pressure.”

Drs. Kozik and Taylor envision BMA as a liaison, connecting individuals interested in getting involved at high levels with advocacy opportunities. Placing Black microbiologists in working groups and task forces dedicated to fixing problems at structural levels is an important step toward real progress.

Black Microbiologists’ Roles in Their Communities

A separate part of their work is community outreach, which has in some ways moved front and center because of the pandemic. Everyone wants reliable information about public health, and microbiologists like Drs. Taylor and Kozik can help communicate accurate information and increase scientific literacy. This outreach role can be particularly important in connecting with communities who frequently experience medical racism. For members of such communities, getting information from an expert they personally know may be preferred over an expert who is part of the medical system that has ignored

and harmed them. But, Dr. Kozik said, conversations around vaccine hesitancy too often point to historical medical harm, such as the use of HeLa cells or the Tuskegee experiments, rather than focusing on the medical racism that is pervasive today—and among many marginalized groups, not only Black communities, although the conversation tends to focus on them. (For example, [a recent poll](#) found Black and white Maryland residents had vaccine hesitancy at approximately equal rates.)

“The reason [for vaccine hesitancy] is not necessarily because they can trace back so many generations to someone who was involved in those historical events, although many can,” Dr. Kozik said. “They know that their aunt died of breast cancer because the doctor said that there was nothing wrong with her, but there actually was something wrong with her. Everybody has those stories, everybody... So they may be hesitant, but not because of any sort of failing on their part. But that’s kind of the way that it’s talked about.”

Dr. Taylor added, “Addressing vaccine hesitancy in the Black community is important because I want my community to be healthy. I want them to have adequate and equitable health access. But we experience discrimination in medicine literally every day—things that have happened because we were dismissed or not believed about our symptoms. And I feel like we are not having those conversations.”

Establishing BMA as a nonprofit has been no small task, but the effort has been worth it so far—“Overwhelming but rewarding,” Dr. Taylor said. As the organization takes off and gains the power Drs. Kozik and Taylor seek, and as other “Black in X” groups do too, they will push forward the transformative structural changes that lay the groundwork for a more equitable academic landscape. The path Drs. Kozik and Taylor took, transforming a hashtag into a community, which morphed into something larger and more lasting than either originally planned, is an accessible one, though one requiring work and commitment. One takeaway is clear: if you want to advocate for change in your own community, you have to dive in. ✨



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