



LOOKING INWARDS
YOLANDA OHENE

Yolanda Ohene is a Wellcome Accelerator Award Research Fellow in Neuroimaging at The University of Manchester. Following an MSci in Physics from Imperial College London (2013) and a Master in Plasma Physics from UPMC and École Polytechnique, France (2014), she obtained a PhD in Medical Imaging from University College London (2020). Yolanda was awarded the Institute of Physics' Jocelyn Bell Burnell Bronze Medal and Prize in 2019 for outstanding contribution to physics by an early career researcher for her work in the development of a new MRI technique and The Women in Neuroscience UK's Equality, Diversity and Inclusion Award (2025). Alongside scientific research, Yolanda is a keen science communicator and has spoken at The Royal Institution, Cambridge Theatre London, and at large science events including New Scientist Live, Cheltenham Science Festival, and The British Science Festival, where she was the recipient of one of the Award Lectures (2021). Yolanda has been featured on the BBC and in *The Guardian* advocating for better equity in STEM fields and is one of the directors of The Blackett Lab Family C.I.C, UK Collective for physicists of Black heritage, to represent, connect, and inspire the next generation of physicists. – Address: Division of Psychology, Communication and Human Neuroscience, The University of Manchester, Zochonis Building, Manchester, M13 9NT, United Kingdom. E-mail: yolanda.ohene@manchester.ac.uk.

The College for Life Sciences Fellowship instantly attracted me because I had been searching for ways to integrate public health, science communication, and creativity more deeply into my basic science neuroimaging work. Delighted and excited about pursuing research, I hadn't prepared for just how much the time would teach me about myself.

My proposal was “How can medical imaging research better serve historically marginalised groups?” Over the years since doing my PhD, I had been gradually coming to this question. The ideas of exploring the lack of inclusion in medical imaging research and more holistic approaches to the scientific method were exciting. But I quickly found that my question was too big to handle in a 5-month fellowship. There are almost infinite avenues to approach the question: struggling healthcare systems, medical discrimination, underrepresentation in research, systemic racism, the list goes on. Initially, my plan was to write a fellowship application based on this question. Lucky for me, I found out that I had been successful in a Wellcome Trust Fellowship application that I had submitted before I arrived at Wiko: Breaking Barriers: Exploring blood-brain barrier function in a Black population at risk of dementia using advanced MRI. This took the pressure off and gave me time to explore other sides of myself outside of science and writing grants.

While learning languages isn't my forte, I seized the opportunity to participate in the German classes. It was wonderful to have three extra weeks in August, during the intensive German course, to get to know the other early-arriving Fellows and go on excursions in the city. Thank you to Eva von Kügelgen for gently guiding us in the beginner's class and expanding my vocabulary from “Guten Tag” to be able to order a coffee. I was blessed to have Bashir as my partner in our class throughout my time at Wiko. His intellect, humour, kindness, and knowledge were boundless. This also gave me the extra chance to probe him further about his intricate questions at each week's Colloquium.

Like everyone, I was terrified of giving my Colloquium. I asked the fantastic Sherene, who kindly agreed, to give my introduction. In preparation, the first question that Sherene asked me was, “What was your first relationship with the lab, tell me what it felt like, what it smelt like?” These simple questions took me aback; I suddenly recognised that my relationship with science has been almost completely cerebral. I have been separating myself from my experiments and had rarely taken a moment to examine how the environment I work in felt to me. This was poignant especially because I was trying to understand how my area of research could be more inclusive. It made me examine the labs that I had previously worked in, which felt safe and supportive, which I'd learnt from technically, and which created a welcome environment. This reflection also brought a deeper realisation about how being a scientist suited my character of being on the introvert/extrovert cusp. I enjoy sharing my work with wider audiences and speaking at conferences, but also I am truly content when working alone in the lab. Perfecting the setup of equipment, tweaking the way in which the radiofrequency pulses and magnetic

gradients are programmed on the MRI machine to capture the highest signal and the sharpest image. These reflections allowed me to start imagining what the ideal lab environment would be like for me. How would I like to build future teams, what skills and values would I like the people to have, and what make spaces feel inclusive for all working there?

It was humbling to sit back and listen to the conversations at lunch and dinner (a massive thank you to Dunia and the staff for providing so generously for us). I learnt so much from the other Fellows, their partners, and their wonderful children, as well as the fantastic Wiko staff during the mealtimes. Sometimes, I found that the discussions would cause an internal conflict for me between a desire to find the courage to speak up and share my story and a yearning to retract further into myself. This taught me something about being able to sit more comfortably in my unknowing. I was incredibly grateful to Hannah (another self-proclaimed introvert) who often rescued me from my shyness and gave a calm reassurance that we all bring our individuality to the table. Hannah also gave me excellent exhibition recommendations and a witty appreciation of the darker side of life.

Living in Berlin was the perfect place to reignite my love of art. I visited many exhibitions, saw theatre plays, went to the cinema, sat in listening bars (my favourite was Migas in Wedding), I went to dance classes, watched dance shows, and of course went dancing! I enjoyed discovering some new Black British poets—thanks to the fantastic Wiko library team. It was very special to go along to attend Misato's concert, *Boids*, for the string quartet at Radialsystem. The musicians and composition took us on a beautiful, abstract, and sometimes obscure journey into an otherworldly soundscape. The sounds they created, through the strings and at points directly off the bodies of the instruments themselves, reminded me of the multitude of ways of exploring and expressing the function of the brain. And how we are still only scratching the surface of our understanding of this organ.

Alongside exploring my creative side, my time at Wiko allowed me to foster a fruitful and hopefully long-lasting collaboration with my neuroimaging colleagues, Lizzie Powell (University College London) and Lena Václavů (Leiden University Medical Centre). They joined me for a week in which we set up some mathematical simulations of advanced MRI techniques to probe the blood-brain barrier. We delved into the foundations of the mathematical models, debated the meaning of the signal to measure subtle changes in the brain, and worked together to write code for the different models. This shone a light on many existing questions in our field. How to untangle a very small signal from the noise? What does this signal reflect biologically? How to better access and join

together the global expertise in our field? We have continued to work together this year; I invited them over to The University of Manchester in the summer. And now we've now presented some of this work at an international conference and have submitted a European Cooperation in Science and Technology proposal with others in the field.

I was glad that I brought my bike with me to Grunewald; it was a very handy way to explore the city. I enjoyed cycling to the various flea markets across the city, where I found some lovely gems for my wardrobe. I also loved to go for long cycles in Grunewald Forest to let off some steam, think of ideas, and move my body. One of my most cherished memories was cycling with Basile to the less-popular checkpoint of Berlin (Checkpoint Bravo). We spent the afternoon traversing the forest along the old route where the Berlin Wall used to stand and ended by visiting the University of Potsdam. We took lots of pictures of the historic building and beautiful scenery. It was a wonderful day, getting out into the countryside and being able to talk freely about the privileges we have as academics, as well as some of the struggles we have with working in a system that wasn't necessarily built for people like us.

There were many memorable moments, but few other highlights to mention. I took a trip to visit Prof. Onur Güntürkün's neuroscience lab in Ruhr University Bochum. His lab specialises in the origins of cognition across different species; it was incredibly inspiring to see the cutting-edge work they were doing and meet the brilliant people in his lab. I travelled to Poland to speak at the Silesian Science Festival Katowice, which is the biggest science festival in Europe. Racha kindly lent me one of Pieti's whistles, which I used for a demonstration about radio waves during the talk. All I can say is I'm glad I didn't know anyone in the audience for this one! A big shout out to the party committee, especially Leyla and Sara, for bringing the dancing, laughter, and good energy during the darker days. Finally, walking, chatting, and imagining new worlds with Sherene, I felt blessed to hear her insights about hidden histories, about global healthcare, about Palestine.

On reflection, I learnt that I have a superpower of being very technically minded, but perhaps a rare ability of finding ways to bring the clarity of abstract maths and physics to a wider audience. I was blown away by the Colloquia of other College for Life Sciences Fellows (Mariana, Michael, Rachel, and Ashley) who had similar superpowers, which made me proud we are reshaping the "awkward scientist" stereotypes. And a heartfelt thanks to Jana for looking after us and giving me great suggestions about science talks happening in Berlin. Fundamentally, I am a people person. I love to learn from people, to

try to understand new perspectives, and Wiko fosters this environment so beautifully. It's a unique place where you form a web of unexpected connections that deepens one's understanding of oneself and the world.

I started my Wellcome Fellowship in July 2025, I stepped into a new environment implementing a new technique on the MRI scanner at Salford hospital, and I took a deep breath and thought: "What does this environment feel like to me?" How fortunate I am to have crafted this expertise to see inside the brain, "the final frontier." And how can I continue to shape my research for inclusivity to be at the heart of my practice?

Thank you to the Rector Barbara Stollberg-Rilinger and the incredible Wiko team for giving me the space for me to look inwards, break myself open, and continue to find my path.