

## Black Scientists – Tackling racism in UK S&T

Date and Location: 7th December 2022 at The Royal Society

Chair: Pallab Ghosh  
BBC Science Correspondent

Speakers: Dr Ale Palermo FRSC  
Head of Global Inclusion, Royal Society of Chemistry  
Professor Ijeoma Uchegbu  
Professor of Pharmaceutical Nanoscience, University College London  
Sigourney Bonner  
Co-founder of Black in Cancer and PhD Student, University of Cambridge  
Dr Karen Salt  
Deputy Director for Research Culture & Environment, UKRI

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Audio/Video Files: [www.foundation.org.uk](http://www.foundation.org.uk)

Hash tag: #fstblackscience Twitter Handle: @FoundSciTech

**DR ALE PALERMO** began the event by noting that there was clear evidence of barriers to achievement for black students. White students were 13% more likely to get a first or 2:1 degree compared with BME students. This continues at every level up the academic ladder, fewer opportunities for research funding, and an academic pay gap. The Office for Students and Research England recently provided £1M to fund 13 programmes to tackle inequalities in access to postgraduate research.

The Royal Society of Chemistry published their Missing Elements report in March 2022, following two years of research, and based on data and evidence, including from HESA. The data show that whilst 4.9% of undergraduate students are black, this falls to 1.4% of PhD students, 1.0% of non-professorial academic staff and 0.0% of professors. They are aware of a single black chemistry professor in the UK, but statistically this is still 0.0%. There are similar low numbers in RSC membership, and it's clear that the UK is losing black chemists at an alarming rate.

The report also shows that whilst 55.6% of undergraduate chemistry students are studying at Russell Group universities, that

number drops to 37.8% for black students, important as Russell Group students tend to have more opportunities to go into PhDs.

They also looked at the intersectionality of gender and ethnicity. For all chemists, the percentage of women vs men drops at each level from undergraduate to PhD to non-professorial staff and then to Professor. For black women, that drop is even more pronounced (and there are no black female chemistry professors).

The Missing Elements report also looked at the lived experience of BME chemists. The research indicated that there are six interactive themes that impact their retention in chemistry, which are: attraction, inspiration and progression; mentorship, sponsorship and networks; the culture of chemistry; funding systems and structural barriers; global community; and leadership in the community, accountability and allyship.

**PROFESSOR IJEOMA UCHEGBU** began by introducing her science. She uses molecular envelope technology to create medicines with reduced side effects and improved efficacy. She then presented some ESRC data on diversity, showing that ethnically diverse management teams are

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more innovative; ethnically diverse juries make better decisions; ethnically diverse teams price stock more accurately; public companies with ethnically diverse management teams are more profitable; and a great mix of ethnicities and nationalities in research publications yields more citations.

There is also a clear link between income inequality and health and social problems, and the UK is a very unequal country. We saw during Covid that there were worse implications for those who were poor, black or from Bangladeshi heritage. In UK academia, 2% of academic staff are black, compared with 4% of the UK population. But only 0.7% of professors are black, and only 0.2% are black women – around 45 out of 20,000 professors.

This stems from an education system that's not fit for purpose. At age 11, achievement is identical between black and white students, with 67% of each meeting the standard. By A-Levels, 11% of White students achieve 3 Grade As (a typical offer for a research-intensive university), compared with 5% of black students. When it comes to degree qualifications, 82% of white students achieved a First or 2:1 in 2021, compared to 65% of black students. This then leads to a pay gap between white and black graduates of 23%.

In research, it is then very unusual to be a black PI, and black researchers are less likely to be funded by UKRI. Wellcome Trust has similar issues, but are taking positive action. When proposals for grants are ranked the same, they will fund proposals from underrepresented groups.

A race equality strategy is needed across the whole education sector, and the data should be published – because that leads to action. In UCL, more than half of students are from BME backgrounds, and the university has carried out a number of activities, such as holding conversations about the death of George Floyd, running a Centre for the Study of Race and Racism, and challenging UCL's previous links with racism and eugenics – leading to the renaming of some buildings. Degree results for black students are improving.

**SIGOURNEY BONNER** began by noting that the previous speaker, Ijeoma Uchegbu, was the first UK black female professor that she had ever met, despite working in a number of institutions over several years. In Black in Cancer, they have a phrase, “you can't be what you can't see”. Visibility is important.

Sigourney's own journey began with an

undergraduate degree in human physiology at the University of Leeds, including a year in industry. She applied for several PhDs without success, including one where it was clear the interviewer had made assumptions about her based on appearance. It took 17 applications and her getting 5 years of additional research experience before she secured a PhD place. This compares with three friends from her undergraduate course who left university with same degree result, all of whom secured PhDs straight away.

Sigourney met Dr. Henry Henderson, at the time a postdoc in Vanderbilt University in Tennessee, and together they founded Black in Cancer. They thought that it would be a small activity but it rapidly expanded. The need was clear. In the case of Cancer Research UK fellowships, ethnic minorities had less rejections of proposals at outline stage than white counterparts, but as proposals moved through full application and interview, it ended with a 27% success rate for white candidates and only 11% for ethnic minority candidates.

Black in Cancer was born to connect black cancer researchers, but also to focus on black patients suffering with cancer, looking to increase survival rates. They have promoted community engagement via the Cancer Awareness Project, and networking via the Black in Cancer Pipeline Program. This has included a mentorship programme, paid lab placement and postdoc awards, in the UK and USA. October 2022 saw the first Black in Cancer conference, with 250 delegates – cancer researchers, patients, advocates, and allies, and at which they gave out further funding. The conference was immensely supportive of those present, with a very different feel to other scientific conferences.

**DR KAREN SALT** noted the excellent work that had already been mentioned. Whilst it was important to talk about the data of grants and hiring practices, it was also important to talk about how it makes people feel, to walk around in environments in which racism is pervasive, something that she has experienced first-hand. After a background as a researcher, Dr Salt now works in UKRI. The issues stretch well beyond science, but in science, a lot of work is being done to address them, including widening participation activities focused on students, postgraduate support and work identifying barriers and opportunities. There has been a recent explosion in roles in universities to work on diversity issues, and real efforts to nurture and support the entire research community.

This massive push is welcome, but care is needed that we don't pile up excessive expectations on new BME

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academics to drive forward change, make an instant difference to curricula, sit on every diversity committee, etc. There is an urgency to this work, and it's wonderful that many organisations are waking up to the need to tackle racism with a range of new activities, but we need to be aware of the loads that are being placed on some colleagues.

We are currently in a transitional moment, and there are great examples of activities in many organisations. But this activity needs to scale, and that will be a challenge. The Mellon Mays fellowship programme in the US is an example of a large programme, bringing together 51 institutions, who have to commit to a number of things. The idea is to tackle underrepresented faculty, by creating a cohort, and supporting them learn and grow from undergraduate, through PhD and into the job market.

What we need to do is to band together, to learn from the different community activities (like Saturday schools) to create a number of different programmes on a consistent basis – so we are not relying on charities and good will to move people forward.

**IN THE DISCUSSION PERIOD**, the panel were asked why the current push on tackling racism in science and technology was happening – and what needs to happen next. The panel noted that these things have come in waves of greater and then less effort in the past, though the current ways that communities are banding together is a source of hope. There is a sense of momentum, and people are listening. One change is that many organisations are openly using the word racism, which makes a big difference. People are starting to take it more seriously, and thinking how to be better allies. Data will make a difference – companies should report their ethnic pay gap in the same way as their gender pay gap, and government should legislate for this - and publish their own data on differences in educational outcomes. There is still fragmentation on tackling the issues, and an important next step is much more co-ordination.

There was a set of questions around Saturday schools, working with black science teachers, and how to avoid this becoming a tick box exercise. In response, the panel noted that publishing the data was essential but not sufficient – to avoid the tick box exercise, it needed conversations with people, some of which might start as hostile, but become easier with time. One problem is that for some organisations, the data they have is poor or fragmented. One aspect of the Mellon Mays programme in the USA is that

organisations commit to self-assessment and analysis and then publishing a plan. The UK HE sector should have a conversation about what might work here. Working with other communities is vital to drive forward the changes we need. Bringing in younger secondary school students into universities such as Cambridge can help them seem more accessible to those from ethnic minorities. Increasing visibility of black researchers is key.

The panel were asked about what help them back in their careers, and also about improve the fear of self-certifying ethnicity data. In response to the first question, the panel instead talked about what had helped their careers. These included seeing positive role models, leading to raised aspirations, and the huge benefit of mentorship. On self-disclosure, we need to understand why people are not disclosing the data. There are real people under the data, and there is a relational aspect to disclosing data.

Gavin Costigan