

Transforming R&D People and Culture across the UK

There is increasing willingness within the R&D sector to tackle longstanding issues in workplace culture, and to help develop an R&D workforce fit for the future. The British Neuroscience Association is working to shift research culture within neuroscience, but there a number of areas **cutting across science** that the UK Government can set a strong and ambitious strategy to nurture.

Shifting research culture away from ‘publish or perish’

Researchers remain pressurised to publish as many papers as possible, as quickly as possible, with incentives to publish only surprising and novel findings, in 'High Impact Factor' journals which prioritise this kind of research. This puts a huge burden on researchers to produce what the system values as the ‘right’ results¹, and has led to worrying levels of non-reproducible research.² We need to improve researcher well-being and move away from measuring research value by its publishability rather than its credibility.

Key calls to action:

- Challenge institutions to commit to hiring policies that support credibility of research, and which reject use of Impact Factor as a direct proxy for research quality.
- Encourage the R&D sector to prioritise credibility-building approaches, such as exploratory research, replication studies or hypothesis-testing research, and to shift towards better recognition and reward of research teams rather than focusing on individuals.

Ensuring researchers have the skills, knowledge, tools and processes they need

To do things differently, researchers at all career stages need to be provided with the ability to use new tools and approaches for research to make their work as credible as possible. In this way we can help to make wide-ranging, long-lasting change to the future R&D workforce.

Key calls to action:

- Challenge all funders to provide training and guidance for researchers in how to navigate new research practices which are designed to improve credibility, such as: Registered Reports, Exploratory Reports, Open Science initiatives, research consortia, and use of data repositories.
- Encourage institutions to introduce concepts such as pre-registration at student level, for example, through pre-registering undergraduate research projects³, and for postgraduates presenting posters at conferences.⁴

Fostering an inclusive and diverse research culture

Research benefits when it brings together and builds on the diversity of views, backgrounds, and life experiences within the research community to help to tackle the complex challenges in science. There are long-standing barriers faced by underrepresented groups negatively impacting representation in research.

Key call to action:

- Challenge all funders to support initiatives aimed at improving representation, diversity and equity in research, and in particular to support students from currently under-represented ethnic groups.

We encourage BEIS to work collaboratively to implement these changes – with funders, institutions, industry, charities, and learned societies.

¹ The importance of no evidence. *Nat Hum Behav* 3, 197 (2019). <https://doi.org/10.1038/s41562-019-0569-7>

² Macleod MR, Michie S, Roberts I, Dirnagl U, Chalmers I, Ioannidis JP, Al-Shahi Salman R, Chan AW, Glasziou P. Biomedical research: increasing value, reducing waste. *Lancet*. 2014 Jan 11;383(9912):101-4. doi: 10.1016/S0140-6736(13)62329-6.

³ *Nature*, 2018: Reboot undergraduate courses for reproducibility.

⁴ Tibon R, Open Science Committee C, Henson R. Title TBA: Revising the Abstract Submission Process. *Trends Cogn Sci*. 2018 Apr;22(4):271-274. doi: 10.1016/j.tics.2018.01.008.