

Two decade analysis of African neuroscience research prompts calls for greater support

June 14 2021



Satellite imagery of Africa. Credit: Public Domain

A team of neuroscientists are calling for greater support of neuroscience

research in Africa following a long-term analysis of research outputs in the continent.

The findings detail important information about [funding](#) and [international collaboration](#) comparing activity in the continent to the US, UK and areas of Europe. It's hoped that the study will provide useful data to help shape and grow science in Africa.

Africa has the world's largest human genetic diversity which carries important implications for understanding human diseases, including neurological disorders.

Co-lead senior author Tom Baden, Professor of Neuroscience in the School of Life Sciences and the Sussex Neuroscience research group at the University of Sussex, said, "One beautiful thing about science is that there is no such thing as a truly local problem. But that also means that there should be no such thing as a local solution—research and scientific communication by their very nature must be a global endeavor.

"And yet, currently the vast majority of research across most disciplines is carried out by a relatively small number of countries, located mostly in the global north. This is a huge waste of human potential."

The team, made up of experts from the University of Sussex, the Francis Crick Institute and institutions from across Africa, analyzed all of the continent's [neuroscience](#) outputs over two decades, thoroughly curating local and international collaborations, research citation, visibility and funding.

Lead author Mahmoud Bukar Maina, a Research Fellow in the School of Life Sciences and the Sussex Neuroscience research group at the University of Sussex and visiting scientist at Yobe State University, Nigeria, said, "Even though early progress in neuroscience began in

Egypt, Africa's research in this area has not kept pace with developments in the field around the world. There are a number of reasons behind this, and for the first time, our work has provided a clear picture of why—covering both strengths and weaknesses of neuroscience research in Africa and comparing this to other continents.

"We hope it will provide useful data to guide governments, funders and other stakeholders in helping to shape science in Africa, and combat the 'brain drain' from the region."

Co-lead Senior author Lucia Prieto-Godino, a Group Leader at the Francis Crick Institute, said, "One of the reasons why this work is so important is that the first step to solve any problem is understanding it. Here we analyze key features and the evolution of neuroscience publications across all 54 African countries, and put them in a global context. This highlights strengths and weaknesses, and informs which aspects will be key in the future to support the growth and global integration of neuroscience research in the continent."

The study, published in *Nature Communications*, clearly details the African countries with the highest research outputs and reveals that the majority of research funding comes from external sources such as the U.S. and UK.

The researchers argue that local funding is vital in order to establish a sustainable African neuroscience research environment, suggesting greater government backing as well as support from the philanthropic sector.

Professor Baden added, "One pervasive problem highlighted in our research was the marked absence of domestic funding. In most African countries, international funding far predominates. This is doubly problematic.

"Firstly, it takes away the crucial funding stability that African researchers would need to meaningfully embark on large-scale and long-term research projects, and secondly, it means that the international, non-African funders essentially end up deciding what research is performed across the continent. Such a system would generate profound outrage across places like Europe—how then can it be acceptable for Africa?"

More information: M. B. Maina et al, Two decades of neuroscience publication trends in Africa, *Nature Communications* (2021). [DOI: 10.1038/s41467-021-23784-8](https://doi.org/10.1038/s41467-021-23784-8) , www.nature.com/articles/s41467-021-23784-8

Provided by University of Sussex

Citation: Two decade analysis of African neuroscience research prompts calls for greater support (2021, June 14) retrieved 27 April 2024 from <https://medicalxpress.com/news/2021-06-decade-analysis-african-neuroscience-prompts.html>

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