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UCT leading scientists selected to be part of £25M FLAIR scheme

Six University of Cape Town (UCT) scientists have been selected as [FLAIR research fellows](#). The FLAIR (Future Leaders – African Independent Research) is a programme of [The African Academy of Science \(AAS\)](#) and [Royal Society](#), with support from the UK's [Global Challenges Research Fund \(GCRF\)](#), designed to help talented early-career researchers, whose science is focused on the needs of the continent, establish independent careers in African institutions and ultimately, their own research groups. Up to 30 FLAIR fellowships will be awarded in 2019.

The 2019 FLAIR funded scientists were selected from a competitive pool of more than 700 applicants. The FLAIR scheme provides a platform for some of the scientists to return to the continent from countries such as the UK and USA to continue their careers in African institutions. This is an important part of the programme – attracting scientists back from the high-income countries where they have completed their postdoctoral training so that they can play a part in building the research infrastructure at home. To keep improving its scientific output, Africa needs to pay urgent attention to growing and retaining its scientific talent and FLAIR is one of a number of initiatives through which The AAS is tackling this issue.

The UCT researchers who will receive funding are:

[Dr Christopher Trisos](#)

Africa is projected to have as many as 43 million more people pushed in to extreme poverty due to climate change by 2030. Dr Trisos is working on forecasting climate change in Africa and his research will be shared online as free, interactive maps.

[Dr Dyllon Randall](#)

The sanitation services of many African countries are in a phase of development, which itself is an opportunity to avoid repeating mistakes, curbing the wasteful practices

currently facing many developed countries. Heeding this, Dr Randall is working on novel sanitation technologies that would allow for the recovery of valuable resources from human urine.

Dr Dorit Hockman

As the brain matures, different genes switch on and off to affect developmental change. In developing countries, like South Africa, diseases such as tuberculosis that affect the brain are dependent on these maturity-based genetic changes. Dr Hockman's research looks at the activation of medically relevant genes over the course of children's lives.

Dr Joseph Raimondo

Multiple disease processes in the brain such as epilepsy are associated with inflammation of the brain and the action of particular ions – with these resulting inflammatory diseases being especially prevalent in Africa. Dr Raimondo aims to use a technique he developed to measure the proportion of ions within brain cells to inform new treatments for epilepsy.

Dr Justin Komquep Nono

Schistosomiasis kills vast numbers of people, particularly in Africa, and incapacitates millions—its effects ultimately promoting poverty, and there's no vaccine. Dr Nono plans to analyse the genomes and microbiomes of those children more resistant to the parasite to potentially identify a mechanistic weak point in transmission to eliminate the disease.

Dr Sarah Fawcett

For every benefit provided by urbanised, coastal regions – fishing, seafood harvesting, tourism – is a suite of damaging corollaries including sewage and pesticide run-off. Dr Fawcett will track the sources of pollution by using an immense model system: False Bay, South Africa's largest natural bay, with the aims of informing government on where to place Marine Protected Areas.

Dr Wade Petersen

A recurring and chemically useful structure 'spirocyclic oxindoles' can be used as the backbone for many, potentially disease-quashing, drugs however when it is produced, its mirrored, less functional form is often the result. Dr Petersen aims to use new chemistry, including the manipulation of light, to selectively produce the desirable version of the molecule. His research will be applied to drugs treating malaria, TB and HIV.

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