

UCT professor wins prestigious global award

Suraj Parihar, an associate professor from the University of Cape Town's (UCT) Department of Pathology, who is also a member of the Institute for Infectious Diseases and Molecular Medicine (IDM), has been awarded a National Institutes of Health (NIH) Emerging Global Leader Award to build capacity in immune-metabolic and immune-genetic research at the university.



Associate Professor Suraj Parihar | Photo: Supplied

“This prestigious award is offered to early career scientists from low- or middle-income countries and is aimed at providing intensive, mentored research career development experience. Parihar is one of only seven UCT researchers to receive this accolade in the past five years,” said Dr Rob Huddy of UCT's Faculty of Health Sciences (FHS) Research Development team.

Countries in the Global South face a disproportionate burden of global health challenges such as HIV, TB, and Type 2 diabetes. However, the sophisticated scientific skills and equipment needed to tackle these diseases effectively tend to be concentrated in the Global North. Both TB and Type 2 diabetes are leading causes of death in South Africa, and commonly co-occur. Furthermore, Type 2 diabetes increases the risk of developing TB.

Parihar's research, for which he received the NIH award, seeks to understand TB-diabetes co-morbidity better, using an immune-genetics and immune-metabolism approach. This work will bring new research skills and techniques to UCT and build capacity for a new research specialisation.

Identifying genetic factors for TB infection

Critical to Parihar's work is identifying genetic factors linked to individuals developing TB symptoms.

“Most people living in low-and middle-income countries (LMICs) will be exposed to TB at some point in their lives,” says Parihar. “But only 5-10% of people exposed get sick. Particularly those with weaker immune systems resulting from HIV infection. This means that there is something in the immune system of the rest of us that can control this disease.”

Through findings of previous studies, Parihar believes the answer lies in a specific gene pathway that affects the function of macrophages in the body. Macrophages are specialised blood cells that fight against bacterial invasion, detecting and destroying them through inflammation. Parihar and his colleagues believe they have identified a gene pathway that reduces the inflammatory response to TB bacteria, making the body unable to clear the infection and subsequent inflammation.

Building capacity in Africa

The key to this NIH Award is to build capacity in Africa. This means that rather than the complex science being done in the United States, where the skills and the equipment already exist, it will be done by Parihar and his team at UCT under the mentorship of Professors Russel and Hawn. Parihar has procured the necessary equipment through UCT's University Equipment Committee Grant and will travel with his students to the USA for additional training. This will ensure that the equipment is used to its full potential and that the skills learned are returned to the IDM.

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