UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

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MEDIA RELEASE

UP launches Diabetes Research Centre at Faculty of Health Sciences

PRETORIA – The University of Pretoria (UP) has launched South Africa's first exclusive Diabetes Research Centre at a public academic institution.

Approved by the University Senate in November last year, and already operational, the centre is a collaborative initiative that "brings together all the research happening in silos in different departments," explained the centre's Senior Project Manager, Dr Patrick Ngassa Piotie.

Although housed in the Faculty of Health Sciences, the centre adopts a transdisciplinary approach and works across faculties to develop research that aims to improve the lives of people living with diabetes. "It is a holistic approach to address the challenges around diabetes, from prevention to care, and will lead to a new vision in diabetes research," Dr Ngassa Piotie said.

Diabetes, which is caused when blood glucose levels are too high, is the second most common natural cause of death in South Africa, where 4.6 million people live with the condition. According to the Department of Health, only 19% of people with diabetes treated in the public health system manage to control their glucose levels. The danger of uncontrolled diabetes is that it can lead to strokes, blindness, heart attacks, kidney failure or amputation. Uncontrolled diabetes also has dire economic consequences on individuals, families, communities and ultimately the country; diabetes can lead to increased healthcare expenses as well as people losing their income.

The centre's research strategy is organised around six clusters: the prevention of diabetes; diabetes management in primary healthcare; its management in hospitals; gestational diabetes (developed during pregnancy); diabetes in children and adolescents; and diabetes technology.

The gestational diabetes cluster, headed by Professor Sumaiya Adam of the Department of Obstetrics and Gynaecology, is the most prolific. PhD, MSc and MMed research ranges from a 10-year audit of pregnancies affected by diabetic ketoacidosis (when the body breaks down fat too fast and becomes acidic) to a profile of circulating microRNAs (genes) in pregnancies complicated by diabetes.

The centre's main project to date is the Tshwane Insulin Project (TIP). Punted as "translational research in its prime", it is impacting the lives of South Africans living with type 2 diabetes as they transition from oral drugs to insulin through the implementation of a nurse-driven, app-enabled and community-oriented intervention. One of the centre's mandates is academic development. "Being a university, we want to keep producing scientific knowledge that is relevant and impactful," Dr Ngassa Piotie said. "In the long term, we want to develop researchers, a new generation of African investigators in translational and health systems research, and implementation science."

The centre has already received a number of proposals, such as one from Sonja Mostert of UP's Department of Psychology to look at the challenges people with diabetes experience in adopting healthy eating habits and taking up exercise. Existing research includes a study by Dr Maria Karsas of the Department of Paediatrics and Child Health on COVID-19 and diabetes, a PhD in dietetics on the dietary implementation of glycaemic load on

blood glucose control of patients with diabetes, and tech-based solutions to disease management such as the use of sensors to monitor glucose continuously in patients admitted to hospital in a diabetic coma.

Another use of technology that UP's Diabetes Research Centre will pioneer is telehealth, where healthcare is provided remotely by means of telecommunication tools such as phones or smartphones. These services can include patient education or consultations with a specialist, a crucial aid in the South African public healthcare environment where there is often a shortage of health professionals. The centre recently obtained approvals from the Faculty of Health Sciences' Research Ethics Committee as well as the Tshwane Research Committee to pilot a screening programme for diabetes retinopathy using telehealth and artificial intelligence. Primary care patients will have access to a state-of-the-art camera that detects eye damage due to diabetes.

In addition to its research activities, the centre will also offer healthcare providers training, such as a three-day workshop on diabetes and insulin management for nurses in primary care that Enterprises UP will administer.

Professor Paul Rheeder of UP's Department of Internal Medicine is the centre's Director, and its management committee includes Dr Ngassa Piotie and the head of each research cluster. Professor Tiaan de Jager, Dean of the Faculty of Health Sciences, chairs the centre's advisory board. Apart from Prof Rheeder and Dr Ngassa Piotie, others on the 14-person board include representatives from the World Health Organisation, the South African Medical Research Council, Sweet Life and the Diabetes Alliance South Africa, Youth with Diabetes, the National Department of Health, the Gauteng provincial government and the City of Tshwane.

Prof Rheeder and Dr Ngassa Piotie's initial proposal for the centre outlined its value: "Through the UP Diabetes Research Centre, the University will have a meaningful impact on the lives of thousands of South Africans who are alone and without voice before a dreadful disease."

Captions:
1. Prof Paul Rheeder
2. Dr Patrick Ngassa Piotie

Media inquiries

For interviews, please email Prim Gower at Primarashni.gower@up.ac.za or call 083 229 9011

ABOUT THE UNIVERSITY OF PRETORIA

The University of Pretoria (UP) is one of the largest contact and residential universities in South Africa, with its administration offices located on the Hatfield Campus, Pretoria. This 113-year-old institution is also the largest producer of research in South Africa.

Spread over seven campuses, it has nine faculties and a business school, the Gordon Institute of Business Science (GIBS). It is the only university in the country that has a Faculty of Veterinary Science which is ranked top in Africa, and overall has 120 academic departments, as well as 92 centres and institutes, accommodating more than 55 000 students and offering about 1 100 study programmes.

UP is one of the top five universities in South Africa, according to the 2019-2020 rankings by the Center for World University Rankings. It is also ranked among the top 100 universities worldwide in three fields of study (veterinary science, theology and law), and among the top 1% in eight fields of study (agricultural sciences, clinical medicine, engineering, environment/ecology, immunology, microbiology, plant and animal sciences and social sciences).

In May 2020, the annual UK Financial Times Executive Education Rankings once again ranked GIBS as the top South African and African business school. The University also has an extensive community engagement

programme with approximately 33 000 students involved in community upliftment. Furthermore, UP is building considerable capacities and strengths for the Fourth Industrial Revolution by preparing students for the world beyond university and offering work-readiness and entrepreneurship training to its students.

As one of South Africa's research-intensive universities, UP launched the Future Africa Campus in March 2019 as a hub for inter- and transdisciplinary research networks within UP and the global research community to maximise 4IR innovation and address the challenges and stresses our continent and world is facing. In addition UP also launched the Javett Art Centre in September 2019 as a driver of transdisciplinary research development between the Humanities and other faculties. In November 2020 UP launched Engineering 4.0. as a hub not only for Smart Cities and Transport, but also to link the vast resources in technology and data sciences to other faculties via Future Africa. These initiatives are stimulating new thinking at the frontier of 'science for transformation'.

For more information, go to www.up.ac.za