# UCT research focus on combating poverty-related heart disease in Africa

According to studies, one of the leading causes of death in Africa and many developing countries is cardiovascular disease (CVD). Resources in low-and-middle-income-countries are limited, therefore, it is imperative that interventions are guided by the cost-effectiveness of screening and early treatment opportunities.

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The University of Cape Town (UCT) is leading comprehensive research programmes on CVD, at its Departments of Surgery and Medicine within the Faculty of Health Sciences and at Groote Schuur Hospital. These programmes focus on combating diseases related to poverty, such as rheumatic heart disease, pericardial disease, cardiomyopathy and heart failure.

Professor Bongani Mayosi, dean of the Faculty of Health Sciences at UCT said: “We are leading research that aims to combat poverty-related heart diseases through basic research, clinical services and population approaches. Most recently, we had one of the biggest breakthroughs in the discovery of the gene that causes sudden death in young adults and athletes.” Furthermore, findings have been established related to the genetic causes of heart disease, important treatments for pericardial disease and the prevention of rheumatic heart disease.

The Hatter Institute for Cardiovascular Research in Africa, part of the UCT Department of Medicine, conducts world-leading research on heart disease that affects women, especially during and after pregnancy.

Professor Ntobeko Ntusi, head of the Department, established the first academic cardiac magnetic resonance imaging (MRI) unit in Africa. MRI is one of the most comprehensive diagnostic tools, enabling better and faster diagnoses and understanding of heart disease in patients.

## Fostering collaboration, capacity building in cardiology

Diagnosis and screening are important and need to be followed by effective treatments for developing countries. With this in mind, a team of heart surgeons, clinicians and medical engineers at Strait Access Technologies – a UCT startup company – has engineered a novel heart valve made from an innovative plastic material that can be mass-produced at low cost. Using this, doctors can repair or replace diseased heart valves at under-resourced hospitals in developing nations without the need for open-heart surgery.

These are only a few of the many research activities that have led to pan-African research networks, involving more than 20 countries in the sub-Saharan region and other developing countries such as China, Brazil and India. These networks foster collaboration and capacity building in the field of cardiology.

*In establishing itself as a gateway for cardiovascular research from Africa, for Africa and beyond, UCT will hold its first-ever inaugural lecture on the epidemic of cardiovascular disease in the developing world, exploring the broader global implications. The Dr Stuart John Saunders inaugural lecture will take place on 9 May 2018. The lecture is open to the public.*