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13 October 2026

UCT partners with BRICS institutions to boost medical device innovation

The BRICS BioDesign Programme aims to show that innovation, manufacturing and regulatory compliance can happen in the Global South, for the Global South. Photo: Supplied.

The University of Cape Town (UCT) has partnered with India's Andhra Pradesh MedTech Zone (AMTZ), Sechenov University in Russia and the Brazilian Society for Biomedical Engineering (SBEB) to establish the BRICS BioDesign Centre and Programme, an initiative aimed at strengthening medical device innovation, manufacturing and healthcare capacity across the Global South.

Announced ahead of the 18th BRICS Summit in New Delhi on 12 and 13 September 2026, the partnership comes as South Africa seeks to reduce its reliance on imported medical

technologies. About 90% of the medical devices used in the country are imported, representing an opportunity to expand local innovation, manufacturing and job creation. "Essentially, for every R100 that you pay for medical devices in South Africa, close to R90 of that is going outside of the country," explained Professor Sudesh Sivarasu, director of UCT's Biomedical Engineering Research Centre (BMERC) and the Department of Science, Technology and Innovation (DSTI) and National Research Foundation (NRF) South African Research Chair in Biomedical Engineering & Innovation.

"If we can create an environment where there are enterprises that can develop and manufacture those products locally, we can reduce the outflow of money from the country while also creating jobs."

South Africa's medical device market was valued at US$1.12 billion in 2025 and is projected to reach US$1.67 billion by 2032. Developing local capacity could help the country respond to growing healthcare needs, including those associated with cardiovascular disease, diabetes, respiratory disease and cancer.

Building health sovereignty through BRICS collaboration

The programme draws on the complementary strengths of the four partner institutions to help participating countries develop the skills, infrastructure and systems needed to move medical technologies from research to market.

India offers experience in large-scale manufacturing, packaging and certification, while Russia contributes expertise in tissue engineering, testing and data science. Brazil brings experience in medical device manufacturing and biomedical entrepreneurship, while South Africa contributes a strong scientific research base and early-stage innovation capabilities.

"There's a real opportunity for South Africa to learn from these other emerging economies. Although our science is really solid, science alone won't feed us. We need to convert that science into innovation, translate that innovation into appropriate solutions and those solutions into products," said Sivarasu.

The one-year executive fellowship will focus on biomedical engineering, product development, prototyping, manufacturing and certification, alongside clinical immersion and entrepreneurial education. Fellows will spend six months at a partner institution, complementing the training received at their home institution and gaining exposure to different parts of the medical technology value chain.

Managing director and founder of AMTZ Dr Jitendra Sharma described the programme as a bridge between scientific discovery and real-world patient impact. He said the partnership could support co-development, investment and market access while creating a lasting platform for cross-border healthcare innovation.

Sivarasu said the initiative would focus on developing people and systems capable of turning research into practical healthcare solutions.

"We wanted to think beyond technology creation to developing engineers, clinicians and innovators who are capable of handling these technologies and creating systems that can actually take care of the technologies we're building.

"So, much of our focus with the BioDesign Programme has been on creating partnerships and systemic interventions that not only enable novel innovations but give us the ability to

validate those innovations and build the infrastructure that's needed for us to take advantage of these technologies."
Dr Peter Timashev, director of the Institute for Regenerative Medicine at Sechenov University, said the programme marked an important step towards a shared approach to healthcare innovation among BRICS partners.

Applications for the inaugural intake are expected to open before the end of 2026, with the first cohort scheduled to begin in January 2027.

UCT brings established medical technology expertise
At UCT, the programme builds on the work of BMERC's UCT MedTech, which develops medical technologies to address healthcare challenges in Africa and beyond.

The facility holds ISO 13485:2016 certification and a South African Health Products Regulatory Authority Medical Device Manufacturing Licence, enabling it to take medical devices from concept to certified product. Its portfolio includes 24 medical technology patent families, five spinout companies and more than 100 000 devices distributed globally, including Easy Squeezy, FlexiGyn and ZiBiPen.

Fellows at UCT will receive training in FrugalBiodesign, an approach developed at the university that treats resource constraints as design considerations and develops devices suited to the health systems in which many of the world's patients receive care.

"What we've built at UCT is a small-scale version of what the BRICS BioDesign Programme aims to do across nations: to show that innovation, manufacturing and regulatory compliance can happen in the Global South, for the Global South," added Sivarasu.

Olwen Manuel, director in the Office of the Vice-Chancellor, who attended the programme's launch with Sivarasu, said the partnership aligned with UCT's Strategy 2030, which recognises innovation and entrepreneurship as drivers of inclusive development.

"By fostering these collaborations, which connect research, education, industry and government, the university aims to accelerate the translation of knowledge into solutions that create social, economic and public value," explained Manuel.

The initiative creates an opportunity for BRICS partners to strengthen healthcare innovation through shared expertise, build local manufacturing capacity and develop technologies that respond to the needs of their populations.

Story by Nicole Forrest, UCT News.

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