

The research and innovation process

The innovation management process is circular and iterative rather than linear:



Innovation transforms the university's inventions, discoveries and ideas into new applications, products and services. Some technologies are commercialised through new start-up ventures and others are licensed to existing companies. These processes are often described as technology transfer.

Technology transfer

- enables the transformation of research into tangible benefits for society
- leads to the creation of jobs through, for example, spin-off companies
- enhances university-industry engagement
- enriches the educational experience for staff and students
- helps to reward, retain and recruit faculty and students
- provides opportunities for additional income and resources.



"The university is fortunate to have been able to gather so many people doing amazing work that has an impact on our society. UCT is committed to ensuring that the research and development efforts of our researchers result in outcomes that benefit society in its broadest sense."

MR PIET BARNARD
Director of Research Contracts & Innovation (RC&I)



"Innovation is a cornerstone of the research enterprise at UCT: we have a dedicated team that supports our researchers from concept development through to implementation and commercial roll-out. One of the major drivers of innovation is enabling researchers to uncover solutions to real-world problems – and this is particularly critical in the global south."

PROF MAMOKGETHI PHAKENG
Vice-Chancellor

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16 Innovation at UCT



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Meet three UCT inventors



1 **Dr Lutete Khonde** co-created a simpler, faster and cheaper way of synthesising ergothioneine in a lab, with a much greater yield than previous processes. Ergothioneine, a super antioxidant, is studied all over the world for its role in ageing, its ability to increase athletic performance and for developing new anti-tuberculosis drugs. Khonde's process has now been patented and he is working with the Department of Chemistry to find ways to bring the process to market.



2 Biomedical engineer **Dr Sudesh Sivasaru** draws inspiration from nature to design his patented medical devices. In the five years since Sivasaru arrived at UCT, he has invented numerous devices with applications ranging from stroke rehabilitation and asthma therapy to devices that aid orthopaedic surgeons in resolving problems with knee joints. These devices have received a number of national and international awards.

3 **Dr Ann Meyers** from the Biopharming Research Unit is studying how plant proteins could produce a cheaper alternative to conventionally produced vaccines and the reagents used in diagnosing diseases. She is currently working on the production of vaccines against African horse sickness, Rift Valley fever and foot-and-mouth disease, as well as the expression of antibody reagents against several of these viruses for diagnostic purposes.



UCT spin-off companies

ENGINEERING



Isiqu Orthopedics

SCIENCE



HEALTH SCIENCES



Dream Haven (Pty) Ltd



Innovation in numbers



2 226 research contracts processed per year

Total value of contracts in 2018 exceeded **R1.59 billion**



475 invention disclosures received and evaluated since inception (1999)



143 active inventions

24 spin-off companies launched in 14 years



404 patent applications granted since 2011

UCT HOLDS EQUITY IN 10 SPIN-OFF COMPANIES

In excess of **R100 million** of equity in spin-off companies



R40.8 million in accumulated income since 2001 from intellectual property (IP) exploitation activities



RESEARCH CONTRACTS & INNOVATION

Research Contracts & Innovation (RC&I) supports UCT's research activities by centrally managing, authorising and negotiating research and research-related professional services contracts entered into with our wide variety of clients and funders. RC&I also oversees, implements and nurtures technology development and commercialisation activities at UCT.