2019

Report on Research to Senate and Council

Executive Summary

Introduction

As a university, our goal is to serve our country and continent as its leading comprehensive university, contributing new knowledge to tackle the grand challenges of our fast-changing world. We are driven by the need for deep and rapid transformation into a society that values all its people, enhances social justice and prepares members of our university to contribute to a fair and just future.

This report records our progress in the course of 2019 towards these goals, but also acknowledges areas of risk and those in which our performance is not yet reaching our targets. In the conclusion, we indicate our strategy moving forward, not only in terms of mitigating risk, but also to demonstrate our alignment with UCT's transformative vision for the future.

Our reflection on UCT's research portfolio is shaped through the three interlinked principles of transformation, excellence and sustainability that inform the Vice-Chancellor's developing *Vision 2030*. We recognise the ambitious nature of placing these targets at centre stage and embrace the challenge of disrupting old paradigms whilst maintaining that which serves us well. We are convinced that addressing this challenge in an innovative and dynamic manner will position us well to contribute definitively, both globally and locally.

To bridge our transition from UCT'S 2016–2020 vision to the "three interlinked pillars" of excellence, transformation and sustainability embedded in *Vision 2030*, we interrogate our performance through the prism of questions related to the transformative nature, productivity, impact and sustainability of our

research. Across these, we consider the enabling environment that is required in order to better our achievements.

To advance our **transformative agenda**, we need to challenge and support our existing scholars while nurturing the growth of the next generation. In doing so, we are mindful that our postgraduates and young researchers care deeply about creation, curation, connection and community. This has implications for why, how and on what we focus our research, and why, how and what we teach. What skills and mindset do we, as executives and academics, need in order to inspire, motivate and retain the next generation of academics? In terms of demographic change, a comprehensive report was commissioned that demonstrates a steady – but too slow – increase in black researchers at UCT. Many of the tables in the main report now include demographic data, thanks to the new electronic administration (eRA) system that enables the tracking of these trends. A number of new initiatives further demonstrate the shift towards a more inclusive identity as summarised in the highlights section further below.

UCT's **research productivity** continues to grow as measured through internationally recognised indicators, such as income generated through grants and contracts, the increased number of journal and book publications and patents submitted to the national Department of Higher Education and Training (DHET), and the growth in the number of research master's and PhDs. UCT's advancement in the world rankings as well as its comparative performance in National Research Foundation

(NRF) rating can also be considered as proxies of research productivity. Comprehensive reports on all of the above are included in Section 9 of the main report.

The above standard metrics are problematic when used in isolation, and in 2019 the University Research Committee voted to support the principles of the San Francisco Declaration of Research Assessment (DORA), whereby peer-assessment based on qualitative impact on stakeholders are brought in to play. The extensive work underway to host an international research summit on the United Nations Sustainable Development Goals (SDGs) in Africa, focused on accelerating the scale and pace of change towards reaching these goals in Africa, further demonstrates UCT's focus on, and investment in analysing and show-casing, the socio-economic relevance and impact of our research (postponed until 2021 in view of the COVID-19 pandemic). The SDGs include resolving some of the world's most intractable and complex problems and therefore provide fertile ground for demonstrating the impact of our work.

Examples of how the imperative for **sustainability of the research enterprise** is being addressed are included in the highlights section below. In addition, the quality assurance reviews of UCT's accredited research groupings are geared to ensure ongoing research excellence and productivity, sustainable business plans and encourage succession planning. In terms of research infrastructure, the effort to manage and sustain research equipment through appropriate planning, sharing and avoiding of duplication continues

to be strongly advocated by the University Equipment Committee, also through regional consultation.

Creating an **environment to nurture the academic project** is evident in the continued strengthening of UCT's research support and infrastructure, not only through the eRA system, but also through the new international grants hub that provides proposal development support to apply for large consortium-based grants. Policy developments in the e-research space and in the area of data management serve to increasingly support and guide the use of online resources and research-related software.

Effective **knowledge dissemination** has been identified as a key enabler to strengthen research, and to this end the development of business plans and governance structures to establish composite and interdisciplinary data hubs and facilities that can provide access to data sets and share "best practice" methodologies across disciplines and research teams or researchers are underway. The Research Office's communications hub guides researchers to achieve greater visibility on a range of online or web-based platforms.

The year 2019 has been complex in terms of executive leadership for the research portfolio. Following the appointment of the previous substantive DVC Research and Internationalisation, Prof Mamokgethi Phakeng, as Vice-Chancellor, two acting appointments were made through to end April 2019. The UCT community expresses thanks to Prof Michael Kyobe and Prof Kevin Naidoo for taking on this role. Over

the months May to July, the roles of the portfolio were shared between the Executive and incoming DVC Research and Internationalisation, the latter on a part-time basis. Prof Sue Harrison took up the role full-time in August 2019. Further, through this, we have needed to prepare for the retirement of our long-time Executive Director of Research, Dr Marilet Sienaert, at the end of 2019.

The need to increase UCT's **investment in research** had been noted over many years and an additional R30 million was voted to research on a trial basis for three years (2019–2021). This investment was intended to address strategic need, including cementing a stable base in the light of decreasing national research funding, and Prof Kevin Naidoo constructed a draft research strategy that informed some early initiatives. Prof Sue Harrison actualised the benefit of this investment in research as a focal point of her first months in office. She revised and refined the plans further, launching them as an action plan alongside the work being done at the university-wide level on *Vision 2030*.

More detail on our strategy for the way forward is provided in the conclusion of the report.

Throughout the report, our focus on deep and rapid transformation is a cross-cutting theme, addressed in most chapters and extending beyond demographics to address the research we do, the enabling academic culture we seek, and the opportunity we work to provide to create a fair and just academic environment.

2019
IN NUMBERS
A RESEARCH DASHBOARD

UCT international rankings
1st in Africa

198th
IN THE WORLD
QS 2020

136th
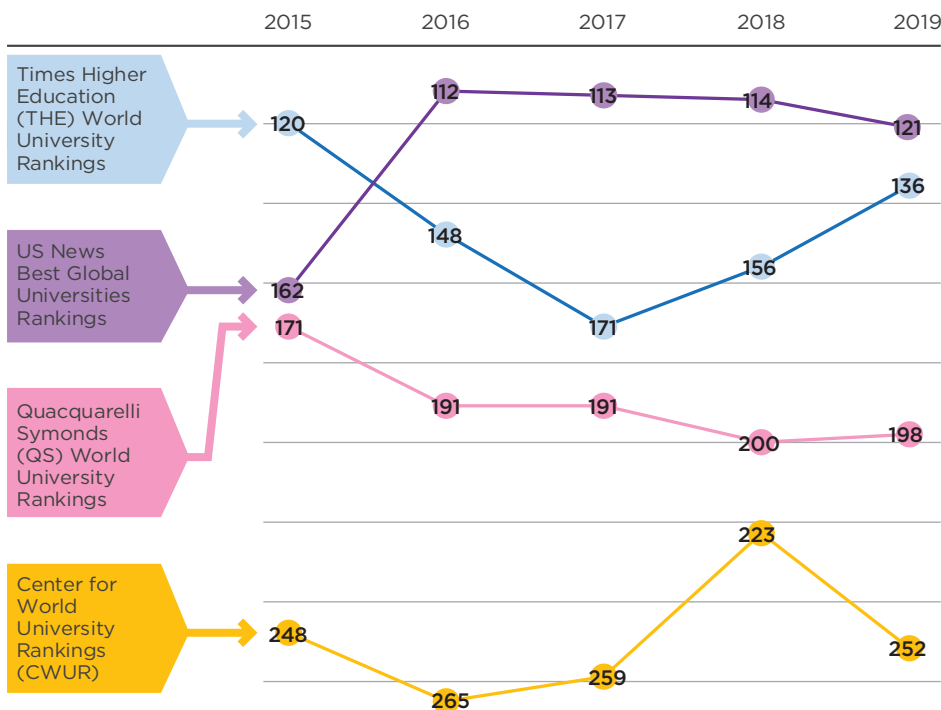**IN THE WORLD**
THE 2020

252nd
IN THE WORLD
CWUR 2019-2020

121st
IN THE WORLD
US NEWS 2020
BEST GLOBAL
UNIVERSITIES

201-300
IN THE WORLD
ARWU 2019

9th
**EMERGING
ECONOMIES**
THE 2019

World university rankings

	2015	2016	2017	2018	2019
Times Higher Education (THE) World University Rankings	120	112	113	114	121
US News Best Global Universities Rankings	162	148	171	156	136
Quacquarelli Symonds (QS) World University Rankings	171	191	191	200	198
Center for World University Rankings (CWUR)	248	265	259	223	252

Subject rankings:

10th **IN THE WORLD**
Development studies

QS 2020

20th **IN THE WORLD**
Mining & mineral engineering

GRAS 2019

36th **IN THE WORLD**
Oceanography

GRAS 2019

Key terms:
THE Times Higher Education
QS Quacquarelli Symonds
CWUR Center for World University Rankings
GRAS ShanghaiRanking's Global Ranking of Academic Subjects
ARWU ShanghaiRankings – Academic Ranking of World Universities

Note: The ShanghaiRankings are not represented in this graph because UCT is ranked in a band from 201-300 which is not possible to include in this illustration. This was an improvement from 2018's ranking of 301-400

Publications*

1826.56
Publication count (units)

14
Number of authored books

189
Number of chapters in books

R226 million
Subsidy income: publications

3 232
Number of journal articles
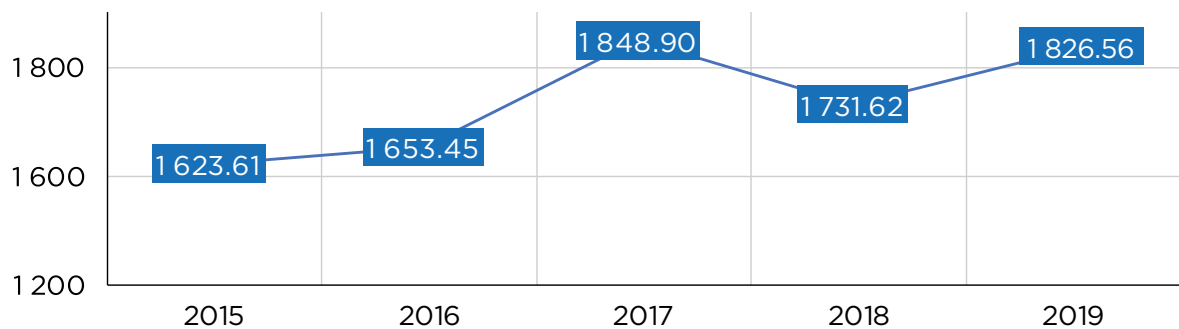
3 163
Number of authors (all outputs)

251
Number of conference proceedings

*The publication figures are for accredited (subsidy-generating) outputs only published in the preceeding year.

Publication count units:

	2015	2016	2017	2018	2019
	1 623.61	1 653.45	1 848.90	1 731.62	1 826.56

National Research Foundation (NRF) numbers

512
NRF-rated Researchers

12%

The National Research Foundation allocates ratings based on a researcher's recent research outputs and impact, as perceived by international peer reviewers.

35
A-rated researchers

29%

A-rated researchers are international leaders in their field. About 30% of the country's A-rated researchers are at UCT.

43
SARChI Chairs

18%

Department of Science and Technology/National Research Foundation South African Research Chairs are designed to strengthen the ability of the country's universities to produce high-quality research, innovation and students. 18% of the country's SARChI Chairs have been awarded to UCT.

NRF-rated researchers:

2015	2016	2017	2018	2019
514	542	542	515	512
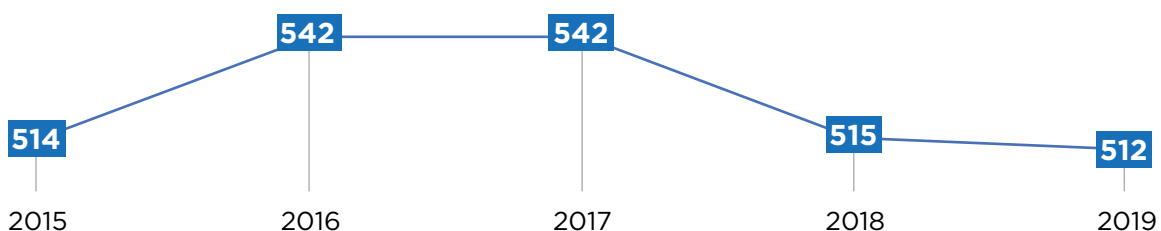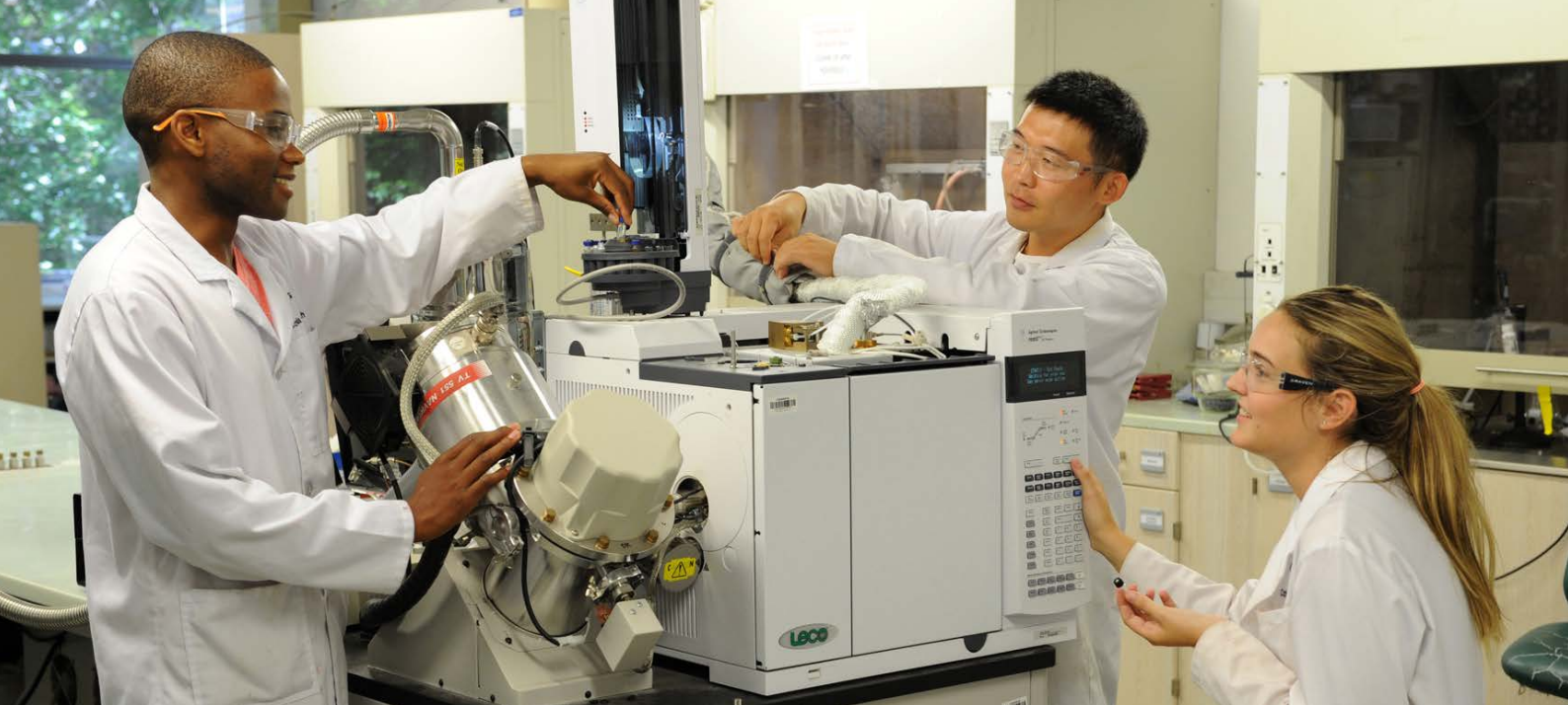
2019 Contract research

2 163 Research contracts signed

Research contract value R1.77 bn
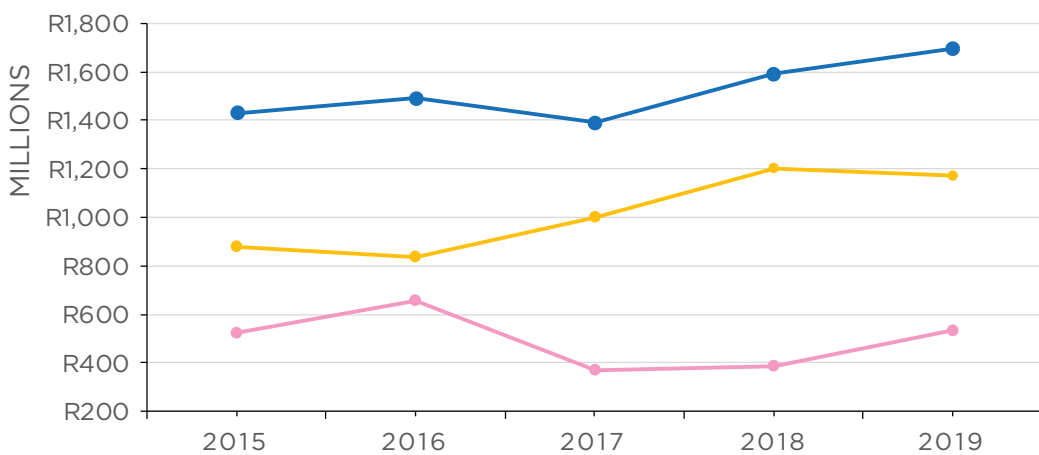
Value of foreign research contracts signed R1,190 m

Value of local research contracts signed R579 m

Research contracts

37 Patents granted

INCOME R1.64 BILLION* external research income in 2019

**1 SPIN-OFF COMPANY STARTED**

* Research income refers to revenue actually received or due on SAP, and is therefore the actual realisation of the monies agreed to per the research contracts. Note: These figures are not adjusted for inflation or international currency fluctuations.
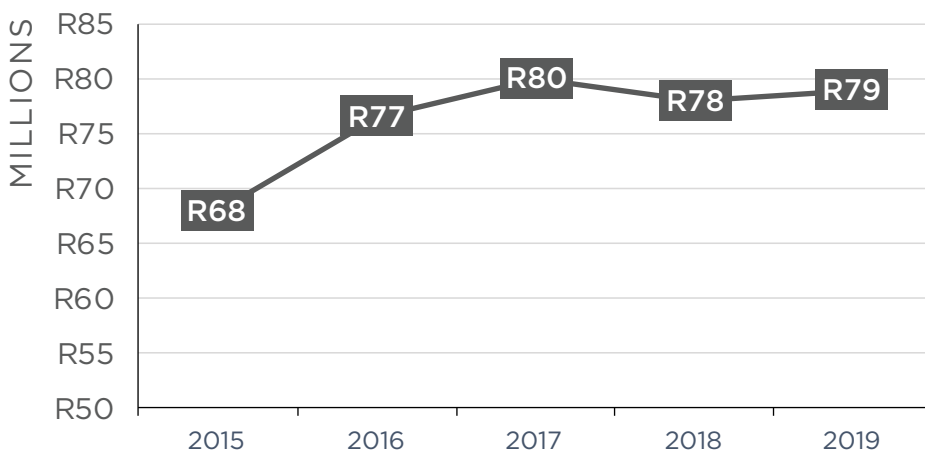
2019 Graduate & postdoctoral funding

Postgraduate funding

Chart — Postgraduate funding (MILLIONS):
- 2015: R255
- 2016: R272
- 2017: R295
- 2018: R312
- 2019: R302
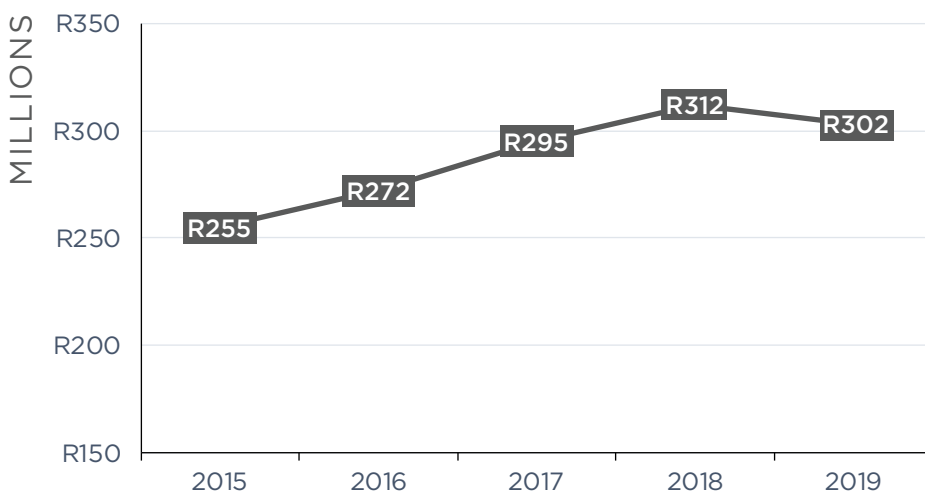
R302 million
Postgraduate funding

Funding for postdoctoral fellows

Chart — Funding for postdoctoral fellows (MILLIONS):
- 2015: R68
- 2016: R77
- 2017: R80
- 2018: R78
- 2019: R79

R79 million
Funding for
postdoctoral fellows

Highlights

These narrative highlights supplement the graphic highlights that precede them, and offer an overview of successes in diverse areas of UCT's research landscape. They range from strengthening the academic pipeline to raising the profile of UCT's research globally.

UCT investment in new programmes that forge an inclusive identity and sustain excellence

The Enabling Grant Seeker Excellence (EGSE) awards aim to encourage applications to external – particularly international – funders and to decrease research funding dependency on the university and the National Research Foundation (NRF). Once-off awards are made on evidence of having submitted an external application.

The value of the award ranges from R10,000 to R100,000 depending on the size of the external grant the researcher applies for.

In 2019, 61 researchers were supported to a total value of R3,650,000, based on their grant applications of over R124 million.

Junior Research Fellowships are awarded following a competitive, proposal-driven process to which UCT's accredited research groupings (units, centres and institutes) may apply. The purpose is, firstly, to increase research productivity and to strengthen the career path of the next generation of researchers in a way that ensures they are mentored, nurtured and well-networked into an interdisciplinary community of scholars. The second purpose is to bolster the research capacity of UCT's accredited research groupings to build centres of critical mass.

Awards are based on the quality of a mentorship plan and career track outlined for the fellow. Successful recipients recruit the fellow according to UCT's equity policy.

Ten awards of R500,000 annually for three years were made in 2019 and will be adjusted to bring them in line with UCT's current remuneration packages for fixed-term contracts at this level.

The Programme for Building Research-Active Academics aims to help build research-active academic staff in the early years of their appointment through an award that allows them to support a master's project under their supervision through a student bursary and limited running costs. The award enables the new staff member to develop supervision expertise and build a team in an area of their choice.

This initiative allowed 66 early-career academics in permanent positions for 3 years or less to provide a two-year bursary (dependent on a satisfactory progress report at the end of the first year) to a master's student, supplemented where needed by a small running cost, through awards valued between R120,000 to R150,000. The total value awarded through this initiative was R8,562,000.

The UCT Seed Awards were established to address the abrupt decline in the number of applications for NRF rating after the NRF's policy change that cut incentive grants.

Rating remains a useful benchmarking tool and is still required to access some of the NRF's competitive funding programmes. UCT seed awards are made to successful first-time rating applicants and those whose ratings are successfully renewed.

The seed awards are scaled according to the rating achieved and in 2019 awards to the value of R1,960,000 were made to 64 eligible applicants.

The three-year Decoloniality Project (2017–2019) challenges academics to develop new thinking about problems that should be addressed most urgently by UCT as an African university. This project continues to deliver published research and innovative solutions, including in the curriculum.

The three projects that were selected through a competitive proposal-driven process are currently going into their last round of the funding of R300,000 each per annum.

The 2030 Future Research Leaders Programme aims to lift out a small cohort of exceptionally talented early-career researchers, selected by the Vice-Chancellor, who are recognised by their peers as future world-leaders in their fields. UCT risks losing these exceptional scholars not only through head-hunting by other universities but also due to shortages in research funding and infrastructure. The goal is to safeguard their careers at UCT and build on the excellence of this cohort by offering additional support to help them reach their full potential.

The programme has an annual budget of R5 million; a further three researchers were selected in 2019 to join the founding cohort of 10, bringing the number up to 13.

The Advancing Womxn Awards (2019–2024), another Vice-Chancellor initiative, aims to amplify womxn researchers' voices both for their own advancement and the advancement of others. The project promotes human capital development of womxn and helps us to rethink our views of gender in South Africa, giving new insights into ourselves and people in other communities.

Five substantial grants – three of R1 million a year, and two of R750,000 a year – have been awarded over five years.

UCT support for graduates (master's and doctoral students) and postdoctoral fellows

In 2019, 2 837 postgraduate students (33.9% of all eligible applicants) received a total of 4 307 awards to a total value of R273,652,138. This includes 784 international and refugee students who received 1 139 awards to a total value of R74,696,487.

Of the 2 837 students who received awards, 1 011 (35%) were black South African postgraduate students (including African, Asian, coloured and Chinese).

Additional awards from external sources made via the Fees Office brought the total postgraduate funding in 2019 to R302 million (a decrease from R313 million in 2018).

The university continues to host the most postdoctoral research fellows in the country, with 364 (179 South African and 185 international) postdoctoral registrations in 2019. Of these, 191 were considered as black postdocs (African, Chinese, coloured, Asian), 147 white, and 36 undeclared.

Donor support for graduates and early career academics

The Carnegie Corporation's Developing Emerging Academic Leaders (DEAL) in Africa project, which began in 2011 with US$2.3 million awarded every two years, is now in its last year. It has excelled in its aims to support research-leaders-in-training in the fields of infectious diseases (including the disciplines of molecular medicine and molecular and cell biology), civil engineering and economics. Of the 27 fellows in the last cohort (2018-19), 14 were female, 23 were black and 22 came from the rest of Africa.

Achievements by the fellows during the course of the programme include:

- publication or co-publication of 110 academic articles since 2017, including 49 published in 2019, and a further 46 under current review
- presentation at 66 international conferences and invitations to speak at international gatherings
- registration of a patent
- extensive research visits to top international universities and research institutes
- supervision of master's and PhD theses
- serving as reviewers for journals and research grant publications, including service on editorial boards
- serving as executive committee members on pan-African research projects
- successful co-applications for eight international research grants as well as involvement in international research collaboration with key African and international universities.

The Black Academic Advancement Programme (NRF-FRF Sabbatical Awards) is funded by the NRF and the FirstRand Foundation. UCT was invited to submit eight applications in 2019. All applicants were successful and the awards will commence in 2020.

Researcher development

The Emerging Researcher Programme (ERP) (now subsumed into the Researcher Development Academy – see below) enrolled 79 new members in 2019. Of the 87 academics who received promotions in 2019, 41 were ERP members at some stage in their career. Representation of black South Africans in the ERP is 56.5% (as opposed to 29.7% on the academic staff), and female ERP members comprise 58.3% (compared to the overall 45.8% female academic representation at UCT). All eligible black South Africans were awarded research development grants in 2019 (65.1% of available funds).

The UCT Researcher Development Academy (RDA) is located in the Research Office and offers an array of skills development courses to our sister universities in South Africa and elsewhere on the continent.

The Research Office runs several staff development programmes for UCT staff, postdoctoral fellows and postgraduate students, but these programmes are dependent on soft funding, which places them at risk. The RDA was conceptualised to help financially sustain the ERP by using a cost-recovery business model (applied only to external-to-UCT clients) that aims to make the entity self-sustaining over the next few years. UCT staff and students will continue to benefit free of charge.

The International Grants Support Hub in the Research Office bolstered its capacity at the end of 2019 and now provides pre-award assistance for applicants that need to broker large, international consortia and comply with the increasingly complex requirements of international grant agencies. Such support is imperative for increasing UCT's access to large, international grants and is already bearing fruit.

Two ARUA centres of excellence hosted at UCT

The two (out of 13) African Research Universities Alliance (ARUA) centres of excellence hosted at UCT have consolidated their strengths in 2019 and continue to excel. These are the African Centre of Excellence for Inequality Research (ACEIR), led by Professor Murray Leibbrandt, and the ARUA Centre of Excellence in Climate and Development (ARUA-CD), with Professor Mark New as director and Professor Sheona Shackleton as deputy director. The University of Ghana and the University of Nairobi are co-hosting nodes of both UCT centres, providing exceptionally fertile ground for enhanced collaboration with these two African universities.

The visibility of UCT's research

During 2019 the Research Office published issues 3 and 4 of Umthombo, the research magazine that aims to showcase the breadth and depth of UCT's research, primarily for an international audience. Umthombo replaces the annual research report with a shorter, more dynamic, frequent and topical publication that is appropriate for the target audience of international visitors and for promoting UCT's research when visiting collaborating institutions.

Further highlights in communication include the expansion in services around internal research communications at UCT, including an increase in the frequency of the Research Announcement and a re-design of the Research Support Hub,

the dedicated research administration and support website. The Post-graduate Funding Office site – a key resource for postgraduates – has also been overhauled and integrated into the UCT Postgrad Hub.
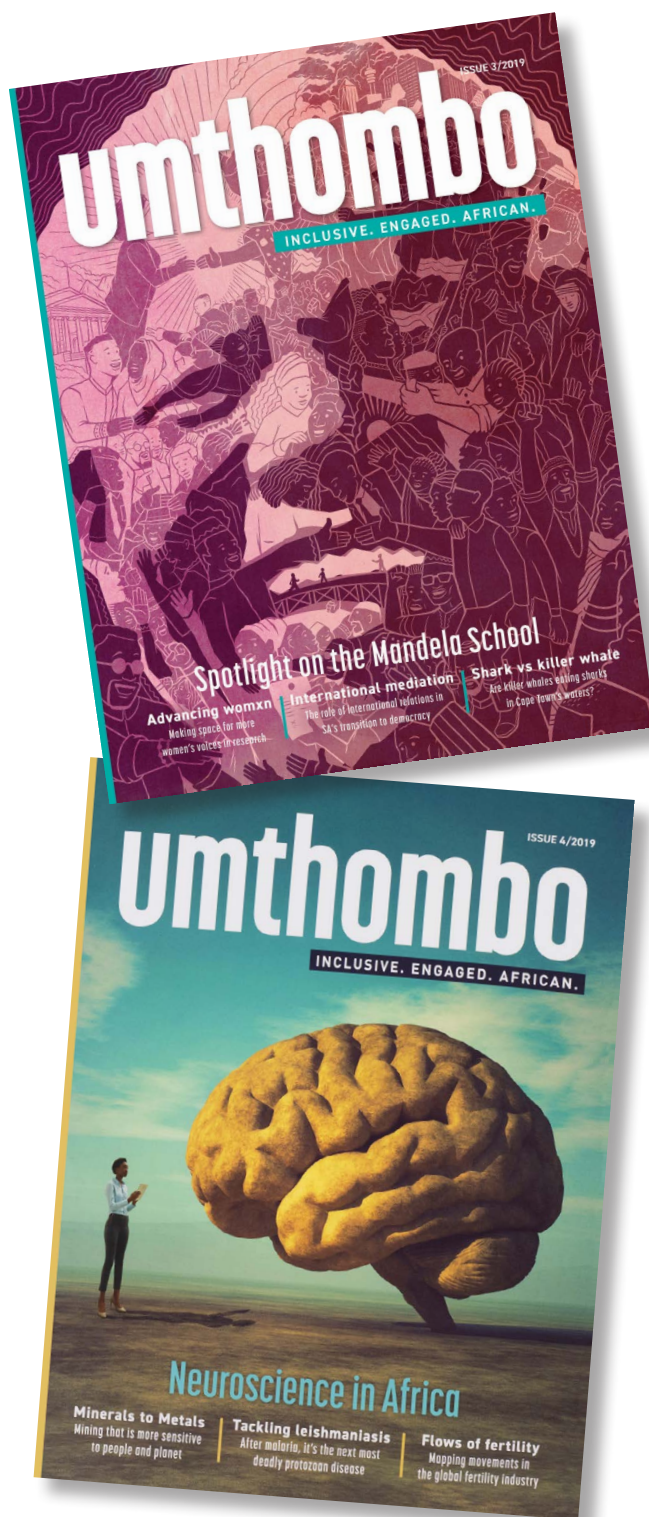
2019 UCT investment

Researchers supported

Investment in 2019

Enabling Grant Seeker Excellence Awards	**61**	**researchers supported**	R3,650,000
Junior research fellowships	**10**	**fellows supported for three years**	R5,000,000
Programme for Building Research Active Academics	**62**	**researchers given 2-year bursaries for a master's student**	R8,562,000
UCT Seed Awards	**64**	**researchers supported**	R1,960,000
2030 Future Research Leaders Project	**13**	**(3 new in 2019)**	R5,000,000

Projects supported

Investment in 2019

Decoloniality Project (2017–2019)	**3**	**projects over 3 years**	R2,700,000
Advancing Womxn Awards (2019–2024)	**5**	**projects over 5 years**	R4,500,000

Risks

The following list of research-related risks – while not comprehensive – demonstrates the most pressing risks to UCT's research enterprise. They have been identified by the University Research Committee using the risk policy framework accepted by Council in November 2010. It is anticipated that the impact of the current COVID 19 epidemic will have repercussions for UCT's research, the detail of which will emerge in the coming months and years.

Research funding

We are pleased to report that the risk of inadequate internal funding has greatly improved in the short term with the reorganisation of general operating budget (GOB) resources for a period of three years (2019-21) that has enabled the launch of new funding instruments described in the Highlights section above. These programmes – conceptualised to build research-active staff that

independently bring in external funds and generate research outputs – are starting to bear fruit.

However, and very pertinently, UCT remains unable to implement multiple business plans that have been developed to adequately support its **soft-funded academic research staff (SFARS)**, due to lack of resources. As highly research-productive staff that also supervise postgraduates, lack of support for this constituency places the research enterprise at grave risk, especially in the faculties of health sciences and engineering & the built environment.

This risk is exacerbated by the impact of the COVID-19 pandemic whereby funders are withholding grants where research is on hold. In response to this, a task team under the leadership of Deputy Vice-Chancellor for Research and Internationalisation, Professor Sue Harrison, is fast-tracking planned improvements for this critical constituency.

Income from national funding, particularly the NRF, continues to be a challenge due to changing policies and rigorous adherence to demographic targets. This also impacts on researchers' ability to top up postgraduate bursaries and provide running costs for student research. While this has improved in 2019, thanks to internal funds made available through the funding programmes listed in the Highlights section as well as UCT's sustained efforts in assuring postgraduate funding support, the uncertainty continues. Particularly at risk are the two national **DST/NRF Centres of Excellence** hosted at UCT beyond 2022 (c*change and Birds as Keys to Biodiversity Conservation). These centres are important research training sites for postgraduate students but, despite new business plans that have been submitted on request to the NRF, their future remains uncertain.

The DST/NRF South African Research Chairs Initiative (SARChI) is likewise a significant source of research income for the university and, importantly, also a critical platform for postgraduate and postdoctoral training and research. Twenty-three of our (current) 43 chairs are in their final funding cycle, with their grants anticipated to end in 2022 and 2023. Efforts are being made to explore funding partners for these chairs. UCT is also planning ahead in an attempt to secure at least partial financial support for the chairs in 18 to 24 months' time.

In the face of increasing dependency on international grants, the university is exposed to significant and ongoing **foreign exchange risks**. In addition, increasingly onerous legislative requirements make it more difficult to secure funding in the first place (see also section below). Embedded within this risk is the reality that UCT's international research income is raised by only a few individuals, some of which are SFARS. Losing even one of these individuals will have considerable impact on UCT's research. Concerted efforts were made in 2019 to begin to mitigate this risk, with UCT's new funding mechanisms to incentivise the

raising of international funds and the enhanced proposal development support that is now on offer in the Research Office. The focus now has to be on addressing institutional unpreparedness for legislative compliance.

Unreadiness for compliance

Universities in South Africa are currently grappling with a plethora of new policies and legislation that raises new demands for compliance for which institutions are ill-prepared. Universities South African Forum (USAf) is working with universities to fully understand the scale of the compliance imperative, how it will be done, by whom, and what the role of the different departments and individuals within universities will be.

There are currently more than 100 pieces of legislation that impact the university in one or another way*. Within the research endeavour there are very low levels of compliance to the legislation, and this poses exceptional risk that will have a knock-on effect on reputation, safety, security and income.

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*The following institutions and policies all place additional requirements on research for which compliance is very low: DAFF: Department of Forestry and Fisheries; GMO's: Genetically Modified Organisms; SAVC: South African Veterinary Council; DoH: Department of Health; NHREC: National Health Research Ethics Council; OHRP: Office for Human Research Protection; OLAW: Office of Laboratory Animal Welfare; US-ORI: United States Office of Research Integrity; EU-GDPR: European Union General Data Protection Regulation; POPIA: Protection of Personal Information Act.

To mitigate this risk, an executive task team, with the help of the Office of Research Integrity (ORI), concluded extensive mapping of the research compliance landscape at UCT. Work is underway to address the immediate gaps and includes the establishment of a short-term Ethics Governance Review Committee that will oversee the harmonisation and adjustment of UCT's relevant structures, policies and procedures.

Fragmentation of research support structures

Resourcing the administration and support for research has not kept pace with the massive growth of the research enterprise over the past five years. In addition, the administration that supports research is currently spread across faculties as well as a range of independent PASS departments, including the Research Office, the Research Contracts and Innovation Office, the Research Finance Office, Human Resources, the International Office and the Development and Alumni Department.

This highly fragmented governance of research administration and support developed organically over the years and was never designed to manage a research enterprise of our current size and complexity. Not only is this model cumbersome and confusing for researchers to navigate effectively and to make optimal use of funding opportunities, it also places the university at risk in the context of an increasingly complex policy and compliance environment.

Progress towards the establishment of a virtual platform where the full range of administrative activities that support research are visible, aligned and coordinated is coming to fruition in certain areas of research activity. Key to this is the electronic research administration (eRA) system, with modules for the grant pre- and post-award cycles. Full implementation of both modules will be concluded in 2020, going a long way in providing more holistic research support services.

Research equipment infrastructure

Research infrastructure and the acquisition of new research equipment are central to UCT's research competitiveness, and the University Equipment Committee (UEC) is responsible for its strategic acquisition and maintenance. Its budget does not cover current need, with support-worthy requests totalling R30 million against the R16 million awarded in 2018. However, in 2019, improved analysis of the risks to UCT resulted in an increase of 6% to this fund, now also more appropriately located in the University's Capital Expenditure Budget. From an operational point of view, this allows for greater flexibility and agility when, for example, high-end laboratory equipment required to run major research and postgraduate teaching programmes needs to be replaced.

There nevertheless remains an urgent need to develop a model for institution-wide core facilities that cut across faculties and assure economies of scale, as well as a shift towards research data accessibility in the form of central data hubs or facilities. A pilot study drawing on the learnings of DataFirst has been launched and will be reported on in 2020.

Conclusion

As evidenced in the full report, UCT continues to excel as the leading research-intensive university in Africa and we thank our researchers for their tireless commitment to producing new knowledge that is relevant to our time and place, that continues to inform the curriculum and that provides fertile training ground for our postgraduate students and postdoctoral fellows. But we must accelerate transformation that gives agency and voice to previously marginalized South Africans and pair this with ongoing excellence if the university is to be sustainable into the future. We cannot do this by simply taking on more. We need to make decisions on how we prioritise, and where we should best focus our efforts and resources. We can each excel individually but our university will best excel as a collective.

In identifying research areas of collective strategic advantage, the matter of impact is of primary importance. By supplementing our bibliometric indicators of excellence with evidence of societal, environmental and economic impact when evaluating research, we can encourage new knowledge that is in line with what we value. The Research Symposium (November 2019) was an important step in this direction, and together with the development to date of UCT's *Vision 2030* (under leadership of the VC), have informed the strategy for research that is now being mapped out for the coming decade. Addressing current grand challenges and co-creating a sustainable global future is central to this strategy. Breakthroughs in

basic knowledge must be brought to bear on enhancing quality of life in social, economic and environmental terms, which require disciplinary depth as well as efficient inter- and transdisciplinary teams. We must impact select areas of importance for our city, country and continent whilst maintaining our globally competitive edge. To achieve this, we must attract and retain top academics, build diversity across our staff, enable soft-funded research teams to flourish, nurture our early career academics and provide a cutting-edge postgraduate education. Risk mitigation and balancing efforts and resources will remain central guiding principles as we take our strategy forward.

The new in-house initiatives and funding instruments elucidated in the report (see Section 9 in the main report) provide a sound base from which to align UCT's research with *Vision 2030*. These include new funding instruments that incentivize a shift towards applying for funds beyond UCT and the NRF, encourage postgraduate supervision, and build deliberate career tracks for emerging academics in interdisciplinary groupings with demonstrated mentorship capabilities.

The challenge of our research administration, which is fragmented across multiple PASS and Faculty areas (see Section 8.3.3 in the main report), will be addressed through improved virtual platforms where the full range of administrative activities that support research are systemically made visible, aligned

and coordinated. In tandem, broadly accessible and interdisciplinary research tools built by experts will be provided for cross-campus use such as data repositories, data analytic facilities and cross-cutting methodologies, to name a few. To further adapt to a changing world as more researchers apply for complex, consortium-based (mostly international) grants, the new hub to support advanced proposal development in the Research Office is already geared up for this change.

In addition, the design and implementation of a compliance plan for issues related to research is a matter of urgent priority. A review of ethics governance aimed at harmonizing processes and achieving appropriate standardization across faculties is already underway, as is the establishment of a new non-biomedical human ethics in research committee to review protocols (also for interdisciplinary studies) from across the university. This focus on best practice might in the longer term lead to the establishment of a more comprehensive due diligence unit as a necessary condition to advance our institutional compliance levels.

The way forward also includes diversifying current funding streams and prioritising those that foreground local perspectives in their research agendas. We will strengthen our African collaboration for the good of the continent but also leverage interest from global funding agencies. We must address our lost sphere of influence with the NRF and strive to rebuild relations and influence national thinking. We will implement an HR policy that has buy-in and

support to retain – under much improved conditions of service – our soft-funded research staff (SFARS) that contribute so significantly to URC's research stature. Research infrastructure and expensive equipment must be sustained through rigorous monitoring of replacement needs and careful business planning to assure optimal usage and avoid duplication of resources.

It is clear that, as an institution, we face a challenging future, but we are collectively determined to embrace this through transformative innovation. The work has already started, with some components already well underway and the COVID pandemic spurring us on. In looking forward, we are confident of the impact our research will have in helping our societies adapt to a post-pandemic world, in our city, our country, on our continent, and on the global stage. ■

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