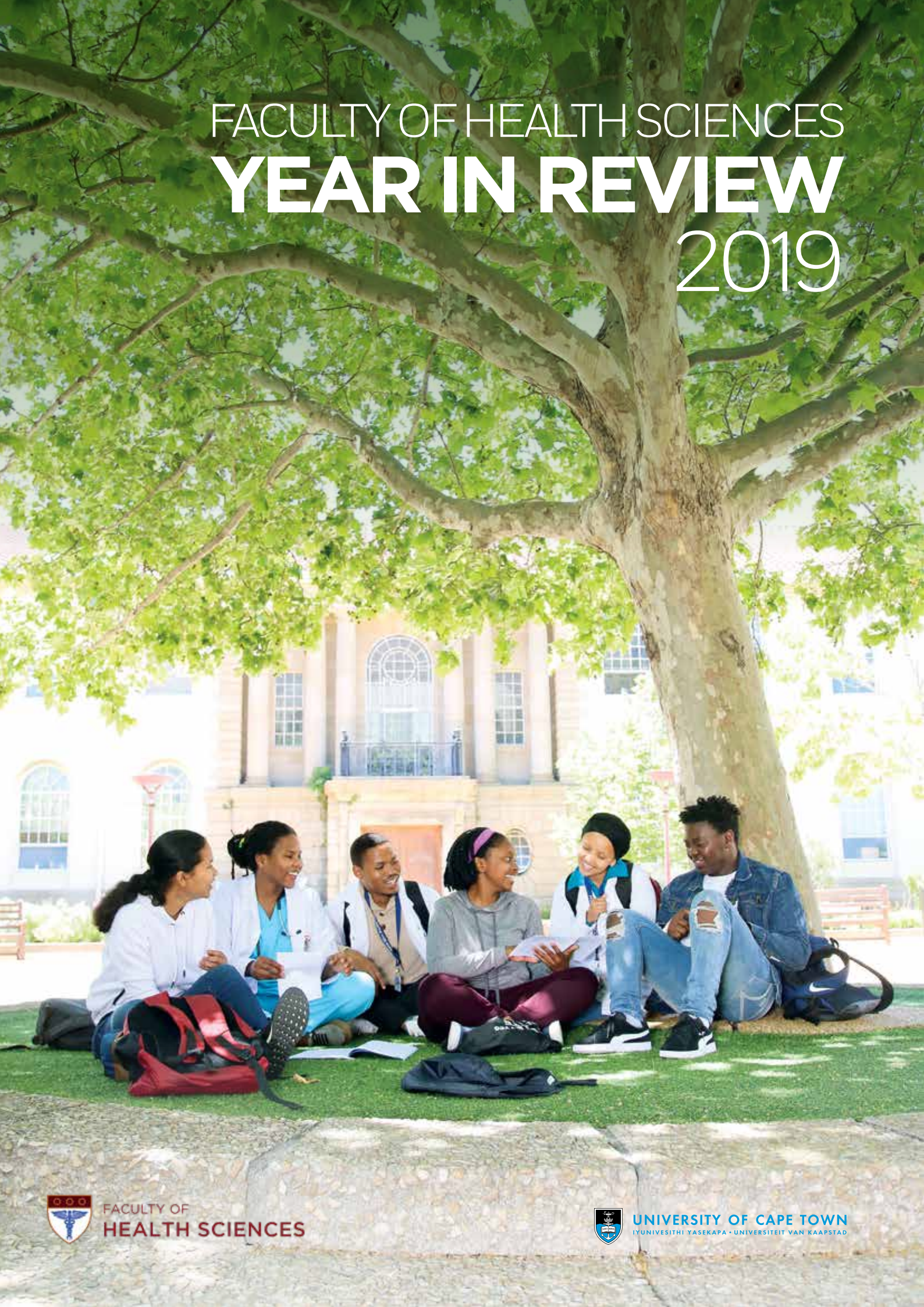

FACULTY OF HEALTH SCIENCES
YEAR IN REVIEW
2019

FACULTY OF
HEALTH SCIENCES

UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

VISION

UCT is an inclusive and engaged research-intensive African university that inspires creativity through outstanding achievements in learning, discovery and citizenship; enhancing the lives of its students and staff, advancing a more equitable and sustainable social order and influencing the global higher education landscape.

MISSION

UCT is committed to engaging with the key issues of our natural and social worlds through outstanding teaching, research and scholarship. We seek to advance the status and distinctiveness of scholarship in Africa through building strategic partnerships across the continent, the global south and the rest of the world.

UCT provides a vibrant and supportive intellectual environment that attracts and connects people from all over the world.

We aim to produce graduates and future leaders who are influential locally and globally. Our qualifications are locally applicable and internationally acclaimed, underpinned by values of engaged citizenship and social justice. Our scholarship and research have a positive impact on our society and our environment.

We will actively advance the pace of transformation within our university and beyond, nurturing an inclusive institutional culture which embraces diversity.

Project manager: Thania Gopal
Production: Thania Gopal, Jason Howes, Linda Rhoda, Thembakazi Sonwabe, Nobhongo Gxolo
Writers: Thania Gopal, Nobhongo Gxolo, Kim Cloete, Articles courtesy of UCT News
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Design: Sean Robertson

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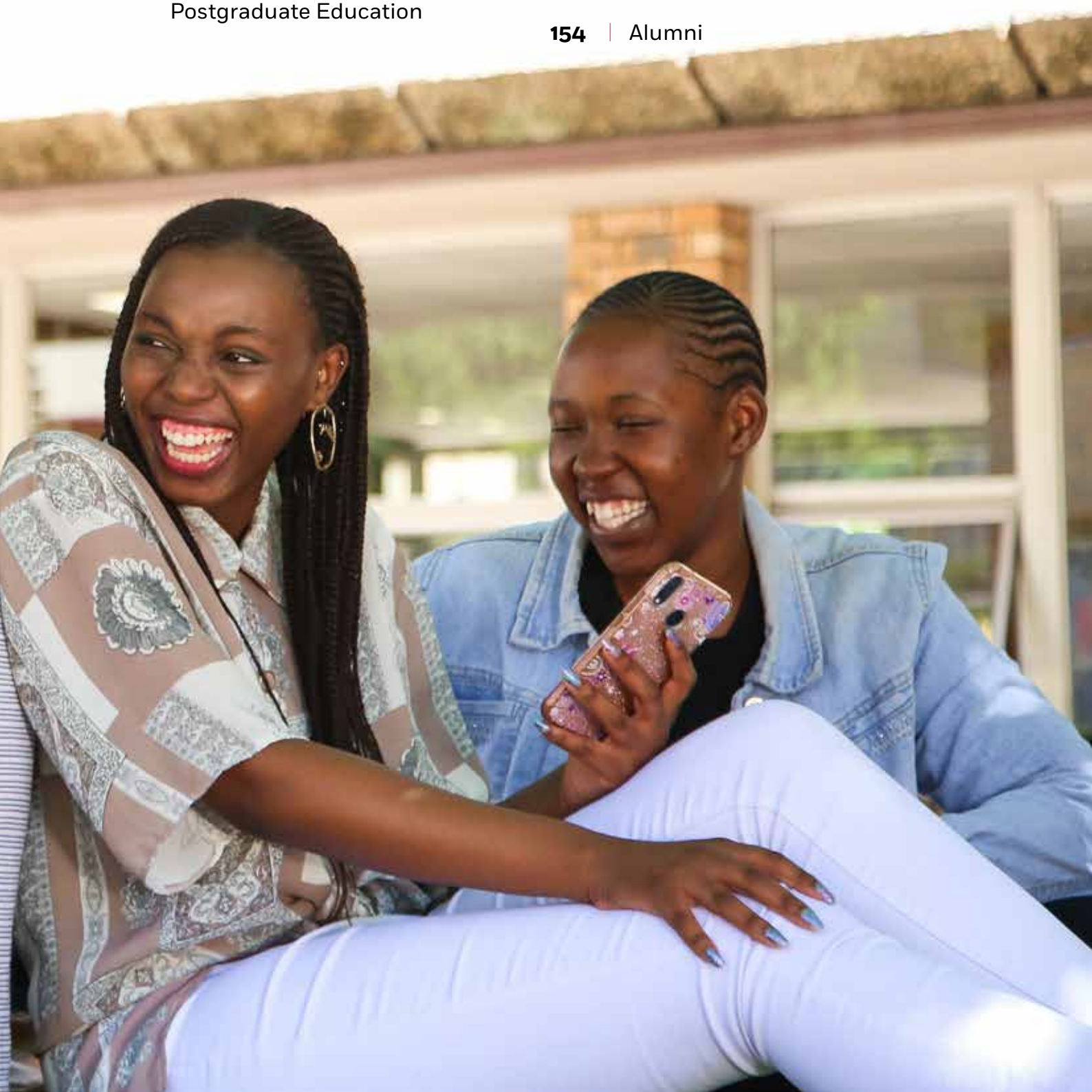


STAFF

FACULTY OF HEALTH SCIENCES
A YEAR IN NUMBERS 2019

One of the largest faculties at UCT

A PROUD TRADITION OF ACADEMIC EXCELLENCE

Top-rated university in Africa

World-class research

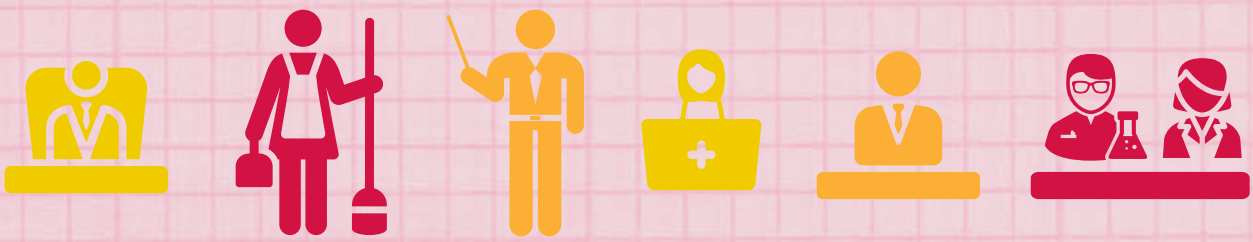
Providing research, teaching, clinical services

65th **in the world for clinical, pre-clinical and health universities**

*2020 Times Higher Education (THE) World University Rankings.

Our research enterprise brings **HALF** of UCT's research income and has **DOUBLED** over the past 5 years.

31 accredited research units



1594 staff

> 90% South African
> 70% Female

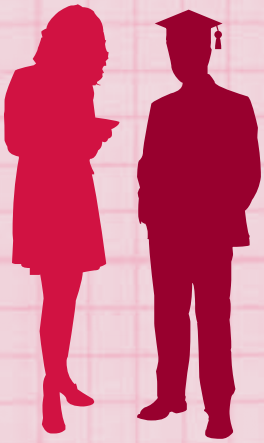
Black	Coloured	Indian	White	Other
30%	33%	6%	30%	1%

506 Academic

85	50	162	195	11	3
Professors	Assistant Professors	Senior Lecturers	Lecturers	Junior Research Fellows	Other

More than 400 support staff in critical roles, including:

- Administrative, Technical, Lab, Departmental, Nursing and Research, Finance Assistants
- Secretaries
- Data capturers
- Procurement clerks
- Drivers
- Fieldworkers



1086 Professional, Administrative and Support Staff

Joint Staff

738 Western Cape Government

65 National Health Laboratory Service

LARGEST DEPARTMENTS BY STAFF NUMBERS

319	151	145	110	94
Medicine	Pathology	Public Health and Family Medicine	Paediatrics and Child Health	Psychiatry and Mental Health

WELCOME

It has been a privilege to serve as Interim Dean of UCT's prestigious Faculty of Health Sciences, for the past 15 months. In 2019, the Faculty has responded to challenges in the University and the country, and has come through stronger. In this publication, you will gain some insight into the expansive achievements of our Faculty – excellence in teaching and learning; world-class high-impact research; social responsiveness efforts; and strong partnerships in health services to enable us to better serve our communities. As a Faculty, we are committed to excellence, with an emphasis on addressing development and social justice.

It has not been an easy year for the Faculty, defined in many ways by the adoption of a 'business unusual' approach. In a commemorative event in July, we marked one year since the passing of Professor Bongani Mayosi. We remembered Bongani Mayosi for his deep-seated desire for cultivating collective greatness and the profound positive impact he has had on so many. This event drew the Faculty together and started a much-needed process of collective healing as we continue to support his philosophy of lifting others as we rise, investment in young people, and fostering an environment in which everyone feels that they belong and have a home in our Faculty. The tragic death of UCT student Uyinene Mrwetyana, which spurred a national conversation around sexual and gender-based violence (SGBV), also deeply

Faculty of Health Sciences' Deanery Team: Back: Assistant Dean: Health Services Greg Petro, Deputy Dean: Research Ambroise Wonkam. Front: Assistant Dean: Student Support and Development Rudzani Muloiwa, Deputy Dean: Postgraduate Education Elelwani Ramugondo, Interim Dean Carolyn Williamson, Deputy Dean: Undergraduate Education Gonda Perez.

affected our Faculty community and served as a reminder that there is still much work to be done not only with regards to gender-based violence, but also understanding the interconnected nature of gender, race and class in contributing to systemic oppression and discrimination.

The Faculty is one of the largest and most complex in the University with over 2000 staff and 4500 students, with strong partnerships with the Western Cape Government and National Health Laboratory Service. To respond to this complexity, as well as to the national and local political, societal and fiscal challenges of the last few years, we underwent an external review to ensure that we are equipped to leverage our strengths to achieve our vision and mission. We are now implementing these recommendations to strengthen our governance, leadership, and management capabilities in order to create a faculty that is not only geared towards excellence, but embraces transformation, inclusivity and the promotion of health equity.

In this publication you will read how our students, staff and alumni have excelled and continue to deliver noteworthy achievements that are recognised both locally and globally. Our students are doing exciting innovative work in the Faculty, and our excellence in training is given expression by the impact our alumni have on the communities they work in after they leave our University. Over the past decade, the Faculty's research income has increased by 170%, reaching

nearly a billion rand last year, with over 1500 research articles published. Our research is changing policy and practice, and UCT was recognised as the leading institute in HIV research across the globe, and our researchers are recognised through numerous national and international awards.

The Faculty also has five major building projects underway that will prepare us for the future. These include the impressive Neuroscience Institute; the Positron Emission Tomography-Computed Tomography (PET-CT) facility; ARISE (African Research Institute for Skin hEalth); the Observatory Forensic Pathology Institute; and an expansion to the Institute of Infectious Disease and Molecular Medicine (Courtyard Extension Project).

I congratulate the Faculty staff and students for their amazing achievements, and express my deepest appreciation to all of you who collectively contribute to the Faculty's success. I also pay tribute to the leadership and team work of the Deanery, the Dean's Management Committee, colleagues and students. It has been a privilege to work with all of you.

It gives me great pleasure to present the Faculty of Health Sciences' Year in Review for 2019, which celebrates our vast achievements across all disciplines and epitomises our commitment to excellence.

PROFESSOR CAROLYN WILLIAMSON
Interim Dean

INTERIM DEAN
Carolyn Williamson

EXECUTIVE SECRETARY
Mpho Mogotsi

ADMINISTRATIVE ASSISTANT
Sandy Sileku

SENIOR SECRETARY
Pamela Magwa

ADMINISTRATIVE ASSISTANT
Samantha Louw

ASSISTANT DEAN: HEALTH SERVICES
Gregory Petro

DEPUTY DEAN: RESEARCH
Ambroise Wonkam

DEPUTY DEAN: POSTGRADUATE EDUCATION
Elelwani Ramugondo

DEPUTY DEAN: UNDERGRADUATE EDUCATION
Gonda Perez

ASSISTANT DEAN: STUDENT SUPPORT AND DEVELOPMENT
Rudzani Muloiwa

DIRECTOR: FHS RESEARCH
Yolande Harley

IT MANAGER
Jerome Corns

BUSINESS MANAGER: RESEARCH FACILITIES
Daniel Doetz

OPERATIONS MANAGER
Reece Brooks

FACULTY OFFICE MANAGER
Sandra Munesar

COMMUNICATIONS & MARKETING MANAGER
Linda Rhoda

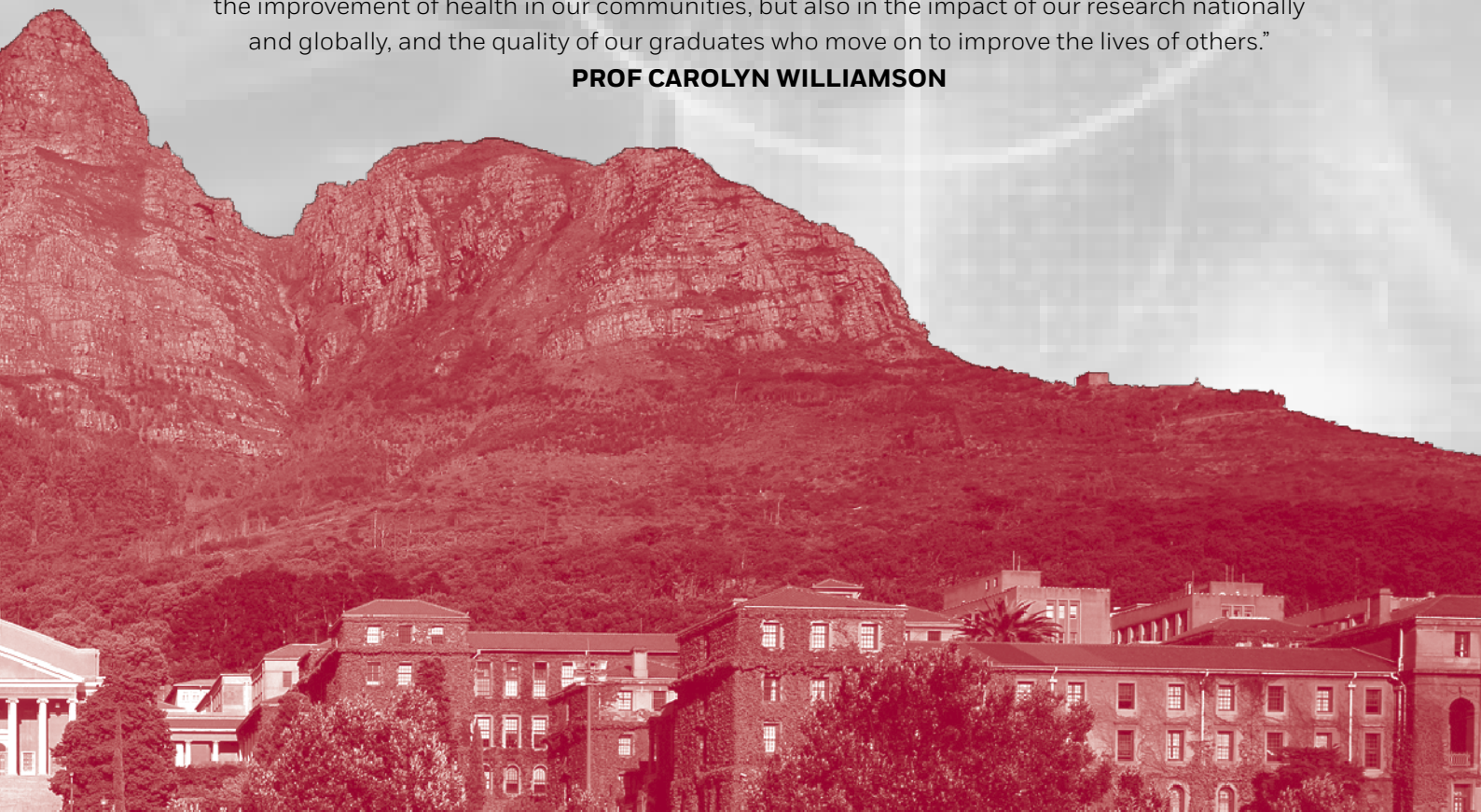
FINANCE MANAGER
Zaida Sherry

HR CLIENT SERVICES MANAGER
Heidi Starr

MEET THE DEANERY

"The Faculty of Health Sciences is committed to improving the health of all South Africans. As the most highly rated health sciences faculty on the continent, we have an unrelenting focus on excellence, innovation and transformation in training, research and clinical service. Our work is transformative across the region, made possible by our highly rated staff, and inspiring group of undergraduate and postgraduate students. Our success is seen not only in the improvement of health in our communities, but also in the impact of our research nationally and globally, and the quality of our graduates who move on to improve the lives of others."

PROF CAROLYN WILLIAMSON



FACULTY OF HEALTH SCIENCES 2019

DEPARTMENTAL HIGHLIGHTS

1 SURGERY

This year we welcomed Associate Professor Salome Maswime to head Global Surgery, one of the most vibrant scholarly areas in health science. We launched the Archbishop Tutu Chair of Urology alongside several stellar achievements: Professor Anthony Figaji's re-appointment to the SARChI Chair of Clinical Neuroscience; Professor Peter Zilla (UCT Fellow); Dr Des Fernandes' (Adjunct Professor); Professor Alp Numanoglu (President-elect of the World Federation of Associations of Pediatric Surgery); Associate Professor Allan Taylor (President of the World Federation of Interventional and Therapeutic Neuroradiology); and Professor Elmi Muller's ground-breaking work on transplantation in HIV-positive recipients, which led directly to a change in US legislation.

PROF GRAHAM FIEGGEN

MENTAL HTS

2 OBSTETRICS AND GYNAECOLOGY

I'm delighted at the very high pass rate for the 2019 College of Medicine of SA examinations as well as the ongoing impact of the ANARA project, the only initiative that conducts research, teaching, and public services in fertility in Africa. We sadly celebrated the enormous impact of the late Drs Leon van Wyk and Carol Thomas in the field of cervical cancer and gynaecology. Their significant contributions lie in the incredible cancer-patient database developed by Leon, and Carol's activism for women's health rights. The Carol Thomas Memorial Initiative to upgrade the gynaecology out-patients' facility honours and continues her legacy.

PROF LYNETTE DENNY

3 PUBLIC HEALTH & FAMILY MEDICINE

This year we proudly celebrate the Master of Public Health (MPH) programme's 20th year, with its 500th student graduating in December. UCT's MPH is the leading programme of its kind in South Africa, with 24 coursework modules offered that draw on each of the academic divisions in the School of Public Health & Family Medicine. Across streams in Environmental Health, Epidemiology & Biostatistics, Health Economics, Health Systems, Community Eye Health and Social & Behavioural Sciences, our graduates are making important contributions to strengthening public health programmes, policies and research across South Africa and the African continent.

PROF LANDON MYER

4 HEALTH & REHABILITATION SCIENCES

2019 has been an exciting year for the Department of Health and Rehabilitation Sciences. Two moments during this year stand out for me: One was a visit by our Vice-Chancellor to one of the clinical training sites (Victoria Hospital) where we had an opportunity to proudly showcase the contribution that our students make to the provision of health services in the metro, especially in facilities where they are sometimes the primary service providers. We also hosted one of our most successful conferences where key stakeholders in rehabilitation professions gathered to discuss the future of rehabilitation as a field.

ASS. PROF LEBOGANG RAMMA

5 INTEGRATIVE BIOMEDICAL SCIENCES

In 2019 IBMS launched a cross-disciplinary postgraduate training programme comprised of diverse modules that will expose our MSc and PhD students to a range of specialised techniques and transferable skills. The programme will include 5 modules by 2020 and has important links with the University of Naples Federico II, supported by an Erasmus Plus KA107 grant, and the University of Edinburgh. Most significantly, this programme will facilitate postgraduate student and staff mobility and support students in acquiring competencies to improve personal development and employability whilst also raising awareness and understanding of other cultures and countries.

PROF EDWARD STURROCK

6 PSYCHIATRY AND MENTAL HEALTH

Following the Life Esidimeni tragedy, members of the Department have provided substantial input into the review process, and into attempts to improve mental health policy. Such contributions include serving as an external panelist on the National Investigative Hearing on the Status of Mental Health Care in South Africa, using this hearing's report to advocate for improved services, and contributing technical support to the National Dept of Health's Mental Health Think Tank on National Health Insurance. Health economics research on public mental health services in SA has laid a strong foundation for reworking budgets to increase parity, and has resulted in the commissioning of work on an investment case for mental health by the NDoH.

PROF DAN STEIN

7 PATHOLOGY

An exciting highlight was Dr Melissa-Rose Abraham's seminal research on HIV reservoir, fundamentally changing our understanding of the formation of HIV reservoir and shedding light on efforts needed to cure HIV. Construction of the cutting edge Forensic Pathology Institute is underway and will significantly enhance capacity to address critical forensic needs in South Africa. 31 registrars and 8 supernumerary registrars are on our highly regarded pathology training programme recognised for producing well-honed and sought-after graduates. We launched our new cross-divisional undergraduate programme in Infectious Disease and Immunology, a first in South Africa.

PROF RAJ RAMESAR

8 BIOMEDICAL ENGINEERING, HUMAN BIOLOGY

A central focus has been the proactive and precedent-setting restitution initiative (led by the DVC Transformation) that culminates in 2020 in the reburying in Sutherland of the remains of nine individuals brought to UCT in the 1920's, in retrospect unethically. The reburying along with public sharing of scientific knowledge offers restorative justice to affected families and communities. We also celebrated 50 years of biomedical engineering at UCT during a symposium with alumni, graduates and collaborators in September. Grown from small beginnings in 1969, the now strong interdisciplinary academic division has been formative for biomedical engineering academically and professionally in South Africa.

PROF MALCOLM COLLINS

9 DEPARTMENT OF MEDICINE

While the Department of Medicine continues to excel in all areas of our core competence and to lead with excellence within the Faculty and University and on national and international stages, the key achievements to highlight relate to two areas of our work and life. The first relates to the evolving gains made in advancing institutional culture, with greater focus on collegiality, kindness and collaboration. The second relates to improved clinical governance practices, which should be the fundamental basis of our care and service platforms. I thank and acknowledge all staff in the Department for responding with much vigour and enthusiasm.

PROF NTOBEKO NTUSI

10

RADIATION MEDICINE

In January our Faculty signed off UCT's first Positron Emission Tomography (PET)-CT scanner project worth over R60 million. This powerful imaging tool involving radiation medicine complements the existing 3T MRI body imaging scanner (in the Cape Universities Body Imaging Centre (CUBIC) and the Neurosciences Institute). Locally important diseases will be researched by imaging with metabolically sensitive positron isotopes and multidisciplinary collaboration to improve management. Championed by many in our Faculty leadership, the machine was funded by The Bill and Melinda Gates Foundation, Technology Innovation Agency, Aspen Holdings, UCT and the Provincial Government of the Western Cape.

PROF STEVE BENINGFIELD

11

PAEDIATRICS AND CHILD HEALTH

At the 19th Congress on International Pediatric Pulmonology in Japan Professor Heather Zar was given the Past-President's award for a "Lifetime of seminal contributions that will impact generations to come and for embodying a role model for the paediatric pulmonary community worldwide". This is wonderful recognition of the extraordinary work that Professor Zar has done over many years, and a tribute too, to the wonderful team that have worked with her.

PROF ANDREW ARGENT

12 HEALTH SCIENCES EDUCATION

Our programmes are helping to address fundamental educational issues in the country, ranging from how students are assessed to how best to utilise aspects of eLearning and simulation in service of the field. They have elicited great interest nationally and from abroad. This year, we established the Master's and Doctoral programme in Health Sciences Education, requiring commitment from fledgling supervisors to developing their supervisory competence in an emerging environment. Our intensive orientation programme guides candidates transitioning from their clinical field into health professions education (HPE). The Masters programme is unique in SA as it is by dissertation, preparing researchers rather than practitioners in HPE.

PROF FRANCOIS CILLIERS

13 ANAESTHESIA

Our Department reached a milestone for anaesthesia and critical care in SA with the incorporation of the Critical Care Medicine division to ensure growth and sustainability of this sub-speciality. Continuing as leaders in Cardiovascular Anaesthesia on the continent to bring appropriate cardiac solutions and services, we ran 5 Transoephageal Echocardiography and 6 Point of Care Echocardiography courses. We also graduated 15 nurses on our annual 3-month Anaesthesia Theatre Nurse Course. I am particularly delighted with the high success rate of our 12 MMED degrees and the 54 peer-reviewed papers and international book chapters, with publications mainly in high impact international journals.

PROF JUSTIAAN SWANEVELDER

14 PRIMARY HEALTH CARE

A highlight was the positive academic review of the Eden rural health district platform in George. The external panel of experts concluded that the four-year-old platform has demonstrated that it has consistently graduated competent, confident and well-trained health care professionals. It found that the Garden Route District platform is a major teaching and training asset to the Faculty of Health Sciences. The panel recommended that the platform be expanded to include students of other health professions and strongly promoted a longitudinal learning programme that aligns with the strengths and opportunities of the rural nature of the district.

PROF STEVE REID

15 INSTITUTE OF INFECTIOUS DISEASE AND MOLECULAR MEDICINE

At the IDM we are very proud of the new and upgraded clinical research facilities that were launched in 2019, namely the new Masiphumelele Aerobiology TB Research facility (DTHC), and the upgraded Site B Khayelitsha Community Health Centre (Wellcome CIDRI-Africa). The former is a site where, amongst others, the 'fluorTB' consortium will study how TB is transmitted through the air. The latter will continue to be a site where new interventions for HIV and TB are tested. A new TB vaccine candidate tested recently at SATVI and at this site showed protection against TB, which is an exciting breakthrough.

PROF VALERIE MIZRAHI

STRONGER TOGETHER

Our Professional, Administrative and Support Staff (PASS) are critical to achieving the Faculty's vision of being a centre of excellence both locally and globally. The Faculty of Health Sciences has more than double the amount of PASS staff (1086) compared to Academic staff.

'Next year I will be working for FHS for 30 years. I've seen this institution change from what it was and how it was, to what it is now.'

DID YOU KNOW?
Around 5000 venue booking requests are processed in the Faculty annually

▲ **XOLALI BERNARD SIYILA**
ROOM PREPARATION
'I come to the class venues and prepare everything for the lecturers and students so when they enter the classroom, everything is ready for them to learn – we clean the boards, sweep the class for them so when they come in, they can be ready to learn.'

'I have only good memories – especially during the bad times, the unity and togetherness of the people at UCT is amazing.'
– Xolali

◀ **PAUL ROSSOUW**
INFORMATION AND COMMUNICATION TECHNOLOGY SERVICES
'I love interacting with people. This job allows me to interact with people in every department at FHS. I also enjoy the people I work with as we have a lot of camaraderie between us. We like to integrate the work we have between us so if anyone in our team has a problem/issue, we like to come together and discuss it to try and resolve it.'

CLAUDETTE SULYMAN ▶
SECURITY/
RECEPTION DESK
'My favourite memories are meeting people from different facets of life – not just people from South Africa, but also from overseas. I learn about how they do certain things and where they come from. It makes me realise the diversity of cultures we have at UCT.'

MERENCIA JANUARIE
CLEANING STAFF
'What I enjoy most about my job is the diversity and the fact that every day is different in some way or another. There is always something to look forward to in each new day.'

DID YOU KNOW?
Transport for undergrad students is provided on a daily basis from the Faculty to 109 off-campus sites.

▲ **NOMATHAMSANGA BUKULU**
BUS DRIVER
'I enjoy being with the students, learning from them and just driving them to the clinics.'

'What inspires me is my son... whenever I show him pictures of the buses I drive, he looks at me like a hero.'
– Nomathamsanga

A TRANSFORMATION JOURNEY

The Faculty of Health Sciences (FHS) transformation journey has, over the past 20 years, addressed a number of issues related to social justice not limited to changing student and staff demographics. Transformation encompasses every aspect of institutional culture from greeting fellow staff and students in the corridors to developing policies that ensure that those that have been marginalised are now empowered. 2019 has been the year when a number of these efforts have reached fruition. From this year the key performance areas (KPA) of

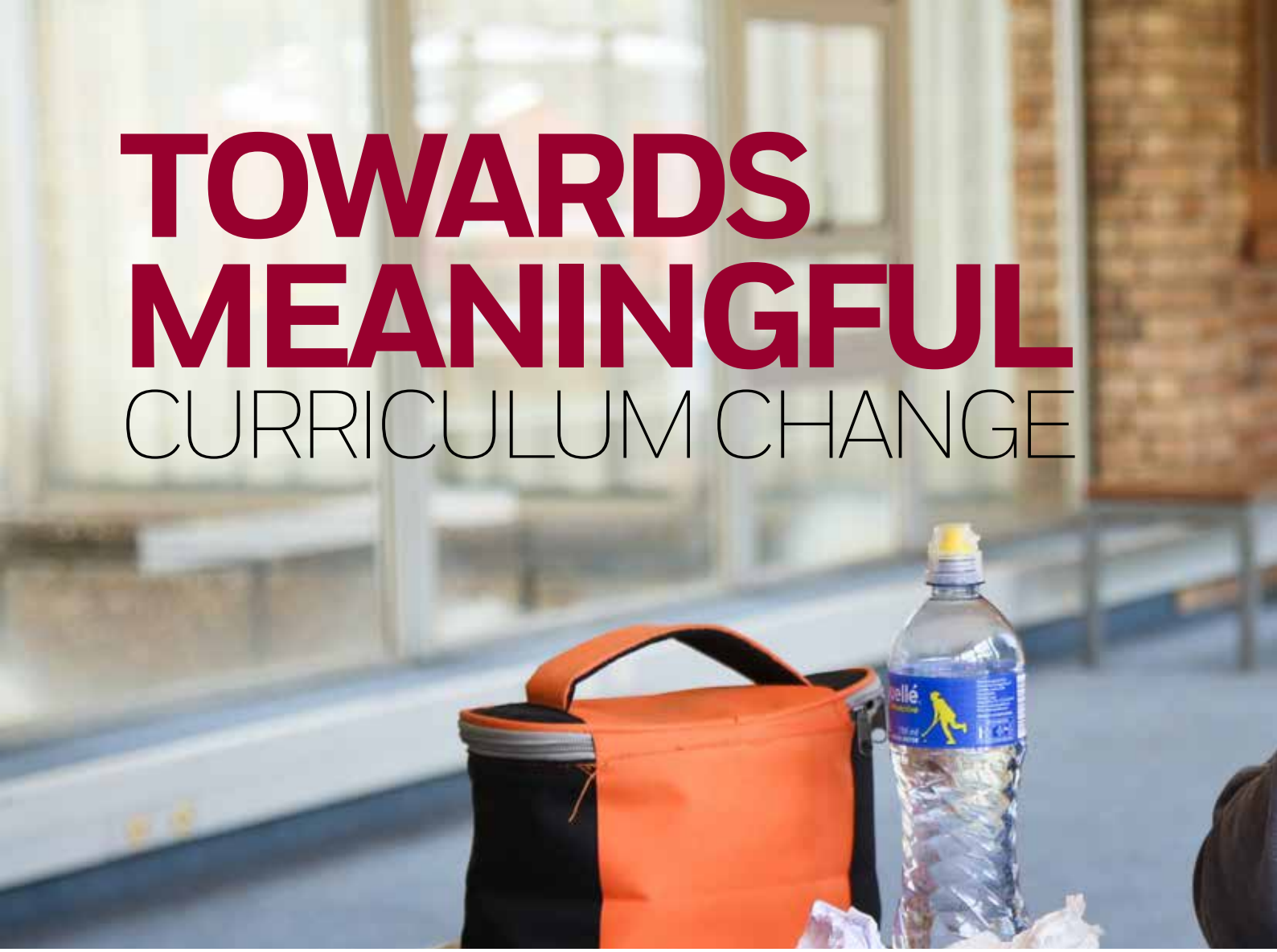
current head of departments (HODs) and head of divisions (HoDivs) will include transformation initiatives and outcomes. This will allow the Dean to monitor progress within all departments. Furthermore, the job descriptions for all newly appointed HODs and HoDivs will explicitly detail the responsibility of the appointee to uphold the principles of transformation. However, the TEC recognises that HODs and HODivs will need support during this process and for that reason we have developed a Transformation Framework document to "guide departments, divisions, research units and institutes in the Faculty to develop their own Transformation Plans, aligned to the broad transformation goals of the Faculty of Health Sciences and the University of Cape Town". In order to equip departments with the tools required to implement their transformation plans, the TEC has strengthened its structure to include representatives from all thirteen Departmental TECs and developed updated Terms of Reference that hold us accountable to all staff and students.

At grass roots level, the departmental TECs advise Head of Departments on transformative processes and facilitate difficult conversations. All departmental TECs are now represented on the Dean's Management Committee through the co-chairs who actively situate all discussions within the context of the Faculty's Transformation Framework document.

2019 has therefore been the year of guidance and accountability. Although, transformation of the faculty is the responsibility of the Dean, the current FHS Transformation and Equity committee (TEC) would like to recognise the staff and students who have tirelessly contributed to this process, not least of all Gonda Perez, Leslie London, Roshan Galvaan and Zetu Makamandela-Mguqulwa who started it all. Transformation is not a project, product or destination but a journey that we hope all our fellow FHS colleagues will join and embrace.

ASSOCIATE PROFESSOR MARC HENDRICKS AND ASSOCIATE PROFESSOR ZENDA WOODMAN
On behalf of the Transformation and Equity (TEC) Committee

TOWARDS MEANINGFUL CURRICULUM CHANGE



The Deanery of the UCT Faculty of Health Sciences continues to be committed to efforts towards meaningful curriculum change, including engaging with debates around decolonising the academy. This commitment is shared by the Faculty's Transformation and Equity Committee. It builds on Professor Bongani Mayosi's legacy, as he established the Faculty's own Curriculum Change Working Group (FHS CCWG), in response to a group being established for university-wide engagements in 2016.

During 2017 and 2018 the FHS CCWG engaged the faculty community on decoloniality in relation to curriculum change. With the release of the UCT Curriculum Change Framework (CCF) in June 2018, and the Faculty Mental Health Working Group (MHWG) Report in April 2019, the FHS CCWG has started drawing important links across curricula, institutional culture, societal issues and student mental health in the Faculty. These links were again reiterated during a Faculty Reflection and Dialogue Space following the tragic passing of UCT student, Uyinene Mrwetyana, and the spate of Xenophobic and Afrophobic attacks in South Africa.

A central question was posed at the Reflection and Dialogue Space: "What needs to be acknowledged about recent events – specifically, what do we need to see and acknowledge to make an appropriate diagnosis about the current national crisis?" The response to this question highlighted ongoing dehumanisation, fuelled by chronic collective wounded-ness which arises out of the legacy of apartheid, and finds expression through continued divisions and privilege along race, class and sexuality, as well as patriarchy and toxic masculinity. As part of addressing these issues the FHS CCWG plans to take forward recommendations from the UCT CCF and the MHWG Report.

For a coherent approach towards meaningful curriculum change in the Faculty, the FHS CCWG will also draw from the Senate-endorsed document, "Taking Curriculum Change Forward", and welcomes collaboration with the Primary Health Care Directorate, the Trauma Advocacy Group and the Gender Health, Justice and Research Unit.

PROFESSOR ELELWANI RAMUGONDO
On behalf of the Curriculum Change Working Group

RESEA

PHOTO KARIN SCHERMBRUCKER/SLINGSHOTMEDIA.CO.ZA FOR THE NEUROSCIENCE INSTITUTE


ARCH

FACULTY OF HEALTH SCIENCES RESEARCH:

MAKING INNOVATIVE STRIDES FOR LOCAL AND GLOBAL IMPACT

UCT's Faculty of Health Sciences (FHS) has kept up its strong record of pioneering and excellent research aimed at improving the health of the people of South Africa and beyond. 2019 has been marked by research by exceptional academics, many of whom have been involved in cross-disciplinary and international collaborations. Research has focused on a wide range of areas from researching methods of preventing cervical cancer, to new technologies for life-saving cancer treatment, and collaboration on a new tuberculosis (TB) vaccine clinical trial.

The Faculty Research Office (FRO) underwent a strategic review in 2019 flowing from positive growth over the past 10 years. Over the last decade, the Faculty's research income has increased by 170%, reaching nearly a billion rand in 2018. Research contracts have tripled and research output has increased by more than 70%. PhD registrations have increased by over 120% while postdoctoral fellow registrations have doubled.

The number of National Research Foundation-rated researchers has doubled, and the number of University Research Committee accredited

The Faculty of Health Sciences has 13 Departments

53%

Of the 2,226 research contracts the University entered into in 2018, the FHS was responsible for 1,174.

The FHS hosts around a **quarter of UCT's NRF-rated researchers.**

In addition to the 36 B- and 71 C-rated researchers, **the Faculty hosts 10 A-rated scientists** and 23 Y-rated researchers.

The National Research Foundation allocates ratings based on a researcher's recent research outputs and impact, as perceived by international peer reviewers. A-rated researchers are international leaders in their field.

research entities in FHS has increased by over 50%. In this context, the support systems that enable optimal research activities needed a recalibration, starting with the FRO that underwent a strategic review in January and February 2019. This was aimed at redefining its functions and optimal structure.

The new FRO will be headed by a Director of Faculty Research that will lead a team of three managers: Research Enterprise, Research Diligence, and Research Intelligence.

Other necessary changes that have happened in the past year include the implementation of a new tiered deficit policy that will help in managing finance risks and the implementation of a new ethics fees recovery system that will enable better operations and allow resources for training. The Clinical Research Centre has been reviewed with the goal of optimising its mandate, while Faculty Research enterprise budget principles have been developed. An electronic Research Administration (eRA) system was also rolled out in 2019.

Other important steps that were taken in 2019 include contributions to the Faculty Research misconduct policy, a university-wide policy on soft-funded researchers; the development of a faculty risk registry; and the exploration of ways to manage the sustainability of a critical research core facility that could, potentially, be a significant risk to Faculty – the UCT Research Animal Facility.

A pending need is the implementation of the latest research finance management systems. We hope to introduce these soon.

With better support systems in place, the time has come to frame a new and transformative faculty vision and strategy for sustainable research.

We hope to count on you – each of us, all of us – to achieve this.

PROFESSOR AMBROISE WONKAM
DEPUTY DEAN RESEARCH

Over 1500 accredited journal articles published in 2019.

R994 million

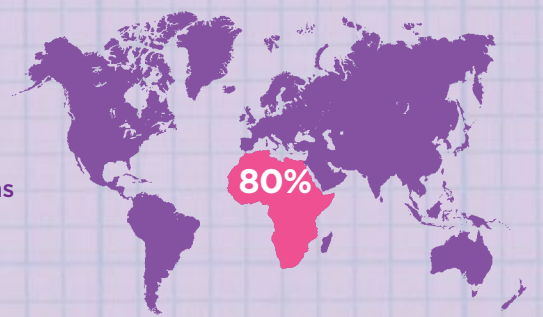
FHS accounted for R994 million of UCT's R1,587 million in Research Income for the year, approximately 63% of the Institution's total (a decade ago it was 40% of the University's total).

2 000+ staff

undergraduates 2 000+

postgraduates 2 500+

132 **postdoctoral fellows,** 80% from Africa



Since 2010:

- Postgraduate students in the FHS have increased by ~80%
- PhD registrations and graduations have increased by ~120%
- Postdoctoral fellow registrations have doubled

SUDESH SIVARASU

PROLIFIC INVENTOR SERVING HUMANITY THROUGH INNOVATION

STORY UCT NEWS **PHOTOS** JE'NINE MAY

Associate Professor Sudesh Sivarasu, from the Division of Biomedical Engineering, has collected a trail of awards for his invention achievements in the field and his contributions to fostering collaborative innovation internally at the University of Cape Town (UCT), as well as nationally and internationally.

Sivarasu arrived at UCT eight years ago, as an early career researcher, to take up a lectureship post at the Department of Human Biology. At this point he had already developed a high-flexion artificial knee implant as part of his PhD research in India – where he was born.

Since then he has contributed invaluable inventions and innovations to the research community, but more importantly for him, to the everyday lives of people. He also founded the Medical Devices Lab (which seeks to produce first-rate technical solutions to clinical problems) and the Orthopaedic Biomechanics Lab at UCT's Faculty of Health Sciences.

The devices Sivarasu has invented have applications ranging from stroke rehabilitation and women's health, to orthopaedic surgery, asthma therapy, auto-injectors, surgical assist devices and children's medicine. His name is associated with 19 patent families, 51 patent applications, and eight

inventions at the University. He also conceptualised the ptosis crutches; an open-source innovation which is now being used globally.

"I believe that God created each one of us uniquely with a special set of gifts and talents. The onus lies on us to decide how we use these gifts for the betterment of humanity," explains Sivarasu. "We can change the world we live in through consciously driven, sustainable and compassionate innovations."

Adopting the principles of Frugal Biodesign (a model which starts with consulting with the end user to define a hierarchy of needs that a technology must answer to, followed by stages of conceptualisation, intellectual property roll-out and commercialisation) the Medical Devices Lab identifies clinical issues in need of technological intervention. Sivarasu's approach to solving unmet clinical needs through Frugal Biodesign provides proof-of-concept quickly and at minimal cost. The researcher has adopted this design methodology into the Medical Device Design course (as part of MSc-Biomedical Engineering), which is one of the most sought-after courses in the programme and has led to numerous invention disclosures to the Uuniversity.

Coining the term Frugal Biodesign, the research of which has been supported by the UCT-VC's Future Leaders – 2030 initiative, Sivarasu has based his approach on the Stanford Biodesign programme, which essentially takes the form of a multidisciplinary group of professionals solving a problem together.

"It's not the technology that's going to dictate the solution; rather, it's the problem that's going to determine the solution through appropriate technologies."

While he believes that taking this kind of bigger picture systems approach is the only way to reach a successful outcome with healthcare innovations, his take is that involving many stakeholders during the innovation phase is currently not feasible in an African context.

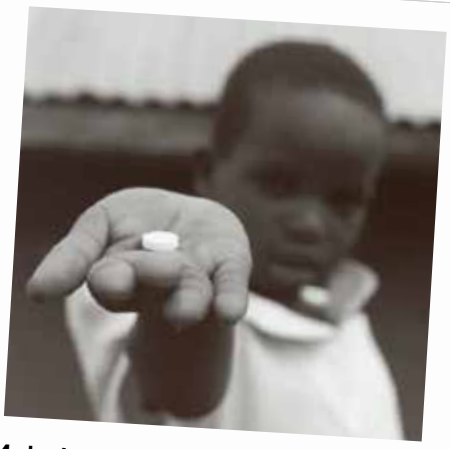
Most recent on his list of collaborative innovations, Sivarasu is one of a team of Biomedical engineers from UCT and Osmania University, India, who have put their heads together to develop a tool for clinicians to administer medication to their patients remotely using mobile messaging technology. Despite being one of the most commonplace therapies in hospitals around the world, intravenous administration of drugs remains one of the most admin-intensive. Currently, a clinician or nurse must be present at a patient's bedside to administer intravenous medication manually.

It's these kinds of successes that affirm Sivarasu's overall philosophy. "It's not the technology that's going to dictate the solution; rather, it's the problem that's going to determine the solution through appropriate technologies. We should avoid the traditional pitfall of the technology push."

Sivarasu's accolades, which are often as a result of teamwork, include being: the recipient of the South African Department of Science and Technology's *Innovation Bridge* award for the Innovation most likely to find markets; awarded the UCT Deputy Vice-Chancellor's Award for Achievement in Innovation; named among the *Mail & Guardian* 200 Young South Africans in the Science and Technology category; the recipient of the National Science and Technology Forum (NSTF)-South 32 TW Kambule Award for emerging researcher; a recipient of the UCT College of Fellows Young Researcher Award; presented with the Claude Leon-Merit award for early career researchers, and Young Scientist award at the International leprosy congress; elected as a member of the Global Young Academy (GYA); and selected to join the ranks of the South African Young Academy of Science (SAYAS).

MALARIA DRUG LESS EFFECTIVE IN MALNOURISHED CHILDREN

Researchers have found that the most-prescribed antimalarial drug is less effective in severely malnourished children than adequately nourished ones. The study calls for further research into optimising treatment for undernourished children.



Malaria treatment not as effective in malnourished children.

"Although one in three children under five years old in sub-Saharan Africa is malnourished, they are usually excluded from studies on malaria treatment," explains Professor Karen Barnes from the University of Cape Town's (UCT) Division of Clinical Pharmacology and head of Pharmacology for the WorldWide Antimalarial Resistance Network (WWARN). She, along with UCT Associate Professor Lubbe Wiesner and Michiel Smit, previously part of Wiesner's lab in the same division, collaborated with international partners on the research.

"The dosage regimens recommended for these children don't seem to be optimal and this increases the chances that treatment will fail for them – which is what we showed in this study."

Young children are particularly vulnerable to malaria infection; 61% of those who die from the disease worldwide are less than five years old. Young children who are malnourished are at an even higher risk of contracting the disease and dying from it. Sub-Saharan Africa – where one in three young children is malnourished – also sees more than 90% of the world's malaria cases and deaths.

The physiology of malnourished children, which is different from that of adequately-nourished children, may change the way antimalarial

STORY UCT NEWS **PHOTO** TEUN BOUSEMA

drugs are taken up and distributed by their bodies. Malnutrition could, for instance, reduce the absorption of drugs in children, but there has been little research, with contradictory information, addressing how well the treatments work for them.

Artemether-lumefantrine is the most commonly recommended antimalarial drug worldwide. These researchers have previously found that after receiving the doses recommended by the World Health Organization, blood concentrations of lumefantrine – are lower in young children than in adults. Despite this, children are still being given the same dose as adults (adjusted for their body weight).

The research team worked to understand how malnutrition might further compromise this treatment, as well as testing whether the current treatment is effective for malnourished children. They investigated the absorption of lumefantrine and the effectiveness of artemether-lumefantrine in treating severely malnourished children with uncomplicated - (i.e. not severe) malaria. To do this, they looked at data for 399 children (all with malaria, 131 of them severely malnourished) involved in a clinical trial at two hospitals in Mali and Niger. The concentrations of the drug were measured by Wiesner's team using an assay developed and validated by Smit.

"This study is the first to address the challenge of treating malaria in severely malnourished children," says Barnes. "It highlights how important it is to make sure that treatment is adequate in this vulnerable group."

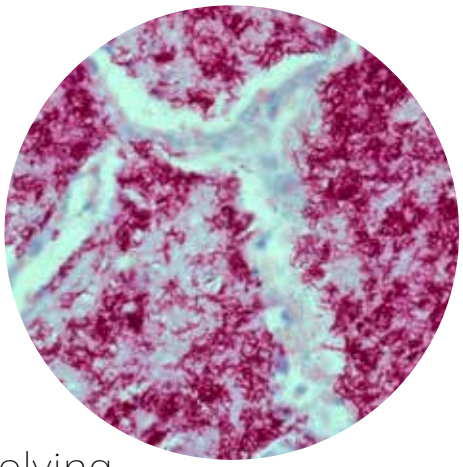
The results showed that not only were the levels of lumefantrine lower in young children's blood compared to adults' blood, but that among severely malnourished children there was even less of the drug – about 19% less – than in other young children. This lower exposure also meant these children acquired new malaria infections sooner.

"There are serious knowledge gaps in associations between malnutrition and antimalarial drug efficacy, and this study provides key insights," said Professor Joel Tarning, head of Pharmacometrics at the Mahidol-Oxford Tropical Medicine Research Unit and WWARN, which led the study with numerous collaborators, including UCT, Médecins Sans Frontières Epicentre, the University of Bamako in Mali, and the Ministry of Health of Niger.

To evaluate three alternative dosing regimens the researchers used a model they had developed to see if they could improve lumefantrine exposure among severely malnourished children. Standard treatment involves administering the drug twice a day for three days.

The model explored increasing, intensifying and extending this treatment.

"Now we need to test these in malnourished young children," Barnes concludes. "This is so that treatment guidelines can align with the optimal malaria treatment for the very many young and malnourished children living in malaria areas in sub-Saharan Africa."



FIRST REAL HOPE FOR A TB VACCINE IN 100 YEARS

The final analysis of a multi-site clinical trial involving UCT has produced the first signal of a potentially effective vaccine against tuberculosis (TB) in almost 100 years.

The results, which were announced on 29 October at the 50th Union World Conference on Lung Health's TBScience 2019 conference in Hyderabad, India, and published in the prestigious *New England Journal of Medicine*, showed 50% efficacy of the candidate vaccine M72/AS01E in reducing the incidence of TB lung disease in HIV-negative adults already infected with latent TB at the time of vaccination.

"These are game-changing results. If we can offer latently infected adults durable protection against pulmonary TB disease, we may be able to interrupt the cycle of TB transmission," said Professor Mark Hatherill, director of the South African Tuberculosis Vaccine Initiative (SATVI).

SATVI and the Wellcome Centre for Infectious Diseases Research in Africa, TB research groups based in the Institute of Infectious Disease and Molecular Medicine at UCT, are two of the 11 sites in South Africa, Kenya and Zambia where the study was conducted.

In October 2018 UCT News recorded the publication of primary results from the Phase 2b clinical trial, in a previous study published in the *New England Journal of Medicine*. It showed "for the first time, that a protein sub-unit vaccine can prevent progression to active TB in people who are already latently infected with the TB bacillus at the time of vaccination".

The study was sponsored by the global healthcare company GSK (GlaxoSmithKline), and conducted in partnership with IAVI, a non-profit organisation dedicated to developing vaccines against HIV and TB.

TB is the leading cause of death through infectious disease worldwide, representing a significant public health threat with 1.5 million attributed deaths globally in 2018. In South Africa, the estimated incidence of TB is 520 per 100 000 of the population.

The World Health Organization

STORY UCT NEWS, LISA BOONZAIER **PHOTO** CIDRI-AFRICA

estimates that nearly one-quarter of the global population has latent TB. A total 10% of those people will develop active pulmonary TB disease.

There is currently no available TB vaccine with proven, consistent efficacy in adults.

Professor Tom Scriba, SATVI Deputy Director: Immunology, said the groundbreaking study had demonstrated that a vaccine "can provide long-term protection against lung TB".

"We are also now able to decipher exactly how the immune response can protect humans against TB," he added.

Professor Robert J Wilkinson of CIDRI-Africa, Imperial College and the Francis Crick Institute in London, said the results were cause for optimism, with the major task ahead now being to analyse samples collected from the trial to seek "clues to how we might do even better".

"Our previous experience, and the combination of Crick and the Wellcome Centre in Cape Town, uniquely positions us to play a significant role in this effort, at the same time as contributing to the development of scientific careers in Africa," he added.

Put simply, the study assessed the safety and efficacy of the M72/AS01E candidate vaccine in already infected – but not yet sick – adults in Khayelitsha, Worcester, Kenya and in Zambia. More than 3 500 people, all HIV-negative and aged from 18 to 50, were involved. Each received two doses of the candidate vaccine or a placebo 30 days apart.

They were followed for three years, during which time only 13 of the total 1 626 who received the active vaccine developed active lung disease, a reduction of 50%. In the placebo group, 26 people fell ill with active TB.

The next step, the researchers said, was to rigorously test the candidate vaccine in more clinical trials. Only after that, could it potentially be rolled out to the public.

A study participant undergoing nebulisation for sputum collection

UCT LEADS THE WAY IN HIV RESEARCH

A new report charting global trends in HIV/AIDS research has identified South Africa as one of the global leaders in the field. The University of Cape Town (UCT) was also revealed to be the most influential institution, based on its global field-weighted citation impact.

Professor Linda-Gail Bekker, Deputy Director of the Desmond Tutu HIV Centre at UCT's IDM and immediate past president of the International AIDS Society.

Data in the report comes from Elsevier's SciVal and Scopus databases and the analysis covers research published between 2014 and 2018. The United States (US) is by far the top producer of research in the field over the period, surpassing the second-highest contributor, the United Kingdom (UK), by more than 27 000 publications. South Africa is the third biggest producer of relevant research in the field, producing close to 7 000 publications between 2014 and 2018.

"This is an extraordinary achievement, given we're a small country," said Professor Linda-Gail Bekker, Deputy Director of the Desmond Tutu HIV Centre (DTHC) at UCT's Institute of Infectious Disease and Molecular Medicine (IDM).

"For us it's the coming together of burden of disease, a good critical mass of expertise and then obviously infrastructure that lends itself to getting this kind of research done."

While institutions with the

STORY UCT NEWS, NADIA KRIGE **PHOTO** MICHAEL HAMMOND

> "For us it's the coming together of burden of disease, a good critical mass of expertise and then obviously infrastructure that lends itself to getting this kind of research done."

highest HIV/AIDS research output are predominantly located in the US, UCT and the University of the Witwatersrand (Wits) were also named among the top ten, taking 8th and 9th positions, respectively.

Looking at field-weighted citation impact (FWCI), however, UCT tops the global list with an FWCI of 3.8 and 1 873 publications between 2014 and 2018, which suggests that its HIV/AIDS research output is seen to be highly influential.

"I have no doubt that the IDM has made an enormous contribution to that set of papers," Bekker said. Apart from the DTHC, the IDM is home to a number of research groupings focusing on various aspects of HIV/AIDS and HIV/tuberculosis (TB) co-infection. Among others, there is the Wellcome Centre for Infectious Diseases Research in Africa (CIDRI-Africa) and the South African Tuberculosis Vaccine Initiative (SATVI), all based at UCT's Faculty of Health Sciences.

"HIV-related research in the IDM is wide-ranging. In addition to the internationally renowned research programmes on the prevention and management of HIV/AIDS and the evolution and pathogenesis of HIV, researchers in, and associated with, the IDM also lead major programmes on the prevention and management of HIV-associated tuberculosis and TB-immune reconstitution inflammatory syndrome (TB-IRIS), HIV-associated fungal opportunistic infections, and mucosal immunity in the female and male reproductive tracts," said Valerie Mizrahi, Director of the IDM.

"They, and others across the Faculty and University, have applied their enormous talent, passion and energy to tackling one of the defining health challenges of our time. As IDM Director, I am very proud of UCT's standing as a global leader in HIV research."

UCT's work on HIV also extends beyond the IDM, with research in a diverse set of groups in the Faculty of Health Sciences looking at, for example, the relationship between HIV and non-communicable diseases such as mental health, and the epidemiology of HIV in population groups, with further research in other faculties examining social and economic aspects of HIV.

INNOVATION ASSISTS ORGAN DONATION

Professor Elmi Muller, Head of the Faculty of Health Sciences' Division of General Surgery.

Professor Elmi Muller, Head of the Faculty of Health Sciences' Division of General Surgery and transplant surgeon presented her innovative research into infectious diseases at the World Economic Forum's 13th Annual Meeting of the New Champions in Dalian, China.

Muller discussed innovative ways to address the dire shortage of organ donors. "We can ethically transform transplantation's future by using new technology to use previously discarded organs, existing technology to expand the donor pool and investing in future technology –

such as stem cell research, transgenic pigs and 3D printing – to make sure that more organs become available to patients who need life-saving treatment."

Muller went on to highlight how HIV-positive organ transplantation (from an HIV-positive donor to an HIV-positive recipient) can increase the donor pool, a solution she pioneered in South Africa.

This country has one of the highest incidences of HIV in the world. More than 7 million people in South Africa are living with HIV. This high prevalence rate has led Muller and other scientists to explore solutions for a wide range of clinical problems that HIV-positive

"We can ethically transform transplantation's future by using new technology to use previously discarded organs, existing technology to expand the donor pool and investing in future technology – such as stem cell research, transgenic pigs and 3D printing – to make sure that more organs become available to patients who need life-saving treatment."

Breaking barriers to a cure for HIV

An international, collaborative study involving University of Cape Town (UCT) researchers, published in the prestigious journal, *Science Translational Medicine*, has revealed an unexpected finding that could lead to better therapies towards reducing the HIV reservoir, a major barrier to developing a cure for HIV. The reservoir consists of viral DNA that survives hidden in the body even after indefinite treatment with antiretrovirals. Antiretroviral treatment cannot eradicate the virus, which persists in long-lived reservoirs in the DNA of immune cells, and which will generally rebound if treatment is ceased. The dynamics of how this reservoir forms, though, have been largely unknown. Scientists had thought that it formed continuously during infection prior to treatment.

STORY UCT NEWS, LISA BOONZAIER

STORY ADAPTED BIRGIT OTTERMAN AND ELMI MULLER, UCT NEWS AND THE CONVERSATION **PHOTO** WEF

patients face, including end stage kidney failure. According to Muller, over the past 10 years 51 kidneys from deceased HIV-positive donors have been transplanted into HIV-positive patients in Cape Town, South Africa. Muller and colleagues recently published the longer-term outcomes of these patients in the prestigious, *The New England Journal of Medicine*.

The study looked at survival rates and the impact of the second HIV strain – which is transplanted with the kidney and belonged to the donor – on the recipients, and found that the survival rates of patients were high and there was no resistance to drug regimens passed on through the donor kidney. Although recipients did get a new strain of the HI virus from the donor, this strain didn't have a major long-term clinical impact on the recipient.

"Our findings are good news for South Africa – and for other countries wanting to do the same transplants. They clear away a number of uncertainties that scientists have had about the efficacy of using kidneys from HIV-positive donors," says Muller.

Now, scientists have genetic evidence that this is not the case, and that initiation of antiretroviral treatment could be altering the biology of the human immune system in such a way that it allows the HIV reservoir to form or stabilise.

"We hope reducing the size of the reservoir will take us a step towards achieving our goal of enabling people to stop treatment without the virus rebounding," says UCT's Professor Carolyn Williamson, the head of the Division of Medical Virology, who led the study with Professor Ron Swanstrom of the University of North Carolina at Chapel Hill (UNC).

The new research results from a collaboration between researchers at UCT, UNC and the Centre for the AIDS Program of Research in South Africa (CAPRISA).

HLUMANI NDLOVU GETS NOD FOR LEADING RESEARCH

Emerging researcher Dr Hlumani Ndlovu wins big at the 'Science Oscars'.

Dr Hlumani Ndlovu was awarded the TW Kambule-NSTF Award for Emerging Researchers in recognition of his investigation into the immunological mechanisms behind inflammation of the liver and mediating protective immunity. The awards, popularly known as the 'Science Oscars', celebrate outstanding contributions to science, engineering, technology and innovation in South Africa.

In the Division of Chemical and Systems Biology, senior lecturer, Ndlovu leads a lab largely concerned with studying inflammation. With his team, he is researching the immunobiology of snail fever using animal models to mimic infection in humans. Infestation happens when parasites released by certain types of freshwater snails penetrate the skin. Snail fever, also known as bilharzia, is a disease caused by parasitic flatworms. Infections by worm-like parasites are a major cause of morbidity and mortality in the developing world. Although inexpensive drugs are available, they don't prevent re-infection. And a vaccine, which is currently not available, could play a key role in eradicating the disease. Ndlovu and his team have also identified key immunological mechanisms that down-modulate inflammatory liver pathology. Their work could also help to identify candidate proteins or immune factors for targeting as host-directed therapies to mitigate debilitating liver fibrosis.

STORY UCT NEWS **PHOTO** NSTF

Dr Ndlovu (centre) receives the NSTF-South32 Emerging Researcher Award at a gala dinner. He is flanked by Reinhard Meyer (left) and Dr Phil Mjwara, Director General at the Department of Science and Technology (right).

FUTURE-PROOFING OUR KIDS

Approximately 250 million (43%) children under the age of five years in low- and middle-income countries (LMICs) are failing to meet their developmental potential. Risk factors contribute to this loss of human potential. Expanding understanding of the risks that lead to poor outcomes, and which protective factors contribute to resilience in children may be critical to improving disparities.

Researchers from the Faculty of Health Sciences led by Professor Kirsten Donald, Head of the Division of Developmental Paediatrics and Child Health, assessed child development at the age of two, of 734 children in the Drakenstein Child Health Study (DCHS). This is a unique South African longitudinal birth cohort study investigating the determinants of child health. This study, led by Professor Heather Zar, intensively follows 1000 children and their families from pregnancy through childhood in a low socio-economic, peri-urban area of Paarl in the Western Cape. Donald and her team assessed potential risk and protective factors identified from prior literature to impact child development and found a number of important risk factors; such as maternal anaemia in pregnancy, poor maternal health (such as HIV), and maternal mental health problems that contributed to poor developmental outcomes in children in this cohort. Important protective factors include mothers having at least some secondary school education, better home circumstances, and healthy birth weight. This important study provides much-needed insight for understanding risk and protective factors for child development that may inform integrated intervention policy design and implementation for supporting development in high-risk environments.

BUILDING A SCHOOL LIBRARY AND A BOOK-SHARING PROGRAMME

Many children in the DCHS study have neurocognitive delay, and come from impoverished circumstances with little access to books, reading, or early child development initiatives. To strengthen education and promote literacy and neurodevelopment, the DCHS partnered with a local primary school, Langabuya Primary (1500 learners from Grade R to Grade 7) to create a library (identified by the school as a core need). The school library was built in partnership with the school and other stakeholders including; fundraising, building infrastructure, finding appropriate partnering non-profit organisations, stocking the library, and training staff. A Langabuya library committee of teachers and parents was initially established and trained to run the library; thereafter a librarian from the local community was employed. The library is a well-used facility, greatly valued by students and school staff. The librarian sees around 220 students daily, scheduling weekly class library sessions and opening after hours. The DCHS has also initiated a book-sharing trial amongst a sub-group of parents and their children, so as to promote a program whereby parents interact and read to their children as a means of promoting literacy, bonding, cognitive and socio-emotional development.

SOURCE DONALD KA, ET AL. (2019) RISK AND PROTECTIVE FACTORS FOR CHILD DEVELOPMENT: AN OBSERVATIONAL SOUTH AFRICAN BIRTH COHORT. PLOS MED

CLINICAL RESEARCH SITE SHINES IN KHAYELITSHA

UCT Vice-Chancellor Mamokgethi Phakeng officially opened CIDRI-Africa's extended clinical research facilities at Site B Community Health Centre in Khayelitsha.
LEFT TO RIGHT Profs Graeme Meintjies, Mamokgethi Phakeng, Robert J Wilkinson, and René Golliath and David Binza.

Working on some of the most important breakthroughs in tuberculosis (TB) diagnostics globally, and testing HIV and TB vaccines, is a vital part of the pioneering work being done at the Khayelitsha clinical research site of the Wellcome Centre for Infectious Diseases Research in Africa (CIDRI-Africa).

The University of Cape Town (UCT) launched CIDRI-Africa's extended clinical research facility at the Site B Khayelitsha Community Health Centre. In her address Vice-Chancellor Professor Mamokgethi Phakeng emphasised the power of collaboration, commitment and service in solving problems and driving change in Africa.

Administered from the Institute of Infectious Disease and Molecular Medicine (IDM), CIDRI-Africa provides core support to 12 world-leading principal investigators, and their collaborators.

"The fantastic thing about this research site is seeing it grow over the past 15 years from a single shipping container to a facility with prefabricated buildings that have over 10 consulting rooms, an on-site laboratory, a pharmacy and data capturing facilities," said Professor Graeme Meintjes of the IDM. Meintjes is a Wellcome Senior Research Fellow and the Department of Science and Technology-National Research Foundation (DST-NRF) South African Research Chairs Initiative (SARChI) Chair of Poverty-Related Infections.

Situated in the heart of Khayelitsha, UCT researchers work with the community at CIDRI-Africa's clinical research site, where more than 4 000 people collectively have volunteered to be part of research studies. Researchers also work with local and provincial Departments of Health and non-governmental organisations to find solutions to the high burden of TB and HIV in South Africa and globally. It has led to some exciting developments. The centre's work has informed both practice and policy, with publications in leading international journals.

"Most of these diseases affect the community and therefore it makes sense to research the diseases within the community and within the health facilities that serve the people," said Professor Robert J Wilkinson, CIDRI-Africa Director.

STORY UCT NEWS, KIM CLOETE **PHOTO** MICHAEL HAMMOND

Pioneering ‘new science’ in Masiphumelele

At the age of five, 20% of children in Masiphumelele are already infected with tuberculosis (TB). When these children enter high school, about half are infected with TB. By the time they become young adults, the infection rate has increased to roughly 80%.

STORY UCT NEWS, CARLA BERNARDO
PHOTO MICHAEL HAMMOND

That's the reality for the Masiphumelele community of over 23 000 residents, home to the Desmond Tutu HIV Foundation (DTHF) Masiphumelele research site. The R10 million cutting-edge Aerobiology TB Research Facility, commonly called the "Masi site", officially launched on 20 February. Its work focuses on the study of the transmission of these TB organisms with a view to finding ways to halt the spread of the disease.

Emeritus Professor Robin Wood, chief executive officer of the DTHF and director of the Desmond Tutu HIV Centre (DTHC), an accredited research centre within UCT's Health Sciences Faculty and affiliated with the Institute of Infectious Disease and Molecular Medicine (IDM), said at the launch that poor socio-economic conditions are one of the big drivers of TB transmission.

Wood is pictured left with UCT Vice-Chancellor Mamokgethi Phakeng. Professor Linda-Gail Bekker, Deputy Director at the DTHC, chief operating officer at the DTHF and a member of the IDM, told guests that there is a 20-year relationship between clinicians, scientists and the Masiphumelele community. The relationship dates back to 1999 when the staff at the Desmond and Leah Tutu Clinic began providing HIV care to Masiphumelele residents. That clinic is still situated in the community.

UCT Vice-Chancellor and guest of honour Professor Mamokgethi Phakeng cut the red ribbon, officially opening the facility. She said that UCT increasingly recognises that the "university lives in the community and the community lives in the university".

EMERGING RESEARCHERS IN HEALTH SCIENCES

Three young Faculty of Health Sciences scholars, Dr Dorit Hockman, Dr Joseph Raimondo and Dr Justin Komguep Nono are among the inaugural 2019 cohort of Future Leaders – African Independent Research (FLAIR) Fellows. FLAIR Fellowships are awarded to talented African early-career researchers who have the potential to become leaders in their fields. The initiative is a partnership between the African Academy of Sciences (AAS) and The Royal Society, supported by the Global Challenges Research Fund.

Dr Dorit Hockman

Dr Joseph Raimondo

Dr Justin Komguep Nono

Dr Ursula Rohlwink

Associate Professor Suraj Parihar

Dr Kate Webb

The Crick African Network (CAN), a programme of the Francis Crick Institute in the United Kingdom and five partner institutes in Africa, has named the new African Career Accelerator (ACA) awardees this year.

The Crick, as it is affectionately known, supported by a £6 million grant from the Global Challenges Research Fund, is dedicated to understanding the fundamental biology underlying health and disease. The CAN aims to promote economic development and healthcare in partner countries by sharing the Crick Institute's extensive experience researching

Dr Mandy Mason

diseases, including HIV, tuberculosis and malaria.

This UK–Africa collaboration provides fellowship recipients with two years of intensive training and mentorship – dividing their time between the Crick Institute and their African partner institution – to foster the next generation of research leaders in Africa.

The network includes collaboration with the universities of Stellenbosch and Cape Town, South Africa; the Medical Research Council (MRC) Uganda Virus Research Institute; the University of Ghana; and the MRC Unit in The Gambia, which is also representing the West African Global Health Alliance.

Two University of Cape Town (UCT) scientists receiving the African Career Accelerator award this year were included among the fellows. Doctors Ursula Rohlwink and Suraj Parihar follow in the footsteps of UCT postdoctoral research scientists Dr Mandy Mason who was awarded the fellowship in the first round late last year, and Dr Kate Webb, who was one of the award winners in the second round earlier this year.

TEACHING & LEARNING

UNDERGR

RADUATE

CREATING A SUPPORTIVE ENVIRONMENT

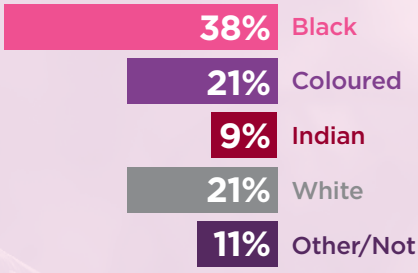
The year, 2019, presented the Faculty with several opportunities for improving the experience of undergraduate students. The emphasis was on creating a supportive environment so that students could succeed in their chosen programmes. To this end, the Deanery worked with the Health Sciences Students Council to take various steps towards making the Faculty a more inclusive, transformed and welcoming space for our undergraduates. The discussions with the HSSC centred around timeously looking into challenging issues that included feelings of exclusion, racism and cyber-bullying, ensuring that students' concerns of safety and security are investigated and attempts made at resolving these issues.

The year marked a deep and important focus around sexual and gender-based violence (SGBV) in tune with UCT's campus-wide

UNDERGRADUATE STUDENTS
A YEAR IN NUMBERS

2107 registered students

452 first-year students



More than **70%** of undergraduate students identified as female

99% of undergrads are South African.

EIGHT PROGRAMMES

- **1333** MBChB
- **240** BSc in Occupational Therapy
- **224** BSc in Physiotherapy
- **157** BSc in Speech Language Pathology
- **112** BSc in Audiology
- **28** Higher Certificate in Disability Prac
- **11** Adv Diploma in Cosmetic Formulation Science
- **2** BSci in Medicine

#JustNO Campaign. The tragic death of UCT student, Uyinene Mrwetyana, further propelled the Faculty to unite in solidarity against SGBV. The FHS students launched a campaign against intimate partner violence (IPV). The campaign was supported by the Faculty and conceptualised and initiated by two fifth year medical students.

The Faculty made further progress towards the establishment of a Student Wellness Centre on our campus. With the assistance of the Management of Groote Schuur Hospital, space was identified next to the Staff Wellness Service. The Faculty is now working with the UCT Student Wellness Service to renovate the space so that a service that includes Primary Health Care and Mental Health can be offered to students in need of care. The counsellors (social worker and psychologist) provide a service to students on campus.

Did you know?

459 undergraduate students graduated in 2018, 77% were female.

Two undergraduate programmes were reviewed. The MBChB programme was reviewed by the Health Professions Council of South Africa (HPCSA). On the whole, the outcome of the review was positive with a few areas that require improvement. We are waiting for the final report from the HPCSA. Following some concerns from students and staff, there was an internal review of the Physiotherapy programme. The Faculty is awaiting the final report from the reviewers. The review highlighted the commitment of staff and students towards ensuring that the programme continues to be one of the best in the country.

Over the past year our undergraduate students have gained widespread practical experience working in UCT's partner hospitals in the Western Cape, as well as community centres, clinics, schools and in the community. The Faculty also has a rural training programme where Medical and Physiotherapy students are trained in the 'UCT in the Garden Route' project in the Southern Cape. Students have also had stints in the Saldanha Bay sub-district, as part of the very successful Vredenburg project. This has given students valuable training in rural health care.

Our undergraduate students, with support from dedicated academics,

have continued to inspire us through their uplifting and impactful practical work. Our students have described their practical work in 2019 as immensely rewarding as they have gained experience across the spectrum – in mental and physical health - and in different settings, with individuals, families and communities. Their work has ranged from a transformative project with school learners in the tough, gang-ridden area of Vrygrond in Cape Town to supporting psychiatric patients to integrate into the community and assisting people to recover from strokes.

Through our teaching, services and opportunities for practical experience, we continue to encourage our students to become caring and competent professionals who strive to make a difference in their communities in South Africa and further afield.

ASSOCIATE PROFESSOR GONDA PEREZ
Deputy Dean Undergraduate Education

ASSOCIATE PROFESSOR RUDZANI MULOIWA
Assistant Dean Student Support

UCT IN EDEN

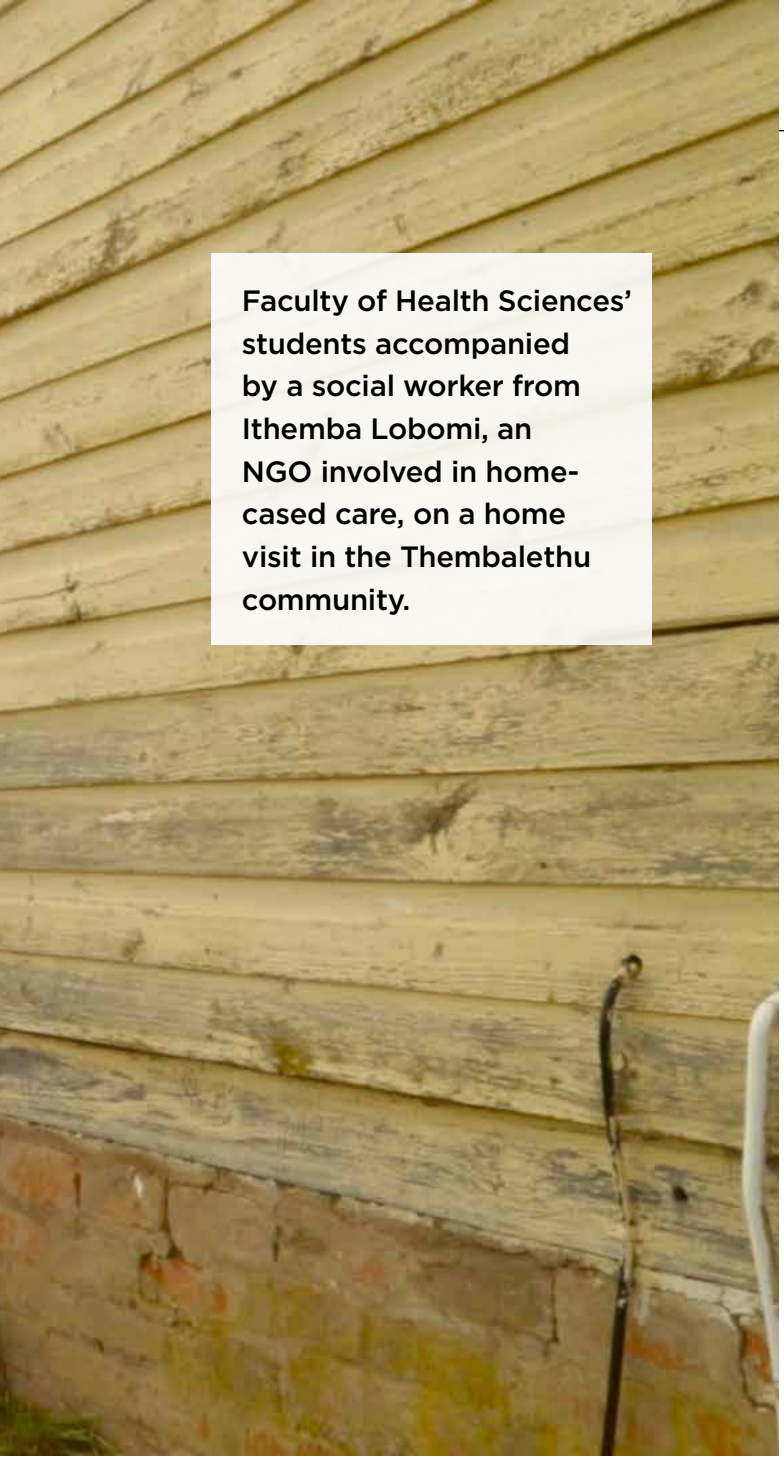
TRAINING DOCTORS FOR RURAL SOUTH AFRICA

Faculty of Health Sciences' Medical and Physiotherapy students have gained invaluable experience through working in hospitals and in the community as part of the 'UCT in Eden' project in the Southern Cape.

In 2019, 17 sixth year MBChB students did their year-long practical training at George hospital, a well-run and busy secondary referral hospital.

As part of the programme, they also spent six-week stints in district hospitals in Oudtshoorn, Knysna and Mossel Bay.

The project in the Eden district, recently renamed the Garden Route district in 2019, aims to develop doctors who are dedicated to assisting people in disadvantaged communities.



Faculty of Health Sciences' students accompanied by a social worker from Ithemba Lobomi, an NGO involved in home-cased care, on a home visit in the Thembalethu community.

"What is particularly exciting is seeing not only how our students can benefit from working in different environments where they are very much part of a team, but how they are impacting on society at all levels."

PROFESSOR CAROLYN WILLIAMSON
INTERIM DEAN FACULTY OF HEALTH SCIENCES

The students work across the wards – from paediatrics to emergency care and surgery. They also spend time in the clinics connected to the hospitals, do house-to-house visits in the community and get involved in other UCT public health programmes in the area.

Students say they've thrived on the hands-on, practical experience and the opportunity to learn from medical professionals in the hospitals in which they train.

"It's been amazing. We've had wonderful support from the health professionals. Our opinions have been greatly valued as part of a small, close-knit team. We've had the opportunity to see patients ourselves and take on more responsibility for themselves," said 6th year Medical student, Ziyabukwa Mayalo.

A major advantage of the programme is that the students are considered as part of the team from day one. They are also integrally involved in service delivery. Staff at the hospitals also benefit from professional development offered by UCT staff. The students complete

STORY KIM CLOETE

the same academic programme as in Cape Town and their results have been exceptional.

The project has enabled teaching and learning to be done in a more holistic and relatively rural setting that is appropriate to the realities of the South African health services.

In 2019, two groups of 14 Physiotherapy students spent a semester each, working and training in the hospitals, clinics, hospices and schools in the Eden district. This included work at the Bethesda Medical and Relief Services. They also followed up with patients at their homes.

"A huge benefit is that they provide a service that didn't exist before students were here, in this part of the world. My role with the students is to go out into the community and into people's homes and provide care for them," said Sam Smuts, UCT Clinical Educator in Physiotherapy.

Having a broader impact on society dovetails with one of UCT's key goals to be socially responsive.

Apart from studying the curriculum, students have also been involved in the Isisombululo Project based in Thembalethu township in George. The programme, managed through

"For us as the leadership it's important that we are not just up there, on top of the hill in Rondebosch, but in the community. We don't exist just for ourselves. We exist to serve, whether it's in the quality of the graduates we produce or the way we serve the community."
PROFESSOR MAMOKGETHI PHAKENG
UCT VICE-CHANCELLOR

Amosi, father of five young daughters (right), has managed to transform his life after receiving help from the multidisciplinary team, which includes UCT medical students, Busisiwe Maphanga and Mandi Keswa and social worker, Zintle Ngonyama (opposite) during a home visit.

the UCT Faculty of Health Sciences, started as an HIV/AIDS and TB, prevention, treatment and care programme, but has expanded into a range of services for the community. These include maternal health, mental health and services for families.

During 2019 some students based in George tutored high school learners in mathematics and science on a voluntary basis on Saturday mornings. They have also helped on a community-based treatment service for people with substance use disorder.

It's hoped that the year will inspire and encourage students to embark on a career in rural medicine, and in public hospitals in smaller towns, where the need is great.

The vision of the project aligns with Healthcare 2030, the vision of the Western Cape Government, as well as with policy of the National Department of Health.

Successful partnerships have been developed and maintained by the Faculty of Health Sciences, mainly with the Western Cape Department of Health, but also with the George, Oudtshoorn and Knysna municipalities, as well as with various non-governmental organisations such as the Bethesda and Knysna Hospices, and Ithemba Lobomi in Thembalethu.

In 2020, 24 6th year MBChB students are expected to spend their practical year living and training in the area. The Eden project started in 2015 in George and Oudtshoorn, before expanding to Mossel Bay and Knysna. Within the next few years, it plans to include Beaufort West in the Central Karoo.

RURAL ROTATIONS ON THE WEST COAST

The town of Vredenburg in the Saldanha Bay sub-district is home to a very successful UCT rural training site for a range of students from the Faculty of Health Sciences.

Vredenburg is the largest town in the Saldanha Bay Sub-District and is about 140 kilometres north of Cape Town. It falls under the jurisdiction of the Saldanha Bay municipality. The municipality covers an area of 2015 km^2 and has a current population of around 125 000 people.

Within this area is a 105-bed district hospital with 12 permanently employed doctors, as well as eight nurse-led primary health care clinics, two satellite clinics and one mobile clinic which is funded by the Western Cape Department of Health and provides health care to the community.

The University of Cape Town launched its Vredenburg project in 2009 after identifying the area as a good site to establish a rural training site aligned with the vision of the National Department of Health and Western Cape's Healthcare 2010 and later 2020 plan. The University's main aim was to prepare skilled health care practitioners who will be relevant in both the international and national context.

With this core goal in mind, the Division of Family Medicine in the School of Public Health and Family Medicine sent groups of students to the area. They were joined by Physiotherapy, Occupational Therapy, Communication Sciences and Disorders and Dietetic students.

The students stay at a house bought by UCT in Vredenburg. It serves as a base camp, with a learning centre with IT link-up and Faculty vehicles.

The Family Medicine block was initially set up as a training site for final year students as an alternative to being based at a a community health centre in Cape Town. A full-time lecturer was appointed in 2014. The decision was made to send everyone in the final year class in Cape Town, to Vredenburg for an intense immersion exposure. This meant that within a four-week block, each student has a week-long exposure to the rural health care platform on the West Coast.

During this week the students spend time at the hospital and at

the local clinics as well as training in other disciplines based at the house. They perform calls in the hospital's emergency centre with the hospital doctors and see patients in both the Emergency centre after hours as well as at a primary health care clinic. They also assist in some surgeries, have the opportunity to see patients in the wards and join training and meetings at the hospital, such as the Morbidity and Mortality meetings.

Once a week, all students staying at the house at the time hold a meeting where a case is presented. Each profession is asked how they would approach the case and what their role in the health team would be. This often becomes a very lively discussion. Most groups refer to it as one of the highlights of their time in Vredenburg and have suggested that similar meetings are held in Cape Town.

The students have had a positive impact on both patient care and service delivery. The response to the Vredenburg programme has been overwhelmingly positive with comments like:

"Until now I have given very little consideration to working in family medicine, and certainly not in a place as out of the way as Vredenburg. But after last week I have to reconsider and I'm actually looking forward to spending six months in family medicine."

"I wanted to say whilst still in Vredenburg: thank you very much for sharing your experiences. I found it insightful and inspirational."

"I just wanted to say thanks again so much for this past week. It was lovely getting taught by you. Thanks for sharing so much wisdom."

The success of the doctors' training program has encouraged UCT graduates to return to the area for their community service years. Out of the four community service posts linked to the Saldanha Bay Sub-district, at least two of the posts annually have been filled by UCT graduates, with all four posts taken up in a year since the programme started, within some years. In addition, two doctors in the area have joined the Family Medicine specialist training programme.

The initiative is unique in the way it operates and symbolises the symbiosis of the rural healthcare districts and the UCT's Faculty of Health Sciences.

STORY KIM CLOETE

RURAL SUPPORT NETWORK

The aim of the Rural Support Network (RSN) is to recruit and retain health workers in rural communities, where it is most needed. This student-led initiative aims to cultivate student development by starting meaningful conversations and advocating for rural health at the Faculty of Health Sciences - with South Africa's future healthcare workers - and with the objective of increasing the retention of healthcare professionals in rural regions.

The initiatives which we are most proud of include our annual Rural Placements Programme which sends students from across disciplines at the Faculty of Health Sciences on an all-expenses-paid trip to rural hospitals within South Africa. This gives students the opportunity to experience working in rural regions, while simultaneously providing outreach in the villages and towns they visit.

In 2019, 23 students from the Faculty will be sent to the Eastern Cape, Mpumalanga and KwaZulu-Natal. Throughout the year, students are also sent to peri-urban regions across the Western Cape to give them the opportunity to work with Community Health Workers – doing home-visits and at primary level clinics.

Another exciting initiative is our Rural Health Awareness Month (RHAM) which is hosted in April each year. During RHAM, the RSN increases it's on-campus presence by inviting leaders in rural advocacy from across South Africa to speak to students about current issues and developments within rural medicine, and the organisation hosts its annual Run for Rural fun-run/walk. The run aims to raise awareness around the average distance which persons in rural regions must travel to access healthcare, and all profits from the day go toward funding students' trips during the Rural Placements Programme.

TANWEER CHARLES
RSN Chairperson 2019/20

EXCELLENCE IN TEACHING

Dr Amaal Abrahams was awarded the Faculty of Health Sciences' Excellence in Teaching Award, which recognises outstanding teaching that inspires and supports students' academic development.

Dr Amaal Abrahams, a senior lecturer in the Division of Cell Biology, says a good teacher is committed to ensuring student success. She has introduced and developed new and innovative teaching and learning strategies to promote student access and development. Abrahams is the recipient of the Faculty of Health Sciences' Excellence in Teaching Award.

"I actively strive to create a socially constructive atmosphere filled with active peer learning and collaboration, with my predominant role being that of a mediator. Here I believe language is important, where my role is one of an active participant in the classroom, providing students with clear learning objectives, detailed instructions on performing the task

STORY THANIA GOPAL **PHOTO** JE'NINE MAY

and providing clear symbolic tools, such as videos, drawings and words. Within the Intervention Programme (IP), where I teach Physiology, the small size of the class ensures that I am able to create such an active social learning environment. Within the larger mainstream classroom to promote self-directed learning I have created different interactive learning activities such as routinely asking students questions throughout the session to assess their knowledge and understanding, formative assessments, quizzes and group work that I employ to change the way students learn."

TRAIN THE TRAINER

The Division of Cell Biology hosts an annual Teachers' Workshop which aims to inspire life science teachers from local schools (specifically lower income districts) and to provide them with the tools and techniques to achieve learning goals in fun and exciting ways. It also provides a platform for academics at the University to gain insight on how the science curriculum is delivered at secondary level, which informs the Division's teaching and learning approaches for first-year students. The programme is designed based on the Grade 9 Natural Sciences curriculum and covers concepts that lecturers have found that students struggle with.

At the end of the 2019 workshop, each teacher received a comprehensive booklet outlining the experiments, learning objectives and additional resources that teachers could use in their classrooms, a practical biology classroom resource textbook and a paper microscope. The workshop also provides a platform to discuss best teaching practice in the current South African context, both at secondary and tertiary level and has enhanced the university's engagement with local schools.

OT STUDENTS THRIVE ON REWARDING FIELDWORK

Occupational Therapy students from the Faculty of Health Sciences' Department of Health and Rehabilitation Sciences, have described their practice work in 2019 as immensely rewarding. They have gained experience across the spectrum – in mental and physical health and in different settings, with individuals, families and communities.

UCT's OT division is known for its track record in providing a socially responsive curriculum, where students do practice learning or fieldwork. In 2019, students have immersed themselves in training in diverse contexts, from hospitals and community centres to crèches and schools.

As part of their final year Occupational Therapy 'Community Development Practice' cluster, several students were involved in a transformative project at the Zeekoevlei primary school in Cape Town's Lotus River, where many of the learners are affected by gangsterism and domestic violence.

A particularly successful part of the project was using life-size board games, such as Snakes & Ladders, as a way to engage grade three and four learners in meaningful conversation. Climbing up the ladder or down a snake, the learners answered questions such as what made them feel good and affirmed and what they struggled with or considered as troublesome or difficult behaviour.

People identified as local heroes were also brought in to chat to the learners and to inspire them, while grade seven learners who had been identified by their teachers as positive role models, mentored the grade three and four learners. This ripple effect had a positive effect on the children.

"What I found rewarding was changing negative patterns, interrupting the cycle and just allowing children the possibility to

STORY KIM CLOETE

do better and to reach their dreams," said fourth year OT student, Micaela Tedder.

Over the weeks, the students noticed a change in behaviour, with more understanding and respect for each other.

For fourth year student, Mpilo Zuke, it was an opportunity to break down stigma and boost confidence among the learners. "I think the biggest improvement was seeing them starting to become aware of how to respect each other. I love engaging in social transformation and equipping people to be better that the rest of the world thinks they can be."

Fourth year student, Chelsea Muir, found her work with mental health clients at the Magnolia ward at Lentegeur hospital especially rewarding. She has also had worthwhile practice experiences at a crèche at Groote Schuur hospital and the burns ward at Red Cross War Memorial Children's Hospital.

OT students use board games as a way of facilitating meaningful discussion at the Zeekoevlei Primary School in Lotus River, Cape Town.

"OT really draws on my caring side. It's so rewarding to see the change OT can make, like helping a client in a mental health ward develop a daily schedule, working with a toddler to finally hold his own bottle, or seeing a client being able to re-learn a skill after a stroke." It also has a cascading positive effect on the people around them, such as family members and hospital staff.

Third year student, Sam Melis, appreciated her practical experience working in a community home with people living with chronic mental illness, such as schizophrenia, bipolar disorder and depression and anxiety. Together with the residents, they chose a themed international evening and cooked together and talked about the culture of a particular country. It was aimed to ease residents into socialising and reintegrating into the community.

"I've really fallen in love with OT. I like the holistic aspect of it – treating the whole person. It's also very impactful working alongside clients, rather than telling them what to do."

While some students thrived on their work with groups of people, others found particular value in working with individuals. But they all agree that one of the joys of OT is that it holds so many opportunities.

Students say they would like to see more young men considering the field of OT as a career, as it would be extremely valuable to have more men in the field. OT contributes to all levels of healthcare and community development, while OT practitioners fulfill an important role in inter-disciplinary teams in many healthcare settings.

Zuke said she would encourage people to study the four-year BSc in OT degree at UCT. "If you have a love of people and want to play a valuable role in their lives, or want to understand people from a holistic perspective, OT is for you. Our lecturers are great too. They don't only cultivate critical thinking and practice, but they really care about you as a person as well."

REVOLUTIONISING **HEALTHCARE**

Nine student-led teams were tasked with developing avant-garde solutions to some of the biggest challenges facing South Africa's beleaguered healthcare industry, and to show off their ideas to industry experts.

The Futures in Health Accelerator Project, led by the Faculty of Health Sciences' Surgical Society (SurgSoc) – offered students from across faculties an opportunity to join forces and develop futuristic ways in which to improve healthcare in the country.

Spearheaded by the SurgSoc's Liam Devenish (fourth-year MBChB/MSc), Sipho Ndereya (fourth-year MBChB) and Matthew Potter (final-year MBChB), the project takes the form of a student-run incubator that seeks to assist multidisciplinary teams to cultivate disruptive ideas with one common thread – to advance this crucial sector.

Teams were allocated just seven minutes to pitch their novel ideas and a panel of industry experts were allowed seven minutes to ask questions, provide suggestions and, where necessary, poke holes in their concepts.

The ideas varied from developing an application to reduce patient waiting times at healthcare facilities to consolidating patients' health records in a single, easy-to-use application, amongst others.

"The programme is intended to facilitate learning and growth, incubate disruptive ideas and foster social innovation that is sustainable, economically [viable] and underpinned by a design-thinking approach," Devenish said.

One innovative idea was Medla, a proposed one-stop-shop which aims to consolidate personal records using a smart technology application, giving patients easy access when they need it most. The concept looks at ways in which patients can tap-in online, check their medication lists and what the medication is needed for, and even examine records from their last consultation with their doctor.

The proposed roll-out is easy: Patients would register online or download the application to start their Medla journey.

Matthew Potter from the Surgical Society explains that the Future's in Health Accelerator Project brings together students from different faculties and a multitude of cultures to come up with futuristic ways in which to improve healthcare in South Africa.

Similarly Qut is a scheduling system that seeks to enable healthcare providers to reduce waiting times at facilities, and address non-arrivals as a result of a protracted in-hospital system – a common problem in South Africa.

It examines the best ways to eliminate queues, by scheduling visits, booking appointments and selecting a clinic and time slot that suits the patient's individual needs. The system is designed to empower patients to make use of a simple, flexible and accessible platform, via cell phone, that collects data and improves patient flow.

Potter told the audience that the idea for the project came after they had witnessed first-hand the number of challenges faced by South Africa's health sector.

"We work in a system that is overburdened and it's debilitating to say the least, even at this early stage in our careers," he said.

It's not just a case of not having enough medication, or even enough hospitals, he added.

"[It's] a fundamental disconnect between what we understand [are] the needs in South Africa and what we actually have available in the sector."

To help get it right, he noted, making use of the resources, regardless of their limitations, and drawing on the expertise of professionals in other fields for different ideas is key.

"We exist at this amazing University where the most talented students from around the country and continent come [to learn]. We are excellent at developing these students and academics, but we keep them in these very narrow silos," he said.

"We need to develop ideas around how to address problems in South Africa."

STORY NIÉMAH DAVIDS, UCT NEWS **PHOTO** MICHAEL HAMMOND

POSTGRA


ADUATE

2019 YEAR IN REVIEW

POSTGRADUATE EDUCATION MAKES GREAT STRIDES

The postgraduate section of UCT's Faculty of Health Sciences made great strides in 2019, boosting its academic programmes as well as the number of postgraduate students. Forward-thinking steps were also taken to strengthen postgraduate education within the Faculty.

There has been significant growth in the postgraduate student body over the past few years, and in 2019 we registered 2502 postgraduate students. The Faculty now hosts a total of 245 postgraduate academic programmes. The large number of postgraduate students and qualification offerings is testimony to highly dedicated staff and a successful research enterprise with world-renowned scientists available to teach and supervise students.

Several initiatives were introduced within the postgraduate education portfolio in response to an external faculty review aimed at strengthening

POSTGRADUATE STUDENTS A YEAR IN NUMBERS 2019

Total number of registered postgrad students

2502

Female **1478**

Male **1024**

Number of students

PhD	Honours	Masters	NDGP	PGDP
587	99	1372	50	394

FROM:

72% South African citizens and permanent residents

24% Other African countries

4% International students from outside Africa

245 postgraduate programmes

leadership, functioning and accountability of the Deanery. Terms of reference for committees responsible for postgraduate affairs have either been newly established or reviewed, with the aim of providing them with a clear mandate.

The Accreditation Committee, which ratifies new undergraduate and postgraduate programmes and courses, as well as proposed changes to courses, has had its Terms of Reference and Composition ratified by the Faculty Board. This is an important move towards ensuring quality assurance for all academic programmes offered in the Faculty. The Postgraduate Executive Committee has also revised their terms of reference – a pivotal change was to include their role in developing the postgraduate education strategy for the Faculty.

The Postgraduate Administration Office and the Deputy Dean Postgraduate Education have hosted road shows for all departments to communicate key developments in postgraduate administrative processes. In tune with a focus on sustainability, a critical development is the move towards paperless processing of postgraduate annual reports.

The Postgraduate Health Science Student Council (PGHSSC) now has its own office space in the Faculty. Regular meetings between the PGHSSC and the Deputy Dean Postgraduate Education have helped to build ongoing trust and have generated exciting ideas for 2020 and beyond.

PROFESSOR ELELWANI RAMUGONDO
Deputy Dean Postgraduate Education

2018

683
PG graduates

65 PhD
101 Honours
278 Masters
239 Postgraduate Diplomas

500
GRADUATES OVER
20 YEARS
OF THE MASTER OF PUBLIC HEALTH PROGRAMME

PhD's across
78 disciplines/ professions

DID YOU KNOW?

The newly established Department of Health Sciences Education has 2 postgraduate programmes. The 2 research-based programmes commenced in 2016 and already have 18 students registered. The programme is unique because of its multidisciplinary nature, which helps clinicians to conduct research across the boundaries of their clinical disciplines, professions and educational backgrounds.

USING BIG DATA TO SOLVE GENETIC RIDDLES

Using machine intelligence tools and big data is at the heart of pioneering work spearheaded by Associate Professor in the Division of Human Genetics, Emile Chimusa.

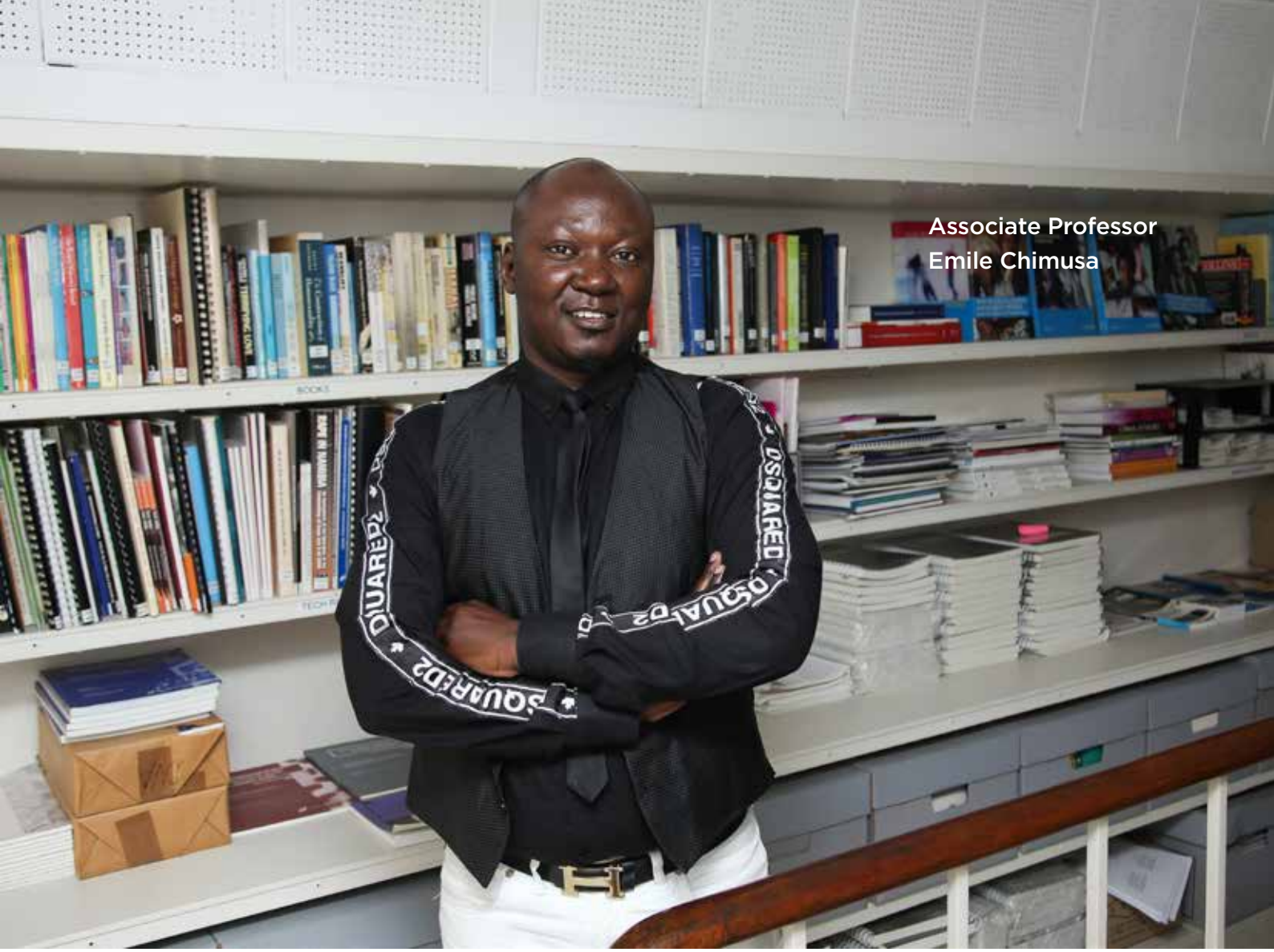
This young and dynamic statistical geneticist has established a research group which introduces a way to use machine intelligence tools to mine large scale biomedical data, so that it can pinpoint the genes associated with disease and therefore predict health and health risks.

The group undertakes human DNA sequencing within a population or within an ethnic group, which can be used to understand all kinds of disease, from HIV and tuberculosis to various cancers. Novel statistical and machine learning methods have been developed for uncovering the genetic basis of these diseases.

"We try to address the question of why the human species is different in terms of people's response to disease susceptibility and resistance and how different people respond to treatment, with a goal to predict the human health risk."

The Faculty is using machine intelligence tools and high performance computing within this field and is leading the way on the continent. Researchers conduct some of their research at the Centre for High Performance Computing (CHPC) in Cape Town.

For Chimusa, who was born and raised in the Democratic Republic of



Associate Professor Emile Chimusa

Congo, it could lead to breakthroughs in better understanding personalised medicine, particularly in Africa.

Africa has different environments and high genetic diversity that shape the way people respond to treatment. Working on this pioneering research will help to develop medicines suited for Africans.

Chimusa's research in this area has brought together a wide range of experts, from mathematicians, statisticians and computer scientists to biologists and medical doctors, who are capable of improving medical research as well as effectively analysing large scale biomedical data. He believes it's an extremely exciting field for the young generation.

"We have novel data in Africa. This will really position us to better understand our own local health problems, as well as train people who will be able to compete in the market."

Chimusa holds a PhD in Computational Biology and Bioinformatics and was recently appointed an associate professor at UCT. The Division of Human Genetics falls under the Department of Pathology at UCT's Institute of Infectious Disease and Molecular Medicine (IDM).

STORY KIM CLOETE **PHOTO** JE'NINE MAY

CELEBRATING 25 YEARS OF **BUILDING HEALTH LEADERSHIP**

The Oliver Tambo Fellowship Programme (OTF), based at the School of Public Health and Family Medicine celebrated 25 years of contributing to capacity development of health management and leadership in the health sector. This makes it the longest running South African postgraduate training programme dedicated to strengthening the leadership capacity of public sector health managers.

It has had a primary focus on South African public sector managers, but more recently has also had graduates from NGOs and from other low-and-middle income countries, including Lesotho, Jordan and Malawi.

First opening its doors in 1994 as a postgraduate diploma in Health Management, Economics and Finance or DHMEF, with an initial cohort of 28 participants, two years later, it became the OTF programme. Since then, the core qualification evolved into a postgraduate Diploma in Health Management and most recently, in its current location in the

Celebrating 25 years of the Oliver Tambo Fellowship are staff and members of the inaugural class of 1994 with guest of honour, Dali Tambo (son of the late Oliver Reginald Tambo after whom the programme is named). From left: Maylene Shung King, Leslie London, Reno Morar, Dali Tambo, Jud Cornell, Precious Nobongoza, Sue Machutchon, Lucy Gilson, Hassan Mahomed.

Health Policy and Systems Division, the OTF evolved into a Diploma in Health Leadership. The Diploma has a strong focus on health systems complexity, with 'systems thinking' as an integral, core part of its orientation and curriculum. Underpinning the OTF is the understanding that all health leaders need to develop a complementary suite of competencies – so learning outcomes embrace cognitive, functional and social competencies. Social competencies in particular, which involve understanding of the self and self in relationship to others, is a key stream that runs through all aspects of the Diploma. When managers reflect back on the programme, they often emphasise reflective practice as the most valuable part of their learning journey.

The OTF is also viewed as a health system intervention in itself and not only as a career development opportunity for individuals. This is reinforced by a purposive set of workplace-based activities, and the explicit recruitment of teams, either in the same cohort or in successive cohorts from areas and facilities.

In one of the subdistricts which has consistently sent participants on the course in the last few years, there is a growing team of colleagues working in different parts of the subdistrict hospital, who now work differently and collectively towards the improvement of this facility. Training also emphasises the strategy of bringing about system change through 'small wins' and recent graduates have very successfully developed small wins that are now adopted for roll-out on a national and provincial scale.

The core qualification, the postgraduate Diploma, runs over 18 months and takes in a new cohort of participants annually. But as a fellowship, it is also more than a qualification. Critically, OTF alumni form strong and lasting relationships, that have resulted in a network of alumni that interact with and support one another in a variety of ways.

250 The OTF has graduated more than 250 managers who work at different levels and portfolios in the public health and NGO sector. Amongst its graduates is the newly-appointed Chief Operating Officer of the University of Cape Town, Reno Morar, who was part of the very first cohort of students in 1994. Others include the previous Director General of the National Department of Health, Ms Precious Matsotso; a previous National Director General for Health and then foreign affairs Dr Ayanda Ntsaluba, and the Chief Operating Officer of the Western Cape Department of Health, Dr Keith Cloete.

PHOTO LEANNE BRADY

SURGING AHEAD

TO IMPROVE CONDITIONS FOR PERSONS LIVING WITH DISABILITIES

UCT's PG Diploma in Disability aims to increase awareness and informed participation in disability issues at a teaching, research and community-based programme level. The course is geared towards a wide range of people, including managers in national, provincial and local governance structures, disability activists, teachers, social workers, policymakers and staff of higher education institutions across different faculties.

Ncikazi Nyoka is currently completing a Postgraduate Diploma in Disability Studies in the Department of Health and Rehabilitation. She has juggled her studies this year with her work in the Department of Social Development, where she is a social work policy developer in the programme: Services to Persons with Disabilities. Ncikazi has also found time to support and motivate persons with disabilities through voluntary work with the Bondzone group.

Ncikazi broke her spinal chord in a car accident in 2009. She has turned a very difficult situation into something positive and is now a firm advocate for persons with disabilities. Ncikazi says UCT has been very supportive during her year-long postgraduate course, providing a bursary which fully covered the course fees, as well as accessible transport during two blocks of lectures during the year.

"I strongly believe in the slogan: Nothing about us without us. Persons with disabilities should be champions of change. We should be involved in the design of policies to monitor the inclusion of persons with disabilities."

DID YOU KNOW?

The Postgraduate Diploma in Disability Studies has developed it's blended online programme on an inclusive practice of online accessibility by implementing accessibility standards which has helped accommodate our students with visual impairment and our first deaf student in 2018.

ON THE CUTTING EDGE

MEET ASSOC. PROFESSOR SALOME MASWIME

STORY THANIA GOPAL **PHOTOS** JE'NINE MAY

5 billion

people globally lack access to safe and timely surgery. Maswime is making surgery safer for Africans.

She is a recipient of the prestigious Discovery Foundation Massachusetts General Hospital Fellowship Award, President of the South African Clinician Scientists' Society, and recently joined the Faculty of Health Sciences in her new role as the head of Global Surgery.

Falling in love with the labour ward is where it all began for UCT's recently appointed head of Global Surgery, Associate Professor Salome Maswime, who says she was enticed by the thrill and excitement of the labour ward and the pure joy of witnessing a healthy mom receiving a healthy baby. But it was also the deep disappointment of losing a new mother that persuaded Maswime that she needed to learn and do more. After graduating as a specialist obstetrician and gynaecologist from the University of Witwatersrand in 2013, Maswime completed a PhD investigating caesarean-related morbidity and mortality. "I did a study across 15 hospitals and that is when I really realised how health systems affect surgical outcomes," says Maswime.

Before joining UCT, Maswime was also granted the prestigious Discovery Foundation MGH Fellowship Award to further her training and studies at the Massachusetts General Hospital's

Center for Global Health in Boston, in the United States. Here, she used the opportunity to broaden her research and clinical skills and meet some of the best scientists and clinicians in the world.

Now, she is extremely excited to be based at Africa's best university. "UCT offered me an opportunity that was just so aligned with what I wanted to do with my career, after spending a year learning about global health to come and lead global surgery with my background in caesarean sections, it was really just the perfect alignment for me." She also credits the Faculty of Health Sciences at UCT for having done a lot of groundwork in preparing for global surgery. "I feel like I've come to a place that is fertile to developing global surgery as a unit."

Describing global surgery as the interface between clinical disciplines and public health, Maswime says

it's really about improving equity, improving healthcare, universal surgical access and providing good quality care. This is particularly relevant in low-resource settings such as South Africa because of the high surgical morbidity and mortality, an unmet need for access to surgical care, high rates of complications, delays in patients receiving care, and differences in the standards of care. "And so, we've got such a high burden of disease and unless we start looking at the *why* and the *how* to improve it, we will continue practising medicine the way we have been taught to, but if clinicians and public health specialists start talking to each other together – we will find solutions that are going to improve outcomes and so global surgery is about doing that…"

Maswime describes herself as creative, hardworking and ambitious. But she is also a dreamer, who's unafraid of stepping up to challenges and reimagining new ways of delivering patient-centred healthcare, such as the integration of maternal and mental health services. She encourages young people not to conform. "Find yourself and do what you believe in and what you meant to do," she says. For this multitalented mother of two, this almost meant giving up medicine for a career in the performing arts. Maswime is a talented musician (who plays the trumpet and French horn) and also started a creative arts group at university where she was involved with writing, acting and producing.

In her new role, Maswime's vision is to develop global surgery at UCT into a world-renowned centre for excellence, to contribute to changing the way that surgical practice is taught, and to training and developing people who are equipped to take this forward across the continent. Oh, and of course, she dreams of becoming an A-rated scientist along the way. Stay tuned.


HEALTH

SERVICES

FORGING CLOSER **PARTNERSHIPS**

Working closely together with our stakeholders has been at the core of the Faculty's health services work in 2019. The collaboration has paved the way for further opportunities, particularly with the Faculty's biggest external partner, the Western Cape Government (WCG) Department of Health.

The Faculty and the Department serve communities through the joint provision of services, teaching and research and have 738 joint members of staff. UCT partners with several hospitals across the Western Cape to train undergraduate and postgraduate students in the Faculty. UCT has staff and students in 122 facilities across the Western Cape, stretching as far as Vredenberg along the West Coast and Eden District along the East Coast. The success of the partnership lies in a common desire to work together within a good governance framework, cementing our already excellent relationship.

In 2019, the Deanery reached an important milestone as the Faculty and the department committed to the generation of a bilateral agreement, which is based on the principles from the Multi-lateral Agreement between the WCG and the four Higher Education Institutions training health professionals in the Western Cape. The bilateral agreement between the Faculty and the WCG is based on 12 foundational principles. These are: building trust through openness and transparency; commitment to fairness, in light of historical inequity; adopting an enabling approach and commitment to the spirit of partnership. The principles also include commitment to building positive organisational culture and to collective change management, realistic expectations in light of resource constraints, and a commitment to address power imbalance and control. The two partners have also committed to acknowledge the "Medical Model bias" in previous agreements, as well as adhering to the spirit of the multi-lateral agreement with the Province and all universities. Sharing technical expertise across the parties

and commitment to fundamental transformation and equity also form part of the principles.

The bilateral agreement is the culmination of years of work and is an exciting development for the Faculty. It holds the promise of even greater collaboration across diverse fronts. The relationship of mutual respect and trust between the WCG Department of Health and UCT has filtered through to individual staff members from across the two institutions.

Apart from the joint members of staff we share with the WCG Department of Health, we also have important links with the National Health Laboratory Service (NHLS). We have 65 joint staff members with the NHLS and our relationship is governed by a multilateral and bilateral agreement.

Other Health Service highlights in 2019 include engagements with the Division of Nursing and Midwifery; working with the Futures in Health student research and innovation group; and engagements with UCT's Properties and Services Committee, the Health Services Working Group and the Clinical Training Platform Committee. These have been aligned with the vision and mission of UCT and work towards excellence, sustainability and transformation. Outstanding colleagues in Human Resources and Finances as well as the committed support from the staff in the Dean's Office have helped to forge and grow these valuable partnerships.

GREG PETRO
Assistant Dean: Health Services

KEITH CLOETE
Head: Western Cape Government Department of Health

IMPROVING PATHOLOGY SERVICES THROUGH STRONG COLLABORATION

The National Health Laboratory Service (NHLS) is the key pathology partner of the UCT Faculty of Health Sciences (FHS), and is the sole provider of diagnostic pathology services to the public healthcare sector in South Africa. This service is integrally linked to the teaching and research mandates that are shared by NHLS and UCT. This positive, collaborative engagement of the two organisations has resulted in an excellent service to our communities, the teaching

of pathology to undergraduate students at the FHS, and the generation of critical research outputs that have improved the lives of many, and contributed to key policy developments and public health interventions.

In 2019, the NHLS together with its academic partners published 593 journal articles, admitted 35 intern medical scientists, 39 registrars and 248 intern medical technologists. The financial and leadership challenges have improved significantly over the last few years. In 2018/19 financial year, the NHLS finances were turned around from a R1.8 billion deficit to a surplus of approximately R1 billion. The organisational revenue grew from R7.9 billion to R8.5 billion. Increased revenue collection coupled with effective cost containment resulted in better cash flow. Consequently, there has been improvement in staff retention, filling of vacant pathologists' positions, a successful pay progression process, increased number of bursaries allocated to the NHLS staff, and the significant improvement in laboratory functioning. As a result, the NHLS was commended by the Parliamentary Portfolio Committee on Health in 2019 for the successful turnaround.

We congratulate staff in the NHLS who have contributed to this success.

DR KAMY CHETTY
Acting Chief Executive Officer, NHLS

MAKING THE MONEY WORK

ECONOMICS AND THE NHI

National Health Insurance is to be implemented in a context of dismal economic fundamentals, but there is nevertheless considerable reason for hope. Susan Cleary, Associate Professor in the Health Economics Unit in the School of Public Health and Family Medicine writes about the economics in South Africa's proposed system of universal health coverage.

In 2015, United Nations member states signed the Sustainable Development Goals, committing to the achievement of key health and development targets by 2030. A central pillar of these efforts is the movement towards universal health coverage, which entails the progressive realisation of equitable access to quality healthcare, free at the point of use. In South Africa, our proposed universal health coverage system is named National Health Insurance (NHI).

NHI is to be implemented in a context of dismal economic fundamentals, but there is nevertheless considerable hope as extra value from our healthcare investments can be achieved

irrespective of NHI. Ironically, achieving this value will require a regime of explicit disinvestments. In this article, I reflect on some key economics issues in the existing public health system, the NHI proposal as a response to those issues, and how a system of explicit economic priority-setting offers the potential of maximising value within available resources.

I will start with a basic analogy of supply and demand, which is perhaps a first step in understanding the economic functioning of a complex system. On the demand side, the South African health system faces a large and growing burden of disease. On the supply side, expectations regarding the productivity of health workers seem dangerously divorced from resource-constrained realities.

Over a seven-year period, I collaborated in a programme of work on primary care leadership and governance within two South African and one Kenyan setting. A common theme of experience from this work was the story of "unfunded mandates". As reflected by one manager: "Again in HR, when we look for HR approval, they kept on saying they don't have money, and the service, irrespective of no money, no personnel, the MEC, the president wants that thing [guideline or policy] to be implemented with immediate effect." How are healthcare facilities supposed to implement new guidelines with no new resources?

The impossibility of implementing the current load of guidelines and standards is clearly illustrated across the Annual Inspection Reports of the Office of Health Standards Compliance. In the most recent report, national average scores were 59% in hospitals, 50% in Community Health Centres and 47% in clinics; a score of 80% denotes compliance whereas a score below 40% denotes the need for "urgent intervention". Of the 851 facilities inspected, 1% achieved a compliant score.

What does this tell us?

It is currently impossible to achieve National Core Standards. Why? There is too little money. When the approach towards policies and guidelines at the top of the system is aspirational, while the bottom is collapsing, the benefit of considering affordability within priority-setting cannot be underestimated.

As South Africans, we are familiar with the risk of system collapse within the context of Eskom. Similar to the public health system, in the case of Eskom, a key challenge was the mismatch between supply and demand. However, with Eskom, this mismatch was much more obvious and motivating — if the loads were managed incorrectly, the resultant blackout could mean months of darkness. Avoiding blackout meant load shedding, a set of efficiency and

disinvestment measures designed to reduce the demand on the grid in order to avoid calamity.

I would argue that the public health system is similar to Eskom, where collapse has already happened within parts of the system, and the indicators are that it is imminent in others. The load that we are expecting the system to bear is simply too much.

It is within this context that we seek to achieve universal health coverage. How might this be possible? The answer lies within the specification of the health benefits package. Even the poorest country in the world can have universal health coverage.

What exactly is a health benefits package?

In theory, it is something unbelievably technical and extremely detailed, defining care pathways, medicines and diagnostics for different conditions. Within the NHI, the benefits package is central to the success of the reform for a number of reasons.

First, in chapter 2 of the NHI Bill, the entitlements of the users of the NHI Fund are defined. These include knowing what is on the benefits package, receiving these services free at the point of care, referral to another provider if the service is unavailable, and if services are refused, to receive written reasons from the NHI Fund for this decision. This is an extremely powerful set of entitlements to equity across all jurisdictions.

How will these benefits be determined?

According to the NHI Bill, the Minister will establish a Benefits Advisory Committee, and the NHI Fund will set up a similar body called the Office of Health Products Procurement, with a number of potential areas of overlap.

The work of these bodies is absolutely crucial, because if we have committed to equitable access to the health benefits package, the only way to keep the lights on in the health system is to ensure that the package is affordable. And yet, there is nothing in the NHI Bill about spending within budget. Given the equity entitlements of users, and our tendency towards creating unrealistic national policies and guidelines, there is a huge concern that the fund will spend far in excess of the allocated

"We need to start taking affordability far more seriously in the way we manage our health system. Currently, there is a massive supply/demand mismatch, and we need urgently to work to align our expectations of our health system with what is achievable."

budget, with potentially disastrous consequences.

What is the way forward?

We need to start taking affordability far more seriously in the way we manage our health system. Currently, there is a massive supply/demand mismatch, and we need urgently to work to align our expectations of our health system with what is achievable. We need to stop setting up our health workers for public failure.

To do this, we need to identify areas for load shedding (explicit disinvestment) and if I were in charge, I would start this process by mapping all the current clinical guidelines and rationalising care within them (for example, reducing follow-on diagnostics, changing visit schedules, task shifting to more cost-effective providers).

Well-established methods of economic evaluation and health technology assessment are available to achieve this, taking consideration of distributive as well as procedural justice.

What is currently lacking is the data, but I believe that the increasing availability of "Big Data" will allow us to implement mathematical programming algorithms to choose wisely across all of healthcare, and this might be possible sooner than we imagine.

The institutional architecture needed to achieve this is contained within the NHI Bill. What remains to be seen is whether we will be able to overcome the politics of aspiration. If we can do so, the data suggests we will gain far greater value from our current health systems investment.

But what if we don't…?

SOURCE: THIS ARTICLE WAS FIRST PUBLISHED ON SPOTLIGHT

COMMUNITY SYSTEMS **STRENGTHENING FOR HEALTH**

The Community Systems Strengthening project, based in the School of Public Health and Family Medicine, is a three-year pilot which aims to build the capacity of community members and health committees to realise their health rights and promote community well-being.

The focus on developing models for community participation in health is intended to speak to strategies that advance health equity and strengthen governance systems for health. The focus has been on identifying training needs for community members and health committees, and advocacy and networking to strengthen health committees' and community voice, both locally and internationally.

Community Systems Strengthening (CSS) is underpinned by a collaborative approach with a strong focus on capacity development in order to empower communities using a variety of methods, such as training, mentoring, dialogues and advocacy campaigns in order to respond to the integrated nature of community health.

The School of Public Health and Family Medicine in the Faculty of Health Sciences has managed the pilot with local partners, Women on Farms Project and Training for Transition in three areas: Klapmuts, Belhar and Gugulethu.

The CSS project has trained community members and health committees in four cross-cutting themes namely, food and nutrition, child protection, peacebuilding and health promotion. Within child protection, there is an emphasis on increasing knowledge of children's rights, types of abuse, child health, the need for early childhood development and community responses to child protection. Food and nutrition aims to respond to high rates of hunger and focuses on food security, developing home and community gardens while also improving knowledge on healthy living. A CSS partner from Klapmuts outlined the benefits of the project:

Gugulethu community members, CSS for Health Project participants and other stakeholders discussing issues and interventions relating to the social determinants of health.

STORY LUCILLE RYAN **PHOTO** CSS FOR HEALTH PROJECT

"[What] we did at the early childhood development centres was to start food gardens; and they would provide those crops from the gardens – they would provide food for the kids... The one has started harvesting, and it was beautiful veggies, I must say; and she said she is going to cook a meal for the kids the next day."

Peacebuilding concentrates on violence reduction and prevention as well as developing positive behaviours and life skills with a strong commitment to youth leadership and change, while health promotion has a prevention and an awareness focus on chronic conditions such as high blood pressure and diabetes. Access to the UCT Adult Education programme as well as mentoring skills were provided to participants to develop strong community leadership skills.

Recently the CSS project provided training to child-focused projects covering the Road to Health book (RTHB), designed to keep track of children's growth and development milestones from birth. CSS Project Manager, Lucille Ryan says, "We customised very simple training on the RTHB for the CSS projects that work with children in an attempt to increase awareness of the book, its value to parents and caregivers as well as a means to promote links between early childhood development and clinics for child well-being."

Other interventions included advocacy campaigns and community dialogues, which served as a platform to raise community issues with key stakeholders and government as well as knowledge sharing and networking. In addition, the community members were trained to conduct surveys and interviews which provided the participants with more in-depth understanding into local community challenges. Links have been built with a variety of NGOs and government departments with an emphasis on building the agency of community structures to articulate more strongly for health rights, with a view to proposing models for best practice.

*** The project is managed by Lucille Ryan and co-funded by the European Union, the pilot ended in December 2019.**
www.salearningnetwork.uct.ac.za

HEALTHCARE IS POSSIBLE FOR ALL

Emeritus Professor of Medicine, Solomon Benatar (right) with UCT Vice-Chancellor Professor Mamokgethi Phakeng and Faculty of Health Sciences' Head and Chair of Medicine, Professor Ntobeko Ntusi.

Emeritus Professor of Medicine, Solomon Benatar delivered the second annual Dr Stuart John Saunders Lecture titled: "Health, healthcare and professionalism in the 21st century" in the Faculty of Health Sciences at the end of November. His lecture, framed within the context of his work on the structure and funding of healthcare services in South Africa, human rights, bioethics and the political economy of global health, illustrated some of the insights and values he developed during his 19-year tenure as Professor and Head of the Department of Medicine at UCT (1980-1999) and his 19 years of annually invited teaching and research on Public Health and Bioethics at the University of Toronto (2000-2018).

SOURCE: NIEMAH DAVIDS, UCT NEWS **PHOTO:** BRENTON GEACH

He began by referring to current controversies on the state of health globally and emphasised that, despite major advances in health and longevity, only a small proportion of people had benefitted optimally. Egregiously wide disparities persist within and between countries. Attention was drawn to global instability resulting from economic, biological, social and environmental crises associated with a 'market civilization' focused on endless consumerism and a profit orientation, that ignores the impact of 'free-riding' on the environment, with disastrous current and future implications for the health of individuals and whole populations.

These remarks served as background to health care reform endeavours globally over past 40 years as a dialectic between two ideologies: health care as a social value promoted under the aims of the Health for All movement and health care as a commodity within a free market driven by neoliberal economic policies. Post WW11 achievements in rebuilding national health systems and national health insurances based on progressive

taxation that enabled distribution of resources in a socially just manner, were eroded by neoliberal policies that generated widespread inequities even in countries with universal access.

Collaborative work with Canadian colleagues evaluating persisting inequities in their healthcare sector, where ten times more is spent per capita on healthcare than in South Africa, provided several lessons: first, that biomedicine and money alone can only reduce but not abolish health inequities; second, there are not enough doctors to provide all health care needs and more emphasis should be placed on community health workers and nurse practitioners – e.g. midwife obstetric units have made a "major difference" to the maternal mortality rate in the Western Cape; third, adequate health care planning requires mechanisms for setting priorities in resource allocation.

In middle-income countries, like South Africa, short to medium term efforts to improve access to healthcare through "National Health Insurance (NHI) should focus on [equitable] insured access to primary health care because that is what can be afforded and delivered." He encouraged the public and private sectors to cooperate in bridging the disconnects between policy-making and their practical implementation. "There must be a means of generating goodwill among professionals for the common good of patients and society." Such endeavours should be driven by principles combined with the pragmatism required to achieve realistic goals. Longer-term plans are complex and need to be geared towards economic and political structures that shape the social determinants of health and disease.

Although Universal access has become a global priority, the WHO and others are not giving adequate consideration to achievable levels of access to health services. With 70% of the world's population living on less than US$10 a day and 40% on less than US$3 a day, there's an urgent need for discussion and debate about what can be achieved and how.

Some implications were outlined (of all the above) for Health, Health Care Services, Medical Education and Professionalism both locally and globally. Despite the state of world health today and the variety of changes that may occur in the years ahead, Benatar proposed that intellectual excellence in the acquisition of knowledge and bedside clinical skills with wisdom in the application of technological advances, accompanied by excellence in humanistic dispositions of health professionals in caring for *patients as people* (the ability to communicate meaningfully across multiple barriers, to discern patients' fears and understand the lonely nature of suffering), will remain preeminent goals at the heart of medical practice.

Despite the gloomy state of the world, he concluded with measured optimism, that the human ingenuity demonstrated in achieving amazing technological advances augured well for the potential to resolve complex social problems.

Collaborative surgery at Groote Schuur Hospital – Ear Nose and Throat consultant Dr Tashneem Harris removing a complex neck tumour invading the spine, assisted by Neurosurgery consultant Dr Ncedile Mankahla and registrar Dr Thembani Hina.

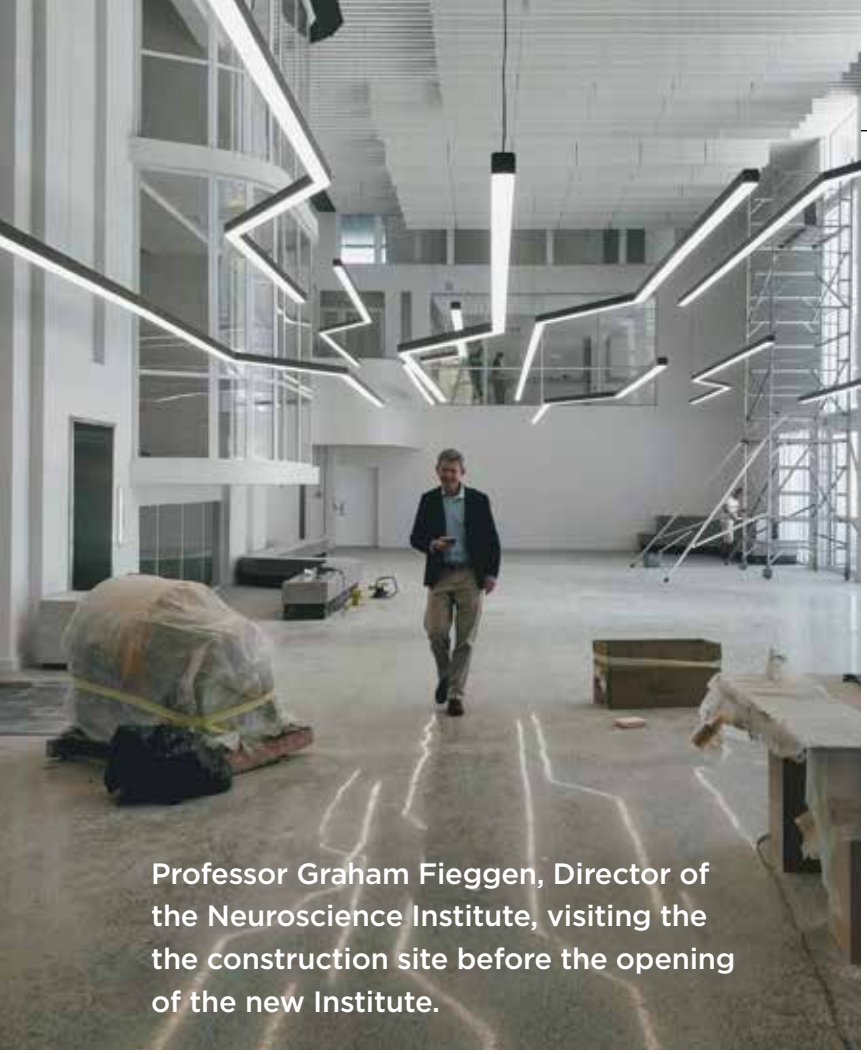
BUILDING THE FU

UTURE

PHOTOS JENNIE MAY, JOSEPH RAIMONDO

NEUROSCIENCE INSTITUTE

2020 will see the opening of a wonderful new facility on the Groote Schuur Hospital campus, the interdisciplinary Neuroscience Institute. A fundraising campaign supported by a diverse team of clinicians, scientists and professional administrators received substantial funding from donors as well as strong support from the Western Cape Government Department of Health, Groote Schuur Hospital and UCT. This project was developed in recognition of the increasing contribution of neurological and mental disorders to the burden of disease, and the importance of enabling novel approaches to understand and manage the impact of common conditions such as HIV, TB and trauma on the human brain. The completion of this facility is an enormous milestone that embodies the spirit of collaboration on every level. The Neuroscience Institute now focuses on ongoing and future projects that will grow local-,



Professor Graham Fieggen, Director of the Neuroscience Institute, visiting the the construction site before the opening of the new Institute.

regional- and international networks and strengthen neuroscience capacity through initiatives that support the emerging researcher cohort, enabling cutting-edge clinical and basic neuroscience teaching and training.

COURTYARD EXTENSION PROJECT, AND WOLFSON FOYER REDESIGN

The Institute of Infectious Disease and Molecular Medicine (IDM) has embarked on an internal refurbishment of the ground floor of the iconic Wolfson Pavilion to create useful modular small meeting spaces that make efficient use of the quieter half of the floor, without losing its versatility for exhibitions and events.

In another major development, the IDM is in late-stage planning for filling in the two courtyards in the Wernher Beit North (WBN) building. This building project, which is funded by the Department of Science & Technology to enable continued hosting of the Cape Town Component of the ICGEB, will create 1500 sqm of space over three floors that will house laboratories, small group meeting rooms, and offices. Building works are expected to commence in the first quarter of 2020.

PET-CT FACILITY

The establishment of a new Positron Emission Tomography-Computed Tomography (PET-CT) facility at the University of Cape Town and Groote

PET-CT Facility

Schuur Hospital is crucial to clinical research, patient care, and training. Funding to establish a PET-CT scanner at the Cape Universities Body Imaging Centre (CUBIC), located at Groote Schuur Hospital, was secured from the Bill and Melinda Gates Foundation (BMGF), the Technology Innovation Agency (TIA), Aspen Holdings and UCT. The motivation underlying these awards was insufficient PET-CT capacity in the Western Cape to meet the rapidly growing demand for this imaging modality for clinical studies in tuberculosis to monitor progression from infection to disease, and to provide early indication of the efficacy of new TB drugs and drug combinations.

ARISE (AFRICA RESEARCH INSTITUTE FOR SKIN HEALTH)

The six-storey R73-million ARISE Building, funded by the Sector Education and Training Authority (SETA) is envisioned as a training centre for skin health, cosmetic and occupational product skin safety testing. This multidisciplinary facility will include the following units and specialized research clinics:

- National Cosmetic Product Safety Testing Lab and Cosmetic Ingredients Information Centre
- Measurement laboratory for testing mechano-physical and ultraviolet light on hair and skin and effects of cosmetic ingredients
- In vivo skin measurement unit
- Hair and Scalp Clinical Research Unit and Wound Healing and Keloid Scarring Research Unit
- Occupational Dermatitis, Contact Dermatitis and Allergy Research Clinical Unit (to include systematic investigations and management of work-related skin disease)
- Skin Laser Research and Access for Community Improvement Program (offering access to technologies for poor and vulnerable populations for whom this would be unaffordable).

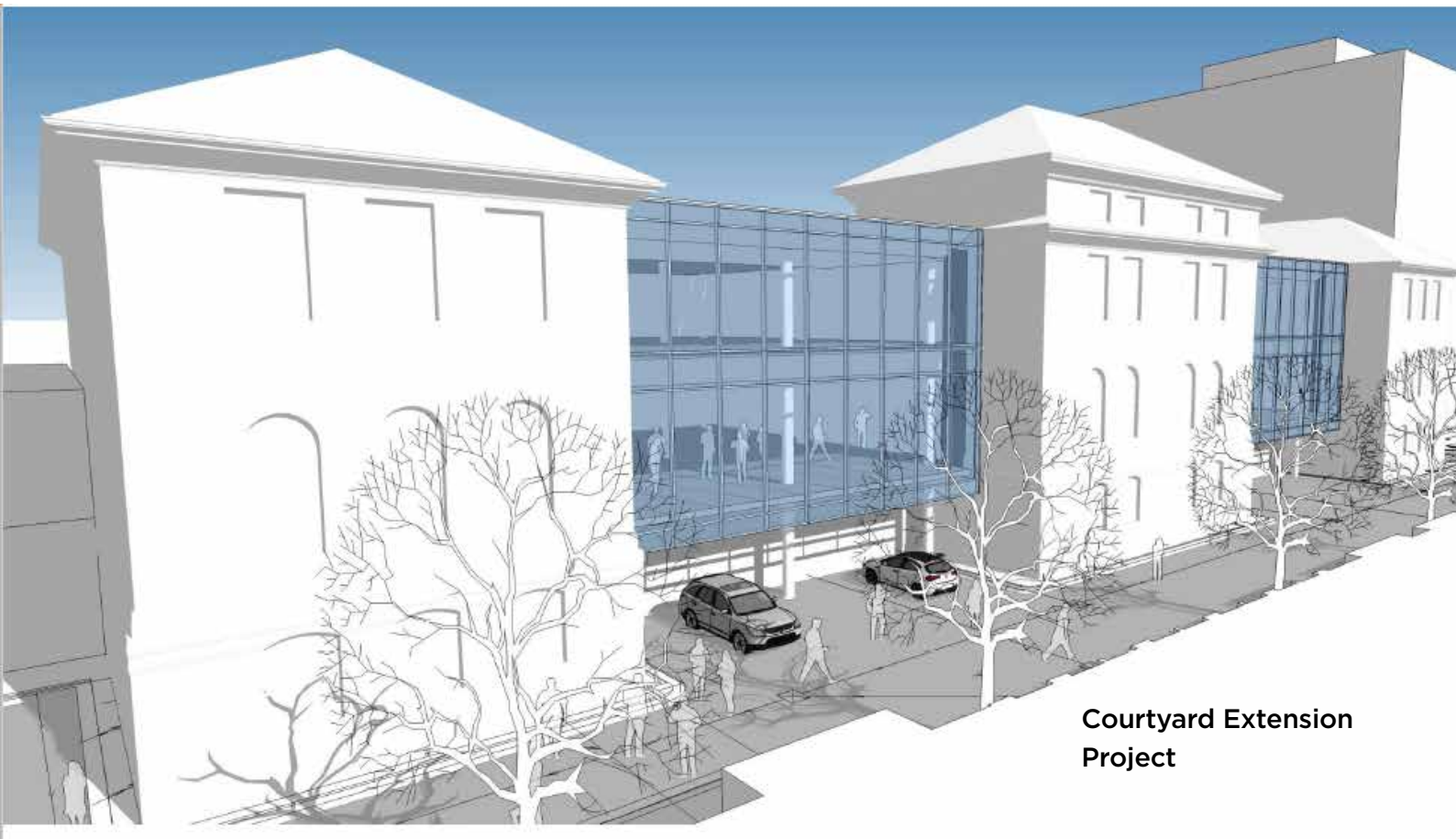
The ARISE building will also provide a meeting place for key stakeholders involved in cosmetic product safety, advocacy, policy and regulatory work, and will be home to South Africa's first Advanced Diploma in Cosmetic Formulation Science.

OBSERVATORY FORENSIC PATHOLOGY INSTITUTE

This 3-level, R281m building, funded by the Western Cape Government Health Department and being built by the Public Works Department is due to be completed in mid-2020. It is located on the corner of Main Road and Groote Schuur Road, at the entrance to the historic Groote Schuur Hospital. The facility aims to provide quaternary services (level 4) integrating forensic medicine and sciences into holistic death investigation services for the province.

According to Professor Lorna Martin, Head of Forensic Medicine in the Faculty of Health Sciences, "The facility is poised to be more than just a mortuary. It will allow for pathologists to be trained and work as expert consultants to investigators, courts, prosecutors and defence counsel. In this way, the Institute will provide a comprehensive service that will include improved quality of responses to questions of loved ones regarding cause of death, manner of death, and any other peri-mortem/ ante-mortem circumstances."

Observatory Forensic Pathology Institute (Artist's impression)



Courtyard Extension Project

REIMAGINING LEADERSHIP

A TRIBUTE TO PROFESSOR BONGANI MAYOSI

Professor Bongani Mayosi has left an indelible mark on society. Described as a visionary leader, his mammoth contribution to academia and health research in South Africa and beyond, and his beautiful, brilliant mind will continue to inspire generations.

But Mayosi also modelled a unique kind of empathic and transformative leadership that was and is still sorely lacking in our country, on our continent and perhaps, globally.

The Faculty of Health Sciences community gathered in an intimate event to honour the life and legacy of their former Dean. Speaker after speaker shared personal stories about the deep and profound way Mayosi had altered the trajectory of their professional careers.

Together they painted a picture of a leader who had a tremendous gift for harnessing raw potential, who inspired and motivated, who knew how to make people feel valued and validated, and who was hell-bent on kick-starting a generation of home-grown proudly African leaders, who would be equipped to tackle the specific health challenges of South Africa and the African continent.

"This man wanted me to dream bigger, to dream the impossible", said specialist physician Dr Neliswa Gogela, referring to the now famous conversation in which Mayosi urged so many students to stretch their dreams far beyond what their imaginations could conceive. Current Chair and Head of the Department of Medicine at UCT and Groote Schuur Hospital (GSH), Professor Ntobeko Ntusi said Mayosi "made being an academic cool" and contributed to an increasing number of black-

Professor Liesl Zühlke receiving the African Leadership Award from the SA Medical Research Council/UK Department for International Development. A student of Professor Mayosi, she says that he played a highly influential role in her academic life.

trained cardiologists and other black specialists from his department.

From the 'very green' first year occupational therapy student, who confessed to being completely "starstruck" when he met Mayosi in his first few months, and was advised to stay at UCT and get a PhD; to the nurse with no prior experience in clinical trials who Mayosi took under his wing, to the hepatologist who described Mayosi as her "superhero" and "guardian angel on earth" - his leadership style transcended traditional student-teacher boundaries.

For young black students especially, he chartered a way through uncertain territory, he instilled the idea that the "mighty UCT" could be an academic home, a place where they belonged. He provided a safety net, he offered his brilliant mind, he served as a trusted advisor, and he opened doors – including funding opportunities, authorship in important publications, and an opportunity to showcase students' work on national and international platforms, and much more. He created a seat at the table for so many, and he did so graciously, with affirming words, and an irresistible sense of humour.

"I need you" he said to Nurse Veronica Francis, who would go

on to co-ordinate the first ground-breaking African-led clinical trials on tuberculosis pericarditis. "I trust you with this," he told an anxious Lwazi Mhlanti before an important presentation to the African Union. And to the mother of Liesl Zuhlke, now a paediatric cardiologist, he committed to helping her to "climb the Everest of academia".

That Mayosi achieved so much, so fast, is not by chance but rather by design. His approach to life and leadership was both methodical and intentional. Today he would be considered a child prodigy, having achieved the highest marks in his matriculation examinations at the tender age of fifteen (with six distinctions). His first two degrees – a BMedSci (1986) and MBChB (1989) – were completed concurrently, both obtained cum laude and at the top of his class.

In 2006, after being appointed only the seventh Professor of Medicine and Head of UCT and GSH's Department of Medicine in its 87-year history, and it's first black leader, Mayosi outlined what can be described as a kind of blueprint – his grand plan for transforming the oldest Department of Medicine in Africa into a thriving academic hub that would accelerate investment in young African leaders, who would be equipped to solve Africa's health problems.

His inaugural address, entitled, "*The Future of Medicine*" was a carefully crafted masterpiece designed to draw attention to the "African origins of medicine", to instil a sense of pride

in African roots and to highlight the enormous challenges and potential on this continent.

Introducing the audience to the "Father of Medicine", Mayosi described the wonderful character of Imhotep, an "African physician" who was the "world's first universal genius and polymath". He spoke about "the state of colonial and post-colonial medicine in Africa" and the devastating impact of South African apartheid policies on the health of this country's people. He painstakingly laid out how the top five leading causes of death in Africa were as a result of "diseases of poverty" – including HIV/AIDS, tuberculosis and malaria – but also chronic diseases, such as stroke and heart disease. He outlined some of the major challenges preventing the development of strong and stable health systems in Africa – including the need for adequate numbers of skilled health workers, basic infrastructure and equipment; and effective health financing and health information systems.

Finally, Professor Mayosi shared his vision for the establishment of an "All African Institute for Clinical Research" that would produce at least 1000 clinical PhD scholars who would "change the fortunes of clinical medicine in Africa for the next 100 years".

But Mayosi wasn't just a dazzling orator and charismatic leader. He went on to do the hard work, confronting many of the issues he raised in that milestone speech – tackling diseases of poverty endemic to Africa, contributing to health policy and health systems strengthening, and investing in perhaps his most cherished vision, nurturing and growing young African leaders.

As Head of UCT's Department of Medicine, he ushered in an era of what he described as a "renaissance in academic activity" with record numbers of publications being produced each year. He transformed the Department of Medicine to "be the largest and leading medicine department on the African continent", according to Ntusi.

Countless awards and achievements followed Mayosi, including South Africa's highest national honour, the Order of Mapungubwe in Silver; an A-rating by the National Research Foundation; and election into the US National Academy of Medicine - which recognises individuals who have demonstrated outstanding professional achievement and commitment to service. Mayosi led the all-female researcher team responsible for discovering the gene that causes sudden death in young people and athletes – a feat touted as "the biggest advancement in South African cardiology since Dr Chris Barnard's first heart transplant".

For Mayosi, perhaps the biggest praise would come from his beloved students who said they were "almost always warmly welcomed not as

his oldest students but as his dear friends", who said, "he wasn't tall, he wasn't muscular, but I felt protected", who said Mayosi "knew instinctively that there was something greater inside me", who said, "he gave me his undivided attention", and who said, "I wanted to be him completely – father, dean, Head of Cardiology, black man who could come down to my level…".

In his book, *Leaders eat last: Why Some teams pull together and others don't,* Simon Sinek, wrote: "True leadership is about empowering others to achieve things they didn't think possible". Mayosi reimagined a kinder and more caring approach to leadership. Forsaking the trappings of power and prestige, he modelled a values-based style of leadership, so conspicuously absent and so desperately needed in these turbulent times.

From *klein dorpies* and rural villages and humble beginnings across South Africa and beyond, bright young minds could finally imagine themselves walking the corridors of the seemingly unreachable University of Cape Town.

Bongani Mawethu Mayosi will be sorely missed. But his leadership legacy lives on. For years to come, these hallowed halls will reverberate with the stories of a humble young man from a little town called Ngqamakhwe, in the Eastern Cape, who came to UCT with twinkling eyes and a broad gleaming smile.

STORY THANIA GOPAL **SOURCE** THIS ARTICLE WAS FIRST PUBLISHED ON WWW.HEALTH-E.ORG.ZA

"Together they painted a picture of a leader who had a tremendous gift for harnessing raw potential, who inspired and motivated, who knew how to make people feel valued and validated, and who was hell-bent on kick-starting a generation of home-grown proudly African leaders, who would be equipped to tackle the specific health challenges of South Africa and the African continent."

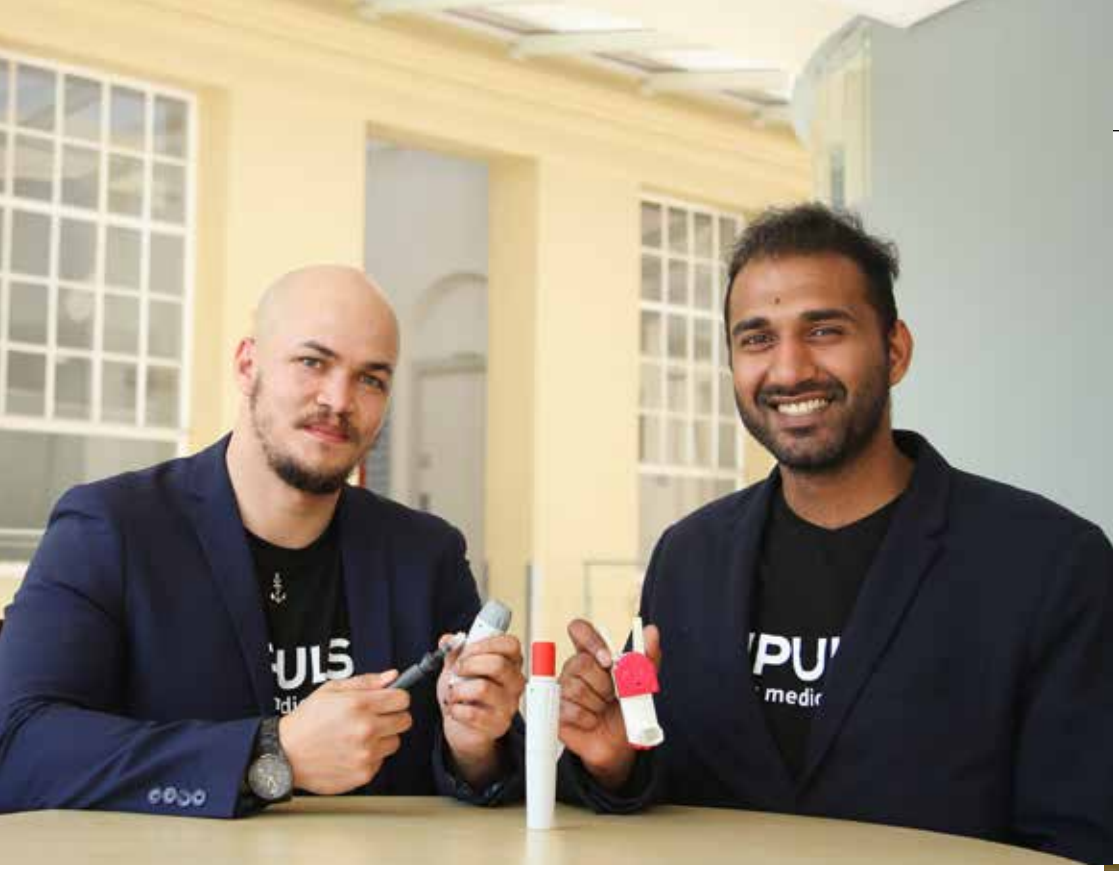
BONGANI MAYOSI LEGACY PROJECT

In the spirit of fostering excellence and upholding the extraordinary legacy of Professor Mayosi, the Faculty of Health Sciences and UCT Libraries are honouring him through a range of projects under the banner of *Celebrating the Bongani Mayosi Legacy*. These include renaming of the Health Sciences Library and new spaces being developed within the Library; an extensive online and hardcopy bibliography of his works; and an inspirational exhibition on his legacy and the projects being carried forward by some of his proteges through the Bongani Mayosi Research Collaborative. Financial support for students will be generated through the Mayosi Impilo Bursary Fund (re-named in his honour); the Bongani Mayosi Postgraduate Fellowship Award; and the Accelerated Transformation Project (which was initiated by Mayosi and funded by the Mauerburger foundation). The Bongani Mayosi Memorial Lecture will also be held annually on the anniversary of his birthday, in January.

2019
IN PICTURES

PHOTOS JE'NINE MAY, JASON HOWES, MICHAEL HAMMOND, BRENTON GEACH, SHAWCO HEALTH

Students from the Faculty of Health Sciences – dressed in medical scrubs took to the streets of the Mother City in a 10km 'Scrub Run', in a bid to raise funds and awareness for the Weekend Waiting List Initiative, to help eradicate the backlog of children waiting for operations at Red Cross War Memorial Children's Hospital. The event, organised by the Surgical Society, raised more than R200 000. The Surgical Society also won UCT's Most Outstanding Society Executive award at the 2019 Student Leadership Awards.

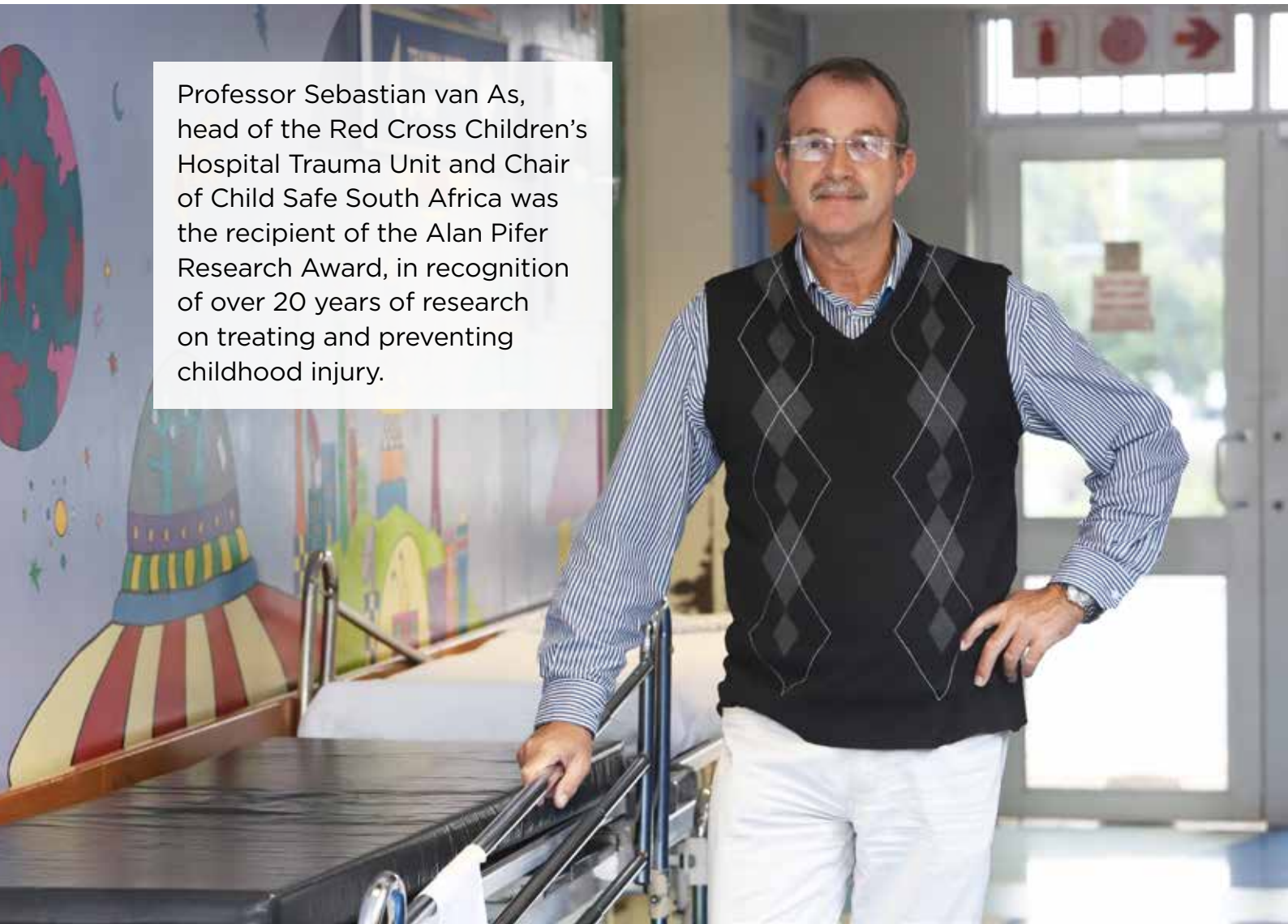


ABOVE Impulse Biomedical is a UCT spin off startup, having started their journey as Biomedical Engineering Masters' students in the Division of Biomedical Engineering's Medical Devices Laboratory, under the supervision and guidance of Associate Professor Sudesh Sivarasu. After completing their Masters, Giancarlo Beukes and Gokul Nair started Impulse Biomedical to get the technologies they developed during their degrees, into the hands of patients that need them. Their champion technologies include the award winning ZiBiPen – a reloadable adrenaline auto-injector with variable needle lengths for the treatment of anaphylaxis (severe allergies) as well as the award winning Easy Squeezy – a reusable sleeve attachment that enhances the usability of the standard asthma pump for paediatric patients.

BELOW Robert Samuels has delivered an incredible 46 years of service to the Faculty. He joined the Department of Medical Biochemistry (now named the Department of Integrative Biomedical Sciences) as a laboratory assistant 46 years ago, on 12 November 1973, and has worked in several laboratories ensuring that the day-to-day operational needs are met.

ABOVE The UCT Cardiac Society is a student-led society that provides supplemental teaching in the fields of cardiology and cardiovascular medicine to undergraduate medical students. Here, the Cardiac Society provides a fun experience for school learners at the Faculty of Health Sciences' Open Day.

LEFT Professors Gary Maartens from the Department of Medicine and Dan Stein from the Department of Psychiatry and Mental Health were awarded A-ratings by the National Research Foundation (NRF). Maartens is an international authority on the therapeutic aspects of HIV-associated tuberculosis (TB), drug-resistant TB and antiretroviral therapy in resource-limited settings and Stein's research focuses on psychobiology and management of anxiety disorders, including obsessive-compulsive disorder, post-traumatic stress disorder and social anxiety disorder.



Professor Sebastian van As, head of the Red Cross Children's Hospital Trauma Unit and Chair of Child Safe South Africa was the recipient of the Alan Pifer Research Award, in recognition of over 20 years of research on treating and preventing childhood injury.

Faculty of Health Sciences' students, staff and alumni featured prominently on the prestigious Mail & Guardian's 200 Young South Africans list – celebrating young leaders (under 35 years) who have made their mark in the health sector.

LEFT SHAWCO Health won the UCT Team of the Year at the 2019 Student Leadership Awards. Since 1943, SHAWCO, the Students' Health and Welfare Centres Organisation, has developed a reputation for delivering quality primary healthcare in under-resourced communities in Cape Town, South Africa. SHAWCO is a student-run, non-profit community outreach organisation. It relies on over 100 volunteer doctors and 800 medical and allied health science students in all years of study to ensure that these student-run free clinics continue to be delivered.

INAUGURAL LECTURES: These are held annually to celebrate the appointment of lecturers to full professorships. From left to right: Professor Thomas Franz from Biomedical Engineering presenting "Mechanics, Mitochondria and More"; Professor Collet Dandara from Human Genetics presenting "Pharmacogenomics and personalising medicines in African populations for quality health: Yet another story of playing catch-up"; and Professor Ambroise Wonkam, Deputy Dean of Research in the Faculty presenting on "Enabling genetic medicine".

LEFT Interim Dean, Professor Carolyn Williamson, Dr Geney Gunston and Dr Ayanda Gcelu having fun at a highly informative and memorable Open Day, attended by more than 3000 school learners who came to learn more about the Faculty of Health Sciences.

ABOVE Inspired by the historical Speakers' Corner in Hyde Park, London, Soapbox Science offers female scientific researchers a platform to connect with and educate the general public about their work. Dr Edina Amponsah-Dacosta, a postdoctoral research fellow at the Vaccines for Africa Initiative explains how vaccines work to protect individuals and communities from potentially fatal diseases.

ABOVE Madhuri and Jagmohan Authar have been serving up delicious home-cooked vegetarian meals to staff and students in the Faculty of Health Sciences for the past 23 years.

RIGHT Professor Karen Sliwa, President of the World Heart Federation and Director of the Hatter Institute for Cardiovascular Research in Africa, based at UCT, with Professor Barbara Casadei, President of European Society of Cardiology (ESC), presenting at the largest Cardiology Congress ever held (33 000 delegates) during the first week of September, in Paris.

Professor Tania Douglas, Director of the Faculty's Medical Imaging Research Unit in the Division of Biomedical Engineering was recognised as a Distinguished Woman Researcher in the Research and Innovation category at the 2019 South African Women in Science Awards in recognition of her interdisciplinary work that spans biomedical engineering, health innovation and innovation studies. Douglas also holds the Department of Science and Technology/ National Research Foundation South African Research Chair in Biomedical Engineering and Innovation.

ABOVE The Faculty's Health Sciences' Orchestra (HSO) was originally started by medical students in 2018. With the support of the late Professor Bongani Mayosi's team, the HSO aimed to provide a space for health professionals to re-enter music and to express themselves outside of the demanding work environment. The orchestra has subsequently grown to include musicians from an even wider range of professions and backgrounds including public health professors, students, interns, surgeons, medical scientists, attorneys and teachers. In 2019, under the baton of Shaun Karssen the orchestra hosted its first concert and also played at the memorial event held in honour of Professor Mayosi.

LEFT Professor Johan Fagan is Africa's first recipient of the Nikhil J. Bhatt, MD International Public Service Award from the American Academy of Otolaryngology – Head and Neck Surgery Foundation, acknowledging his contribution to the field of ear, nose and throat (ENT) services in developing nations. Fagan's self-published free online ENT textbook has scored double platinum status, with over 2 million chapter downloads – an incredible contribution to global education.

LEFT Associate Professor Shahieda Adams and Professor Mohamed Jeebhay from the Division of Occupational Medicine in the School of Public Health and Family Medicine were part of a team that played an integral role in providing technical medical input to the legal arguments in South Africa's historic R5-billion settlement for gold miners who contracted silicosis and/or pulmonary tuberculosis at work.

Students celebrating after winning First Prize for Best Poster at the Undergraduate Research Day, which showcases and celebrates the work of undergrads in the Faculty.

Jasantha Singh, a cosmetic formulation science student in the Hair and Skin Laboratory, in the Division of Dermatology, gets the thumbs-up from Vice-Chancellor Professor Mamokgethi Phakeng after taking top honours in a competition run by the Academic Representatives Council that gives students the chance to pitch their business or business idea and stand a chance of winning a monetary and mentorship prize. Singh's winning product, Aurora Rose, was created out of her own frustration with the use of products too harsh for her ultra-sensitive skin.

LEFT Professor Valerie Mizrahi, Director of the Faculty of Health Sciences' Institute of Infectious Disease and Molecular Medicine was awarded Africa's premier research fellowship, the Oppenheimer Research Fellowship for significant contribution to the field of microbiology and tuberculosis (TB) research. Mizrahi has published 142 peer-reviewed journal articles, supervised or co-supervised 65 postgraduate students and postdoctoral fellows and co-edited the definitive textbook on the biology of Mycobacterium tuberculosis.

Professor Thomas Franz welcomed staff, students, alumni and guests to a symposium celebrating 50 years of the Division of Biomedical Engineering. From small beginnings in 1969, the Division has been built on the scholarship and work of notable academics, innovators and "influencers" over five decades, the most celebrated being UCT physicist and Nobel laureate Dr Allan MacLeod Cormack who won the 1979 Nobel Prize in Physiology or Medicine for his work on X-ray computed tomography.

Students Savannah Verhage and Nicholas Loxton were awarded Leadership Excellence Awards at UCT's 2019 Student Leadership Awards. Verhage has organised a range of events that have raised thousands of rands for Operation Smile and for the Red Cross Children's Hospital. Loxton has served as President of the Surgical Society, President of the Southern African Student Surgical Society, and Vice President of the International Association of Student Surgical Societies. Working across these roles, he has co-convened and initiated the first International Association of Student Surgical Societies Symposium in Cape Town, allowing UCT students access to a world class event in South Africa.

Two Faculty of Health Sciences' professors have been elected to stand among South Africa's leading scholars and scientists as members of the Academy of Science of South Africa (ASSAf):

Professor Kheertan Dheda was awarded the 2019 South African Medical Research Council's Platinum Award for a lifetime of outstanding achievement. He heads UCT's Centre for Lung Infection and Immunity, is head of the Division of Pulmonology, and is a National Research Foundation (NRF) A-rated scientist. Dheda's research focuses on the design and evaluation of user-friendly diagnostic tools and interventions for drug-sensitive and drug-resistant tuberculosis (TB).

UCT Lung Institute celebrated its 20th anniversary with a gala dinner at the Westin Hotel in Cape Town. Located at the Faculty of Health Sciences, the Institute provides clinical services and its researchers work in the fields of respiratory medicine, tuberculosis (TB), allergies, occupational medicine and dermatology.

Professor Ernesta Meintjes, from the Division of Biomedical Engineering, holds the Department of Science and Technology/National Research Foundation South African Research Chair (SARChI) in Brain Imaging and is the Director of the Cape Universities Body Imaging Centre at UCT that houses the only research-dedicated Magnetic Resonance Imaging (MRI) scanner on the African continent. Her extensive research focuses on MRI methods, development and application.

While the intention is compelling, it lacks a clear focus on strengthening the public health sector which must be a basis for any future universal access. Secondly, it risks exacerbating inequities: (a) between cure and prevention as there is no earmarked prevention function within the NHI and resources may end up being diverted into reimbursing curative care; (b) rural areas may be disadvantaged by the requirement for accreditation linked to Office of Health Standards Compliance (OHSC). Thirdly, high levels of managerial competence will be needed to run such a complex system. Lastly, public and community participation is absent or, at best very limited.

PROFESSOR LESLIE LONDON
School of Public Health and Family Medicine

IS THE NHI BILL FIT FOR PURPOSE?

The National Health Insurance (NHI) is a health financing system designed to pool funds to provide access to quality, affordable health services for all South Africans – based on their health needs and irrespective of their socio-economic status. The Bill was tabled in Parliament in August. We asked a few key stakeholders in the Faculty of Health Sciences to comment:

The NHI is something that I think most students working in health would agree is a step in the right direction, if one thinks about the current inequitable state of healthcare in our country; patients being turned away at government hospitals due to overburdened systems, medical aids that commoditise healthcare to a point where it is not affordable to the average income earner. The country needs urgent health reform, and greater commitment towards making universal healthcare a reality. However, I think there is definitely reservation around the Bill because of its ambiguity. We all want to know – what does this mean for us as professionals? What will be considered an essential service? I think we are waiting for more answers than questions in order to fully give our commitment to this policy.

CARRYN JAMES
Postgraduate Health Sciences Students Council

I believe that creating a single health service on the basis of the strengths of the current private and the public health systems in South Africa is an opportunity for creating a more just and equal society. The NHI is going to happen whether we like it or not, as it has already been legislated. How well it will work depends on the quality and extent of all of our contributions, in solidarity with all the people of this country who deserve a decent health service. Health For All means exactly that.

PROFESSOR STEVE REID
Primary Health Care Directorate

NHI is to be implemented in a context of dismal economic fundamentals. Despite this, the vision of equity articulated within the NHI Bill is a thing of beauty – where users are entitled to services defined for the NHI irrespective of where they live. How is this achievable without additional resources? The answer lies within a long-term process of careful harmonisation and rationalisation of clinical guidelines, ensuring that our policies are truly implementable. This process is called Health Technology Assessment. In addition to equity for patients, this could dramatically improve the working experiences of frontline health professionals.

ASSOCIATE PROFESSOR SUSAN CLEARY
Health Economics Unit, School of Public Health and Family Medicine

WITH OVER 55 MILLION PEOPLE, THE PUBLIC HEALTH SECTOR SERVES 84% OF THE SOUTH AFRICAN POPULATION WHILE THE PRIVATE SECTOR SERVES 16% OF THE POPULATION.

The principle of financial protection from catastrophic health costs though laudable has resulted in more prominence of curative hospital care instead of prevention. Furthermore, the outlined implementation process could widen urban/rural and hospital/Primary Health Care inequity. Entry into the NHI Fund is dependent on compliance to National Core Standards (NCS). Currently, better resourced hospitals and urban facilities tend to be compliant. Thus, deliberate and equitably funded processes to ensure NCS compliance in rural and PHC facilities before the NHI is implemented are critical to ensuring a Universal Health System that prioritises prevention and is accessible to the most vulnerable.

DR TRACEY NALEDI
Public health specialist and Desmond Tutu HIV Foundation PhD candidate

Professor Shanaaz Mathews, Director of the Children's Institute, was invited to submit an expert affidavit, challenging the defence of 'moderate and reasonable chastisement', using her research to highlight the impact of physical violence against children.

LANDMARK COURT RULING

TO PROTECT CHILDREN'S RIGHTS

The Children's Institute (CI), housed in the Faculty of Health Sciences, was established as a multi-disciplinary policy research aimed to contribute to policies, laws and interventions that promote equality and realise the rights of all children in South Africa. Monitoring and advocating for the realisation of child rights is therefore core to the work of the Children's Institute.

In 2017 the South Gauteng High Court heard an appeal against a Magistrate's Court decision where a father had been found guilty of assault for beating his 13-year-old son. In the appeal, the father raised the defence of 'moderate and reasonable chastisement'. The High Court thought it necessary to consider whether the defence is consistent with the Constitution and invited the CI to join the proceedings as *amici curiae* (friends of the court) with the Quaker Peace Centre and Sonke Gender Justice, legally represented by the Centre for Child Law. Professor Shanaaz Mathews, Director of the Children's Institute, was also invited to submit a written expert affidavit, challenging the defence of 'moderate and reasonable chastisement', using her research to highlight the detrimental short- and long-term effects of physical punishment and its links with other forms of violence against children.

In October 2017, the South Gauteng High Court declared the defence of 'moderate and reasonable chastisement' unconstitutional, only to have the judgment challenged by Freedom of Religion South Africa (FOR-SA). The Constitutional Court heard the matter on appeal in November 2018 and it took nearly a year for the Concourt to make a unanimous judgement that declared the common law defence of "reasonable chastisement" to be inconsistent with the Constitution. The court found that the right to be free from all forms of violence from both public and private sources includes violence in the form of reasonable and moderate chastisement. The court acknowledged the intergenerational cycle of violence, saying that South Africa has "a painful and shameful history of widespread and institutionalised violence".

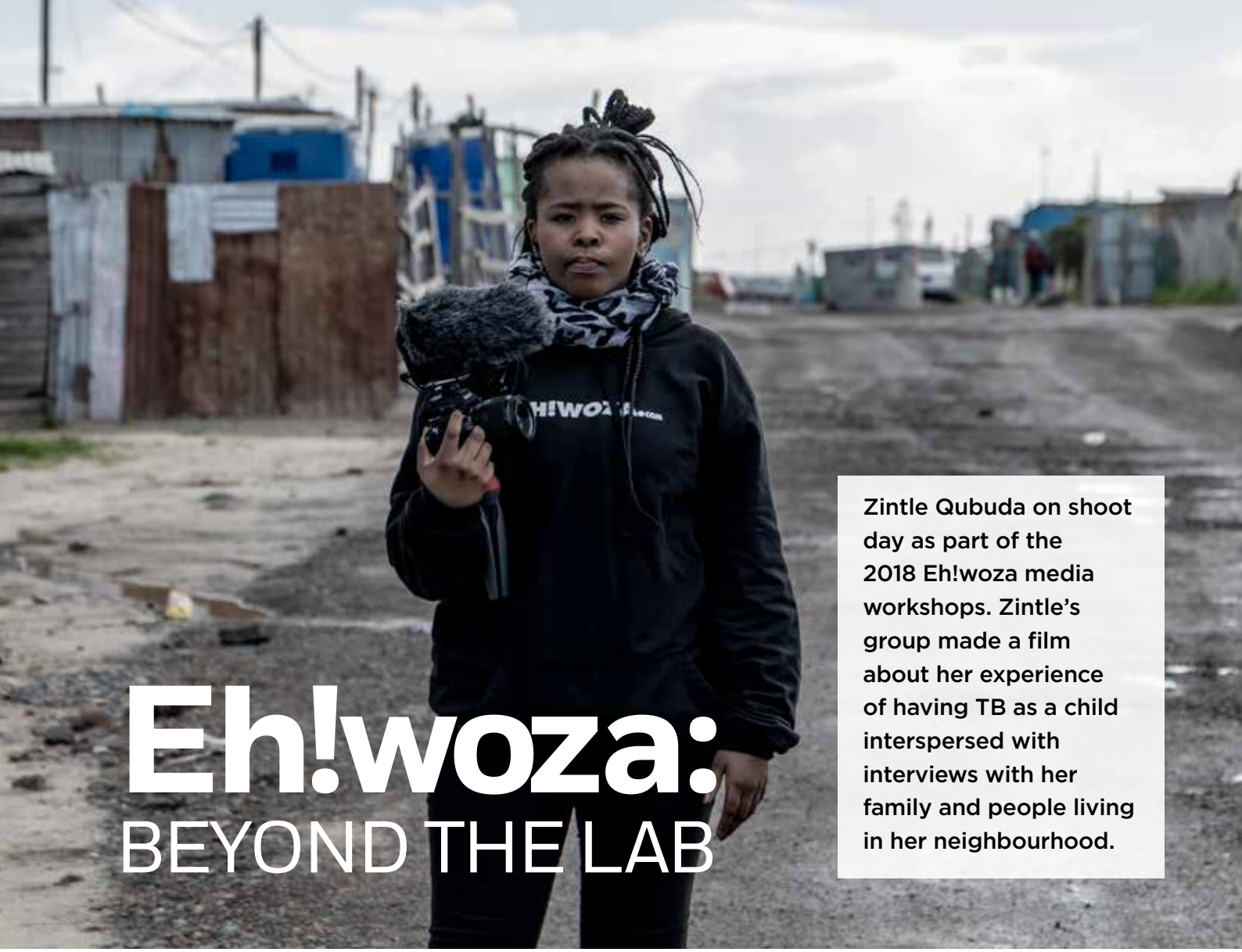
The judgement also highlighted that violence against women and children are inextricably linked, occurring in the same households and sharing the same drivers. But this court ruling is only the first step in protecting children from physical violence in the home, and "the real work begins now". We now need the implementation of widespread interventions to support families at a national level to change attitudes and behaviours that perpetuate the use of harsh and violent discipline of children.

"But this court ruling is only the first step in protecting children from physical violence in the home, and 'the real work begins now.'" (Constitutional Court judgement)

PHOTO BRENTON GEACH


Billy

SOCIAL RESPONSIVENESS



Zintle Qubuda on shoot day as part of the 2018 Eh!woza media workshops. Zintle's group made a film about her experience of having TB as a child interspersed with interviews with her family and people living in her neighbourhood.

Eh!woza: BEYOND THE LAB

Before joining Eh!woza, Siphesihle Zimba didn't know too much about tuberculosis. However, since participating in this project, it's a different story.

"I am going to teach people in my community about what TB is exactly," the high school learner said. "And at school when we are given essays about TB, I am going to write about it because now I know what I am going to be writing about."

Eh!woza was started in 2013 when a group of scientists engaged an artist about a social responsiveness project linked to TB. It started with a short documentary involving learners from IkamvaYouth, an educational NGO, based in Khayelitsha, that provides extra-curricular tutoring to high school learners.

The collaborative project is based at UCT's Faculty of Health Sciences Institute of Infectious Disease and Molecular Medicine (IDM). Eh!woza's flagship project, Learner Doccies started in 2014 and during this work, learners are taught about many aspects of TB research including transmission, the development of vaccines, discovery and development of new TB drugs and clinical trials. Science workshops are facilitated by junior

and senior researchers based at the IDM, including the Wellcome Centre for Infectious Diseases Research in Africa, the Molecular Mycobacteriology Research Unit and the South African TB Vaccine Initiative. Learners who take part in the project do experiments in laboratories and participate in lectures and discussion sessions.

Documentary production starts during science workshops when learners are provided with camera equipment to start generating footage to be used in films. After the science workshops, learners start a two-week media production phase during the July school holidays. Guided by artist Ed Young, learners produce all aspects of documentaries from storyboarding to shooting and editing. Films are not prescriptive and learners are encouraged to tell personal stories about TB in their community.

Seventeen-year-old Zintle Mekile, an Eh!woza member, is particularly keen on the media workshops. "We get to go to different places of our choosing on shoot days. And the response from people is amazing," said Mekile. "Some are scared of the camera, fearing to be on 'TV', and some are able to share information on camera. Despite the tiring film editing, media workshops are fun. I can now make a film/documentary, thanks to Eh!woza."

Mekile also enjoys the lab work. "I got to understand more about clinical trials, vaccination, the growth of bacteria, and the importance of preventing and treating tuberculosis on time," she added. "I also had the time to go to the lab and do some experiments like professional scientists."

Eh!woza has begun to expand. In 2018, Eh!woza established a collaboration with the Khayelistha mission of Médecins Sans Frontiéres to develop the MSF/Musos/DR-TB Collab. This work brings together Khayelitsha-based musicians and survivors of drug-resistant TB (DR-TB), in a process that encourages story-telling and sharing, so that the lived experience of people who have survived DR-TB inspires the production of new music, poetry and music videos. Eh!woza's newest project, Eh!woza Schools, aims to use the media produced in Eh!woza Doccies and MSF/Musos/DR-TB Collab to engage a broader group of learners and to stimulate dialogue in high schools around infectious disease and the social determinants of health. At the end of 2019 Eh!woza was awarded a multi-year Discretionary Award from the Wellcome Trust to develop a platform for public engagement with health in the region. This exciting development will allow the organisation to consolidate exciting projects, develop new networks and connections, grow capacity, while placing a key focus on sustainability.

Doctoral student Bianca Masuku, says Eh!woza strives to integrate biomedical knowledge, the social aspects of TB and youth education to contribute to a broader debate about the social and material conditions of TB and how knowledge about it is produced, navigated and reflective of local experiences of disease and health, and ultimately decreases stigma about TB and other diseases.

STORY ADAPTED YUSUF OMAR, UCT NEWS **PHOTOS** COURTESY EH!WOZA

DRIVING COMMUNITY CARE

The first Tutu Tester mobile clinic was launched by the Desmond Tutu HIV Foundation (DTHF) in 2008. At the time, it was found that harder to reach populations, including men and adolescents, were not getting tested or delaying treatment and as a result they were presenting with more advanced disease and a higher death rate, compared to women. In response, Professor Linda-Gail Bekker and the DTHF team designed

Colourful, iconically-branded, and widely recognised – the Tutu fleet of mobile units are a walking (or driving) banner for the UCT Faculty of Health Sciences and DTHF innovation and provide a living vehicle for evidence-based messages to be rapidly and broadly deployed in the community.

a colourful mobile clinic service which offered rapid point-of-care HIV-testing as a chronic disease check, along with screening and treatment or referral for sexually transmitted infections, tuberculosis, blood pressure and glucose levels. With time, viral load testing has also been introduced for people living with HIV.

This comprehensive and holistic health screening package was adopted as a means to destigmatise HIV testing and reframe it as part of a personal routine wellness check. Over the years, the Tutu Tester and its partner fleet members, the Tutu Teen Truck (for adolescents) and the Amajita Tutu Truck (for men) and the Tutu Kwik Test (for providing specific, targeted testing) have been dispatched daily to communities where there is a high disease burden and limited resources to improve health screening and promote an active approach to health among those vulnerable to communicable and other diseases.

The Tutu mobile clinic fleet offers patient-friendly HIV testing in convenient locations, and by decentralising services from conventional clinics into the community and offering health services in public spaces, the services reduces the time and travel required to access healthcare, making uptake more appealing for those who may otherwise delay health-seeking. The mobile services have a key focus on promotive and preventative health, which can be difficult to prioritise in over-burdened public healthcare facilities, and provide an opportunity for healthy people to engage in conversations with healthcare professionals about how they can protect themselves and live healthier lives.

>100 000

HIV counselling and testing sessions with patients from limited resource and underserved communities in Cape Town have been conducted since May 2008.

67% **of patients tested HIV-positive at the Tutu mobiles were linked to HIV care within 3 months, according to a 2018 paper. Surveys among men and patients under 25 years have shown high acceptability for the service.**

The Amajita Tutu and Tutu Teen Trucks have shown that the hardly-reached adolescent and male population can be reached and are keen to engage in friendly accessible services.

BEYOND OUR BORDERS:

A FOCUS ON VULNERABLE AND MARGINALISED POPULATIONS

THE GENDER, HEALTH & JUSTICE RESEARCH UNIT

The Gender, Health & Justice Research Unit (GHJRU), headed up by Professor Lillian Artz, has been working in conflict and post-conflict settings and transitional states on the continent for the past 10 years. The core of the GHJRU's work is improving both substantive rights to equality and access to justice (including health and social development) as well as the inclusion, capacity-development and engagement with vulnerable groups, civil society organisations and other rights-focused institutions in a variety of social, institutional and geographical contexts in Africa. Evidence-based advocacy is a key element of this Unit's work.

PHOTOS ABOU KISIGE, COURTESY OF PHOTOSHARE

PHOTO EC/ECHO/MALINI MORZARIA

Initially focusing its regional work on the prevention of torture and ill treatment in places of detention in six post-conflict African states – including South Africa, Kenya, Uganda, Rwanda, Mozambique and Burundi – the work of this small but dynamic research unit has expanded to other regions and other, often overlooked, marginalised populations. They have recently released the findings from two studies.

The first study on *Sexual and Gender-Based Violence and/or Torture Amongst South Sudanese Refugees Living in Settlements in Northern Uganda* is on the plight of South Sudanese Refugees in three large Northern Ugandan Refugee Settlements (Bidi Bidi, Pagirinya and Adjumani).

In just three months during the summer of 2016, more than one million refugees crossed the border from war-torn South Sudan into northern Uganda. As of August 2019, their numbers have been swelled by the arrival of over 800 000 more. It is the biggest refugee crisis on the continent and the third biggest in the world after Syria and Afghanistan, and was the subject of a collaborative research project involving Professor Lillian Artz, Director of the GHJRU, in collaboration with Dr Helen Liebling and Professor Hazel Barrett from Coventry University, assisted by Faddy Gladys Canogura, Director at the Kitgum Women's

Peace Initiative, a non-government organisation located in northern Uganda. The rapid pace of the arrival of the refugees has left the United Nations (UN) on the back foot in terms of keeping up with documenting and recording their experiences and their needs upon settlement in the camps. The absence of research containing in-depth information and evaluation of the needs of those who are survivors of sexual and gender-based violence (SGBV) and torture, inspired the research team to conduct in-depth interviews with adult refugee survivors of SGBV and/or torture during the migration as well as key providers of health, justice and support services in the settlements. Funded by the British Academy/Leverhulme, the team conducted a qualitative investigation using a psychological health and human rights approach to study the experiences of refugees and assess their use of the services available to them. Gross human rights violations including capture, torture, sexual violence, and witnessing the rape and execution of their loved ones were disturbingly common. All the refugees interviewed reported suffering both short-term and long-term emotional trauma from what they had endured. The GHJRU and its partners continue to attempt to secure funding to upscale the research and to find suitable interventions to support refugees.

The GHJRU has also presented it's research findings on the mental health and well-being of lesbian, gay, bisexual, transgender and intersex (LGBTI) people in East and Southern Africa and these communities' experiences of violence, and experiences in accessing healthcare. It is part of a series of reports based on research, led by Professor Alexandra Müller, in nine countries of Southern and East Africa, including Botswana, Ethiopia, Kenya, Lesotho, Malawi, South Africa, eSwatini, Zambia and Zimbabwe. Across those nine countries, a standardised questionnaire was used to survey 3,796 people, asking about physical and sexual violence, depression, anxiety, suicidality and substance use, as well as experiences of discrimination when accessing healthcare. The findings showed the precarious state of LGBTI people's mental health and wellbeing in East and Southern Africa, and the high levels of violence that LGBTI people experience. Compared to what we know from the general population, LGBTI people have higher levels of mental health concerns, have experienced more violence, and have faced barriers to healthcare that are directly linked to their sexual orientation, gender identity or gender expression. They show that in the East and Southern African region, as elsewhere in the world, discrimination, stigma and marginalisation related to sexual orientation, gender identity and gender expression place LGBTI people at higher risk for mental health concerns and violence.

PHOTO: ABOU KISIGE, COURTESY OF PHOTOSHARE

A refugee girl in Adjumani Refugee Camp, Uganda, drinks water after the community received a solar-powered safe water supply project.

SOCIAL JUSTICE THROUGH SCIENCE IN SUTHERLAND

A landmark project to return the remains of nine people to their resting place has led to cutting-edge science and brought a measure of healing and social justice to families and the community near Sutherland in the Northern Cape.

The project was sparked by Dr Victoria Gibbon, curator of UCT's skeletal collection, after discovering that 11 skeletons in UCT's collection had been unethically obtained from within South Africa. The university has begun with a process of restitution as nine of these were traced back to the Roggeveld region, close to Sutherland. Eight of the nine originated from the same cemetery on a farm called Kruisrivier.

The records indicated that the remains of nine people, two of them children, had been exhumed and brought to UCT between 1925 and 1931 by a medical student whose family owned the farm. Upon establishing that they had been unethically obtained, Professor Malcolm Collins, Head of the Department of Human Biology, immediately placed a moratorium on the skeletons.

The journey that followed involved meeting with members of the Abraham and Stuurman families in the area and meticulously piecing together a story of their descendants as well as life for the San and Khoe people in the 1800s.

The families had asked UCT to study the remains of their descendants, as well as finding out how they had lived and died. Dr Gibbon set to work and rallied the support of a team of scientists and researchers at UCT and two international partner institutions in the UK and Germany.

"The impact of what we're doing is bigger than reburying nine people. We're rebuilding a history that is lost in this community. And for me, that is an incredible privilege to be part of."

ASSOCIATE PROFESSOR VICTORIA GIBBON
SENIOR LECTURER IN BIOLOGICAL ANTHROPOLOGY WITHIN THE DIVISION OF CLINICAL ANATOMY AND BIOLOGICAL ANTHROPOLOGY IN THE DEPARTMENT OF HUMAN BIOLOGY AND CURATOR OF UCT'S SKELETAL COLLECTION.

STORY KIM CLOETE **PHOTOS** JE'NINE MAY

The scientists were able to establish the identity of the individuals; provide insights into where they lived, their diet and their living conditions. They were able to reconstruct their faces as they would have appeared at the time of death. They were able to determine their gender, height and estimate ages; establish any medical conditions they had and cause of deaths; and determine their genetic relationship.

Researchers also drew up a history of the region, as well as a survey of the cemetery and analysis of the disturbed graves.

Dr Gibbon said the project had been deeply meaningful and could hold vital lessons for South Africa. Currently there is no national policy or legislation in place that covers restitution, repatriation and reburial. It is also considered precedent-setting internationally.

"Everyone's been amazing to work with, because they've all been interested in the social justice and community-driven science, rather than a top-down approach. I attribute the success of the project to that," said Dr Gibbon, who is also a senior lecturer in biological anthropology within the Division of Clinical Anatomy and Biological Anthropology at UCT's Department of Human Biology. The outcome of the process so far was announced at a media briefing at UCT on 1 November 2019.

Science project leader Associate Professor Victoria Gibbon with Sutherland family representative Alfred Stuurman.


BEAT TB!
satvi
BEAT TB
satvi

SATVI WINS SOCIAL RESPONSIVENESS AWARD

The South African Tuberculosis Vaccine Initiative (SATVI) received the Social Responsiveness Award at the Faculty of Health Sciences graduation ceremony this year. Social responsiveness (SR) is the University of Cape Town's third pillar of academic performance criteria, alongside teaching and learning, and research. The annual award recognises individuals and groups employed by the university whose scholarly initiatives and undertakings play an effective developmental role in a cultural, economic, political, scientific and/or social environment.

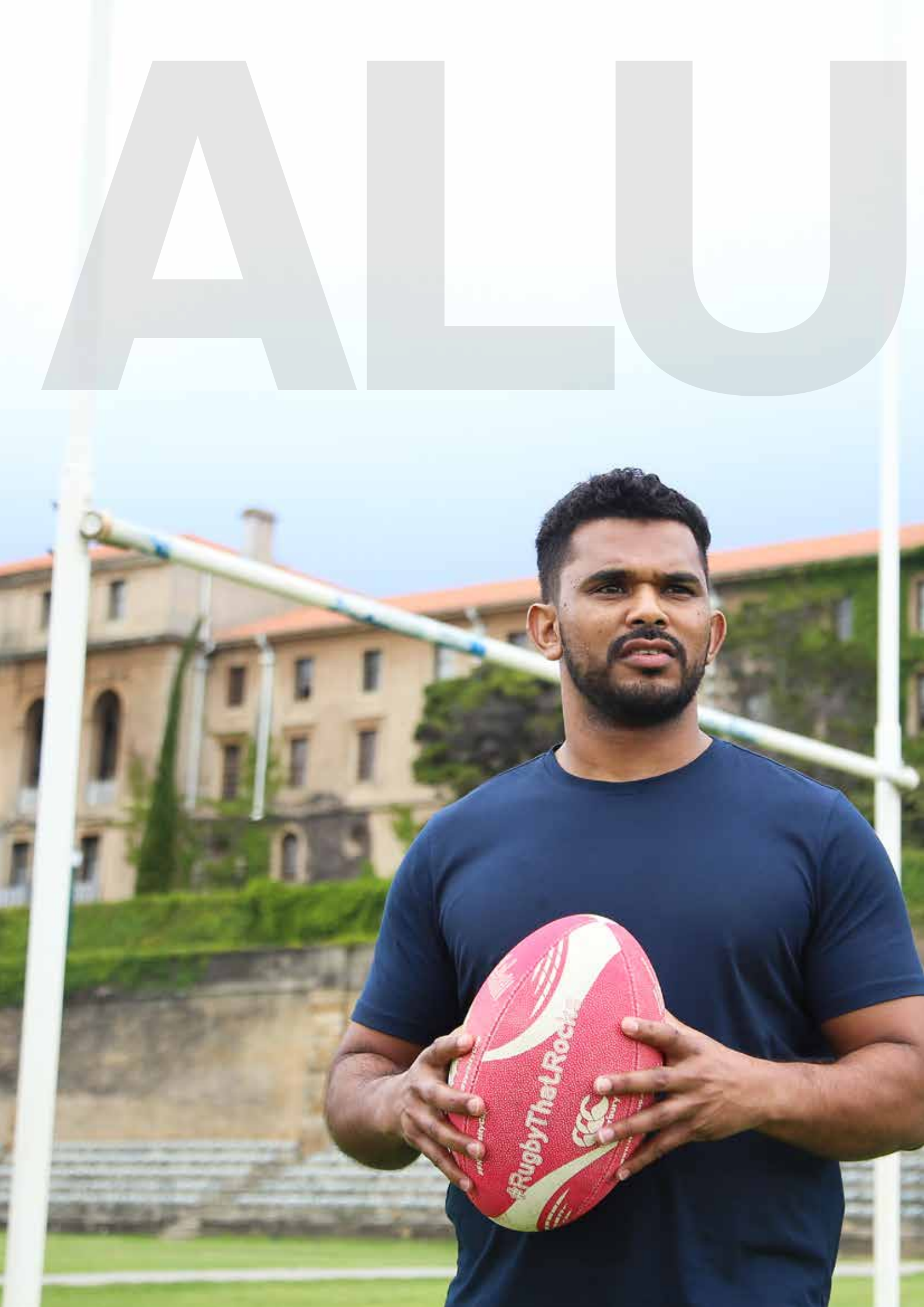
Located within the Institute of Infectious Disease and Molecular Medicine in UCT, and with a field office in Worcester, the initiative views social responsiveness (SR) as a core principle and has been able to draw on its diverse staff complement, including academics and clinical research workers, the broader academic community, and agencies at local, provincial and international level, to fulfil its SR goals. The intention to work closely with communities in the Cape Winelands area as critical role players in the fight to end the tuberculosis (TB) epidemic is central to SATVI's research agenda.

Highlights of SATVI's SR initiatives include two Wellcome Trust-funded drama productions *Carina's Choice* and *Lienkie's Lungs*, the *Kick TB Schools Program*, and the *TB under the Spotlight Science Engagement*.

Through World TB Day activities, SATVI has managed to draw upon a range of international, national and local stakeholders to raise awareness about TB in the Boland district. These activities have included a Wellness Day, TB screening and a *Public Library TB Awareness Programme,* held at local libraries.

SATVI's portfolio of community engagement activities has made a substantial contribution to knowledge production within TB research, and has resulted in several academic outputs including; postgraduate dissertations, peer-reviewed journal articles, a book chapter, and presentations at local and international conferences.

ALU



CHAMPIONING CERVICAL CANCER

She describes herself as a 'doer' – someone who is passionate, enthusiastic and committed. Professor Lynette Denny, Head of the Department of Obstetrics and Gynaecology, is globally known for her pioneering research in the prevention and early diagnosis of cervical cancer.

Denny was recently awarded the South African Medical Research Council's prestigious Gold Medal for her seminal scientific contribution to cervical cancer prevention that has profoundly impacted the health of so many women across the African continent and beyond.

From her groundbreaking PhD research in 2000, which instigated the search for alternatives to cytology-based screening approaches (such as pap smears) for the early detection of cervical cancer, Denny has devoted her life to identifying practical, feasible and locally relevant solutions to preventing cervical cancer in low-resource settings.

"We've probably screened over 40 000 women over a 25-year period and we've published over 130 articles in peer-reviewed journals looking at different algorithms, different approaches to the prevention of cervical cancer in low-resource settings – so affordable, feasible, safe, and acceptable to women...".

She fondly recalls the early days, where her team worked from a caravan in Khayelitsha and later, from second-hand shipping containers, which are still used today. Denny was also the first to demonstrate the significance of "screen-and-treat" approaches to cervical cancer prevention, where women who require treatment are initiated onto treatment immediately – thereby reducing costs and the need for multiple clinic visits required by conventional screening methods.

Denny has also been at the forefront of lobbying for the prevention of the Human Papilloma Virus (HPV), which causes cervical cancer, specifically in HIV-positive women (also the first study performed in HIV-positive women globally), and the evaluation of therapeutic vaccines to prevent the progression of HPV infection to

STORY THANIA GOPAL **SOURCES** REPUBLISHED WWW.HEALTH-E.ORG.ZA **PHOTO** SOUTH AFRICAN MEDICAL RESEARCH COUNCIL

Professor Lynette Denny receiving the South African Medical Research Council's Gold Medal for her significant contribution to cervical cancer research.

cancer in HIV-negative women.

"I think the main challenges are that we are working within a health system that is inadequately resourced, so to actually roll this out into a community is not easy. But the main challenge is to keep women committed to their own health, and instead of just practising technical medicine, I always say my job is to bring humanity back to the practise of medicine," says Denny.

Professor Denny has also been a driving force for research-based advocacy for cancer to be made a priority, specifically, in Africa – bringing together health care professionals, politicians, policy makers and the public to work on cancer at multiple levels. She says the most fulfilling part of her work is "providing a quality service to women who have been historically ignored and disadvantaged – and that's black women".

Denny has also championed women's rights, particularly for survivors of rape, sexual abuse and domestic violence. Together with colleague, Professor Lorna Martin, Head of Forensic Medicine at UCT, Denny created the first comprehensive programme designed to improve the clinical and forensic examination of women and men who have been raped.

She is known as an excellent and inspiring teacher, who is committed to developing emerging clinicians and researchers particularly from low-income countries and historically disadvantaged regions in South Africa. Her advice to young people who are building a future in academia is "to do work that fascinates you, that you are passionate about, that you want to do".

GROWING GREATNESS

A doctor, a social entrepreneur, an author, and a mother. UCT alumni, Dr Kopano Matlwa Mabaso's decade-long career is something of a *tour de force*.

Dr Kopano Matlwa Mabaso

The word 'inspiring' does not begin to describe the enormous achievements of Dr Kopano Matlwa Mabaso over a relatively short space of time. Matlwa Mabaso graduated from UCT's Faculty of Health Sciences as a medical doctor in 2009, she is an award-winning author and also founder and Executive Director of Grow Great – a campaign aimed at mobilising South Africa towards achieving a stunting free generation by 2030.

The Grow Great Campaign emphasises an integrated approach to tackling stunting, a condition that arises from prolonged under-nutrition and affects a child's physical and brain development by "using data to galvanise policymakers, stories to

inspire the public, communities of practice to support community health workers and mom and baby classes to support parents... to galvanise South Africa towards a future where no child is unjustly denied the opportunity to reach their full potential".

Matlwa Mabaso is also a Rhodes Scholar and an alumnus of the University of Oxford where she gained both her masters and doctoral degrees in Public Health. She is particularly interested in health policy and systems research, and health systems strengthening.

Matlwa Mabaso says she has always wanted to help people, which led her to her journey to becoming a medical doctor. "I guess that's why many of us study medicine. I was also really fascinated by the human body, illness, life, death, healing and vulnerability. Medicine allowed me to explore both the science and the art of our human existence," she says.

Matlwa Mabaso has been instrumental in founding a number of organisations which address important public health issues including Transitions Foundation, an organisation that seeks to help South Africa's youth transition from hopelessness to personal fulfilment through education, and WREMS (Waiting Room Education by Medical Students), a health promotion organisation that educates patients and their families on common health conditions in the waiting rooms of mobile clinics, which she co-founded as a medical student.

She has received numerous accolades for her work as a social entrepreneur, including the first ever Aspen Idea Award, Aspen New Voices Fellowship and Tutu Fellowship. She was recently awarded the 2019 Health Excellence Emerging Leader Award by the South African Clinicians Scientists Society and was named on News24's 100 Young Mandelas of the Future list.

She is also an award winning novelist who won the European Literary Award in 2007, and her three novels, described as social commentaries on post-apartheid South Africa have been published in a number of languages across the world. The audiovisual rights for her debut novel Coconut, has recently been optioned for a feature film adaptation.

Dr Kopano Matlwa Mabaso with Dr David Harrison (CEO: DG Murray Trust) and South Africa's First Lady, Dr Tshepo Motsepe, who delivered the opening address at the Inaugural Grow Great Seminar.

SOURCES www.kopanomabaso.com, www.growgreat.co.za, UCT NEWS (Carlo Bernardo, Chido Mbambe) **PHOTOS** SA Government (Twitter), JE'NINE MAY

FIVE MINUTES WITH **VERA-GENEVEY HLAYISI**

Twenty-seven-year-old audiology lecturer, researcher and UCT alumnus, Vera-Genevey Hlayisi understands the value of hearing. She's won multiple awards in the audiology field and is a voice worth hearing to patients, students and at international forums.

Hlayisi was named on the Mail and Guardian's Top 200 Young South African change-makers list and more recently, she was awarded the 2019 Alliance of South African Independent Practitioners Assocations (ASAIPA) national honorary award in recognition of her contribution to the field.

She is currently pursuing doctoral level (PhD) studies in Audiology and is a National Research Foundation grant-holder for her doctoral research focusing on Person-Centred Care. As a researcher, she has been published in international peer-reviewed academic journals as well as congresses and is an award-winning orator of her pioneering research work. Outside of research, she is passionately involved in the audiology profession locally, as a management member of the South African Audiologists Association and internationally, as a content contributor and collaborator with the Ida institute and the Child Language Africa program.

We asked her a few questions:

Can you describe yourself in three words?
A doer. Open. Daring.

How would your colleagues describe you in three words?
Passionate. Contributor. Sociable.

Describe your work in two sentences or less
I facilitate learning in my teaching role, inspire creative thinking within research and I am a zealous advocate for hearing health, disability inclusion and overall health literacy.

What do you find most fulfilling about your work?
Making a meaningful contribution to 1) the students I teach, 2) the patients I get to work with in rehabilitation and 3) audiology scholarship through my research.

What have been some of the highlights of your time at UCT?
Since joining UCT in 2017, there have been a few:
1) Being recognised as one of the top 200 leaders in the health sector in the country;
2) Being afforded opportunities to travel and represent the institution internationally at collaborative partnership workshops in Denmark and as a speaker at academic conferences in Botswana;
3) Officiating the first World Congress of Audiology on African soil in its 34-year existence.

What are the main challenges of your work?
I find the academic or higher education sector in and of itself to be challenging and that, coupled with the current transitioning state of the sector in our context and recent climate of decolonising what and how we function in academia and research, makes for a complex work environment.

What do you love or hate about UCT?
Love: The environment and atmosphere has challenged me to excel. Do not love so much: Parking. I say a prayer daily before I engage in the painstaking war of finding space and then parallel parking, often on a hill.

What's the biggest risk you've ever taken?
I believed and still do, that I CAN.

How do you conquer your fears?
I have no other choice. I remind myself that fear is a proverbial gun and most times as a woman, a black woman, I find that I don't have the luxury not to conquer my anxieties and insecurities or they will conquer me.

What's your version of self-care?
Outdoor adventure. Living in Cape Town, I take most opportunities to hike, explore and be outdoors. It has a calming, often healing, effect that balances me.

If you could change something overnight at UCT, what would it be?
The suffocating atmosphere that exists sometimes in the workspace from the transformation-reluctant energy in the air.

What is your advice to other young people building a future in academia?
To facilitate learning and create new knowledge as is required in academia, will ask of you to be a lifelong learner that is open and hungry for change. And, as with most sectors or generally in life, so too in academia, opportunity does not waste time on the unprepared.

What are your future plans at UCT? What would you like to achieve?
I would like to, in the immediate future, finish my doctoral degree and establish myself as a world class researcher. I would like to in the medium-to-long term contribute to the larger education sector specifically as it relates to health sciences education.

STORY THANIA GOPAL **PHOTO** KIM CLOETE

SUPPORTING STUDENTS ON THEIR JOURNEY

A UCT alumnus has suggested building a matrix of support between UCT medical alumni and students where alumni offer encouragement and mentorship to young people in their student years and onwards on their journey into the medical profession.

Cape Town-based pulmonologist, Dr Peter Chapman, is a contributor to the Mayosi Impilo Bursary Fund, which has become a beacon of hope for students struggling to source funding for their studies. But Dr Chapman suggests that much-needed financial support could be taken a step further. UCT medical alumni who have walked the student road could be there for their younger counterparts as part of an informal network.

"My vision would be to have a loose network of alumni who will be available to support medical students. It could be as simple as taking a student out for a cup of tea or coffee or being available for a phone call from someone who may be having a bad day, or needs advice on coping with an issue."

Dr Chapman pointed out that Medicine is a particularly challenging profession and it was easy to be strained by the system. It was important to be available to walk the road with the next generation of doctors.

"If you talk about healing society and building a new world order then I want the doctors of the future to be people who have hearts, and who will be nurtured so that they in turn pass that on to others."

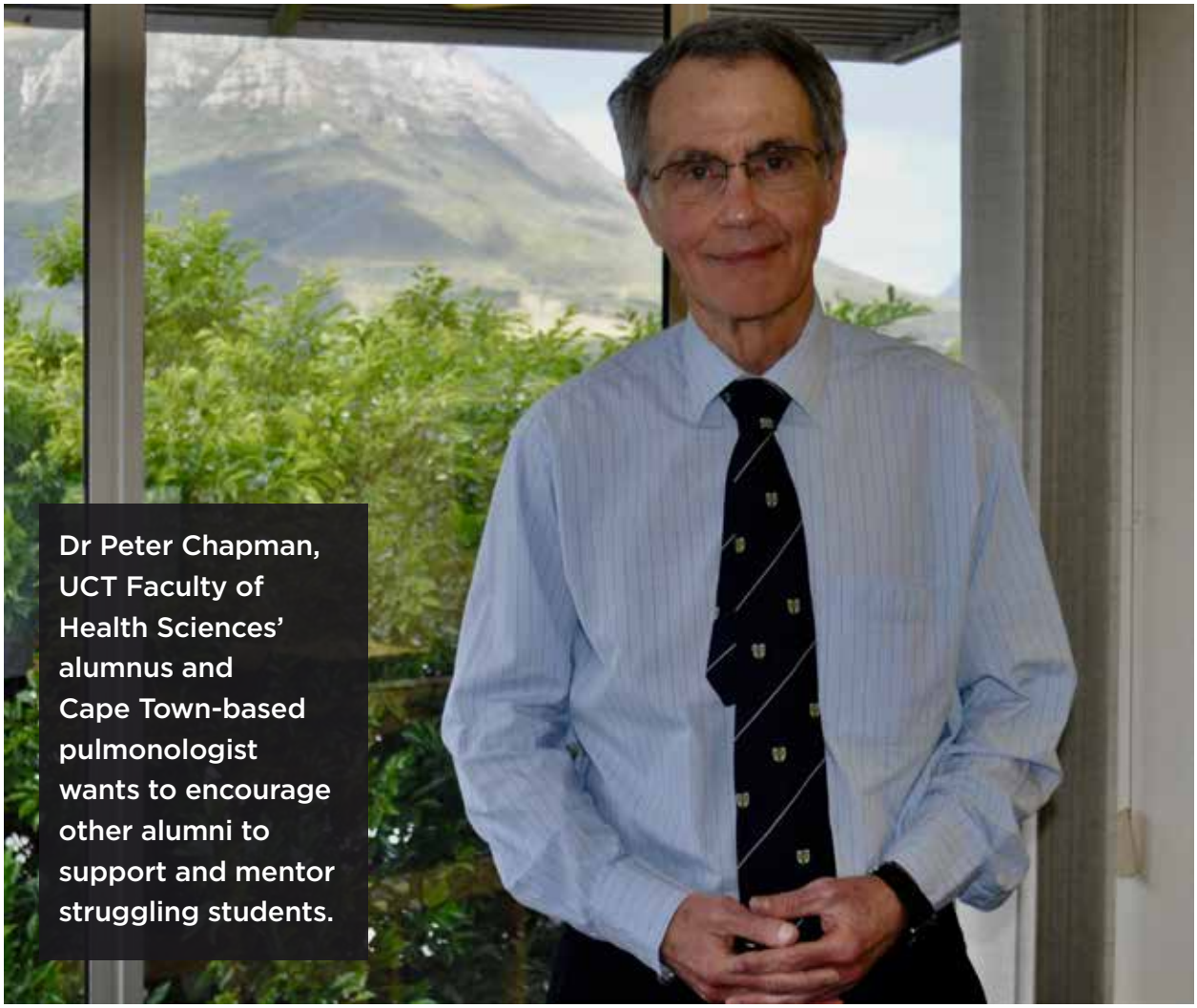
"If you talk about healing society and building a new world order then I want the doctors of the future to be people who have hearts, and who will be nurtured so that they in turn pass that on to others."

Dr Chapman, who is also the chairman of the board of UCT's Student YMCA, recently met with four student recipients of the Mayosi Impilo Bursary Fund, which he described as a wonderful experience.

Dr Chapman said the late Dean of the Faculty of Health Sciences, Professor Bongani Mayosi, had inspired him and sparked his interest in the Fund when he wrote a letter to alumni in June 2018, encouraging them to donate.

"It can be small, but the collective impact of small contributions can be very powerful," said Dr Chapman. He said support, both financial and in a mentoring and supportive role, could be channeled through the faculty. He hopes fellow UCT alumni will consider reaching out to young students and doctors as they chart their path into the future.

The Faculty's Impilo Student Bursary Fund was recently renamed the Mayosi Impilo Bursary Fund. Together with the Mayosi family, it was decided that adding Professor Mayosi's name to the Fund acknowledges his deep commitment to assisting financially disadvantaged students.



Dr Peter Chapman, UCT Faculty of Health Sciences' alumnus and Cape Town-based pulmonologist wants to encourage other alumni to support and mentor struggling students.

STORY AND PHOTO KIM CLOETE

UCT ALUMNI CONNECT

UCT Alumni Connect is a closed and bespoke social networking platform that enables alumni to connect and reconnect with peers from around the world. Membership offers access to a news feed and the ability to stay abreast of important developments at UCT; group pages for alumni chapters and affinity groups; a platform to share individual news and photos; direct messaging and a directory of fellow alumni, by city and region; current job vacancies; internships and career mentorship opportunities. Sign-up takes less than 5 minutes, using Facebook; LinkedIn or email credentials.
www.uctalumniconnect.com

OPPOSITE: Professor Ntobeko Ntusi, Head and Chair of the Department of Medicine with Dr Tony Townsend, alumnus MBChB 1963, at the Vancouver Alumni Dinner in November 2018.
LEFT: MBChB Classes of 1994 and 1969 celebrated their 25th and 50th year reunions. This included a visit to new cutting-edge research facilities at Groote Schuur Hospital (left) and dinner at Simon's Restaurant on the Groot Constantia wine farm (below).

FOR LOVE OF THE GAME:

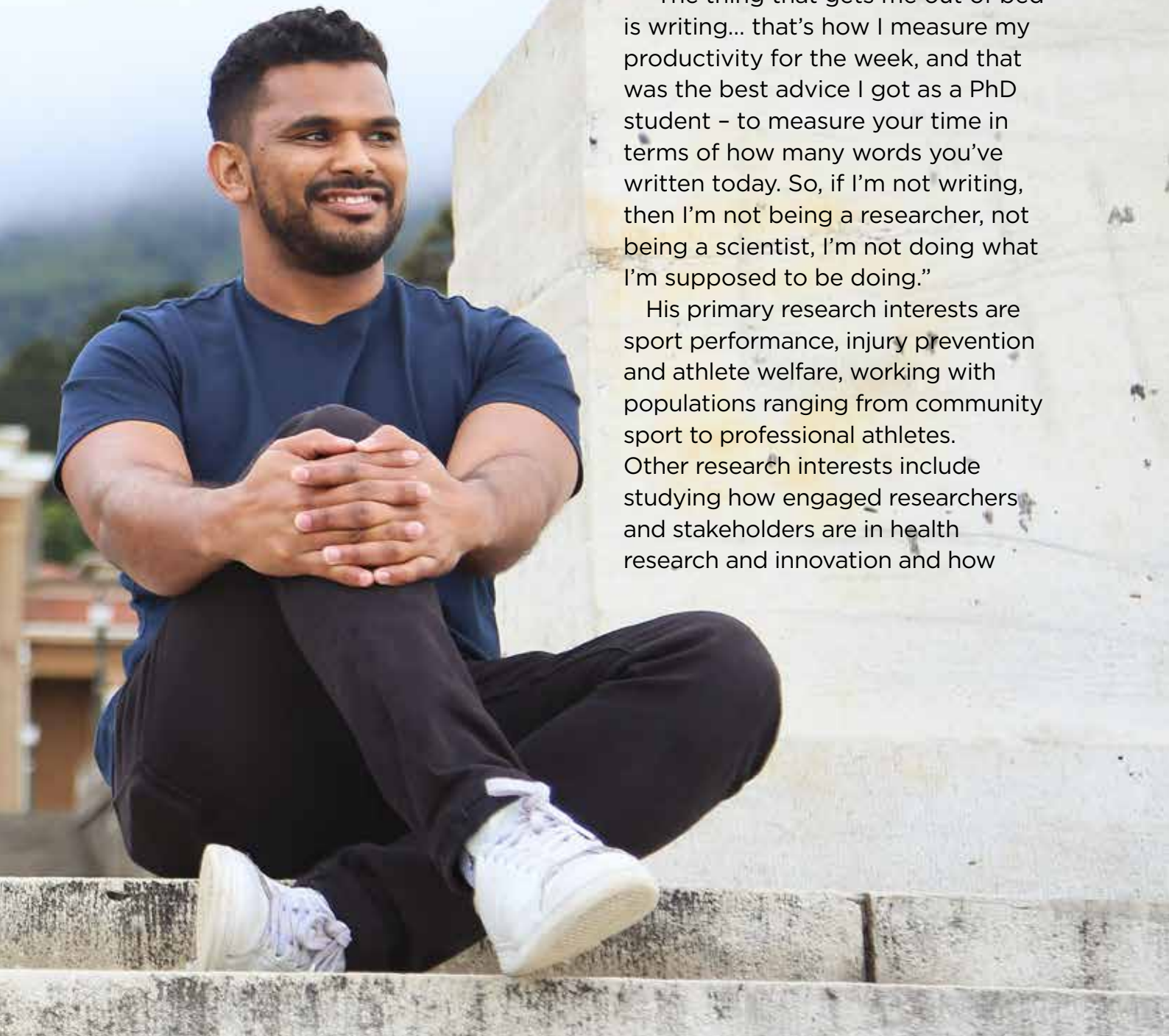
DR SHARIEF HENDRICKS

Growing up in a rugby-crazy family and developing a passion for the sport at an early age, together with emulating the values inculcated by a hard-working mom are all factors which have contributed to 33-year-old Sharief Hendrick's seemingly effortless success.

Hendricks was recently awarded a College of Fellows Young Researcher Award to honour the significant contribution he has made to scholarship in his field. He is currently a Senior Lecturer in the Division of Exercise Science and Sports Medicine in the Faculty of Health Sciences, and a Visiting Fellow at Leeds Beckett University in the United Kingdom. He completed his PhD at UCT in 2012 and already has over 60 publications in international peer-reviewed journals (half of which are first authored). He has a National Research Foundation rating of C2 (a rating is usually reserved for scientists over the age of 35).

"The thing that gets me out of bed is writing... that's how I measure my productivity for the week, and that was the best advice I got as a PhD student – to measure your time in terms of how many words you've written today. So, if I'm not writing, then I'm not being a researcher, not being a scientist, I'm not doing what I'm supposed to be doing."

His primary research interests are sport performance, injury prevention and athlete welfare, working with populations ranging from community sport to professional athletes. Other research interests include studying how engaged researchers and stakeholders are in health research and innovation and how



medical journals use social media to communicate research. His research has changed policy in rugby and produced novel training frameworks and equipment to reduce the risk of injury while optimising performance in sport.

Hendricks says he is motivated by three things. On a societal level, to reduce the risk of injury for players and to help key stakeholders - such as players, coaches, policy makers and sports organisations – perform better and to positively impact on their decision-making. Secondly, within his research field, he would like to make a meaningful contribution to advance the discipline, and on a personal level, he aims to become an expert within his field.

He has graduated 24 students and currently supervisors 21 local and international postgraduate students, as well as convening the Honours,

Masters and Doctoral programmes in Exercise Science at the Faculty of Health Sciences.

"There's a theory that productivity is not the result of time management but attention management, so that you get the most out of your time," says Hendricks. In line with his research, Dr Hendricks also produces a range of science communication outputs such as infographics, blogs and video animation for public engagement and benefit. He has been the social media editor for the European Journal of Sport Science, one of the top multidisciplinary journals in the field of sport science, for the last 5 years. In addition, he is a research consultant for the South African Cricketers' Association (Professional Cricketers' National Players' Association), and New Zealand Cricket Players' Association, South African Rugby Union and Western Province Rugby.

This year, Hendricks was named on the Mail and Guardian's Top 200 Young South African trail blazers list, and was also recently voted President-Elect for the South African Sports Medicine Association (the first non-physician to hold this position).

Given his expertise, Hendricks collaborates with a number of international experts on a range of research projects. Hendricks is a co-investigator on international World Rugby projects, which have generated approximately R2.6 million in research funding. He has presented at a number of international conferences, including the World Rugby Medical Commission.

Hendricks is mad about travelling – he has been to over 23 countries and shares a special love for free-diving with sharks in the ocean. "My one goal in life at the moment is to dive with as many sharks as I can, travel the world, and dive with as many animals as I can." In his spare time, he also helps with ocean clean-ups and teaches high school learners how to snorkel.

AD HOMINEM PROMOTIONS

Congratulations to colleagues on their outstanding performances and promotions through the ad hominem process this year:

Promotion to Professor
A/Professor Deon Bezuidenhout
A/Professor Kirsten Ann Mary Donald
A/Professor Jeannine Mariette Heckmann
A/Professor Mignon Irene McCulloch
A/Professor Liesl Joanna Zühlke

Promotion to Associate Professor
Dr Emile Rugamika Chimusa
Dr Victoria Elaine Gibbon
Dr Phumla Zuleika Sinxadi
Dr Zenda Loren Woodman
Dr Shahieda Adams
Dr Lydia Leone Cairncross
Dr Gregory Louis Calligaro
Dr Mosedi Keanetse Namane
Dr Gregory Alan Petro
Dr Karen Shires
Dr Aneesa Vanker
Dr Sean Adam Wasserman

Promotion to Chief Research Officer with A/Professor Title
Dr Elise Nemes

Promotion to Senior Lecturer
Dr Nazlie Beckett
Dr Shareefa Dalvie
Dr Hlumani Humphrey Ndlovu
Dr Matumo Motsielehi Catherine Ramafikeng
Dr Alison Swartz
Ms Mapheyeledi Rachel Motimele

Promotion to Senior Research Officer
Dr Benjamin Mugo Njeru Kagina

Promotion to Senior Clinical Educator
Mrs Adele Bianca Ebrahim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