GRADUATION CEREMONY

Faculty of Health Sciences

SARAH BAARTMAN HALL

9 September 2025

FACULTY OF HEALTH SCIENCES

ORDER OF PROCEEDINGS

Academic Procession.

(The congregation is requested to stand as the procession enters the hall)

The Presiding Officer will constitute the congregation.

The National Anthem.

Welcome by the Master of Ceremonies.

Musical Item.

The Orator will present Shuaib Chalklen and Mohammed Cassiem D'arcy to the Presiding Officer for the award of an honorary degree.

The graduands and diplomates will be presented to the Presiding Officer by the Dean of the faculty.

The Presiding Officer will congratulate the new graduates and diplomates.

The Master of Ceremonies will make closing announcements and invite the congregation to stand.

The Presiding Officer will dissolve the congregation.

The procession, including the new graduates and diplomates, will leave the hall.

(The congregation is requested to remain standing until the procession has left the hall.)

NATIONAL ANTHEM

Nkosi sikelel' iAfrika
Maluphakanyisw' uphondolwayo,
Yizwa imithandazo yethu,
Nkosi sikelela, thina lusapho lwayo.

Morena boloka etjhaba sa heso,
O fedise dintwa la matshwenyeho,
O se boloke,
O se boloke setjhaba sa heso,
Setjhaba sa South Afrika – South Afrika.

Uit die blou van onse hemel,
Uit die diepte van ons see,
Oor ons ewige gebergtes,
Waar die kranse antwoord gee,

Sounds the call to come together,
And united we shall stand,
Let us live and strive for freedom,
In South Africa our land.

HONORARY DEGREE

Shuaib Chalklen
for the DSocSc *(honoris causa)*

After graduating with a BSocSc from UCT in 1991, Mr Chalklen joined Disabled People South Africa (DPSA) as their National Training Officer. One of his key national responsibilities was to establish cooperatives in rural areas, working towards the economic empowerment of persons with disabilities in rural areas. DPSA and Mr Chalklen played a key role in elevating disability issues in the post-apartheid period, with their efforts and activism resulting in the establishment of the Office on the Status of Persons with Disabilities (OSDP) in the Presidency. Mr Chalklen was appointed as Director of the OSDP in the Presidency, where he played a pioneering role in drafting disability policy and legislation in South Africa, particularly the White Paper on *The Rights of Persons with Disabilities*. This paper guided the coordination of disability inclusion across all ministries at provincial and national levels.

Mr Chalklen also provided support when the Disabilities Studies postgraduate programme, the first of its kind in Africa, was introduced at UCT in 2003. Together with other prominent disability activists, he has been a guest lecturer on the diploma programme. He also provided funding to DPSA for its members to study for the postgraduate diploma, master's and/or a PhD. Many of these alumni now hold leadership positions in the African Union, provincial and national government, and as academics or administrators in universities across the continent.

While at the Presidency, Mr Chalklen played a significant role in the recommendation of the Secretariat for the African Decade of Disabled Persons and was seconded to be its first Chief Executive Officer. The vision of the African Decade (2010–2019) was to bring about systemic change within the African Union and its members, trying to work with governments on disability rights in Africa, an area that needed considerable attention. The adoption of the African Disability Protocol in 2018 was a culmination of the process that began with the declaration of the African Decade. The African Disability Protocol is an important legal framework, guiding African Union member states in developing disability laws and policies.

Of strategic importance, for both Mr Chalklen and South Africa, was his appointment as the United Nations Special Rapporteur on Disability in 2009. His mandate was to monitor the implementation of the Standard Rules on the Equalisation of Opportunities for Persons with Disabilities, adopted by the General Assembly in 1993, and to advance the status of persons with disabilities throughout the world by ensuring that member states adopted and ratified the United Convention on the Rights of Persons with disabilities. Mr Chalklen, as the Special Rapporteur, played a significant role in the transformative trajectory to create inclusivity for persons with disabilities globally. After his tenure, Mr Chalklen established the African Disability Forum (ADF) in 2014, and currently serves as its Executive Director. His fundamental drive within the ADF is to address the structural inequities within the African continent for persons with disabilities, collaborating with various organisations to achieve this goal.

Mr Chalklen's personal experience as a person with a disability who understands the barriers to an inclusive, equitable society for persons, drives his passion to "unleash human potential to create a fair and just society." As a UCT alumnus, he continues to work for the inclusion of persons with disabilities locally and globally in various sectors and in all aspects of life and in doing so, ensures that persons with disabilities receive the opportunities, dignity and respect that they deserve.

HONORARY DEGREE (CONTINUED)

Mohammed Cassiem D'arcy
for the DMed *(honoris causa)*

After matriculating in 1957, Dr D'arcy was admitted to medical studies at UCT. His time at the institution was marked by racial discrimination, and when he completed his medical degree in 1963, he was one of the few coloured graduates of the time. Dr D'arcy left apartheid South Africa to pursue his internship and residency in Pathology in North America. This experience ignited his passion for the field, particularly in the emerging area of Electron Microscopy and Neuropathology.

In 1968, Dr D'arcy was appointed Senior Registrar in the Department of Surgical Pathology at the prestigious Barnes Hospital, part of Washington University. He worked under Professor Lauren Ackerman, one of the foremost experts in the field, and conducted significant research on kernicterus, a serious complication of untreated jaundice in babies. Despite receiving numerous offers to remain abroad, Dr D'arcy declined, his heart set on returning to South Africa to teach and practice Pathology.

Dr D'arcy's hopes were dashed when he was denied the opportunity to utilise his expertise in Electron Microscopy and Surgical Pathology in a teaching position at UCT. He went on to establish a general medical practice in Cape Town, serving disadvantaged communities in Gleemoor and Lansdowne between 1970 and 2000. Over this 30-year period, he provided access to world class medical attention, and selfless and compassionate service and assistance to the deeply disadvantaged communities he served. In addition to his general practice, Dr D'arcy also worked at a local day hospital and provided clinic services in Langa Township, a predominantly black area where labourers were often separated from their families under apartheid law.

Following his retirement from general practice, Dr D'arcy returned to his passion for teaching. From 2001 to 2007, he served as a part-time lecturer in Anatomical Pathology at the University of the Western Cape (UWC) Dental Faculty. He taught courses in General Pathology, Gross Anatomy, and Parasitology, even lecturing to the combined classes of Stellenbosch and UWC medical students. Dr D'arcy was an avid educator, who believed in the power of knowledge and hands-on experience. His impact extended beyond medical students to dental hygienists and alternative medicine students, further cementing his legacy as an educator.

Outside of his medical career, Dr D'arcy made significant contributions to South African arts and culture. He was a prolific writer, publishing short stories that were used as set works in South African schools. For 28 years, he wrote a monthly newspaper column, "Art's for All," that explored arts, culture, and history, particularly focusing on the development of Afrikaans in local communities. He also contributed to South Africa's national heritage policy by helping draft documents for United Nations ratification. His artistic pursuits extended to visual art as well, with his paintings being exhibited in the Iziko National Art Gallery in Cape Town and the National Art Gallery of Malaysia.

In sum, Dr D'arcy's life and career have been a testament to resilience, excellence and an unwavering commitment to making a difference. His is a story of overcoming racial discrimination and contributing groundbreaking research in Pathology, educating the next generation and serving his community, and extends to his cross-disciplinary writings and work in the arts. His pursuits, accomplishments and intellectual offerings define a life dedicated to the betterment and growth of our society.

NAMES OF GRADUANDS/DIPLOMATES

FACULTY OF HEALTH SCIENCES

Dean: A/Professor L Green-Thompson

HIGHER CERTIFICATE IN DISABILITY PRACTICE

Carelse, Keziah Robyn
Mpande, Thulie
Ralikotsi, Vuyiswa
Van Der Berg, Deborah Erica

ADVANCED DIPLOMA IN COSMETIC FORMULATION SCIENCE

Leibbrandt, Danielle (with distinction)
Rakosa, Malikunye Doreen

DEGREE OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

Bernon, Ashleigh Kirsten
Bhiya, Andiswa Ingrid
Camillus Dharmendra, Jude Sitparan
De Paiva, Melissa
Dibakwane, Julia Prudence
Eickelbeck, Ammaarah
Gumede, Yolanda Nomfundo
Kheswa, Thandinkosi
Lepako, Thabang Patson
Mahlasi, Lesego Collen
Maoba, Lefu Hentrek
Mhlongo, Nkanyiso Sandile
Mogole, Tumelo Setsapa
Monareng, Tshegofatso
Mxunyelwa, Hlumela
Nyawuza, Nkateko Princess
Phetla, Sabetha Mamokete Mamoloi
Smith, Keiran Michael
Thabetha, Ntombikayise Alice
Tleane, Fortune Tshegofatso
Zakwe, Luyanda Senamile

DEGREE OF BACHELOR OF SCIENCE IN AUDIOLOGY

Dlamini, Mpumelelo Terrence
Mtwazana, Samkelisiwe
Nkosi, Mthokozisi Knowlage

DEGREE OF BACHELOR OF SCIENCE IN OCCUPATIONAL THERAPY

Gulani, Siyabonga Ismael
Maseko, Thando
Mgujulwa, Uvile Innocent
Nyamate, Sibongile Phileen
Nzama, Cebelihle Mxolisi
Zindela, Lungelo
Zuma, Bayanda Sandile

DEGREE OF BACHELOR OF SCIENCE IN PHYSIOTHERAPY

Linganiso, Sisonke
Mbiyozo, Awethu
Ngxelo, Indiphile Ethel
Raisa, Moleboheng Orabelle
Thinane, Ntswaki

DEGREE OF BACHELOR OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

Zalgaonker, Amierah

POSTGRADUATE DIPLOMA IN ADDICTIONS CARE

Willemse, Rachel Philliphina

POSTGRADUATE DIPLOMA IN EMERGENCY CARE

Le Roux, Yasmin
Ngqabayi, Lolwethu Jannet

POSTGRADUATE DIPLOMA IN HEALTH ECONOMICS

Fanampe, Boitumelo Louisa

POSTGRADUATE DIPLOMA IN HEALTH LEADERSHIP

Beketsana, Moeketsi Johannes
Camp, Samantha Bianca (with distinction)
Colane, Kesaobaka Mighty
De Beer, Jan Nieuwoudt
Ehlers, Janine
Evans, Dwayne Mark
Gaeganenwe, Keaotshepa Mercy
Goolam Nabie, Mubashir (with distinction)
Haroun, Galiema
Kegakilwe, Godisamang Desmond
Luvuno, Beauranne Marilyn
Makhafola, Belinda Mphela
Mchunu, Keletso Karen
Mere, Ebonye Magdeline
Mohamed, Aghmat
Mokatsane, Polaki Ephraim
Ndamase, Tandisizwe Tobias
Segwai, Kotlaetsho Karabelo
Van Der Walt, Nicolette Yvonne (with distinction)
Victor, Francisca (with distinction)
Zigayi, Ziyanda

POSTGRADUATE DIPLOMA IN HEALTH PROFESSIONAL EDUCATION

Abaver, Dominic Targema
Businge, Bitamazire Charles
Shirindza, Katekani Joyce

POSTGRADUATE DIPLOMA IN OCCUPATIONAL HEALTH

Karwani, Cretus Cosmas

POSTGRADUATE DIPLOMA IN PALLIATIVE MEDICINE

Komana, Mmaphefo Michelle
Le Roux, Michael
Ngcamu, Siphumelele

POSTGRADUATE DIPLOMA IN TB-HIV MANAGEMENT

Ahmed Khan, Fathima
Cidibi, Mudiayi
Dube, Zodwa Betty
Fanqa, Asanda
Godibo, Rhighbo
Goliath, Lechrecia Shanice
Gumede, Sinenhlanhla Xoliswa
Kabuya, Ngala Sylvie
Lutabu, Magesa Johnson
Malumedzha, Kateko
Manzini, Sibongakonke
Masoma, Mokgebeleke Lebogang
Minyelela, Nokulunga Khuthala
Mngomezulu, Nothando Mbalenhle

Mogatwe, Kelebogile
Molale, Tsie Bokamoso
Mqholiwe, Nokuzola
Mthimkhulu, Nkululeko Freedom
Ndlovu, Nolwazi
Nkabinde, Johanah
Paul, Katlego Mclaughlin
Shabalala, Nicholas Sicelos
Skhosana, Sheila Busi
Tarwa, Tapiwa Tavarwisa (with distinction)
Tshesane, Palesa Makgofe

DEGREE OF BACHELOR OF MEDICAL SCIENCE HONOURS IN BIOKINETICS

Jordaan, Jandri
Majiet, Amaar

DEGREE OF MASTER OF CHEMICALS RISK MANAGEMENT

Matyora, Taurai

DEGREE OF MASTER OF MEDICAL SCIENCE IN DIETETICS

Gaffoor-Farooqui, Shabira

DEGREE OF MASTER OF MEDICAL SCIENCE IN GENETIC COUNSELLING

Al Balushi, Amira Nabi Bakhsh (with distinction in the dissertation)
Al Malki, Suad Hamed Salim
Backer, Monique
Ellis, Lize (with distinction)

DEGREE OF MASTER OF MEDICINE

Adams, Ilhaam
Alexander, Stephen Akhaan
Amankrah, Melvin Felicity
Appiah-Baiden, Andrew (with distinction in the dissertation)
Armas, Selma
Browne, Gary Edward
Brownell, Louisa Juanita
Burger, Roxanne
Collier, Laila
Dalvie, Zaeem
Davids, Tina
Dawood, Shakira
Dittrich, Corneli Marie
Dladla, Samantha
Etalleb, Mohamed Ali
Gammon, Jessica Stevens
Gaotshetse, Lesego
Govender, Kamini
Hunter, Mehreen Bhorat
Jansen Van Vuuren, Ané (with distinction in the dissertation)
Jones, Caris Alexandra
Kassim, Jateel
Katungi, Tomson Mabare (with distinction in the dissertation)
Keshaw, Paresh Bhana
Lombard, Mark Mason
Lunga, Zamalunga Sinenhlanhla
Lunn, Jarryd (with distinction in the dissertation)
Messiahs, Leanne Robyn
Mkhize, Nondumiso Pearl
Mohamed, Shafeeqah
Mtonga, Petani Emmanuel
Muissa Mbombo, Marie Astrid
Munetsi, Fidelis
Nair, Devina
Nashandi, Helena Muningeninawa
Ndlebe, Babalwa
Norman, Victoria Robyn (with distinction in the dissertation)
Ntunja, Sive Lovemore
Petersen, Lindsay
Potelwa, Tennis Tomo Camagu
Ramyead, Divya Pallavi
Sayed, Adnaan
Schoeman, Elmari
Sekason, Aneesah
Sigasa, Nkanyezi Nandi
Smit, Elsabe Jacoba (with distinction in the dissertation)
Straeuli, Christopher Helmut
Strange, Ashleigh Lynn
Tacon, Nicole Jayne
Van Der Riet, Travis Thomas Sharkey (with distinction in the dissertation)
Venter, Pieter Johannes
Weeber, Heinrich Johannes
Zoubi, Ragab R Ragab

DEGREE OF MASTER OF NURSING IN CHILD NURSING

Huchu, Langton
Kegehi, Domtillah Kegehi
Lyowah Bulaya, Michelle
Makubo, Samuel Joseph (with distinction)
Runyora, Jacqueline Wambui

DEGREE OF MASTER OF PHILOSOPHY

de Araujo, Maxine Jayd (with distinction in the coursework component)
Dos Reis, Domonica-Jean (with distinction in the dissertation)
Erasmus, Jodilee Jade
Khan, Waseela
Le Roux, Stian
Mason, Nicola Michelle (with distinction)
Mphaka, Francina Dimpho (with distinction in the dissertation)
Nicholson, Lee Robert
Phoya, Frank Riann Chikondi
Prakaschandra, Dorcas Rosaley(with distinction)
Samuels, Chantal
Van Aswegen, Shayne Robin (with distinction)
Van Vuuren, Andrew Paul
Watson, Morgan Matshediso Roebert (with distinction)

DEGREE OF MASTER OF PHILOSOPHY IN CLINICAL HAEMATOLOGY

Simba, Kudakwashe

DEGREE OF MASTER OF PHILOSOPHY IN EMERGENCY MEDICINE

Alrashed, Omar Ojran
Antunes, Ana Victoria (with distinction in the dissertation)
Dlamini, Zamasiba Cynthia
Du Plessis, Nicole Cassandra
Lombard, Dewan
Mgidi, Sinethemba Alphius Themba
Moreira, Fabio
Morris, Christopher Vivian
Morudu, David Moraka David

DEGREE OF MASTER OF PHILOSOPHY IN INTELLECTUAL DISABILITY

Lategan, Maxeen Cassandra (with distinction in the dissertation)

DEGREE OF MASTER OF PHILOSOPHY IN NEPHROLOGY

Kamponda, Martin George

DEGREE OF MASTER OF PHILOSOPHY IN OCCUPATIONAL HEALTH

Ndlovu, Vusimuzi

DEGREE OF MASTER OF PHILOSOPHY IN PAEDIATRIC GASTROENTEROLOGY

Mokoto, Tshepang

DEGREE OF MASTER OF PHILOSOPHY IN PAEDIATRIC PULMONOLOGY

Masu, Adelaide Ngina

DEGREE OF MASTER OF PHILOSOPHY IN PALLIATIVE CARE

Burger, Henriette
Nzale Nzali, Arnold Ntumbanzondo
Radikara, Naledi Constance
Zungu, Christopher Menzi (with distinction in the dissertation)

DEGREE OF MASTER OF PHILOSOPHY IN PULMONOLOGY

Eknewir, Salaheddin

DEGREE OF MASTER OF PHILOSOPHY IN RHEUMATOLOGY

Daimari, Rahul

DEGREE OF MASTER OF PHILOSOPHY IN SURGICAL GASTROENTEROLOGY

Scriba, Matthias Frank (with distinction in the dissertation)

DEGREE OF MASTER OF PUBLIC HEALTH

Banwari, Aleya (with distinction in the dissertation)
Choi, Munkyung Elizabeth (with distinction in the dissertation)

Dewar, Janine Felicity (with distinction in the coursework component)
Fielding, Christopher Peter (with distinction in the dissertation)
Githaiga, Jennifer Nyawira (with distinction)
Gwini, Grace Paidamoyo
Hendricks, Sumaiyah (with distinction in the coursework component)
Jensen, Katherine Louise (with distinction)
Kettles, Killoran (with distinction in the dissertation)
Klaas, Portia Siphokazi
Kleinhans, Crystal Faith
Maqungo, Monique Nonceba (with distinction in the dissertation)
Marais, Charl Francois (with distinction in the coursework component)
Mokoena, Prince Mishack
Molopa, Lesiba
Motshweneng, Oupa Steven (with distinction)
Motswakadikgwa, Neo Ruth
Ncinitwa, Akhona Balindile Assiria (with distinction in the dissertation)
Nhlabatsi, Zanele Precious
Nnene, Kelechi Amarachi (with distinction)
Nyembwe, Doris Kela Bajika
Payne, Alexandra
Phiri, Jane
Ritchie, Christine Kim
Semenya, Mmapitsi Phuti
Tibini, Vuyolwetu Thembekile
Vala, Poonam (with distinction)
Verhage, Savannah Skye (with distinction in the dissertation)
Witten, Dane Allistair (with distinction)
Wolpe, Hannah May Nonkosi Dawn (with distinction)
Zwidza, Yolanda Rutendo

DEGREE OF MASTER OF SCIENCE IN AUDIOLOGY

Chappel, Alexia Maria Elly
Davids, Tersia
Nolte, Ciljé Josephus Johannes (with distinction)
Stephan, Heinrich Rudolph

DEGREE OF MASTER OF SCIENCE IN BIOMEDICAL ENGINEERING

Ismail, Raeesah (with distinction)
Van Den Berg, Ronald Nelson (with distinction)

DEGREE OF MASTER OF SCIENCE IN EPIDEMIOLOGY AND BIOSTATISTICS

Dikoko, Viwe
Genamo, Mitiku Tamre
Marekerah, Queen Marvelous (with distinction in the coursework component)
Meyer, Jamie Emma (with distinction)
Roussos, Georgia Anastasia (with distinction)
Zondo, Mpumelelo Mamonoshi Bizo

DEGREE OF MASTER OF SCIENCE IN EXERCISE AND SPORTS PHYSIOTHERAPY

Reynolds, Melissa (with distinction in the dissertation)

DEGREE OF MASTER OF SCIENCE IN MEDICINE

Amien, Muhammad Ilyaas (with distinction)
Bai, Jinming (with distinction)
Behardien, Muhammed Rizaan (with distinction)
Buck, Robin Garth
Clark, Gesina Maria
Conradie, Jesse Robin (with distinction)
Cullinan, Joshua Peter (with distinction)
Frankle, Solyle Emily
Grobler, Anje-Lore (with distinction)
Gumede, Simphiwe Wonderboy
Higgitt, Emily Ruth (with distinction)
Hlagala, Elizabeth Dikano
Houghton, Abbey Mae (with distinction)
Krause, May Julia (with distinction)
Kundieko, Sagel Julia (with distinction)
Levina, Daria

Makofane, Lincon Kgasha (with distinction)
Masuku, Sizalobuhle (with distinction)
Matela, Motshidisi
Mbedzi, Sedzani Michelle
Mbewe, Jonathan
Mehlala, Nandipha
Mkatazo, Thulisa
Mokoena, Mosidi (with distinction)
Molope, Gomolemo Atlegang (with distinction)
Motimele, Stefane (with distinction)
Msipa, Sibongiseni Letticia (with distinction)
Mthembu, Mbalenhle Siwelile
Mthethwa, Jabulisile (with distinction)
Ngwenya, Siphamandla Mc Donald (with distinction)
Notten, Nicholas (with distinction)
Ragunandan, Shiksha
Ramoshaba, Lethabo (with distinction)
Sallah, Aminata Yandeh
Samodien, Kauthar (with distinction)
Sekhwama, Masindi (with distinction)
Shangase, Valentine Amanda (with distinction)
Sidla, Siyavuya
Stofberg, Anronel (with distinction)
Tjale, Palesa Christabela (with distinction)
Tlomatsane, Moratoa Hunadi (with distinction)
Westwood, Jessica (with distinction)
Yila, Rodet-William (with distinction)

DEGREE OF MASTER OF SCIENCE IN OCCUPATIONAL THERAPY

Wicht, Minkateko Lenin (with distinction)

DEGREE OF MASTER OF SCIENCE IN OCCUPATIONAL THERAPY

Cilliers, Nicola Miré (with distinction in the dissertation)
Danster, Dylan (with distinction in the dissertation)
Folly, Akouvi Anna
Shumane, Bongisa Siyasanga

DEGREE OF MASTER OF SCIENCE IN PHYSIOTHERAPY

Vearey, Gillion

DEGREE OF MASTER OF SCIENCE IN SPEECH-LANGUAGE PATHOLOGY

Meyer, Cecilia

DEGREE OF DOCTOR OF PHILOSOPHY

Abdelgawad, Noha
Thesis Title: *Addressing challenges in the treatment of tuberculosis and tuberculosis meningitis: a pharmacometric approach*

Noha Abdelgawad completed her BSc and MSc qualification in pharmaceutical sciences at Helwan University, Egypt, and began full-time study towards her PhD in 2019.

Noha Abdelgawad's thesis applies pharmacometric modelling to address challengesin tuberculosis (TB) and TB meningitis (TBM) treatment. She developed a model-based methodology to monitor and evaluate adherence. She also investigated the pharmacokinetics of rifampicin, isoniazid, and pyrazinamide in hospitalised patients versus outpatients with TB; finding that hospitalised patients do not have reduced drug exposures. She characterised the pharmacokinetics of rifampicin and linezolid in plasma and the central nervous system, revealing that rifampicin's cerebrospinal fluid (CSF) distribution is ~5% in both children and adults, while linezolid reaches ~32% in adults. She provided proof-of-concept that rifampicin penetrates brain tissue based on interpreting data obtained from microdialysis. These findings offer a useful platform for optimising safer, more effective TB and TBM treatment and prevention strategies.

Supervisor: Professor P Denti (Medicine)
Co-supervisor: Dr K Gausi (Medicine)

Abrahams, Toni
Thesis Title: *Considerations in the development and organisation of public and non-profit respite care services for persons with intellectual disability in South Africa: A mixed method study*

Toni Abrahams holds a BA through UNISA, and BA (Hons) and MPsych (Clinical Psychology) degrees from UWC. She is a jointly-appointed psychologist for the Western Cape Department of Health and Senior Lecturer in the department at UCT. She commenced part-time PHD study in 2020.

Toni Abrahams' thesis explores ways to improve respite care (RC) services for persons with intellectual disability (ID) in South Africa, focusing on the public and non-profit sectors. She argues that persons with ID are entitled to RC services that meet their needs. Drawing on the Health System Dynamics and Evans' model of RC, she reviews global RC practices, examines relevant South African policies, surveys national RC services, and conducts interviews with caregivers, persons with ID, service providers, and key informants in the social, disability, and health sectors. Integrating these findings, she recommends how RC should be organised to support persons with ID and their families, who currently lack adequate support. She concludes that affordable, accessible, and equitable RC services are urgently needed. Achieving this requires state prioritisation, increased funding, efficient resource use, and a rights-based approach that adapts existing service principles to enhance the health and wellbeing of this population.

Supervisor: Professor S Kleintjes (Psychiatry and Mental Health)

Aldera, Alessandro Pietro
Thesis Title: *Investigating the clinicopathological spectrum and associated genetics of colorectal carcinoma in young (<60 years of age) patients in the Western Cape Province*

Alessandro Aldera holds an MBChB and MMed degree in Anatomical Pathology from UCT. He qualified as a specialist Anatomical Pathologist in 2019 and has been in private practice since 2020. He enrolled for his part-time PhD at UCT in 2022.

Alessandro Aldera's thesis characterises the clinicopathological and molecular features of over 200 colorectal carcinoma (CRC) resection specimens. He performed next generation sequencing (NGS) on mismatch repair deficient

(dMMR) cases and identified a broad spectrum of mismatch repair (MMR) gene variants, implying that NGS is needed for Lynch syndrome screening. Furthermore, he investigated the ability of a deep learning model to predict dMMR in this ethnically heterogenous cohort, and found that, with calibration, up to 45% of cases could be excluded from costly further downstream testing. He went on to investigate the MMR proficient (pMMR) cohort with whole exome sequencing and found important differences in the frequency of driver genes and key signalling pathways. In addition, he identified *FAT4* and *TET2* as potential novel driver genes in CRC in sub-Saharan Africa. Overall, these findings will inform future screening programs and may have implications for personalised treatment of CRC in the region.

Supervisor: Emeritus Professor R Ramesar (Pathology)
Co-supervisors: Professor K Pillay (Pathology); Associate Professor A Boutall (Surgery)

Bango, Funeka
Thesis Title: *The economics of school-based sexual and reproductive health education interventions*

Funeka Bango holds an MBChB from the University of the Free State and an MPH from UCT. She joined the PhD programme in 2018. Before this, she worked in academia and the public and private health sectors to support the response to the HIV epidemic.

Funeka Bango's thesis assessed the economic costs of adolescent sexual and reproductive health services and evaluated the potential value of a school-based sexual and reproductive health education intervention targeted at adolescent girls in South Africa. Her work has advanced the understanding of health services costs in this field and the cost of outcomes associated with interventions that aim to promote behavioural change. The results of this work, with significant implications for decision-making in South Africa, promise to support policymakers and health professionals to make informed decisions about allocating scarce resources. Her research is expected to influence the development of methods for assessing the value of multisectoral school-based sexual and reproductive health education interventions.

Supervisor: Professor S Cleary (Public Health)
Co-supervisor: Professor L-G Bekker (Medicine)

Bani Odeh, Abed Alra'oof Mohamad Saleem
Thesis Title: *Developing contextual quality standards for emergency departments in Palestine*

Abed Bani Odeh completed his undergraduate degree in Laboratory Medicine at An-Najah National University in 1999 and earned a Master's degree in clinical laboratory science at Birzeit University in 2009, both in Palestine. He began his PhD studies at UCT in 2021.

Abed Bani Odeh's thesis focuses on improving the quality of care in Palestinian emergency departments by developing context-specific quality standards. Using a multi-method approach, the study was conducted in three stages: identifying relevant quality standards, validating them with expert input, and exploring their feasible implementation. The research highlights how tailored quality standards can enhance patient safety and improve emergency care delivery. These findings are particularly relevant for healthcare systems in Palestine and other low- and middle-income countries facing similar challenges, offering a practical framework to strengthen emergency services through locally adapted quality improvement strategies.

Supervisor: Associate Professor W Stassen (Family, Community, and Emergency Care)
Co-supervisors: Professor M Hamdan (Health Policy and Management, Al-Quds University); Professor L Wallis (Emergency Care, World Health Organization)

Beutel, Anita
Thesis Title: *An investigation of the rehabilitation needs, development, and preliminary outcomes of an education and exercise self-management intervention for breast cancer survivors*

Anita Beutel completed her B.Sc. in Physiotherapy at the University of the Witwatersrand in 2003. She joined UCT to complete an MPhil in Sports Physiotherapy in 2013 and commenced full-time study towards her PhD degree in 2018.

Anita Beutel's thesis investigates the experience of physical long-term side effects (LTSEs) of breast cancer treatment such as pain and cancer-related fatigue, and the rehabilitation needs of survivors accessing a public healthcare facility in South Africa. Results demonstrate that LTSEs affect the daily lives and the health-related quality of life (HRQoL) of survivors, and that LTSEs are unaddressed by the standard of care. She went on to conduct a systematic review to determine the effectiveness of self-management interventions including an exercise component. The results of the former two studies allowed her to develop a resource-efficient self-management intervention for South African breast cancer survivors, using published intervention development guidelines. Finally, she demonstrated the feasibility, safety, and potential effectiveness of the newly developed intervention to improve commonly occurring LTSEs, HRQoL, self-efficacy and physical activity. The findings will be useful for the implementation of breast cancer rehabilitation interventions in low- and middle-income countries.

Supervisor: Emerita Associate Professor D Shamley (Human Biology)
Co-supervisors: Associate Professor T Burgess (Health and Rehabilitation Sciences); Associate Professor N Naidoo (Health and Rehabilitation Sciences)

Budree, Shrish
Thesis Title: *The association of early childhood nutrition and growth with the intestinal microbiome and pneumonia*

Shrish Budree is a Fellow of the College of Paediatricians, with an MBChB (UCT), a diploma in child health, and a subspecialty Paediatric Gastroenterology certificate (Colleges of Medicine, South Africa). During his PhD, he conducted microbiome research at Harvard University utilizing samples from the South African Drakenstein Child Health Study.

Shrish Budree's thesis focuses on the determinants of early life nutrition, and the role of the intestinal microbiome in nutritional and respiratory disease in children. Malnutrition and childhood pneumonia are significant global health concerns and contributors to mortality in children under 5 years. He investigates the determinants of growth, showing a high prevalence of malnutrition, and that birth weight was a major determinant of subsequent growth. He evaluates feeding practices finding low rates of exclusive breastfeeding and high consumption of inappropriate foods during infancy. He evaluates the composition of the microbiome in children with stunting and pneumonia, finding significant disruption in stunted compared to healthy children and a disrupted microbiome during and prior to pneumonia. These novel findings illustrate the role of nutrition and the microbiome in child health, especially in low-and-middle income settings and may contribute to development of novel microbiome therapies.

Supervisor: Professor H Zar
(Paediatrics and Child Health)
Co-supervisor: Professor M Nicol
(Pathology)

Callard, Beatrix
Thesis Title: *How can perinatal mortality recording and reporting be optimised in the maternity departments of the Khomas region, Namibia?*

Beatrix Callard completed her undergraduate nursing diploma in Namibia, followed by a Postgraduate Diploma and a MNCN in Child Nursing at UCT. She began full-time study towards her PhD in 2022 with the Children's Nursing Development Unit in the Department of Paediatrics and Child Health.

Beatrix Callard's thesis explores opportunities for optimising existing practices around recording stillbirths and neonatal deaths at facility level and reporting these to district level. Namibia's confidential enquiry into maternal and perinatal deaths highlighted major data discrepancies between different reporting platforms. The literature review, together with field observations, process mapping, and matching more than 7,500 birth and death events across three reporting platforms informed an optimisation strategy at one participating facility to improve the data quality of perinatal events reported upline. Findings suggest that staffing, skills, and systems related factors influenced the quality of recording at source. Small, but feasible changes in data capturing methods at ward level facilitate a reduction in recording errors as well as improved matching of birth and death events across all three data sets. Facility-based recording mechanisms and national data relating to perinatal mortality in Namibia must be reevaluated based on these findings.

Supervisor: Associate Professor N North
(Paediatrics and Child Health)
Co-supervisor: Professor B Morrow
(Paediatrics and Child Health)

Chabala, Chishala
Thesis Title: *Strategies for optimising TB-HIV co-treatment in children and adolescents with drug-susceptible tuberculosis on rifampicin-based standard regimens*

Chishala Chabala is a medical graduate with a Master of Medicine in Paediatrics and Child Health from the University of Zambia and a Master of Science in Clinical Trials from the London School of Hygiene and Tropical Medicine.

Chishala Chabala's thesis examines ways to improve treatment for children with both HIV and tuberculosis. Medicines used to treat tuberculosis, especially rifampicin, can interfere with HIV medicines, making it necessary to adjust one or both treatments to work effectively. In Africa, where drug options are limited, this becomes challenging. The research first examines whether current tuberculosis drug doses for children are adequate and then explores ways to adjust the doses of two HIV medicines when used with rifampicin: lopinavir/ritonavir (an older, commonly used drug) and tenofovir alafenamide (a newer drug). The aim of modifying the HIV medicines was to overcome the interference caused by the tuberculosis drugs. Finally, the thesis looks at how well children taking both HIV and tuberculosis medicines respond to their treatments. The findings provide insights for improving care for children with these two conditions, especially in African settings where HIV and tuberculosis often occur together.

Supervisor: Professor H McIlleron
(Medicine)

Chisholm, Briony Sue
Thesis Title: *Designing and testing a solution to fill ART knowledge gaps at primary healthcare level: WhatsApp-based microlearning*

Briony Chisholm completed her B.Pharm at Rhodes University in 1996 and a Postgraduate Diploma in HIV/TB Management at UCT in 2019. She started her MSc in 2020, upgrading to a PhD (2022). She has worked at the Medicines Information Centre/National HIV and

TB Healthcare Worker Hotline (Clinical Pharmacology) since 1998.

Briony Chisholm's thesis reports on the gaps in healthcare worker (HCW) knowledge of important recommendations in the clinical guidelines, revealed by her online survey of 1950 HCWs. As a result, she designed a WhatsApp-based training intervention – 10-minute, case-based lessons in 'live' WhatsApp groups – and tested it in 50 predominantly rural public health facilities in the Eastern Cape. Her results show that the intervention was highly acceptable, feasible and effective in improving HCW knowledge and patient care. This method of training could be used to overcome the infrastructural, geographic and human resource challenges associated with the vital ongoing training of HCWs.

Supervisor: Professor C Orrell (Medicine)
Co-supervisor: Professor M Blockman (Medicine)

Correia, Arron Taylor Lund
Thesis Title: *Sleep under stress: the complex web of fear, hypervigilance and mental health in a low socioeconomic status community in South Africa*

Arron Correia holds a BSc (Genetics and Biochemistry) (2018) and a BSc (Med) Honours (Exercise Science) (2019, first class pass) from UCT. After upgrading from her Masters in 2022, she began full-time study towards her PhD. She has also worked as a sleep consultant for Sleep Science since 2020.

Arron Correia's thesis explores relationships between sleep, autonomic nervous system regulation and mental health in African descent adults living in a low-income, high-crime South African community. Objective sleep measures confirm long (>9h) but fragmented sleep; one-on-one interviews reveal significant fear for safety at night; 24h heart rate variability measures demonstrate dampened diurnal variation with sympathetic dominance during both wake and sleep, indicative of chronic stress; and questionnaires suggest a significant proportion of participants experience symptoms of depression, anxiety and post-traumatic stress disorder, none of which are treated. Chronic fear, driven by neighbourhood safety at night, appears to result in nocturnal hypervigilance and impaired sleep quality. Arron Correia proposes a theory of Vigilance-Sleep trade-off, whereby heightened nocturnal vigilance increases perceptions of safety, but at the expense of good quality sleep, a key determinant of optimal mental health. Thus, systemic barriers to restorative sleep in this community may perpetuate mental health disparities.

Supervisor: Associate Professor DE Rae (Physiology)
Co-supervisors: Associate Professor M Lipinska (Psychology); Dr L Rauch (Physiology); Associate Professor LC Roden (Coventry University)

Dave, Nicola
Thesis Title: *The spectrum of HIV-related kidney disease in South Africa*

Nicola Dave completed a BMedSc (1997) and MBBS with Honours (2001) at the University of Sydney. She became a Fellow of the College of Physicians South Africa in 2008 and earned a Certificate in Nephrology (2011). She is currently a consultant nephrologist and Head of Division at Groote Schuur Hospital.

Nicola Dave's thesis explores the changing patterns of kidney disease in people living with HIV. Her research, based on four studies, investigates the effects of antiretroviral therapy (ART) rollout regimens, the addition of corticosteroids as adjuvant therapy for HIV associated nephropathy, HIV/tuberculosis (TB) co-infection, and kidney transplantation in HIV positive donors to HIV positive recipients. By analyzing kidney biopsy histology, she addresses critical knowledge gaps to improve the understanding and treatment of HIV-related kidney diseases, contributing to better health outcomes in regions heavily affected by HIV and TB.

Supervisor: Emeritus Professor B Rayner (Medicine)
Co-supervisor: Professor F Post (Inflammation Biology, School of Immunology and Microbial Sciences, and a Consultant Physician at King's College Hospital)

Defo, Joel
Thesis Title: *Leveraging gene/subnetwork meta-analysis to recover signal and deconvolute the interactions between genes in the risk of genetic disorders*

Joel Defo completed his BSc in Mathematics at the University in Yaounde 1 in Cameroon; a BSc (Hons) in Statistics and Population Studies at UWC and an MSc (Med) degree in Bioinformatics at UCT. He joined the Human Genetics Division at UCT in 2018 for his PhD studies.

Joel Defo's thesis proposes a novel framework that integrates Genome-Wide Association Studies (GWAS) signals across multiple studies, and incorporates protein-protein interaction networks for association mapping at gene and pathway/subnetwork levels. This framework was applied to seven European bipolar disorder cohorts, detecting seven genes and identifying a significant subnetwork. Additionally, the method was employed to explore the genetic overlap between suicide and a range psychiatric disorders, revealing an overlapping genetic architecture. The genetic overlap between suicidality and subcortical brain volume was then investigated, identifying potentially significant genes, hub genes with small effects, and a network of interacting genes. Enrichment analysis of network genes revealed pathways associated with signaling, immune function, and nervous system development. This thesis provides new insights into functional and molecular mechanisms emerging from a gene/subnetwork-centric approach and identifies novel candidate genes, which are also appropriate for drug targets and drug re-purposing.

Supervisor: Emeritus Professor R Ramesar (Pathology)
Co-supervisor: Dr D Awany (Pathology)

Diango, Ken Ngoy
Thesis Title: *Adapting a community first aid responder programme to increase out-of-hospital capacity in Kinshasa, Democratic Republic of Congo*

Ken Diango completed his Bachelor of Medicine in 2002 at the University of Lubumbashi in the Democratic Republic of Congo (DRC), and his Master of Medicine in Emergency Medicine at UCT in 2018 before pursuing his PhD in 2020.

Ken Diango's thesis aims to adapt a country-specific Community First Aid Responder programme for the DRC as an initial intervention to increase out-of-hospital emergency care (OHEC) capacity. After systematically characterising the components of the DRC emergency care system and identifying gaps, he elicited Kinshasa's community's unmet emergency care needs, setting the context in which a community-based intervention could represent a low-cost and effective initial solution to strengthen OHEC capacity. He then established the usefulness and acceptability of an adapted community first aid responder (CFAR) program and piloted the course as a small-scale feasibility study to ascertain adaptation to the context and outputs such as trained first responders' confidence and knowledge gains as well as skills proficiency. He shows that a comprehensively implemented tailored CFAR system could potentially enhance OHEC capacity in low-resource settings and likely impact outcomes.

Supervisor: Professor P Hodkinson (Family, Community and Emergency Care)
Co-supervisors: Dr C Cunningham (Public Health); Professor L Wallis (Emergency Care, World Health Organization); Professor E Mafuta (Kinshasa School of Public Health, University of Kinshasa)

Ekwan, Francis Uzu
Thesis Title: *Co-creating a culturally relevant programme for enabling participation of children with brain injury in Uganda (CEBU)*

Francis Ekwan completed his MSc Occupational therapy degree qualification at Zurich University of Applied Sciences in 2019 and began full time study towards his PhD at UCT in 2021.

Francis Ekwan's thesis aims to describe the Culturally Relevant Programme for Enabling Participation of Children with Brain Injury in Uganda (CEBU). Taking a participatory action research design, he co-created, with a group of health professionals (doctors, nurses, and therapists), caregivers, and children with brain injury, the Four-star Model for Enablement and Participation (FMEP) of children with brain injury in Uganda. This model offers a description and an explanation of the co-creation process as well as the consequences and limitations of the CEBU. He proposes Occupation Actualization (OA) philosophy, which assumes that there is a positive relationship between occupation scale, occupation score, and enablement within the guiding principles of the Four-star Model delivered through community connectedness at the African One Hospital. This study contributes towards the contextual understanding of occupational therapy in Uganda and recommends further research in implementing and evaluating the effectiveness of the Four-star Model for Enablement and Participation.

Supervisor: Associate Professor A Sonday (Health and Rehabilitation Sciences)
Co-supervisor: Associate Professor P Gretschel (Health and Rehabilitation Sciences)

Forshaw, Philippa
Thesis Title: T*owards an understanding of the relationship between sleep and cardiovascular disease risk in adults of African descent living in a low socioeconomic status community*

Philippa Forshaw holds a BSc (Genetics and Biochemistry) (2018) and a BSc (Med) Honours (Exercise Science) (2019) from UCT. After upgrading from her Masters in 2022, she began full-time study towards her PhD. Ms Forshaw has also worked as a sleep consultant for Sleep Science since 2020.

Philippa Forshaw's thesis explores relationships between sleep, nocturnal blood pressure and cardiovascular disease (CVD) risk in adults of African descent living in a low-income South African community. Despite an adequate sleep opportunity (>9h), this cohort's sleep was highly disturbed and erratically timed, with significant blood pressure non-dipping and nocturnal hypertension observed at night. Disturbed sleep was linked to poorer CVD outcomes, possibly through insufficient recovery of the cardiovascular system as evidenced by high blood pressure measured during sleep. Earlier timed sleep was also linked with worse CVD outcomes, suggesting a role for circadian misalignment in the pathway to CVD. Qualitative interviews revealed that adverse neighbourhood characteristics such as excessive noise, crime, violence, and alcohol consumption drive poor sleep quality. Through a Global South lens, this thesis proposes the term "Sleep Health Insecurity": societal circumstances in which inequitable access to healthy sleep, a basic human need, contributes to increased CVD risk.

Supervisor: Associate Professor DE Rae (Human Biology)
Co-supervisors: Associate Professor LC Roden (Coventry University, UK); Emerita Professor EV Lambert (Human Biology)

Fowler, Chantal Venetia
Thesis Title: *What are we missing? A qualitative exploration of sexual agency and the related behaviours of AGYW in two HIV interventions in South Africa*

Chantal Fowler obtained her B.Soc. Sci from UCT, Honours in Psychology from UNISA and Master's in Clinical Psychology from Stellenbosch in 2017. She is a registered clinical psychologist and has worked in private practice since 2017. She joined UCT in 2019 to pursue her PhD studies.

Chantal Fowler's thesis focusses on sustained HIV incidence in adolescent girls and young women (AGYW) in South Africa. Using two HIV interventions as a case study, she highlights ways that AGYW are taught by intervention implementers and their caregivers, to understand sex through a lens of warnings, potential risks and dangers. When engaging with peers however, AGYW speak about the more positive aspects of sex, such as it being fun and pleasurable, leaving them inclined to ignore the warnings issued by adults. This thesis ultimately argues against the limited view that young women who engage in sex are immoral risk takers, and for the inclusion of more positive messaging for AGYWs around sex and sexuality. If we are to support AGYWs to avoid potential risks, there is a need for more openness and communication around these issues.

Supervisor: Dr A Swartz (Public Health)
Co-supervisor: Dr Z Duby (Public Health)

Gage, Caleb Hanson
Thesis Title: *The development of integrated palliative care and emergency medical services in South Africa*

Caleb Gage completed his BTech degree at the University of Johannesburg and his MPhil degree at UCT before beginning his PhD studies at UCT in 2021. During his doctoral studies he worked as an emergency care practitioner and a paramedic programme coordinator in Johannesburg, South Africa.

Caleb Gage's thesis focuses on the integration of palliative care and Emergency Medical Services (EMS) in South Africa (SA). He begins by mapping current evidence on the topic and finds that while the integration of these services has been recommended, a lack of research exists, including in SA. He then investigates the extent of EMS involvement in situations requiring palliative care within SA, finding that EMS frequently encounter such situations. Next, he interviews palliative care providers, finding an overall positive perception of EMS use in palliative situations. He further interviews patients and family members with palliative needs and identifies their desires and reasons for using EMS. He uses findings from these studies to then inform an expert panel discussion in which integrative recommendations are developed and prioritised. Finally, he uses these findings and recommendations to develop a conceptual framework which assists in promoting EMS and palliative care integration.

Supervisor: Associate Professor W Stassen (Family, Community, and Emergency Care)
Co-supervisor: Emerita Associate Professor L Gwyther (Family, Community, and Emergency Care)

Gamieldien, Fadia
Thesis Title: *An exploration of recovery among persons with severe mental health conditions in South Africa*

Fadia Gamieldien completed her BSc and MSc in Occupational Therapy qualifications at UCT. She joined the Alan J Flisher Centre for Public Mental Health in 2018 for her PhD studies while also being employed as a senior clinical educator in the Division of Occupational Therapy at UCT.

Fadia Gamieldien's thesis explores the personal recovery experiences of individuals with severe mental health conditions (SMHCs) in low and middle-income countries (LMICs). She investigates the perspectives of diverse stakeholders on recovery from SMHCs in South Africa. She also investigates the psychometric properties of the Recovery Assessment Scale among 250 mental health service users in South Africa. Fadia Gamieldien further enriches her research by synthesising her findings into the Recovery Mandala, which outlines seven interconnected elements essential to recovery from SMHCs in South Africa: Collaborative Co-creation, Person-Centeredness, Hope and Empowerment, Social Network Utilization, Caregiver Involvement, Spirituality and Religion, and Employment. These elements underscore the relational and holistic aspects of recovery while emphasising the lived experiences of mental health service users.

Supervisor: Professor K Sorsdahl (Psychiatry and Mental Health)
Co-supervisors: Professor R Galvaan (Health and Rehabilitation Sciences); Professor B Myers-Franchi (Psychiatry and Mental Health)

Gebreyesus, Manna Semere
Thesis Title: *Pharmacometrics to characterize pharmacokinetics and optimize treatment in understudied populations*

Manna Semere Gebreyesus earned a Bachelor of Pharmacy degree from Asmara College of Health Sciences in Eritrea and an MPhil in Clinical Pharmacology from UCT. She worked as a pharmacist until joining the UCT pharmacometrics team as a Master's student in 2019, transitioning to a PhD in January 2021.

Manna Semere Gebreyesus' thesis focuses on using population pharmacokinetic modelling to optimise treatment in understudied populations, including pregnant women, children, and those from resource-limited settings. She studied drugs across various therapeutic areas: cefazolin for paediatric cardiac surgery with bypass, rifabutin for paediatric tuberculosis with antiretroviral therapy, esomeprazole for preterm preeclampsia, and enalaprilat in African patients with heart failure; examining the effect on drug concentrations of pregnancy, phenotype, age, body size, renal function, use of extracorporeal devices, and concomitant medications. Key findings include dose recommendations for cefazolin and rifabutin, characterisation of pregnancy-related changes in esomeprazole pharmacokinetics, and use of pharmacometric modelling to improve enalapril adherence monitoring. She showcases how modelling can leverage limited pharmacokinetic data by pooling it with historical data from studies in healthy participants. She advocates for including underrepresented populations in clinical research to ensure timely access to safe and effective treatments, whilst suggesting ways to make this achievable.

Supervisor: Professor P Denti (Medicine)
Co-supervisor: Dr R Wasmann (Medicine)

Griesel, Rulan
Thesis Title: *Addressing pharmacological questions about dolutegravir in an African population*

Rulan Griesel completed his MBChB qualification at University of Pretoria in 2008 and specialised in Clinical Pharmacology at UCT, graduating with an MMed in 2018. He became a full-time PhD student in 2019.

Rulan Griesel's thesis reports on key pharmacologic investigations of dolutegravir-based therapy among South Africans with HIV. He explores mechanisms for the greater weight gain observed with dolutegravir- versus efavirenz-based therapy, which was the standard of care. He shows that the weight gain differences are driven by the toxic effects of efavirenz, largely due to a genetic variant common in South Africans. He also explores mechanisms for the dolutegravir, and neuropsychiatric adverse events reported with dolutegravir use – he found little evidence of a concentration-response relationship. Finally, he explores the need for supplemental dolutegravir dosing when treating patients on rifampicin-based anti-tuberculosis therapy in a randomised controlled trial, showing that the supplemental dose may not be necessary. His findings on the safety of dolutegravir and potentially simplifying its use in people with tuberculosis support the widespread implementation of dolutegravir.

Supervisor: Emeritus Professor G Maartens (Medicine)
Co-supervisors: Associate Professor P Sinxadi (Medicine); Professor G Meintjes (Medicine)

Griffault,Dimitri Louis Jonathan
Thesis Title: *Structure/function analyses indicate novel roles for mycobacterial DnaQ homologs in genome maintenance*

Dimitri Griffault obtained BSc and master's qualifications from the Université de Poitiers in France before undertaking full-time study towards his PhD at UCT in May 2019.

Dimitri Griffault's thesis focuses on DNA replication and repair pathways in *Mycobacterium tuberculosis*, the bacterium which causes tuberculosis (TB), with a special interest in their potential role in the generation of genetic diversity through mutations. By analogy to model organisms such as *E. coli*, these pathways have traditionally been assumed to have similar function in mycobacteria. However, using a combination of bioinformatic and molecular microbiological approaches, his work establishes key differences in the composition, structure, and function of mycobacterial DNA proofreading and nucleotide excision repair pathways, reinforcing the need for systematic investigations of the mechanisms enabling adaptive mutagenesis in a major human pathogen.

Supervisor: Professor DF Warner (Pathology)
Co-supervisors: Dr M Mason (Pathology); Dr S Gessner (Pathology); Emerita Professor V Mizrahi (Pathology)

Hakuzimana, Alex
Thesis Title: *A critical assessment of the Rwandan health financing system: implications for health service utilisation*

Alex Hakuzimana holds a medical degree from the National University of Rwanda, an MBA from the Swiss Management Centre and an MPH from the Institute of Tropical Medicine in Antwerp, Belgium. He joined the Health Economics Division at UCT in 2016 for his PhD studies.

Alex Hakuzimana's thesis focuses on equity in using public health services in Rwanda. He starts by conducting a scoping review to gather evidence on the fragmentation in health financing systems. He uses a revised framework to study how and why Rwanda's health financing system is fragmented. He then uses data from the 2005/2006 and 2010/2011 Integrated Household Living Conditions Surveys and from the 2006 and 2009/2010 National Health Accounts to assess the distribution of benefits from public health care spending. He finds that, despite this fragmentation and contrary to findings from other studies, there was no pronounced inequality in public health services use during 2005/2006 and 2010/2011. He attributes this finding to Rwanda's major health sector reforms of the 2000s and recommends further similar studies with recent data to reflect the current reality.

Supervisor: Professor JE Ataguba (Public Health)
Co-supervisors: Dr A Obse (Public Health); Dr L Cunnama (Public Health)

Honwana, Frissiano Ernest
Thesis Title: *Application of dynamic prediction models for longitudinal biomarkers and clinical outcomes in low and middle-income settings*

Frissiano Honwana holds a BSc, BSc (Hons), and MSc in Statistics from the University of KwaZulu-Natal (UKZN). He joined the Division of Epidemiology and Biostatistics in the School of Public Health in 2018 and works in biostatistics in collaboration with epidemiological and clinical researchers at UCT and across South Africa.

Frissiano Honwana's thesis focuses on using dynamic prediction models to predict the risk of poor clinical outcomes using biomarkers in people living with chronic conditions. He investigates the challenges posed to the performance of these models by data limitations, where data quality and scope are limited. In addition to developing an extension of existing models to correctly model censored biomarker data, he challenges the assumption that dynamic prediction models always outperform standard prediction models by applying these models to routinely collected HIV viral load and HbA1c data from the South African National Health Laboratory Service. The results demonstrate the need for a balanced, conceptual approach to inform prediction models, highlighting the central role that data characteristics and biomarker features play in the performance of dynamic prediction models. These findings are fundamental to future applications of dynamic prediction models to enable recommendations for clinical care for people living with chronic diseases.

Supervisor: Professor L Myer (Public Health)

Co-supervisors: Professor M Lesosky (National Heart & Lung Institute, Imperial College London); Associate Professor F Gumedze (Statistical Sciences)

Isiagi, Moses
Thesis Title: *Pulmonary rehabilitation in Africa (community-driven citizen science approach): (a focus on COPD in low-resourced communities in South Africa)*

Moses Isiagi completed his BSc (Hons) in Medicine and MSc (Medicine), *summa cum laude* at UCT. Despite the challenges posed by the COVID-19 pandemic and funding / community access disruptions, he began his PhD studies in 2021, focusing on pulmonary rehabilitation in resource-limited African settings.

Moses Isiagi's thesis presents a novel three-pronged approach to implementing pulmonary rehabilitation (PR) for Chronic Obstructive Pulmonary Disease (COPD) in low-resourced and disadvantaged African settings. Firstly, through a systematic review, he identifies significant gaps in PR programs across Africa, finding no published studies comparing home-based and community-based PR delivery models in the region. Secondly, his survey of healthcare professionals from 23 countries reveals strong support for PR despite implementation challenges, with over 85% expressing confidence in its effectiveness. Finally, using an innovative and novel Citizen science approach in South Africa's Klipfontein health district, he uncovers limited community awareness of COPD and identifies key barriers to PR implementation. His research demonstrates that while traditional medical approaches have improved PR access, community-driven strategies involving healthcare staff, patients, and community members offer promising solutions for sustainable COPD management in African settings.

Supervisor: Professor R Van Zyl Smit (Medicine)
Co-supervisor: Dr KJ Okop (Medicine)

Ituen, Oluwakemi Adebukola
Thesis Title: *A longitudinal study on possible correlates that might explain the onset and progression of musculoskeletal symptoms in school-aged children with Generalized Joint Hypermobility*

Oluwakemi Ituen holds a BSc in Physiotherapy from the University of Ibadan, Nigeria and an MSc in Physiotherapy from UCT. She joined the Division of Physiotherapy at UCT for her PhD studies in 2020. She works as a physiotherapist at the University of Uyo Teaching Hospital, Nigeria.

Oluwakemi Ituen's thesis focuses on factors that precipitate the onset of musculoskeletal symptoms in children with Generalized Joint Hypermobility (GJH). She used a prospective study design to track 126 children, assessing their joint mobility using the Beighton scoring system. Additionally, she assessed children's quality of life and measured proprioception, dynamic balance and functional strength at one-year intervals. The children with GJH remained asymptomatic and there were no significant differences between children with and without GJH in proprioception, dynamic balance and functional strength. Based on her findings, she recommends a higher Beighton cut-off point (≥7) for defining GJH in children and incorporating goniometric measurement into the Beighton scoring system to provide more detailed assessments of joint mobility.

Supervisor: Associate Professor G Ferguson (Health and Rehabilitation Sciences)
Co-supervisors: Professor B Smits-Engelsman (Health and Rehabilitation Sciences) and (Faculty of Health Sciences, North-West University); Associate Professor CD Akwaowo (Community Medicine, University of Uyo Teaching Hospital); Emeritus Professor J Duysens (Motor Control Laboratory, Movement Control and Neuroplasticity Research Group KU Leuven)

Jacobson, Sara Ilyse
Thesis Title: *"There is a human being there": A critical pedagogic approach to shift perceptions of patient worthiness in South Africa*

Sara Jacobson completed a Bachelor of Arts in African American Studies, a Bachelor of Science in Nursing, a Master of Public Health in International Health and Development, and a Graduate Certificate in Instructional Systems Development.

Sara Jacobson's thesis explores why perceptions of patient unworthiness persist among clinicians in South Africa. This study convened a group of nurses and cross-border migrants – a socially marginalised population - who engaged in dialogue and critical reflection over one year. Findings indicate that worthiness determinations on the part of clinicians, support staff, and patients from the general population justify dehumanising actions that harm socially marginalised patients, maintain social and institutional hierarchies, and preserve the unequal status quo. Critical reflection on problematic assumptions, motivations, and beliefs through dialogue provides an alternative to traditional in-service training and holds promise as a strategy to deter worthiness determinations and counter the motive to justify unequal systems.

Supervisor: Dr R Weiss (Health Sciences Education)
Co-supervisor: Emeritus Professor S Reid (Primary Health Care)

John, Jeff Thadathilankal
Thesis Title: *Mitigation of intrarenal pressure in retrograde intrarenal surgery with a novel isoprenaline eluting guidewire*

Jeff John, a UCT alumnus, is a consultant urologist and Head of the Division of Urology at Frere Hospital in East London. He is also the program director of urology training at the East London Walter Sisulu University campus and an honorary lecturer in the Division of Urology at UCT.

Jeff John's thesis, which has been presented in many forms at several prominent international congresses, describes the design, development, in-

vitro release studies and the first animal studies of a novel isoprenaline-eluting guidewire (IsoWire) to improve the surgical management of kidney stones. The study concludes that the IsoWire, which releases 7.5 µg of isoprenaline, is both safe and effective in lowering intrarenal pressure in a porcine model. To continue this unprecedented research forward, Jeff has applied to the South African Health Products Regulatory Authority to conduct a human safety and efficacy trial. In addition to the IsoWire, this thesis details how he developed and validated a retrograde intrarenal surgery (RIRS) trainer. This low-cost, portable, long-lasting, and reusable trainer, which was initially developed to define the procedural steps for his IsoWire studies, is now being distributed to every academic unit in the country and many other centres on the continent.

Supervisor: Professor L-A Kaestner (Surgery)
Co-supervisors: Professor J Lazarus (Surgery); Professor G Fieggen (Surgery)

Kachambwa, Paidamoyo Farai
Thesis Title: *Exploring factors influencing competencies of scientific laboratory technicians and recommendations for improvement: A case study of a Scientific Laboratory based in a resource constraint setting*

Paidamoyo Kachambwa holds a BSc in Computer Science and Microbiology, BMedScHons, and MSc Med in Bioinformatics from UCT. She started her PhD in 2019 and pursued it while working full time in various roles from facilitating omics research at a CRO to implementing precision medicine services in Private Healthcare.

Paidamoyo Kachambwa's thesis explores factors influencing technicians' competencies. Competency affects the quality of outputs which attract funding and business. Technicians therefore complete core functions that directly affect outputs. The institution in this case study, and similar companies in literature, have shown poor outputs. There are limited studies exploring technicians' perspectives of factors affecting undertaking diverse projects in resource constraint setting. Key findings of this study relate to senior management's influence over emerged themes. Although the senior managers valued and understood the influence, they were less aware of underlying interactions that result in adverse effects for both the staff and business. Recommendations are to illuminate on the latter by training and raising awareness at different hierarchical levels; in particular, for technicians and managers to differentiate between incompetence versus barriers in the environment. In Africa and abroad, the recommendations can be utilised in similar scientific laboratories and aids in developing contextual leadership.

Supervisor: Emerita Associate Professor D Shamley (Human Biology)
Co-supervisors: Dr E Badenhorst (Health Sciences Education); Dr A Abrahams (Human Biology); Dr D Sims (Medical Education, University of Oxford)

Kander, Veena
Thesis Tile: *Paediatric electroencephalography in sub-Saharan Africa: access to effective services, training capacity and applicability of teaching modules*

Veena Kander completed her BTech and MTech (neurophysiology) at CUT and began part-time study towards her PhD in 2018.

Veena Kander's thesis helps to address the shortage of skilled paediatric electroencephalography (EEG) interpreters across sub-Saharan Africa (SSA). She investigates this through four projects; firstly, by looking into published reports on EEG training programs accessible to non-specialist clinicians worldwide, secondly exploring who performs and interprets EEG studies in SSA, thirdly the usefulness of an online paediatric EEG training handbook, which she had developed, and lastly expert opinions on training non-epilepsy specialists in paediatric EEG interpretation. This overview highlights the importance of the work done here in developing a pedagogical model for paediatric EEG training and interpretation in Africa for African patients to benefit. This model would further aid children living with epilepsy worldwide, beyond sub-Saharan Africa through to other low income and low middle income countries.

Supervisor: Professor JM Wilmshurst (Medicine)
Co-supervisor: Professor J Hardman (Education)

Kengo, Allan
Thesis Title: *Nonlinear mixed-effects modeling of drug-drug interactions between antiretroviral therapy and tuberculosis treatment*

Allan Kengo holds a Master's in pharmacology from Makerere University and joined UCT's Pharmacometrics group for his PhD in 2021.

Allan Kengo's research investigates how HIV and TB drugs interact when used together, ensuring treatments remain safe and effective. Using mathematical modelling and clinical data from Uganda and South Africa, his thesis identifies key challenges and solutions. He confirmed that doubling the dosing frequency of dolutegravir, an HIV drug, maintained effective levels when combined with high-dose rifampicin. In the same study, he also discovered that generic high-dose rifampicin, a crucial TB drug, delivered lower-than-expected drug levels due to poor bioavailability. He also characterised the pharmacokinetics of ritonavir-boosted atazanavir, showing that twice-daily dosing counteracts rifampicin's impact, restoring safe drug concentrations. Finally, he demonstrated that clofazimine, used for drug-resistant TB, poses minimal risk of harmful drug interactions with other TB medications. His work highlights the value of advanced modelling techniques for optimizing drug dose and improving treatment outcomes for people living with both HIV and TB.

Supervisor: Professor P Denti (Medicine)
Co-supervisor: Dr JE Resendiz Galvan (Medicine)

Levin, Ruth
Thesis Title: *Interoceptive awareness and emotion regulation through a theatre-based relational health intervention: a heart rate variability study*

Ruth Levin holds an MA degree in Theatre and Performance (UCT). Prior to starting her PhD in 2018, she was a theatre director and educator for 15 years before moving into the corporate and public sectors. She works in private practice as a South African Network of Arts Therapists member.

Ruth Levin's thesis tests whether a new intervention, the Theatre-Based Relational Health intervention (TBRH), develops interoceptive awareness (IAw) and emotion regulation (ER) in stressful relationships to improve relational health. Novel outcomes show significant associations between changes in heart rate variability (HRV) and post-questionnaire changes in the Multidimensional Assessment of Interoceptive Awareness (MAIA-2) and Five Facet Mindfulness Questionnaire (FFMQ) show interoceptive awareness and present moment attention are reflected in the heart. interoceptive awareness and emotion regulation are further verified through the MAIA-2, FFMQ and SCS. The qualitative findings substantiate the changes in interoceptive awareness and emotion regulation and give testimony to positive changes in relational health. The outcomes in this study extend extant research on mindfulness-based interventions that develop interoceptive awareness and emotion regulation. Moreover, this study introduces a new behavioural intervention in the field of contemplative science to improve stressful relationships.

Supervisor: Associate Professor A Marais (Psychiatry and Mental Health)
Co-supervisors: Dr L Rauch (Human Biology); Associate Professor S Rabie (Psychiatry and Mental Health)

Lisasi, Esther David
Thesis Title: *Moving from pediatric to adolescent HIV care in Northern Tanzania: exploring transition services, perceptions and self-care during early adolescence*

Esther David Lisasi holds a Doctor of Medicine degree from the University of Dar es Salaam, Tanzania and an MPH from the Royal Tropical Institute, the Netherlands. She worked in Tanzanian HIV and AIDS care and prevention programmes before joining UCT in 2014 for her PhD studies.

Esther Lisasi's thesis examines transition from paediatric to adolescent care of adolescents with HIV in Tanzania to identify factors that may affect this transition and its effects on adolescent self-care. In her research, she examines the transition process and experience of adolescents and their caregivers at two hospitals. Her findings show that there are well established transition practices, however, the lack of protocols/ national guidelines and shortage of human resources were limiting factors in the provision of evidence-informed transition practices. Disclosure of HIV status, medication adherence, virologic evaluation, psychosocial maturity, mental health, and caregiver involvement all affected the transition. After moving from a paediatric to an adolescent clinic, adolescents' self-care responsibilities may change. The study emphasises involving adolescents and caregivers in transition, closely monitoring adolescents as they transition and supporting adolescents in taking on self-care responsibilities. Carers should also be supported to help teens take on these responsibilities.

Supervisor: Professor M-A Davies (Public Health and Family Medicine)
Co-supervisors: Professor CJ Colvin (Public Health Sciences, University of Virginia); Professor BT Mmbaga (Kilimanjaro Christian Medical Centre); Professor KJ Sikkema (Mailman School of Public Health, Columbia University)

Maepa, Setjie Welcome
Thesis Title: *Development of 3D multicellular liver organoids derived from human induced pluripotent stem cells to model antiretroviral therapy induced liver injury*

Setjie Maepa holds a BSc in Medical Sciences from University of Limpopo. He completed his Master of Pathology in Chemical Pathology from Stellenbosch University in 2018 and began full-time study towards his PhD at UCT in 2019.

Setjie Maepa's thesis focuses on developing 3D multicellular liver organoids derived from human induced pluripotent stem cells (iPSCs) to model antiretroviral therapy (ART)- induced liver injury. He first developed and optimised a reproducible protocol for generating a 3D multicellular liver organoid (HLO) model from iPSCs and confirmed the presence of main functional and supportive cell lineages. Through discovery mass spectrometry-based proteomics, he elucidated the protein dynamics and molecular mechanisms of ART, combined ART and antituberculosis (A+TB) drugs and the anti-diabetic drug (Troglitazone) induced liver injury in treated-HLO. Quantitative proteomic analysis showed differentially expressed proteins (DEPs) in drug treated-HLO relative to the control group. Functional enrichment analysis revealed DEPs in ART-HLO, A+TB-HLO and TGZ-HLO groups were associated with immunity, inflammation, oxidative stress, cell proliferation, neutrophil extracellular traps formation, and ATP-dependent chromatin remodelling and necroptosis. These results demonstrate that 3D multicellular liver organoids may be a tractable model for drug cytotoxicity testing.

Supervisor: Associate Professor H Ndlovu (Integrative Biomedical Sciences)

Magagoum, Suzanne Hippolite
Thesis Title: *In vitro comparison of cytotoxicity effect of different recombinant immunotherapeutics for selective killing of melanotransferrin-expressing tumor cell lines*

Suzanne Magagoum completed her BA and MA degrees at the University of Yaoundé 1, Cameroon. She joined the Medical Biotechnology and Immunotherapy Research Unit, Department of Integrative Biomedical Sciences at UCT in September 2021 for her PhD studies.

Suzanne Magagoum's thesis focuses on generating novel recombinant targeted therapeutics against melanotransferrin (MTf)-expressing tumor cells. She further investigates the expression of MTf antigen on Triple-Negative Breast Cancer (TNBC) cell lines, which could be a promising marker for its immunodiagnosis and -therapy. She generates recombinant fusion proteins bearing the variable fragments of an anti-MTf antibody as the delivery system of a toxic payload. She determines the MTf-expression on melanoma and TNBC cell lines, and she evaluates the cytotoxicity of an auristatin F (AURIF)-based Antibody-Drug Conjugate (ADC), Near-Infrared-PhotoimmunoTherapeutic (NIR-PIT), and *Pseudomonas* exotoxin A-based recombinant immunotoxin towards those cells. She finds that: (1) TNBC cells express MTf antigen at a higher level; (2) all the recombinant immunotherapeutics generated kill MTf-positive melanoma and TNBC cell lines in a dose-dependent manner while not affecting MTf-negative cells. Those findings demonstrate proof-of-concept of the development of next-generation targeted therapies against MTf-positive cell lines.

Supervisor: Professor Dr S Barth (Integrative Biomedical Sciences)

Makasa, Innocent
Thesis Title: *Forensic DNA population study to establish autosomal-, Y- and X-STR allele frequencies for the Zambian population*

Innocent Makasa holds a BSc in Biomedical Sciences from the University of Zambia, and an MPhil in Biomedical Forensic Science from UCT. He began full-time study towards his PhD in 2021.

Innocent Makasa's thesis establishes the first forensic DNA allelic frequency data in Zambia, representing the country's nine major ethnolinguistic groups. His thesis focused on the analysis of "short tandem repeat" markers on the autosomal and sex chromosomes from DNA samples collected from 1500 unrelated volunteers. He utilised the resultant dataset to successfully calculate match statistics for DNA evidence within an authentic forensic case in Zambia – a first-time achievement for the country. The population data revealed significant genetic diversity within Zambian ethnolinguistic groups. These included highly polymorphic markers that are particularly informative in forensic casework involving sexual violence. Abundant samples had DNA variants that were uncommon in global populations, some of which were likely to be completely novel. Overall, the DNA data generated in this study are extremely important in human identification efforts and ensuring justice for victims and families of sexual violence, missing persons and mass disasters in Zambia.

Supervisor: Associate Professor L Royle (Pathology)
Co-supervisor: Dr R Handema (Biochemistry, University College of Ndola)

Maluleke, Vutlhari Absalom
Thesis Title: *In silico fluid-structure interaction study of the dispersion of injectable hydrogels in acutely infarcted myocardium*

Vutlhari Maluleke holds a Bachelor of Technology in Mechanical Engineering and a Master of Technology in Mechanical Engineering from the Cape Peninsula University of Technology.

Vutlhari Maluleke's thesis investigates computationally the fluid and tissue mechanics involved in the delivery of hydrogels into infarcted myocardium for the treatment of myocardial infarction, also known as a heart attack. Using μCT and confocal microscopy images, he developed multi-scale computational finite element and fluid dynamics models of a biventricular rat heart geometry and cardiac tissue with interstitial fluid spaces. Coupling the structural and fluid models, he assesses the hydrogel flow in interstitial tissue spaces during a needle injection and the displacement of injected hydrogel by myocardial deformation during a cardiac pump cycle. The models and findings contribute to refining biomaterial design and optimizing injection techniques for treatment of myocardial infarction and prevention of infarct-related heart failure.

Supervisor: Professor T Franz (Human Biology)
Co-supervisors: Professor MN Ngoepe (Mechanical Engineering); Dr KL Sack (Human Biology); Professor NH Davies (Surgery)

Matthews, Ryan Ernest
Thesis Title: *Shaping the undergraduate pain management curriculum in prehospital emergency care education: toward a curriculum and competency framework for South Africa*

Ryan Matthews holds a Bachelor of Technology degree in Emergency Medical Care from the University of Johannesburg and completed an MPhil degree in Clinical Emergency Care at UCT in 2016. He is currently an academic staff member at the Cape Peninsula University of Technology.

Ryan Matthews' thesis develops a competency framework to address suboptimal management of pain in Prehospital Emergency Care. He also developed curriculum implementation recommendations for South African Prehospital Emergency Care education. The study uses narrative analysis, scoping reviews, and semi-structured interviews to derive an initial competency framework. Content

analysis of contemporary curricula identified gaps, and an expert panel refined the framework and suggested ten implementation recommendations. The findings highlight fragmented curricula and propose seven competency domains: Clinical Pain Praxis, Foundational Sciences, Practitioner Wellness and Safety, Communication and Collaboration, Duty of Care and Predisposition for Caring, Ethical Practice, and Scholarship. The expert panel recommended a 'spiral' curriculum, emphasising the multidimensional nature of pain and mentorship. The study's output is an evidence-based framework for improving pain management education, adaptable for local contexts and micro-credentialing, aiming for quality and equity in pain management in prehospital contexts.

Supervisor: Associate Professor P Hodkinson (Family, Community and Emergency Care)
Co-supervisor: Dr N Naidoo (Paramedicine, Western Sydney University)

Mbhele, Sphilile
Thesis Title: *A descriptive study investigating functional balance in deaf school-aged children: towards the adaptation and validation of subjective questionnaires*

Sphilile Mbhele holds B.Comm Pathology and M. Audiology qualifications from UKZN. She joined the UCT PhD programme in June 2021.

Sphilile Mbhele's thesis focuses on the impact of balance disorders in the lives of children who are deaf. She initially translates two self-assessment questionnaires from English to SA sign language in order to allow children with deafness to express their experiences of balance deficits and the related impact it has on their quality of life. Using a comprehensive, low-technology, test battery approach, she is also able to investigate balance performance in children with deafness and those with normal hearing. The findings reflect that children with deafness experience greater symptoms of imbalance; they have reduced balance performance, are at greater risk for falls and have reduced health-related quality of life when compared to their normal-hearing peers. These findings will assist in the management of children with deafness, affording them appropriate and holistic rehabilitation services.

Supervisor: Dr C Rogers (Health and Rehabilitation Sciences)
Co-supervisor: Dr Y Saman (Leicester Balance Clinic, E.N.T Department, Leicester Royal Infirmary), (Brain Sciences, Imperial College London) and the (University of KwaZulu-Natal)

Meldau, Surita
Thesis Title: *Genetic and biochemical landscape of primary mitochondrial disease in South Africa investigated at a referral centre*

Surita Meldau completed her BSc at UFS in 2003, BSc(Med)Hons in Human Genetics (2004), and her M.Sc(Med) at UCT (2007). After nine years employed in the NHLS Inherited Metabolic Disease laboratory, she accepted a joint-academic position with UCT Chemical Pathology and NHLS and embarked on a PhD in 2019.

Surita Meldau's thesis describes the genetic and biochemical landscape of primary mitochondrial disease (PMD) in South African patients referred to a central diagnostic laboratory, by performing an in-depth audit of existing data and use of advanced genetic technologies including high depth mitochondrial DNA (mtDNA) and whole exome sequencing, together with biochemical investigations. The data show that, contrary to indications in existing literature, the mtDNA related PMD landscape in South African patients from multiple African maternal lineages mirror that of populations studied in greater depth elsewhere, while the nuclear DNA related causes of PMD in the same population are unique. The work further describes the molecular and biochemical characterisation of a novel variant in *MT-ND6* in a patient with complex 1 deficient Leigh syndrome, highlighting the value of extensive genetic evaluation during the diagnostic odyssey.

Supervisor: Dr DM Blackhurst (Pathology)
Co-supervisors: Dr GT Riordan (Paediatrics and Child Health); Emeritus Professor AD Marais (Pathology); Associate Professor GF Van der Watt (Pathology)

Meyer, Bahiah
Thesis Title: *Diagnostic solutions for asymptomatic sexually transmitted infections and bacterial vaginosis in resource-limited settings*

Bahiah Meyer started her journey at UCT in 2010. She completed her BSc (majoring in Genetics and Biochemistry) in 2013 and moved on to complete her BSc (Hons) in 2014. She then completed her MSc (Med) in Medical Biochemistry in 2017 and embarked on her PhD studies a year later.

Bahiah Meyer's thesis aimed to further the development of a low-cost point-of-care test, the genital inflammation test (GIFT), as a screening tool to improve the management of sexually transmitted infections (STIs) and bacterial vaginosis (BV) among women living in resource-limited settings. She validated the inflammation biomarkers that GIFT detects and supported the development of the first prototype device. Upon evaluation of this prototype, she found that the device was highly sensitive but lacked specificity and thus requires further optimization. She also used metaproteomics data, including thousands of proteins, to identify novel biomarkers of BV that will be used to develop another diagnostic test. To inform future implementation of these tests, she evaluated the prevalence and inflammatory profiles of STIs and BV among women in different settings in South Africa, Brazil and the Dominican Republic. Collectively, her research contributes to the development of strategies to improve women's sexual and reproductive health.

Supervisor: Dr L Masson (Burnet Institute)
Co-supervisors: Associate Professor Z Woodman (Integrative Biomedical Sciences); Dr A Alisoltanidehkordi (Microbiology-Immunology, Northwestern University)

Miles, Xanthene Eleonore
Thesis Title: *Modulatory effects of the MDM2 inhibitor AMG 232 on the p53 pathway and radiation response in glioblastoma and medulloblastoma cell lines*

Xanthene Miles obtained her BSc and BSc (Hons) qualifications at UWC, and her MSc at WITS University. She commenced her PhD studies at UCT in 2020.

Xanthene Miles' thesis focuses on the modulation of radiotherapy response of brain cancer cells by investigating the effects of molecular inhibition of the MDM2 protein, as a potential therapeutic strategy to enhance radiotherapy response through the activation of the molecule, p53. The MDM2 inhibitor, AMG 232, tested in p53 wild-type and p53 mutant Glioblastoma and Medulloblastoma cell lines demonstrates differential effects on radiosensitivity, with the impact of AMG 232 evaluated through key cellular responses, including cell proliferation, clonogenic survival, cell cycle dynamics, apoptosis-mediated cell death, and metastatic characteristics assessed via migration and invasion assays. Her work, conducted using both photon- and proton beams, provides important mechanistic insight into the role of MDM2 inhibitors in the enhancement of radiotherapeutic response of brain cancer.

Supervisor: Associate Professor A Hunter (Radiation Medicine)
Co-supervisor: Dr J Bolcaen (Centre for Radiopharmaceutical Sciences, PSI Centre for Life Sciences, Villigen-PSI)

Moseki, Raymond Moeketsi
Thesis Title: *Investigating the molecular pathogenesis of tuberculosis-associated immune reconstitution inflammatory syndrome*

Raymond Moseki holds a BSc, BSc Honours from the University of the Free State, a Master's from the University of the Witwatersrand, and began full-time study for his PhD in 2018.

Raymond Moseki's thesis encompasses several studies of immune mechanisms underlying the development of tuberculosis-associated immune reconstitution inflammatory syndrome (TB-IRIS), an inflammatory complication in patients with HIV and tuberculosis when they initiate antiretroviral therapy. He characterised surface markers and transcription factors of CD4+ lymphocytes associated with tuberculosis-associated immune reconstitution inflammatory syndrome (TB-IRIS) development. He compared the expression of genes in the blood of patients who developed TB-IRIS and patients who did not: TB-IRIS was associated with higher expression of genes associated with neutrophils and the inflammasome. He then showed that neutrophils and their soluble inflammatory mediators were more abundant in blood of patients at the time of TB-IRIS. He evaluated novel TB-IRIS treatments in experiments using cells from patients that were stimulated with Mycobacterium tuberculosis, identifying two promising candidates. His findings will inform the design of blood-based tests to identify patients at risk of or with TB-IRIS, and of further research.

Supervisor: Professor G Meintjes (Medicine)
Co-supervisors: Dr C Riou (Pathology); Dr R Lai (Faculty of Medicine Imperial College London); Honorary Professor R Wilkinson (Medicine)

Motsoeneng, Mamonyowe Portia
Thesis Title: *Design and feasibility of an upper limb rehabilitation pathway for breast cancer survivors in the Western Cape*

Mamonyowe Motsoeneng holds a BSc (Genetics) degree from University of Free State and B.Sc.Med (Hons) Medical Genetics and Master of Public Health degrees from UCT. She joined the Department of Human Biology at UCT in 2020 for her PhD studies.

Mamonyowe Motsoeneng's thesis focuses on designing, piloting and evaluating a survivor-led Upper Limb Rehabilitation Intervention to be integrated into current breast cancer survivorship care. She went on to investigate the current state of delivery of upper limb rehabilitation services and documented the views and perspectives of the survivors and health practitioners with regards to the delivery of rehabilitation services in the private and public health sectors. She successfully designed a survivor-led upper limb rehabilitation intervention to be implemented at all levels of care in the public health sector in South Africa. These results will be used to inform the large-scale implementation of a comprehensive survivorship program in South Africa. Furthermore, influence change in policy and inform the South African National Cancer Framework.

Supervisor: Emerita Associate Professor D Shamley (Human Biology)
Co-supervisor: Dr L Cunnama (Public Health)

Mukonyora, Michelle
Thesis Title: *An investigation of the association between structural proteins and lipids with scalp hair curvature*

Michelle Mukonyora completed her BSc and BSc (Honours) in Biotechnology from the University of the Western Cape, and her MSc (Life Sciences) from the University of South Africa. She began her PhD (Medicine) Trichology at UCT in 2019.

Michelle Mukonyora's thesis reports on the association between hair biochemistry and hair curvature. She uses advanced mass spectrometry techniques to investigate hair proteins and lipids of hair that were grouped according to geometry. Her study identifies for the first time, differentially expressed hair proteins and lipids for geometrically classified hair. Several newly identified hair proteins and lipids are described. In fact, the largest number of hair lipids in any study are identified, and their structures are described at a higher structural resolution than previous studies. Michelle Mukonyora's study is also the first to use machine learning methods to build predictive models for hair curvature using both proteins and lipids, which leads to a deeper understanding of how they, in concert,

may regulate hair curvature. Well characterised biochemistries of diverse hair types lay a foundation for a more personalised approach to diagnostic and forensic medicine.

Supervisor: Professor HA Adeola (Medicine)
Co-supervisor: Professor NP Khumalo (Medicine)

Mutithu, Daniel Wakiri
Thesis Title: *Investigation of circulatory and tissue-specific metabolomic biomarkers in valvular heart disease using mass spectrometry*

Daniel Mutithu graduated with BSc (Hons) at Kenyatta University, Kenya and MSc at Wageningen University, Netherlands before beginning full-time study towards his PhD at UCT in 2018.

Daniel Mutithu's thesis uses high throughput screening of metabolites that are expressed in patients with rheumatic heart disease and aortic stenosis who were undergoing valve replacement surgery in South Africa. He investigated the patients using highly sensitive techniques of metabolomics with mass spectrometry tools to study the metabolites in the blood samples and valve biopsies. He found that there are differences in the metabolism processes in rheumatic heart disease and degenerative aortic stenosis patients as compared to healthy persons. Using bioinformatics tools for multivariate and univariate statistics, he observed that the differences in metabolites detected in patients and healthy people can be used for diagnosis and prognosis of valvular heart disease patients. These findings will be important in understanding the processes involved in worsening of rheumatic heart disease and aortic stenosis pathology and can also supplement the existing diagnosis methods.

Supervisor: Professor N Ntusi (Medicine and the South African Medical Research Council)
Co-supervisors: Professor S Skatulla (Civil Engineering); Emeritus Associate Professor R Naidoo (Pathology)

Naidoo, Saiyukthi
Thesis Title: *Investigating the role of sestrin 1 and sestrin 2 in preclinical models of tuberculosis disease*

Saiyukthi Naidoo completed her BSc in Human Physiology and Biochemistry and holds an Honours degree in Infectious Disease and Immunology from UCT. In 2019 she commenced her Master's program, which progressed into a PhD degree in Clinical Science and Immunology at UCT.

Saiyukthi Naidoo's thesis focuses on the role of Sestrins in mediating hyperinflammatory responses during tuberculosis disease (TB). Her findings show that, in the absence of *Sestrin2*, heightened immune responses lead to increased lung pathology and susceptibility in mice during chronic TB disease. At a cellular level she demonstrates that the absence of *Sestrin1* and *Sestrin2* impairs regulation of metabolism in macrophages and leads to the accumulation of reactive oxygen species (ROS). Her data show that Sestrin deletion potentiates a proinflammatory cytokine response and correlates to elevated cell death and bacterial burden in macrophages. Together, suggesting the role of Sestrin as a regulator of metabolism, tightly controlling the levels of ROS in a cell that drives tissue pathology. These data support a ROS mediated cell death model that contributes to increased lung pathology and suggest Sestrins as novel host directed therapy targets to ameliorate TB disease.

Supervisor: Associate Professor S Parihar (Pathology)
Co-supervisors: Dr M Ozturk (Pathology); Professor F Brombacher (Pathology)

Nel, Daniel Benjamin
Thesis Title: *The introduction of workplace-based assessment for general surgery training at a South African university*

Daniel Nel completed his Bachelor of Medicine and Surgery at UCT in 2011. He completed his postgraduate training in General Surgery in 2021, before starting his PhD studies in 2022.

Daniel Nel's thesis investigates the feasibility of implementing Workplace-Based Assessment (WBA) in General Surgery training at a South African university. Using design-based research, he developed and refined a WBA strategy through iterative testing, which involved cycles of implementation and refinement based on stakeholder consultation. His findings revealed fifteen design principles that underpin the successful introduction of WBA in this context. These principles address core components such as assessment tools, supervisor roles, and digital platforms, as well as essential procedural elements like team development and change management. His work offers a blueprint for feasible WBA implementation, contributing valuable insights for postgraduate surgical training.

Supervisor: Professor E Jonas (Surgery)
Co-supervisors: Professor L Cairncross (Surgery); Professor V Burch (Medicine; Education and Assessment, Colleges of Medicine of South Africa)

Ngajilo, Dorothy
Thesis Title: *Occupational exposures and associated health risks among Tanzanian aquaculture workers*

Dorothy Ngajilo holds a Doctor of Medicine (MD) degree from Muhimbili University of Health and Allied Sciences in Tanzania, and an MMed in Occupational Medicine from UCT. She began her PhD in the Occupational Medicine Division of the School of Public Health in 2018.

Dorothy Ngajilo's thesis investigates the occupational health and safety risks in the aquaculture industry, a key component of the Tanzanian blue-economy. Her study focuses on seaweed farming in the context of climate change in Zanzibar, highlighting a high prevalence of work-related musculoskeletal, respiratory, and skin conditions associated with occupational hazards and inadequate worksite intervention measures. It also highlights the vulnerability of seaweed workers, commonly women, to climate change-related health impacts associated with heat and ultraviolet radiation. This

research uses geospatial analysis to reveal geographical variations in occupational health risks and a modified Rapid Entire Body Assessment tool to assess ergonomic risks in water-immersed environments. Applying an intersectional statistical approach, it demonstrates how social identities amplify vulnerability. By focusing on an unregulated, informal and marginalized sector, the research highlights the urgent need for policy change, workplace interventions as well as health and safety training to safeguard seaweed workers' health and well-being.

Supervisor: Professor MF Jeebhay (Public Health)
Co-supervisor: Associate Professor S Adams (Public Health)

Nourse, Peter John
Thesis Title: *Gravity assisted continuous flow peritoneal dialysis (CFPD) in children with acute kidney injury*

Peter Nourse is a qualified doctor with a subspecialty degree in Pediatric Nephrology. He holds a master's degree from the University of Stellenbosch and currently works as a paediatric nephrologist in the Department of Paediatrics and Child Health at Red Cross War Memorial Children's Hospital.

Peter Nourse's thesis focuses on developing a low-cost, efficient, and novel technique for peritoneal dialysis to treat acute kidney injury in children. He also explores various aspects of peritoneal dialysis prescription for paediatric patients with acute kidney injury. He conducted a randomized controlled cross-over trial at Red Cross War Memorial Children's Hospital, comparing a novel method of performing gravity-assisted continuous flow peritoneal dialysis (CFPD) to conventional peritoneal dialysis in children with acute kidney injury. The study demonstrates that the low-cost CFPD method is feasible, well-tolerated, and highly effective, significantly increasing dialysis efficiency. In Africa and other low-resource settings, where many patients depend on peritoneal dialysis, this new technique can be implemented cheaply, easily, and without the need for electricity.

Supervisor: Professor B Morrow (Paediatrics and Child Health)

Oladokun, Ajibola Samson
Thesis Title: *A quantitative characterization of tuberculin skin test indurations using hyperspectral imaging to enable automated latent tuberculosis screening*

Ajibola Oladokun holds a B.Eng. in Electronics and Electrical Engineering from Osun State University, Nigeria. He holds an MSc in Microprocessor and Control Engineering from the University of Ibadan, Nigeria. He joined UCT in 2021 to begin full-time study towards his PhD.

Ajibola Oladokun's thesis investigates the ability of hyperspectral imaging to characterize tuberculin skin test (TST) indurations towards the goal of automated latent tuberculosis (TB) screening. He developed an imaging protocol to enable the reproducible acquisition of the hyperspectral images of TST injection sites. He utilised the protocol to capture the images of the TST induration of 70 subjects in South Africa and Vietnam. In addition, he developed a model to generate readings from the induration images that are comparable to a clinician's readings, but more precise. Furthermore, he developed a framework to identify potential chromophore biomarkers for latent TB using hyperspectral images of indurations. His framework identifies ferritin, water, and oxyhaemoglobin as potential biomarkers for latent TB. These findings show that hyperspectral imaging can potentially contribute to improved health outcomes for at-risk TB groups by enabling image-based automated latent TB screening.

Supervisor: Dr B Malila (Human Biology)
Co-supervisor: Associate Professor T Mutsvangwa (Human Biology)

Opare, Abraham
Thesis Title: *Harmonizing core competencies for Master of Public Health Training programmes in Africa*

Abraham Opare holds a Doctor of Optometry degree from the Kwame Nkrumah University of Science and Technology and a Master of Public Health (MPH) degree from UCT.

Abraham Opare's thesis explores core competencies for Master's in Public Health (MPH) graduates needed for public health practice in Africa and the challenges of harmonising core competencies across MPH programs in the region. Using a literature review and a mixed methods study to identify the core competencies, he highlights additional domains such as outbreak management, leadership, and public health law to be specifically important for MPH graduates' work in Africa. He then investigates the contributions of MPH programs to graduates' development of identified competencies and gaps in teaching competencies across programs. He finds a mismatch between competencies emphasised in MPH programs and those needed by graduates for public health work in Africa. Challenges to core competencies harmonisation across MPH programs in Africa include resource limitations, bureaucratic hurdles, and institutional differences. These findings will be useful for improving MPH training, benchmarking standards that can facilitate harmonisation of programmes across Africa.

Supervisor: Professor L London (Public Health)
Co-supervisors: Emerita Associate Professor V Zweigenthal (Public Health); Professor A Ajuwon (University of Ibadan); Professor A Adongo (University of Ghana-Legon); Dr T Oni (Cambridge University)

Panday, Seema
Thesis Title: *The reliability and validity of an isiZulu speech reception threshold test in quiet for hearing and hearing-impaired individuals in KwaZulu-Natal*

Seema Panday, a lecturer in audiology, completed her Bachelor of Speech and Hearing Therapy and Master's in Audiology at the University of KwaZulu-Natal.

Seema Panday's thesis focuses on assessing the reliability and validity of an isiZulu Speech Reception Threshold (SRT) test for first-language isiZulu speakers in KwaZulu-Natal. She finds that the isiZulu SRT test is both reliable

and valid for individuals with and without hearing loss, contributing to more accurate hearing assessments for isiZulu speakers in the province. The test was validated through a multi-step process to ensure it aligns with the language and context of its users. Additionally, the thesis proposes an integrated framework for the validation of speech audiometry tests, which could serve as a model for similar research at local, regional, and international levels. This work is significant for future Audiology research on test development and validation.

Supervisor: Professor H Kathard (Health and Rehabilitation Sciences)
Co-supervisor: Associate Professor W Wilson (Health and Rehabilitation Sciences, University of Queensland)

Phiri, Lindokuhle Pellegreen
Thesis Title: *The effect of a 12-week exercise training intervention on physical behaviour patterns and perceptions of body image in Black South African women living with overweight and obesity*

Lindokuhle Phiri holds a BTech in Biokinetics from Tshwane University of Technology, Post-Graduate Diploma in Public Health from the University of Pretoria and an MPhil in Biokinetics from UCT. While undertaking her PhD on a part-time basis, she worked as a biokineticist and as a researcher for various parastatals.

Lindokuhle Phiri's thesis focuses on the the effect of a 12-week combined (resistance and aerobic) exercise training intervention on physical behaviour patterns and perceptions of body image in Black South African women living with overweight and obesity from a low-socio-economic setting. This allowed her to understand the physical activities, sedentary behaviors and body image perceptions of the women in response to the intervention and how these factors may contribute to overweight and obesity. She also explored the perceptions and experiences of the women after participating in the 12-week exercise training using focus group discussions and in-depth interviews. The findings of her thesis suggested that the exercise intervention may support positive changes in physical behaviours and provides recommendations for developing sustainable lifestyle intervention programmes for young women from low-resourced settings.

Supervisor: Professor J Goedecke (Human Biology)
Co-supervisors: Dr A Mendham (Human Biology); Professor A September (Human Biology)

Rambiritch, Vanitha
Thesis Title: *Developing a validated framework for a Patient Blood Management (PBM) toolkit appropriate for the South African healthcare context*

Vanitha Rambiritch holds a B Tech Biomed Tech (*Cum Laude*), a PG Dip (HPE) and an MPhil (HPE). She currently serves as the Manager for Tissue Immunology and Genetics at the South African National Blood Service and has over two decades of experience in healthcare education, research, and laboratory science.

Vanitha Rambiritch's thesis introduces a novel and context-specific framework for Patient Blood Management (PBM) in South Africa, addressing critical gaps in existing healthcare practices. By integrating mixed-method research approaches, her study uniquely identifies barriers and opportunities for PBM implementation through interviews with PBM champions and a Delphi survey involving experts. The research provides a comprehensive framework for a PBM toolkit that includes definitional tools to promote awareness; education and training tools to bridge knowledge and education deficiencies; policy and procedural tools for anaemia management; and planning tools for hospital readiness. This work contributes significant value by proposing an actionable, evidence-based model that adapts international PBM principles to resource-limited settings, promoting safer and more effective patient care while minimizing inappropriate blood transfusions. The findings are poised to transform PBM education and practice in South Africa, setting a precedent for other similar healthcare contexts globally.

Supervisor: Professor V Louw (Medicine)
Co-supervisor: Associate Professor E Verburgh (Medicine)

Rampersadh, Kimona
Thesis Title: *Genomic insights into Group A Streptococcus pathogenesis*

Kimona Rampersadh completed her undergraduate studies at University of KwaZulu-Natal and began full-time study toward her PhD in 2019.

Group A Streptococcal invasive and non-invasive disease presents a substantial burden across the world, particularly in low-resourced settings. In an attempt to understand the potential role of genetic factors in Strep A disease, Kimona Rampersadh's thesis documents, from published literature, the vast array of Strep A virulence factors associated with invasive disease. She further presents evidence that penicillin remains effective in managing Strep A in low- and middle-income countries. From laboratory-based studies, she demonstrates that Strep A in Cape town remains susceptible to commonly prescribed antibiotics with minimal antimicrobial resistance (AMR) observed. Finally, through whole genome sequencing, she reports on the prevalence and distribution of virulence factors and AMR genes in Cape Town isolates. These findings will be useful in improving our understanding of the pathogenic role of virulence and AMR determinants in GAS infections.

Supervisor: Professor ME Engel (Medicine)
Co-supervisor: Dr Cl Moodley (Pathology)

Shenje, Justin Tapiwa
Thesis Title: *A description of the pharmacokinetics of first line anti-tuberculosis drugs and adjunctive corticosteroid therapy in the pericardial compartment and their effect on cytokine profiles in the pericardial compartment of patients with tuberculous pericarditis*

Justin Shenje is a qualified medical practitioner and has a Master of Science degree from the University of Pretoria.

He is a Senior Clinical Research Officer at the UCT and works at the South African Tuberculosis Vaccine Initiative.

Justin Shenje's thesis has furthered our knowledge considerably, in respect of our understanding that anti-tuberculosis therapy is poorly absorbed in individuals who have pericardial tuberculosis, raising the need to modify doses of these critical medications in the management of this condition. He also described how prednisolone, useful in the management of pericardial effusion, alters inflammatory milieu. He was also able to show that prednisolone is measurable in the pericardial space in individuals with tuberculous pericarditis and that endogenous cortisol and cortisone are altered in favour of cortisol at the site of infection, which is critical for our understanding for future therapy in patients with a devastating illness.

Supervisor: Professor I Ross (Medicine)

Shipanga, Hendrina Nelao Mwiiwete
Thesis Title: *Analysis of driver gene mutations in oesophageal squamous cell carcinoma*

Hendrina Shipanga holds a BSc (Hons) degree in Biochemistry and Biology from the University of Namibia and a MSc degree in Medical Biochemistry from the University of Cape Town. She began her studies towards her PhD in Medical Biochemistry in 2019.

Hendrina Shipanga's thesis examines 31 whole genomes and 67 whole exomes from South African oesophageal squamous cell carcinoma (OSCC) patients. Her study identifies significantly mutated genes (TP53, CDKN2A (p14ARF and p16INK4a), KMT2D, NFE2L2, ZNF450 and NOTCH1). Samples were clustered into three groups, based on TP53 mutations and tumour mutation burden, with Cluster 2 comprising mainly black female patients lacking TP53 mutations. The NFE2L2-KEAP, NOTCH, and cell cycle pathways are the most affected. Mutational signature analysis reveals prevalent age-related and APOBEC enzymes-related signatures in OSCC. She found variable mRNA levels of p14ARF and p16INK4a in OSCC. Knockdown studies of these genes in OSCC cell lines leads to upregulation of MDM2, p21, NFE2L2, BCL-XL, caspase-3 and caspase-9, suggesting potential roles for oxidative stress-resistant cells and cell survival in OSCC development. These findings advance our understanding of the molecular biology of OSCC and the identification of potential prognostic biomarkers for South African OSCC.

Supervisor: Professor MI Parker (Integrative Biomedical Sciences)
Co-supervisor: Associate Professor DT Hendricks (Integrative Biomedical Sciences)

Sicwebu, Namhla Yamkela Isipho
Thesis Title: *An ethnography of urban adolescents' food choice and practice in urban households of Cape Town*

Namhl Sicwebu holds a BSocSci and a Master's degree in Public Health from UCT. She pursued her PhD in the Division of Social and Behavioural Sciences, School of Public Health and Family Medicine, at the Faculty of Health Sciences, UCT, focusing on adolescent dietary behaviours and decision-making.

Namhla Sicwebu's thesis investigates adolescents' eating practices, nutritional knowledge, and the influence of their upbringing and circumstances on their food choices, particularly within the home environment. Her study highlights how adolescents balance personal goals, values, and knowledge with external factors such as resource availability, family dynamics, and social expectations in their food choices. She underscores the challenges adolescents face in integrating emotional and relational aspects into their food choices. Namhla Sicwebu emphasizes the need for supportive environments to foster healthier eating habits, recognizing that dietary decisions are shaped by multiple factors beyond individual control. Her findings have significant implications for public health strategies aimed at encouraging healthy eating habits among young people.

Supervisor: Dr A Swartz (Public Health)
Co-supervisors: Associate Professor CJ Colvin (Public Health); Professor J Passmore (Pathology)

Simelane, Simphiwe Rhulani Nangamso
Thesis Title: *Strengthening child and adolescent mental health systems in South Africa: A multi-stakeholder implementation science initiative*

Simphiwe Simelane completed a BSc(Med)Hons at UCT in 2013 and graduated with an MBChB in 2016. After an internship at Karl Bremer Hospital in 2019 and community service at Tonga Hospital in 2020, she began her PhD in 2021.

Simphiwe Simelane's thesis addresses the substantial gap in mental health care for children and adolescents in South Africa, where 10–20% of young people experience mental disorders, but 90% do not receive adequate care. Through a multi-methods approach, she reviews child and adolescent mental health services and systems (CAMHSS) strengthening innovations in low- and middle-income countries (LMICs), maps the landscape of CAMHSS in South Africa, and develops strategies for system strengthening. The research co-produces a Theory of Change roadmap with service providers and evaluates the acceptability, appropriateness and feasibility of implementing the World Health Organization's Mental Health Gap Action Programme Intervention Guide for children at the primary care level. The findings contribute to actionable steps for closing the CAMHSS treatment gap.

Supervisor: Professor PJ de Vries (Psychiatry and Mental Health)

Sjölin Wijk, Marie Caroline
Thesis Title: *Advancing tuberculosis treatment through pharmacometric modeling of drug exposure and biomarkers*

Marie Sjölin Wijk holds a Master's degree in pharmacy from Gothenburg University in Sweden and joined the Pharmacometrics Group within the Division of Clinical Pharmacology for her PhD studies in 2021.

Marie Sjölin Wijk's thesis investigates factors influencing the treatment of tuberculosis (TB), focusing on drug exposure and biomarkers quantifying the bacterial load of

Mycobacterium tuberculosis (Mtb). She used mathematical computer modelling to interpret clinical data from South African patients with TB and *in vitro* results on *Mtb* cultures. Her results show that, despite alcohol use being associated with worse treatment outcomes, it affects neither the blood concentration of TB drugs nor the bacterial load during treatment. She also established a link between low drug exposure, bacterial load, and poor treatment outcome. The in vitro analysis elucidated how various bacterial load measurement methods may quantify *Mtb* subpopulations differently, thus assisting their interpretation in a clinical setting. Finally, she developed a robust method to model low drug concentrations. In summary, her work successfully identified factors affecting TB treatment, recommending optimised dosing to ensure adequate drug exposure, thus improving treatment outcomes.

Supervisor: Professor P Denti (Medicine)
Co-supervisor: Dr F Kloprogge (Global Health, University College London)

Sunda, Falone Sunda
Thesis Title: *The expression and biochemical characterization of the human FAM111B protein*

Falone Sunda holds an Honours and a Master's degree in biotechnology from the University of the Western Cape, specializing in virus proteins and plant biochemistry. In 2019, she embarked on her full-time PhD studies at UCT.

Falone Sunda's thesis investigates the human FAM111B protein, mutations of which cause the hereditary fibrosing poikiloderma disease known as POIKTMP. Utilizing advanced techniques like site-directed mutagenesis, recombinant protein expression, mass spectrometry, and bioinformatics, she successfully expressed the FAM111B protein. Her research revealed that the mutated version of the protein which appears in patients degrades rapidly, whereas a double mutant (active site mutation S650A- patient mutant Y621D) exhibits slowed clearance. Additionally, she found that FAM111B's activity is temperature-dependent and can be inhibited by inhibitors such as Serpin G/C and PMSF. For the first time, she showed that FAM111B requires metal ions for optimal function and characterized the protein as a chymotrypsin. She also identified 31 possible interacting proteins with corresponding binding patterns.

Supervisor: Dr A Arowolo (Medicine)
Co-supervisor: Professor NP Khumalo (Medicine)

Terblanche, Camryn Claire
Thesis Title: *Feasibility of individualised synthetic speech for children with complex communication needs in three South African languages (South African English, Afrikaans, and isiXhosa)*

Camryn Terblanche completed her BSc (Hons) in Speech-Language Pathology at UCT and her MSc in Forensic Speech Science at the University of York, UK. She began her PhD in 2021, focusing on the intersection of speech synthesis and Augmentative and Alternative Communication (AAC) for children with complex communication needs (CCN).

Camryn Terblanche's thesis aims to develop natural-sounding synthetic voices for three South African children with CCN using Tacotron 2, an open-source speech synthesis software. The project tackles challenges in child speech synthesis, such as limited child speech data in under-resourced languages and the acoustic variability and articulatory errors inherent in typical child speech. It also demonstrates how synthetic voices can enhance classroom participation and socialisation for children with CCN, while highlighting AAC implementation challenges in South Africa, including resource limitations and accessibility barriers. Despite these challenges, she successfully creates synthetic voices in South African English, Afrikaans, and isiXhosa, achieving 92% intelligibility. Her PhD project provides three children with CCN synthetic voices that reflect their unique identities and cultures, and provides a viable, low-cost method for generating high-quality synthetic child speech in under-resourced languages, showcasing the potential for broader applications in similar contexts.

Supervisor: Associate Professor M Harty (Health and Rehabilitation Sciences)
Co-supervisor: Associate Professor M Pascoe (Health and Rehabilitation Sciences)

Tsirizani, Lufina
Thesis Title: *Pharmacometric modelling to optimize tuberculosis treatment and antiretroviral therapy in children*

Lufina Tsirizani holds a Bachelor of Pharmacy and a MSc Epidemiology from the University of Malawi. She joined the UCT pharmacometrics team as a PhD student in October 2019. Before joining UCT, she worked as a research pharmacist while studying for her MSc.

Lufina Tsirizani's thesis employed population pharmacokinetic modelling to assess first-line tuberculosis and second-line antiretroviral (ART) drug exposure in children. She examined the impact of several demographic and treatment factors on drug concentrations. Her findings highlight the influence of age, body size, drug formulation, and the exposure of both tuberculosis and HIV drugs, emphasising their impact on paediatric dosing. Based on these findings, she suggests easily implementable strategies to optimise the use of these drugs children. Additionally, her research underscores the value of mathematical modelling to maximise the value of scarce yet precious paediatric pharmacokinetic data and calls for the standardisation of study methodologies to enhance data pooling efforts.

Supervisor: Professor P Denti (Medicine)
Co-supervisor: Dr R Wasmann (Medicine)

Tsondai,Priscilla Ruvimbo
Thesis Title: *Characteristics and outcomes of adolescents living with HIV transitioning to adulthood in different health care models across Southern Africa*

Priscilla Tsondai obtained an MPH (Epidemiology and Biostatistics) degree from UCT in 2016. She also holds a Bachelor of Medicine and Surgery degree (MBChB) from the University of Zimbabwe. Priscilla Tsondai's thesis utilises quantitative research methods and integrates linked medical record data to examine the transition to adulthood among adolescents and young adults living with HIV across six Southern African countries. She demonstrates the feasibility of using simple yet effective algorithms to improve the classification of the likely mode of HIV acquisition. She explores key processes and outcomes of this transition, providing a deeper understanding of the factors influencing care continuity. Additionally, she develops practical, standardised tools to assess transition-related processes and outcomes, ensuring their applicability across diverse geographic regions and healthcare delivery models. By enhancing data comparability across studies, this work fosters cross-country collaboration and strengthens research networks in the field.

Supervisor: Professor M-A Davies (Public Health)

van Rensburg, Louis Chris
Thesis Title: *Initiating the development of a curriculum for South African adult critical care retrieval*

Louis van Rensburg holds a Master's degree in Emergency Medicine with Clinical Specialisation and has extensive experience in Emergency Medical Services operations, education and system development. As an Emergency Care Practitioner and lecturer, he began his PhD at UCT in 2021. Louis van Rensburg's thesis addresses the need for structured training in Emergency Medical Services for transporting critically ill or injured patients. In South Africa, the absence of formal Critical Care Retrieval (CCR) education has led to inconsistent care standards. Using a four-phase research approach, he examined international best practices, reviewed patient transfer cases, conducted expert interviews, and engaged 83 specialists in a consensus study. His research identifies critical training gaps, including inadequate knowledge of critical care principles, ventilation techniques, transport physiology, and decision-making under pressure. The result is South Africa's first dedicated CCR training curriculum, aligned with the National Qualifications Framework at Level 8. The curriculum integrates online learning, hands-on simulations, and supervised clinical practice to enhance preparedness for complex patient transfers. This study can elevate CCR as a professional specialisation, improve patient safety, and establish standardised care practices across Emergency Medical Services.

Supervisor: Associate Professor W Stassen (Family, Community, and Emergency Care)
Co-supervisor: Professor C Vincent-Lambert (University of Johannesburg, Emergency Medical Care)

Yildiz, Safiye
Thesis Title: *Germline analysis of colorectal cancer in indigenous South Africans using next-generation sequencing*

Safiye Yildiz completed her BSc (Med) Hons qualification in the Division of Human Genetics at UCT with a first class, pursued an MSc, and successfully upgraded it to a PhD program in 2022. Safiye Yildiz's thesis investigates the genetic basis of colorectal cancer (CRC) in young individuals of African ancestry. With limited prior studies on hereditary CRC in indigenous African populations, this study fills a critical research gap by identifying genetic contributors and improving diagnostic tools. Using advanced next-generation sequencing and pharmacogenetic analyses, the study revealed a high prevalence of disease-causing mutations in established CRC genes (25%) and other cancer-related genes, as well as novel mutations unique to African populations. The study also identified additional mutations in other cancer-related genes and potential-risk variants in about 40% of patients. These findings informed the development of an expanded genetic screening tool, marking the first detailed genomic analysis of early-onset CRC in this population group. The work underscores the need for population-specific approaches to diagnosis and treatment, contributing to personalised medicine and advancing public health initiatives for underrepresented communities globally.

Supervisor: Emeritus Professor R Ramesar (Pathology)
Co-supervisor: Dr G Rebello (Pathology)

Yimam, Habtamu Mamo
Thesis Title: *Design and development of novel anatomical scapular fracture fixation plates*

Habtamu Yimam completed his BSc and MSc degrees in Mechanical Engineering at Addis Ababa University, Ethiopia. Before joining the Faculty of Health Sciences at UCT in 2018 towards his PhD study in Biomedical Engineering, he worked as a lecturer in Mechanical Engineering at Addis Ababa University, Ethiopia. Habtamu Yimam's thesis focuses on the design and development of anatomical plates for the fixation of scapula fractures. After identifying the most common fracture patterns using 3D reconstructed CT images of scapula fractures and using a statistical average 3D scapula shape model, he designed novel plates tailored for specific scapula fractures, manufactured the prototype, and successfully tested it on cadavers. He further evaluated the biomechanical performance of the plates using finite element fracture fixation models, and he developed the Insilco method to evaluate the fit and fixation adequacy performances of the plates. With their pre-contoured anatomical shape, the new scapula plates he designed will be viable options in the surgical treatment of challenging scapula fractures and may improve surgical outcomes.

Supervisor: Professor S Sivarasu (Human Biology)
Co-supervisors: Professor S Roche (Surgery); Dr R Dey (Human Biology)

Zhao, Ying
Thesis Title: *Addressing challenges with the transition to dolutegravir-based antiretroviral therapy in sub-Saharan Africa*

Ying Zhao obtained her MBBCh degree from the University of Witwatersrand. She qualified as a specialist physician at UCT and subsequently finished her sub-speciality certification in Infectious Diseases. She began her research for her PhD in 2020.

Ying Zhao's thesis presents four clinical studies addressing critical knowledge gaps with the transition to dolutegravir-based antiretroviral therapy (ART) in programmatic settings to inform treatment practice and policy. Her meta-analysis of randomised controlled trials demonstrates no increased risk of immune reconstitution inflammatory syndrome with integrase inhibitor regimens, including in patients being treated for tuberculosis in resource-limited settings. In a phase 2 randomised controlled trial (ARTIST trial), she investigated the need for a lead-in supplementary dolutegravir dose after switching to tenofovir-lamivudine-dolutegravir (TLD) among patients failing tenofovir-emtricitabine-efavirenz. Findings from her observational cohort study support use of TLD as a third-line regimen or an alternative second-line regimen after protease inhibitor regimen failure. Finally, dolutegravir resistance was retrospectively assessed in treatment-experienced patients on dolutegravir-based ART for over two years. These findings strengthen the evidence base for the global move to TLD as first- and second-line ART and have policy implications for resistance testing.

Supervisor: Professor G Meintjes (Medicine)
Co-supervisor: Emeritus Professor G Maartens (Medicine)

ACADEMIC DRESS

OFFICERS OF THE UNIVERSITY

CHANCELLOR

The Chancellor wears a gown made from dark blue silk. The front of the gown has facings down each side made of dark blue velvet embroidered with a gold floral design. The gown and sleeves are lined with pale blue silk and the sleeves are looped up in front with a gold cord and button. The yoke of the gown is edged with gold cord. The gown is worn with a square blue velvet hat with a soft crown and gold tassel.

VICE-CHANCELLOR

The Vice-Chancellor wears a gown made from bright blue silk. The front of the gown has facings down each side and sleeve-linings of pale blue silk. The sleeves are looped up in front with a gold cord and button and the yoke of the gown is edged with gold cord. The gown is worn with a black velvet bonnet with a silver cord.

DEPUTY VICE-CHANCELLOR

A Deputy Vice-Chancellor wears a gown made from dark blue silk. The gown has closed sleeves with an inverted T-shaped opening at the level of the elbow to free the arms. The front of the gown has facings of light blue down each side. The sleeves are lined with light blue and the yoke of the gown is edged with silver cord. The gown is worn with a black velvet bonnet with a silver cord.

CHAIR OF COUNCIL

The Chair of Council wears a gown, of the same pattern as that worn by the Vice-Chancellor, made from light blue silk. The front of the gown has facings down each side and a yoke of dark blue. The sleeves are lined with dark blue and the facings and yoke are trimmed with gold cord. The sleeves are looped up in front with a gold cord and button. The gown is worn with a black velvet bonnet with a gold tassel.

MEMBERS OF COUNCIL

Members of Council wear graduate-pattern gowns made from black silk. The front of the gown has 10cm wide, light blue facings down each side trimmed with dark blue cord. The gown is worn with a black velvet bonnet with a blue cord.

REGISTRAR

The Registrar wears a gown made from black silk. The front of the gown has 10cm wide facings of blue silk down each side. The gown is worn with a black velvet bonnet with a white cord.

PRESIDENT OF CONVOCATION

The President of Convocation wears a gown made from black silk and has long closed sleeves with an inverted T-shaped opening at the level of the elbow to free the arms. The front of the gown has facings down each side and sleeves of blue silk. The gown is worn with a black velvet bonnet with a blue tassel.

UNIVERSITY ORATOR

The University Orator wears a gown of gold silk with bright blue silk facings and a yoke edged with gold cord. A black mortar board with a gold tassel is worn with the gown.

ACADEMIC DRESS (continued)

GOWNS

A plain black gown styled after the pattern of the Oxford scholar's gown is worn by diplomats, and Bachelor's, Honours and Master's graduands. Senior doctoral graduands wear a scarlet gown, with facings the colour distinctive of the faculty in which the degree is awarded. PhD graduands wear a scarlet gown without facings.

HOODS

The hood is particular to the qualification and the faculty. Diplomates and Bachelor's grdauands wear a black hood lined with white and edged with the colour distinctive of the faculty. Master's graduands wear a black hood lined with the colour distinctive of the faculty and edged with white, except in the case of the hood for the MMed degree, which is edged with red. Senior doctoral graduands wear a hood of the colour distinctive of the faculty and a black velvet bonnet with a cord of the colour distinctive of the faculty in which the degrees is awarded. PhD graduands wear a hood of scarlet lined with black and a black velvet bonnet with a cord of the colour distinctive of the faculty in which the degree is awarded.

DISTINCTIVE COLOURS

Faculty of Commerce	Yellow
Faculty of Engineering and the Built Environment	Green
Faculty of Health Sciences	Red
Faculty of Law	Old gold
Faculty of Humanities	Blue
Faculty of Science	Purple

VISION AND MISSION
UNIVERSITY OF CAPE TOWN

Vision

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.

OFFICERS OF THE UNIVERSITY

Chancellor
Precious Moloi-Motsepe, MBBCh DCH *Witwatersrand* Dip in Women's and Reproductive Health *Stellenbosch*

Vice-Chancellor
Matlagolo Mosa Moshabela, MBChB *Natal* Dip in HIV Management (SA) *CMSA* MMed *Limpopo (MEDUNSA)*
MSc *LSHTM* PhD *Witwatersrand* MASSAf

Chair of Council
Norman Martin Arendse SC, BA LLB *Cape Town* LLM *UCL*

President of Convocation
Naadiya Moosajee, BSc(Eng)Civ MSc(Eng) *Cape Town*

Deputy Vice-Chancellors
Brandon Ian Collier-Reed, PrEng BSc(Eng) MSc(Eng) PhD *Cape Town* FSAIMechE
Jeffrey Murugan (Acting), MSc PhD *Cape Town*
Elelwani Ramugondo, BSc (Occupational Therapy) MSc (Occupational Therapy) PhD *Cape Town*

Registrar
Kathleen Idensohn (Interim), BA LLB *Cape Town* LLM *Cantab* PhD *Cape Town* Advocate of the High Court

Chief Operating Officer
Richard John van Huyssteen (Acting), Project Management Dip *FTI* BSc *Nelson Mandela*
HDE (PG) BCom(Hons) *Cape Town*

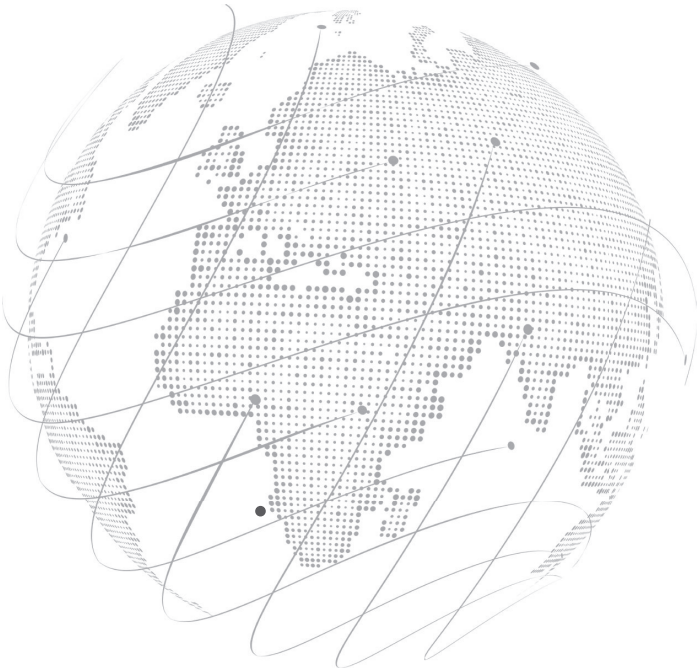
Deans of Faculties

Commerce:	Suki Lesley Goodman, BSocSc(Hons) MBusSc PhD *Cape Town*
Engineering & the Built Environment:	Aubrey Njema Mainza, BMinSC *UNZA* PhD *Cape Town*
Health Sciences:	Lionel Patrick Green-Thompson, DA FCA *CMSA* MBBCh MMed PhD *Witwatersrand*
Humanities:	Shose Kessi, PDBA *Witwatersrand* BA(Hons) *London* MSc PhD *LSE*
Law:	Danwood Mzikenge Chirwa, LLB(Hons) *Malawi* LLM *Pretoria* PhD *Western Cape* Practitioner of the High Court of Malawi
Science:	Hussein Suleman, MSc *Durban-Westville* PhD *Virginia Tech*

Dean of Higher Education Development
Kasturi Behari-Leak, BA(Hons) HDE BEd *Durban-Westville* MEd *Cape Town* PhD *Rhodes*

Director of the Graduate School of Business
Catherine Duggan, BA *Brown* PhD *Stanford*

YOU'VE GRADUATED.
NOW STAY CONNECTED!



Today is not the end of your relationship with the university but the beginning of a new phase in your continuing relationship with UCT, one that you share with the global UCT community of over 200 000 alumni. We want to celebrate your milestones, share opportunities, and keep you connected with classmates, mentors, and the university. But to do that, we need one simple thing from you :

Update your details today!

To remain in contact with former UCT classmates and to keep abreast of important developments taking place at your alma mater, make sure that you update your contact details on our website: www.alumni@uct.ac.za. Here are some of the other ways you can stay in touch with us:

- Attend UCT alumni events hosted in your region
- Participate in the AGM of Convocation
- Find and follow us on social media @UCTalumni
- Visit the Alumni Engagement team in the Old Admin Building, located on UCT Lower Campus
- We love to profile our alumni. Email your news to: alumni@uct.ac.za

UCT benefits from a global network of alumni ambassadors, chapters and affinity groups, with an increasing number of volunteer networks across Africa. Our international UCT offices are focal points for leveraging institutional and research relationships, as well as donor opportunities. You can connect with one of our regional offices:

SOUTH AFRICA
Lu Nteya: lu.nteya@uct.ac.za
Cindy De Oliveira: cindy.deoliveira@uct.ac.za
Nomcebo Msweli: nomcebo.msweli@uct.ac.za

NORTH AMERICA
USA - Porcha Dodson: porcha.dodson@uct.ac.za
CANADA - Samantha Mandigora: info@uctcanada.ca

UNITED KINGDOM
Amelia Tindale: uct-trust@tecres.net

EUROPE
Andrew Wigley: andrew.wigley@uct.ac.za

AUSTRALIA
Ruth Thornton: rjthornton1@bigpond.com

The Development and Alumni Department looks forward to meeting you. Join us at one of the many alumni events hosted around the world, on campus at a UCT public lecture, at UCT Summer School or at your class reunion. Let’s stay connected.