FINAL GRADUATION LIST

GRADAUTION DATE: 07 December 2026
TIME: 09:30

FACULTY OF HEALTH SCIENCES

DEAN: PROFESSOR SA MADHI MBBCh MMed PhD (Witwatersrand) FCPaeds(SA) MASSAf RSSAf TWAS CBE

Doctor of Philosophy

ABILE, Moses *Nursing*
THESIS: Development of quality audit tool for nursing and midwifery education institutions (NMEIs) in Ghana
This research developed and evaluated a context-specific quality audit tool for Nursing and Midwifery Education Institutions in Ghana. Using a multi-method, four-phase approach incorporating a scoping review, document analysis, stakeholder interviews, tool development, pilot testing and Delphi evaluation, the study established seven standards with measurable criteria for assessing educational quality. The tool achieved high expert ratings for relevance, feasibility and clarity and provides a structured framework for institutional self-evaluation and strengthening the quality of nursing and midwifery education.
Supervisors: Dr. CD Christmals and Dr. S Armstrong

ADAMU, Umar Gati *Internal Medicine*
THESIS: Integrating biomarker signatures and metabolomic profiles across left ventricular ejection fraction phenotypes in acute heart failure
This prospective cohort study examined targeted metabolomic profiles across acute heart failure phenotypes, considering clinical outcomes, non-cardiac comorbidities, and circulating biomarkers. The results demonstrated metabolic heterogeneity among left ventricular ejection fraction phenotypes and identified O-acetyl-L-carnitine as a potential prognostic biomarker for mortality. By integrating metabolomic signatures with clinical, echocardiographic, and biochemical data, this research offers new insights into the metabolic disturbances underlying acute heart failure. These findings establish a basis for future metabolomics-guided phenotyping, risk stratification, and personalised cardiovascular care.
Supervisors: Associate Professor N Tsabedze and Associate Professor M Maseko

BAKUWA, Takondwa Connis *Paediatrics*
THESIS: Implementation of a caregiver-led training programme for caregivers of children with cerebral palsy in rural Malawi: A feasibility study
This thesis evaluated a caregiver-led training approach in which caregivers drew on their lived experience to train and support other caregivers of children with cerebral palsy in rural Malawi, where access to rehabilitation services is limited. The study demonstrated the feasibility of implementing the approach in this setting. Findings also confirmed improvements in caregivers' knowledge, self-efficacy, and quality of life, children's activity and participation, in addition to highlighting the importance of structured training, supervision, and health-system support for sustainability.
Supervisors: Associate Professor W Slemming and Dr. G Saloojee

BOUWER, Rochelle Tamar *Physiotherapy*
THESIS: Return to running postpartum: An investigation of the evidence and current practices
This PhD investigated the evidence, practices and feasibility of guidelines on return to running postpartum. Through a scoping review, observational study and proof-of-concept randomised clinical trial, the study identified limited evidence supporting current guidelines, explored factors associated with postpartum running, and evaluated guideline-based recommendations. The use of guidelines showed positive trends towards running performance, muscular function and postpartum return to running. The findings highlight the need for stronger evidence-based guidance to support postpartum runners and inform healthcare professionals.
Supervisors: Associate Professor C Brandt and Dr. S Kunene

DARAMOLA, Olukemi Funmilayo *Anatomical Sciences*

THESIS: Potential attenuative effects of cocoa (*Theobroma cacao*) on histomorphological changes in the testes of diabetic rats fed low protein diet and treated with antiretroviral drug, Atripla.

This research investigated the combined effects of diabetes, antiretroviral therapy, and protein malnutrition on male reproductive health, as well as the protective potential of cocoa (*Theobroma cacao*). Using an experimental rat model, the study demonstrated significant synergistic deficiencies in metabolism, hormones, oxidative stress, inflammation, and structure in the testes when these conditions were combined. Cocoa supplementation improved reproductive parameters in Atripla and/or protein malnutrition but showed limited amelioration when combined with diabetes. These findings advance understanding of factors affecting male fertility and interventions.

Supervisors: Professor EF Mbajiorgu, Dr J Johnson and Dr. P Nkomozepi

DA SILVA, Kate *Pharmacy*

THESIS: Fabrication of a secretome mediated 3D biomimetic intervention for tissue trauma

This research focused on developing and evaluating a 3D-printed gelatin–alginate scaffold for traumatic liver injury. The scaffold was designed to provide structural support and sustained local delivery of Relaxin-1, an anti-fibrotic peptide hormone. The optimised dual-crosslinked platform demonstrated favourable mechanical properties, biocompatibility, controlled bioactive release, reduced oxidative stress and fibrosis-related signalling while promoting tissue remodelling. By functioning as an engineered repair niche, the platform may support a pro-regenerative local microenvironment and offer potential for local regenerative intervention after liver trauma.

Supervisors: Professor YE Choonara and Professor P Kumar

DEVAR, John Wesley Samuel *Surgery*

THESIS: Multiomics analysis of gallbladder cancer in Black African patients

Gallbladder cancer remains a highly aggressive malignancy with limited molecular characterization, particularly in underrepresented populations such as African patients. This study performed multiomic analysis, such as transcriptomics, metabolomics, lipidomics, and microRNA profiling, on South African gallbladder cancer patients, identifying immune pathway dysregulation, lipid/carbon metabolism reprogramming, and key elevated genes and microRNAs.

Supervisors: Associate Professor EE Nweke, Professor G Candy and Professor M Smith

DHEGE, Clarence Tivakudze *Pharmacy*

THESIS: Co-aerosolized pulmonary surfactant and therapeutics for acute respiratory distress syndrome (ARDS)

This thesis developed and optimized an ambroxol-loaded lipid-polymer hybrid nanoemulsion (LPHNE) for nebulised pulmonary delivery for potential ARDS management. The formulation was prepared via hot emulsification ultrasonication and stabilised by PEG 4000, achieving post-nebulisation stability. In vitro studies demonstrated sustained drug release and reduced cytotoxicity in macrophages. A pilot inhalation study in Sprague Dawley rats confirmed pulmonary safety, with preserved lung architecture and undetectable pro-inflammatory biomarkers, positioning the LPHNE as a promising inhalable nanocarrier for ARDS pharmacotherapy.

Supervisors: Professor YE Choonara and Professor P Kumar

DUZE, Sanelisiwe Thinasonke *Clinical Microbiology and Infectious Diseases*

THESIS: Detection and molecular characterization of viable and viable but non-culturable (VBNC) salmonella from the Jukskei river in Johannesburg, South Africa

The research investigated the occurrence and public health risks of Salmonella in the Jukskei River. The study demonstrated that the river is a reservoir of viable, viable-but-non-culturable, and multidrug-resistant Salmonella, with genomic evidence linking environmental isolates to clinical strains. The findings further revealed considerable infection risks associated with exposure to contaminated river water, particularly among vulnerable communities, highlighting the need for improved water quality management, environmental monitoring, and integrated One Health surveillance to address waterborne pathogens and antimicrobial resistance in the country.

Supervisors: Professor M Patel and Dr. M Marimani

FARRELL, Alfred Austin *Paediatrics*

THESIS: Entrepreneurial characteristics, behaviours, and drivers of academic entrepreneurs in the Wits Health Consortium

Starting with academic entrepreneurs leading research entities in the Faculty of Health Sciences and extending to senior academics across the University of the Witwatersrand, this thesis asked what drives academic entrepreneurship in a middle-income country and why intention so often fails to become action. Four linked studies revealed entrepreneurship is necessity-driven, collective, and pursued despite rather than because of institutional drivers. The thesis extends an intentions model suitable for low- and middle-income universities and suggests measures to facilitate academic entrepreneurs.

Supervisors: Professor S Norris and Dr. M Joffe

GOPIECHAND, Jayson Sewchand *Nursing*

THESIS: An evaluation of the fitness for purpose of an existing patient classification system for measuring nurse workload planning

This sequential mixed method study evaluated the effectiveness of an existing patient classification system used to plan nurse staffing to determine whether it is fit for purpose. The study developed a 24-criterion evaluation checklist, validated by international experts and applied it to the hospital's system. The system met most structural and process standards but did not measure nurse satisfaction. The study offers health services a practical tool to strengthen workforce planning, quality patient care and nurse well-being.

Supervisors: Associate Professor S Schmollgruber and Dr. S Armstrong

HOOSAIN, Mohammed Azeem *Physiology*

THESIS: Biomarkers of left ventricular dysfunction in type 2 diabetes mellitus

This thesis characterised left ventricular remodelling and subclinical dysfunction in South African adults with type 2 diabetes mellitus. Echocardiography revealed structural and functional abnormalities, including impaired myocardial deformation despite preserved ejection fraction, which traditional cardiovascular risk factors did not adequately capture. Assessment of circulating biomarkers identified lipotoxic ceramides and inflammatory tumour necrosis factor-alpha as independent markers of this early systolic dysfunction. These findings suggest that combining biomarkers with imaging may improve the early detection of diabetic cardiomyopathy.

Supervisors: Professor A Millen and Dr. S Gunter

HUSSAINI, Sadiq Aliyu *Internal Medicine*

THESIS: Pharmacogenetics of calcineurin inhibitors in African kidney transplant recipients

This research investigates the pharmacogenetics of calcineurin inhibitors (tacrolimus and cyclosporine) in African kidney transplant recipients, focusing on genetic variations that influence drug metabolism and response. It aims to identify specific genetic variation markers affecting dosing requirement, efficacy, and toxicity of these immunosuppressants within this population in South Africa. Understanding these genetic factors can optimise individualised treatment plans, improve transplant outcomes, and reduce adverse effects. The study addresses a critical gap in personalised medicine for African patients undergoing kidney transplantation.

Supervisors: Associate Professor R Duarte, Dr. C Dickens and Dr. Dr B Waziri

JOUBERT, Laurette Christine *Anatomical Sciences*

THESIS: Development of a quantitative method of adult age estimation using µCT in South Africans

This research investigated how microscopic changes in the internal structure of human bone can be used to estimate age-at-death. Using three-dimensional micro-computed tomography, the study analysed the weight-bearing femur and non-weight-bearing humerus of 371 South African individuals. It identified relationships between age and trabecular bone microstructure and used these to develop quantitative population specific age-estimation models for South Africans. The research moves forensic identification towards more objective and reproducible methods and shows the potential of modern imaging within forensic anthropology.

Supervisors: Dr. A Meyer and Professor M Steyn

KAPELUS, Daniel Justin *Vaccinology*

THESIS: The durability of vaccine-induced humoral immunity from novel vaccine schedules

Optimising immunisation schedules requires long-term evidence if we are to get the best protection vaccines can offer. Following South African children for five years, this work found that reducing pneumococcal doses preserved protection for some vaccines but not others, that measles protection fell from 98% at 13 months to 61% at five years, and that 80% of five year-olds lacked rubella immunity before its vaccine arrived. Such evidence shows where doses can be saved and where protection must be extended.

Supervisors: Professor SA Madhi, Dr. G Kwatra, Dr. H Dullab and Dr. C Olwagen

KARIITHI, Brian Timothy *Pharmacy*

THESIS: 3D neuro-mimetic platforms for therapeutic intervention of glioblastoma multiforme

Glioblastoma is an aggressive brain cancer that is difficult to treat as most medicines cannot effectively reach the tumour. This research developed an innovative platform to improve medicine delivery to the brain by combining a slow-release injectable gel, magnetic nanoparticles for MRI tracking and tumour targeting, and a 3D glioblastoma cell model to replicate the cancer environment in the lab. The platform successfully achieved controlled release of chemotherapy medicines in the 3D cell model, providing a foundation for developing improved therapies for brain cancer and other neurological diseases.

Supervisors: Professor YE Choonara, Professor P Kumar and Dr. D Essa

KHAN, Khaalid *Physiology*

THESIS: Peripheral and central immune responses associated with serotype III invasive group B streptococcal colonisation

This thesis investigated immune responses to Group B Streptococcus (GBS), a leading cause of severe bacterial infection in newborns and young infants. Using a hypervirulent serotype III strain, the study demonstrated that severe bloodstream infection drives widespread inflammation, immune dysregulation, and bacterial invasion of the central nervous system. The findings provide new insights into the mechanisms underlying neonatal GBS disease and its potential contribution to long-term neurological impairment, advancing our understanding of GBS pathogenesis and informing future therapeutic strategies.

Supervisors: Associate Professor L Harden and Dr. A Manilall

KHANYILE, Thulile *Haematology & Molecular Medicine*

THESIS: Molecular dynamics analysis of HIV-1 envelope glycoprotein evolution and recognition by the broadly neutralizing antibody in the CAP256 V2 apex lineage

This research utilised advanced computational modelling and molecular dynamics simulations to map the structural evolution of the HIV-1 envelope glycoprotein (Env) over time against its interaction with the CAP256-VRC26 broadly neutralising antibody lineage. By analysing post-translational modifications, structural completeness, and site-specific glycosylation the research uncovers how viral mutations impact antibody recognition over time. These atomic-level insights clarify the structural constraints of the CAP256 Env–antibody system and contribute to understanding molecular features relevant for next-generation HIV-1 vaccine immunogens.

Supervisors: Professor M Papathanasopoulos, Dr. M Killick and Dr. G Owen

KHOFI, Lucy Mandisa *Public Health*

THESIS: The gendering of the water-energy-food nexus in peri-urban and urban South Africa

This research advances a feminist political-ecology analysis of the water-energy-food nexus. Drawing on ethnographic research in Johannesburg and the Eastern Cape, the study reveals how structural neglect, slow violence, and gendered care work, key social determinants of health, shape hunger, wellbeing, and resilience. It links resource insecurity and intimate partner violence to health inequities, reimagining the nexus through agency, care, and social justice. This is a joint PhD undertaken with the University of Amsterdam, in the Netherlands.

Supervisors: Professor L Manderson and Dr. A Bezuidenhout

MADONSELA, Sonto Gugu *Paediatrics*

THESIS: mHealth services for adolescent mental health: A focus on Soweto

Using an explanatory sequential mixed-methods approach, the study investigated adolescents' attitudes, perceptions, and potential barriers to digital mental health support. Findings highlighted the potential of digital technologies to support adolescent mental well-being, while identifying barriers including data costs, limited smartphone access, privacy concerns, stigma, and gaps in mental health literacy. The findings identified adolescents' priorities for sustainable, contextually relevant interventions to promote their mental well-being, highlighting the importance of context-specific approaches that respond to their lived experiences and immediate needs.

Supervisors: Professor J Watermeyer, Associate Professor L Ware and Dr. M Scott

MAFUYAI, Mangai Joseph *Nursing*

THESIS: Development of an educational program for family involvement in pressure injury prevention in Nigeria

Pressure injuries remain a critical global patient safety challenge, in resource-constrained healthcare environments. Recognising the role of family members in African healthcare systems, this thesis evaluated the contextually adapted educational program designed to engage them in preventive care. Guided by the ADDIE and explanatory sequential mixed-methods design, the study assessed baseline knowledge, identified barriers, and evaluated the program. Findings demonstrate that structured family involvement significantly improves preventive compliance and mitigates PI risks offering a scalable, framework to enhance patient outcomes in Nigeria.

Supervisors: Dr. N Klaas and Dr. I Kearns

MASANGO, July *Occupational Therapy*

THESIS: Evidence-based occupational therapy guidelines for a programme applied to a psychiatric day hospital in South Africa

This doctoral research developed the first evidence-based occupational therapy guidelines for private psychiatric day hospital programmes in South Africa. Through five sequential qualitative studies, including a programme appraisal, a scoping review, interviews with experienced occupational therapists and participatory workshops with practitioners and former patients, the guidelines were co-created and structured using the RE-AIM and PRISM implementation frameworks. The guidelines promote consistent, recovery-oriented practice, strengthen group-based therapy and community reintegration, and offer a transferable model for occupational therapy programme development.

Supervisors: Associate Professor T van der Merwe and Dr. F Adams

MCMAHON, William Charles *Vaccinology*

THESIS: SARS-CoV-2 cell-mediated immunity in South Africans following infection and in COVID-19 vaccinees with and without HIV

This thesis characterises SARS-CoV-2-specific T-cell immunity following infection and COVID-19 vaccination among South Africans living with and without HIV. It investigates the magnitude, functionality and cross-recognition of T-cell responses across different vaccination strategies, infection waves and immune histories. The findings demonstrate that people living with HIV receiving antiretroviral therapy can mount T-cell responses comparable to those of HIV-uninfected individuals, while hybrid immunity enhances cellular responses. This research advances understanding of cellular immunity to SARS-CoV-2 in populations underrepresented in vaccine research.

Supervisors: Professor SA Madhi, Dr. G Kwatra, Professor MC Nunes and Dr. A Izu

MIZAN, Gabriel Eduardo *Public Health*

THESIS: Asbestos exposure and health risks from asbestos containing materials in public schools in Gauteng

The aim of this study was to conduct a health risk assessment of asbestos exposure in seven public schools in Gauteng. Three asbestos fibre types were identified in building material samples, but airborne fibre concentrations were below the sampling limit of detection (LOD). The probabilistic risk estimate based on the LOD indicated a hypothetical maximum excess mesothelioma risk of 0.0438% for teachers. The study recommended a proactive mitigation strategy to address emerging risks and ensure compliance with legislative requirements.

Supervisors: Emeritus Professor D Rees and Professor D Brouwer

MODAU, Tumelo Mananye *Pharmacy*

THESIS: Development of referral pathways of progressive joint disorders for community pharmacists

This thesis investigated the role of community pharmacists in managing progressive joint disorders and developed referral guidelines to strengthen multidisciplinary care in South Africa. The research identified gaps in pharmacy education, inconsistent referral practices and fragmented patient pathways. The developed guidelines provided community pharmacists with a structured approach to identifying appropriate referral pathways and collaborating with other healthcare professionals. The study provides a framework to strengthen pharmacists' contribution to multidisciplinary care and improve referral practices for progressive joint disorders.

Supervisors: Dr. A Orchard and Professor D Constantinou

MOHAMED, Farzahna *Internal Medicine*

THESIS: Glucose and lipid metabolism in severe acute respiratory distress syndrome (SARS-CoV-2)

This research examined glucose and lipid metabolism in adults hospitalised with COVID-19. New-onset hyperglycaemia carried greater mortality than pre-existing diabetes, and low LDL-cholesterol independently predicted death. Incorporating admission fasting glucose into the CURB-65 score improved mortality prediction. COVID-19 associated diabetes was driven predominantly by insulin resistance and frequently remitted, whereas lipoprotein(a) remained elevated after recovery. Findings support routine metabolic screening and inexpensive prognostic markers in resource-limited settings. This study was conducted in Johannesburg, South Africa.

Supervisors: Professor F Raal, Professor A Millen and Associate Professor I Kalla

MUDZENGI, Don Lawrence *Public Health*

THESIS: Evaluating the use mobile health (mHealth) technologies in Tuberculosis (TB) contact tracing

Household contact tracing is central to identifying undiagnosed tuberculosis and expanding preventive treatment but remains difficult to deliver optimally. This study explored how mHealth can optimise contact tracing across the cascade, from assisting health workers to helping household contacts. Across four manuscripts, the findings show how gaps in mHealth development and evaluation, real-world implementation conditions, and user engagement shape what these technologies can achieve. Digital tools can support activities across the cascade but cannot, alone, overcome behavioural and health-system barriers.

Supervisors: Associate Professor S Charalambous and Dr. K Velen

OGUNDIPE, Olufemi Kolawole *Anatomical Sciences*

THESIS: Synergistic effects of zinc and insulin supplementation on alveolar bone healing in a rabbit model of alloxan-induced hyperglycaemia: A micro-CT and immunohistochemical investigation

This study investigated the therapeutic effects of zinc and insulin on alveolar bone healing following exodontia under hyperglycaemic conditions. Utilising micro-computed tomography and immunohistochemistry in a rabbit model, the research demonstrated that chronic diabetes induces permanent cortical thinning despite preserved bone volume, the 'diabetic bone paradox.' While insulin restored bone material toughness and zinc preserved alveolar ridge height, combined administration triggered a calcitonin surge that uncoupled bone remodelling. These findings show the critical clinical necessity of early glycaemic control to preserve bone integrity in diabetic patients.

Supervisors: Professor R Ndou, Professor JF Owotade, Professor TA Esan and Professor BC Maseko

OJO, Temitope Olumuyiwa *Public Health*

THESIS: Occupational injury prevention among construction workers: Development of a safety education intervention for informal sector artisans in Osun state, Nigeria

This thesis assessed occupational injuries among informal construction artisans in Osun State, Nigeria, focusing on their prevalence, associated sociodemographic and work-related factors, safety practices, and sociocultural beliefs. Quantitative findings were integrated with artisans' lived experiences, and the artisans prioritised key training needs. These findings informed the co-design and content-validation of a context-sensitive occupational safety training intervention that may serve as a practical evidence base for improving occupational safety and injury prevention among informal construction artisans.

Supervisors: Associate Professor N Naicker and Professor A Onayade

OLORUNFEMI, Gbenga *Public Health*

THESIS: Burden, trends and projections of mortality from breast and gynaecological cancers in South Africa (1999 - 2030)

This thesis quantified the burden, temporal trends, and ethnic inequalities in mortality from the six breast and gynaecological cancers in South Africa (1999–2018), using robust statistical methods, including Joinpoint regression, age–period–cohort analysis, and conducted comparative forecasting with four models: Joinpoint, Holt-Winters, ARIMA, and age–period–cohort. It documented rising cancer mortality, substantial ethnic disparities, and projected increases in cancer deaths by 2030. These findings provide vital evidence to strengthen holistic reproductive cancer control, guide resource allocation, and improve women's health outcomes.

Supervisors: Associate Professor E Libhaber, Associate Professor E Musenge and Professor OC Ezechi

RALEFATANE, Maile George *Chemical Pathology*

THESIS: Determinants of foam cell formation and macrophage scavenger receptor gene expression in African diabetic and non-diabetic subjects

Using an in vitro model based on human macrophages this study demonstrated that HDL-cholesterol, triglycerides and alcohol intake influenced the formation of foam cells. In addition, receptors responsible for macrophage cholesterol uptake, and hence foam cell development, translocated to the cell membrane from intracellular reservoirs during foam cell maturation. Therefore, this study uncovered key subcellular pathways underlying foam cell formation and has developed an in vitro model that may be key to studying the subcellular aetiology of atherosclerotic disease.

Supervisors: Professor N Crowther, Dr. E Cave, Dr. A Deroubaix and Dr. N Naran

REDDY, Denasha Lavanya *Internal Medicine*

THESIS: Clinical and molecular epidemiology of Klebsiella pneumoniae invasive disease in adults

This thesis discussed the clinical and molecular epidemiology of Klebsiella pneumoniae invasive disease (KPn-ID) in hospitalised adults in a middle-income setting (Johannesburg, South Africa) with a high burden of KPn-ID. In addition, the prevalence of gastrointestinal colonisation in hospitalised adults without KPn-ID, and risk factors for gastrointestinal colonisation are described. Another aim was to identify genomic factors associated with enhanced invasiveness in KPn isolates, in order to inform antigenic selection for a multivalent KPn vaccine.

Supervisors: Professor SA Madhi, Professor Z Dangor and Dr. C Olwagen

SATHAR, Farzana *Public Health*

THESIS: The interplay between health-related quality of life, disease severity, and delays in initiating treatment for pulmonary TB in four African countries: A mixed-method approach

Delays in tuberculosis treatment remain an important barrier to timely care. This PhD study investigated who is more likely to delay treatment, the underlying reasons, and how such delays relate to disease severity, physical functioning, and health-related quality of life. Drawing on three studies across African settings, the research highlights how individual, social, behavioural and health-system factors shape the pathway from symptom onset to treatment initiation, with longer delays linked to more severe disease and poorer health at treatment initiation.

Supervisors: Associate Professor S Charalambous, Professor V Chihota and Associate Professor D Evans

SITABULE, Rotondwa Blessing *Human Genetics*

THESIS: Assessing Sub-Saharan African genetic missense variants with potential implications in cytochrome P450 enzymes involved in anti-malarial and anti-TB drug response using multiscale biomolecular modeling

The Cytochrome P450 enzymes break down many medicines we take, and tiny genetic differences can change how well they do the job. Working on African populations long left out of this science, the thesis used computer simulation and machine learning to predict which of those differences matter, and what they could mean for drugs used to treat conditions such as malaria and TB.

Supervisors: Dr. H Othman and Professor S Hazelhurst

SITHOLE, Mandisi Eugene *Pharmacology*

THESIS: The product quality analysis and *in silico* assessment of adulterants in commercial whey protein supplements in South Africa

This study presents an in-depth analysis of the quality, safety, and toxicity of 21 whey protein supplements sold in South Africa. Using advanced analytical methods and computational models, the study examined amino acid profiles, physicochemical characteristics, heavy metal and trace element contamination, adulterants, and receptor-level toxicological interactions. The results showed protein mislabelling, undisclosed adulterants, inconsistent quality, and exposure to heavy metals and trace contaminants, highlighting regulatory inadequacies and the need for quality control, labelling verification, and consumer protection.

Supervisors: Associate Professor G Gabriels and Assistant Professor T Rants'o

SWART, Johannes Jacobus Wessel *Physiotherapy*

THESIS: The morphometry and activation patterns of the rotator cuff: The adaptive structural and activity changes during mixed kinetic chain positions

This thesis investigated rotator cuff structure and neuromuscular activation to inform shoulder management. Utilising a multi-methodological approach comprising a scoping review, South African cross-sectional ultrasonographic and clinical studies, and fine-wire electromyography, it generated preliminary morphometric reference values and identified structural and clinical factors associated with shoulder pain and disability. It demonstrated how body position, exercise selection and kinetic chain conditions substantially influence muscle activation. These findings provide an integrated evidence base for more precise clinical assessment and targeted shoulder rehabilitation.

Supervisor: Professor B Olivier

THIBA, Anza Patience *Surgery*

THESIS: Effects of manipulating the gut microbiome in rat models of hypertension

This study investigated how the gut microbiota relates to blood pressure in hypertensive and normotensive rats. The research compared baseline microbial communities and examined changes following antibiotic treatment and Helicobacter exposure. The study identified strain-specific differences in microbial composition and candidate bacterial taxa associated with systolic blood pressure. By applying compositional microbiome analyses, the work provides a careful foundation for future studies investigating potential microbial roles in hypertension and the development of targeted microbiome-based interventions to improve cardiovascular health outcomes.

Supervisors: Professor G Candy, Associate Professor EE Nweke and Dr. A Ismail

This thesis provides novel insights into how South African entrepreneurs develop individual resilience and achieve success under crisis conditions. Drawing on positive psychology and resilience theory, this study develops a unique conceptual framework to quantitively determine how different factors shape individual resilience and entrepreneurial success. The findings confirm that individual resilience strongly predicts entrepreneurial success validating resilience as a critical determinant of outcomes under challenging conditions. In so doing, this research extends resilience theory beyond single crisis events to examine adaptation under sustained adverse conditions.

GRADUATION AWARDS

FACULTY OF HUMANITIES

To be presented at the Faculty's prize giving ceremony

Fine Art Award:
For Distinguished and Outstanding Creative Research in Fine Art (Doctor of Philosophy)
Alexander Julian Appolis

Ububele Post-Graduate Academic Citizenship Award:
For outstanding postgraduate academic citizenship, service and collegial engagement
Erin Vicky Hazan

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