



Postgraduate degrees in the Pharmaceutical Sciences conferred in 2017/2018

The Academy of Pharmaceutical Sciences takes pleasure in sharing postgraduate students' success. The titles of the research projects provide insight into the scope and nature of pharmaceutical research that is happening in the country. Unfortunately, due to space limitations, only the main supervisor of each research project has been listed.

Please note that this list is incomplete, as not all universities have submitted details of graduates and their research to the SAPJ.

The Academy congratulates all graduates and wishes them well in their future careers.

Nelson Mandela University

MPharm (Research)

AC Bobbins (Cum laude)

Delivery of pharmaceutical services and care at three primary healthcare clinics with different dispensing models in the Nelson Mandela Bay Health District

Supervisor: Prof SF Burton

K Cumberlege

Pharmacists' perceptions of the effects of the Consumer Protection Act of 2008 on the pharmacy profession in South Africa: an exploratory study

Supervisor: Prof I Truter

BHC Gebers

Pharmacy personnel practices with regard to the sale of non-prescription asthma medication in community pharmacies in the Eastern and Western Cape

Supervisor: Dr LC Kritiotis

NM Kemp

Barriers to picking and packing in pharmaceutical warehousing and distribution in South Africa

Supervisor: Mr YE Kadernani

Y Khan (Cum laude)

A proposed baseline South African antimicrobial stewardship curriculum for the Bachelor of Pharmacy programme

Supervisor: Dr JA Mc Cartney

ST Ndzamela

Patients and healthcare professionals' experiences of medicine unavailability at a primary healthcare centre in the Nelson Mandela Bay Metropole

Supervisor: Prof SF Burton

Y Ramjan

Development of a framework for a proposed antimicrobial usage reporting tool for public sector hospitals

Supervisor: Dr JA Mc Cartney

MPharm (Course work)

PDT Louw

Method validation for the quantification of casticin in *Vitex agnus-castus* fruit using a Fourier Transform infrared multivariate chemometric model

Supervisor: Prof G Kilian

S Singh

Proportional scale-up of plasma-derived factor VIII by increasing the mass of cryoprecipitate for dissolution

Supervisor: Prof G Kilian

MSc (General Health Sciences)

VP Dakada

The medicinal chemistry of selected halogenated diketopiperazines cyclo (C/S-PR0-4F-PRO) and cyclo (L-PHE-41-VAL)

Supervisor: Prof EE Ferg

WA Gwimo (Cum Laude)

Development and characterisation of miconazole nitrate loaded solid lipid nanoparticles for incorporation into a vaginal mucoadhesive system

Supervisor: Prof G Kilian

PhD (General Health Sciences)

MN Nyambe

The anti-proliferative activity of *Drimia altissima* and a novel isolated flavonoid glycoside against hela cervical cancer cells

Supervisor: Prof M van de Venter

D Oelofse

Haematological malignancies in a South African population: a study in cancer transition

Supervisor: Prof I Truter

North-West University**MPharm****AP Akinrogunde**

Bipolar disorder in the South African private health sector: Longitudinal analysis of prevalence, comorbidities and prescribing patterns

Supervisor: Prof MS Lubbe

HL Bester

Testosterone undecanoate associated polycythaemia in males with late-onset hypogonadism in a private practice

Supervisor: Dr J du Plessis

V Booyesen

Adherence to post-operative pain medication following day case orthopaedic surgery at a South African private hospital

Supervisor: Prof JR Burger

R de Kock

Prevalence of carbapenem resistance in adult patients admitted to a private hospital in Daspoort, Tshwane

Supervisor: Dr DM Rakumakoe

M du Toit

Therapeutic drug monitoring of gentamycin and amikacin in hospitalised patients in a private hospital, Western Cape

Supervisor: Dr DM Rakumakoe

WP Greffrath

Triglyceride levels after six months of lopinavir/ritonavir therapy as an indicator for pancreatitis risk

Supervisor: JM du Plessis

J Jaquire

Provision of pharmaceutical care and public health services in an ambulatory elderly population

Supervisor: Dr R Joubert

L Joubert

Prescribing patterns of ADHD medication in children under the age of eighteen years in the Western Cape from 2005-2013

Supervisor: Prof JR Burger

M Obeng-Kusi

Research methods for conducting pharmacoepidemiological studies using medicines claims data

Supervisor: Prof JR Burger

M Sello

Clinical outcomes and renal safety in HIV/AIDS patients on tenofovir-containing regimens in Lesotho

Supervisor: Dr DM Rakumakoe

T Smit

The prevalence and configuration of nausea in patients receiving intravenous chemotherapy in a private oncology centre in South Africa

Supervisor: Dr J du Plessis

F Wafawanaka

Usage of central nervous system medication in HIV/AIDS patients: Longitudinal analysis (2005-2015) of prevalence and prescribing pattern changes

Supervisor: Prof MS Lubbe

MSc**E Aucamp**

An investigation of indanone derivatives as inhibitors of monoamine oxidase

Supervisor: Prof A Petzer

C Bakker

The synthesis and evaluation of bezosuberone derivatives as inhibitors of monoamine oxidase

Supervisor: Prof A Petzer

C Bezuidenhout

Mechanisms of in vitro cytotoxicity of antimicrobial peptides in combination with stabilising excipients

Supervisor: Prof LH du Plessis

S Bushoff

Investigation of the stabilising effects of niosomes on the amorphous forms of roxithromycin

Supervisor: Prof ME Aucamp

DJ Cloete

The synthesis and evaluation of tetralone derivatives as inhibitors of monoamine oxidase

Supervisor: Prof JP Petzer

ES de Ridder

Comparative study of transdermal delivery of oestriol, oestradiol and progesterone from multidrug formulations

Supervisor: Prof J du Plessis

I du Plessis

The development of simple HPLC methods to separate methylene blue and its metabolites

Supervisor: Prof JC Wessels

L Erasmus

Investigation of surfactant-drug pharmacokinetic interactions

Supervisor: Dr C Gouws

M Erasmus

In vitro cytotoxicity of *Siphonochilus aethiopicus* in combination with selected fillers for tableting

Supervisor: Dr JM Viloen

CL Erichsen

Pharmacological evaluation of an alpha2C selective antagonist in an animal model of posttraumatic stress disorder

Supervisor: Prof BH Harvey

J Fourie

Evaluation of efavirenz on neurochemical and oxidative stress markers and addictive-like behaviours in rats

Supervisor: Dr M Möller-Wolmarans

A Haasbroek

Drug absorption enhancement capacities and mechanisms of action of *Aloe vera* gel materials

Supervisor: Prof JH Hamman

MC Haigh

Anticancer activities of oxidant-redox drug combinations in lipid excipients

Supervisor: Prof LH du Plessis

S Hattingh

Development of lipid matrix tablets containing a double fixed dose combination of artemisone and lumefantrine

Supervisor: Dr JM Viljoen

JJ Heyns

Investigating the absorptive and secretory transport of selected anti-malaria drugs

Supervisor: Dr C Gouws

C Jacobsz

Pharmacokinetic interactions: the effect of herbal extracts and supplements on drug permeation

Supervisor: Dr JD Steyn

HD Janse van Rensburg

5-Hydroxy-1-tetralone analogues as dual A1/A2A receptor antagonists for the potential treatment of neurological conditions

Supervisor: Prof G Terre'Blanche

MG Labuschagne

Comparative study of the transdermal delivery from testosterone formulations

Supervisor: Prof J du Plessis

FAW Laux

Development of micro-beads that contain functional excipients for effective oral delivery of macromolecular drugs

Supervisor: Prof JH Hamman

JS Lotter

Studies on *Garcinia mangostana* Linn as a therapeutic intervention in an immune-inflammatory model of schizophrenia

Supervisor: Dr M Möller-Wolmarans

L Marais

Synthesis and evaluation of 3,4-Dihydro-3-methyl-2(1H)-quinazoline derivatives as monoamine oxidase inhibitors

Supervisor: Prof LJ Legoabe

KC Ngoy

Formulation of a multiple-unit pellet solid oral delivery system for metformin and gliclazide

Supervisor: Prof JH Steenekamp

JAC Nieman

Development of a multiple-unit sustained release dosage form containing gliclazide

Supervisor: Dr JM Viljoen

L Pieterse

Adenosine A1/A2A receptor antagonistic properties of selected 2-substituted benzoxazinone and quinazolinone derivatives

Supervisor: Prof G Terre'Blanche

C Rudman

A retrospective descriptive investigation into the clinical profile of HIV patients in the North West Province switched to third-line regimens

Supervisor: Dr M Viljoen

C Strydom

Development of a bead-in-matrix delivery system for insulin

Supervisor: Prof JH Steenekamp

MA Qhobosheane

Design, synthesis and evaluation of quinasolinone analogues as monoamine oxidase inhibitors

Supervisor: Prof LJ Legoabe

A van As

Optimisation and characterisation of Pheroid® entrapped radio tracer formulations

Supervisor: Dr NI Barnard

PhD**M Barkhuizen**

Genetic and perinatal risk factors for movement disorders

Supervisor: Prof AF Grobler

C Burger

Natural oil nano-emulsion dispersions for the topical delivery of clofazimine, artemisone and decoquinate

Supervisor: Prof M Gerber

C Calitz

Establishing three-dimensional cell culture models to measure bio-transformation and toxicity

Supervisor: Dr C Gouws

MP Chelopo Mgobozi

The development and evaluation of a novel hybrid PLGA nanoparticle-Pheroid® with the potential to improve tuberculosis therapy

Supervisor: Prof RK Hayeshi

I Engelbrecht

The synthesis and evaluation of dual inhibitors of monoamine oxidase and catechol-O-methyltransferase

Supervisor: Prof A Petzer

JH Hamman

Development of multiple-unit pellet systems by employing the SeDeM expert diagram system

Supervisor: Prof JH Steenekamp

J Kleynhans

Pheroid® technology as a tool to change the administration route of selected pharmaceuticals from intravenous to oral

Supervisor: Prof AF Grobler

A Lewies

An in vitro evaluation of antibacterial and anticancer properties of the antimicrobial peptide nisin Z

Supervisor: Prof LH du Plessis

SF Steyn

Chronic effects of pre-adolescent pharmacological and non-pharmacological interventions on depressive-like behaviour in rats

Supervisor: Prof CB Brink

M Strydom

Design, synthesis and evaluation of novel levodopa pro-drugs for the treatment of Parkinson's disease

Supervisor: Prof A Petzer

L van Zyl

Topical delivery of clofazimine, artemisone and decoquinate utilising vesicles as carrier system

Supervisor: Prof J du Plessis

Rhodes University**MSc****H Naidu (Pharmaceutics) with distinction**

Formulation, development and assessment of an orodispersible taste-masked sildenafil film for paediatric use

Supervisor: Prof RB Walker

MPharm**TO Duxbury (Pharmacy Practice)**

Collaborative health literacy development: A World Health Organization workplace health promotion approach to address tobacco use

Supervisor: Dr S Paphitis

RI Manhanzva (Pharmacy Practice) with distinction

Antimicrobial resistance awareness program at Settlers Hospital

Supervisor: Prof S Srinivas

P Marara (Pharmacy Practice)

Workplace health promotion at Rhodes University: harmful use of alcohol

Supervisor: Prof S Srinivas

Doctor of Pharmacy**N Fouche****N Mdazuka-Dlani****Tshwane University of Technology****MTech Pharmaceutical Sciences****IT Baloyi (Cum laude)**

Anti-quorum sensing activity of selected South African medicinal plants used to treat urinary tract infections

Supervisor: Prof A Viljoen

MM Djokam Kamga (Cum laude)

Application of vibrational spectroscopy in the quality control of herbal teas

Supervisor: Prof A Viljoen

LJ Lerotholi (Cum laude)

Phytochemical profiling and quality control of *Athrixia phylicoides* (bush tea)

Supervisor: Prof A Viljoen

FN Mhlongo (Cum laude)

Investigating the pro-angiogenic activity of South African plants used for wound healing

Supervisor: Prof A Viljoen

KC Mmopele (Cum laude)

Quality control and biopharmaceutics of African olive (*Olea europaea* subsp. *africana*)

Supervisor: Prof A Viljoen

K Mokhethe (Cum laude)

Anti-quorum sensing activity of plant volatiles

Supervisor: Prof A Viljoen

E Rubegeta Pavel (Cum laude)

Chemical composition and antimicrobial activity of selected African Myrrh species

Supervisor: Prof A Viljoen

MN Sibanyoni (Cum laude)

Acetylcholinesterase inhibitors from South African Amaryllidaceae

Supervisor: Prof A Viljoen

University of Limpopo (Turfloop campus)

MSc

J Chanyandura (Pharmaceutics)

Formulation and evaluation of gastro-retentive floating tablets of griseofulvin

Supervisor: MS Poka

M Caswel (Pharmacology)

Prescribing patterns of antimicrobial agents for surgical site infections

Supervisor: Prof NZ Nyazema

University of the Western Cape

MPharm

SSMA Almajdoub

Polymer coating of an optimized nano lipid carrier system of *Harpagopytum procumbens* extract for oral delivery

Supervisor: Dr A Dube

SFI Ebdwi

A comparative in vitro analysis of anti-infective generic and brand medicines in the South African public

Supervisor: Dr KL Ward

NT Guzha

Development of a model to predict the cost of treatment of breast cancer with chemotherapy at Groote Schuur hospital

Supervisor: Prof P Valodia

MR Mhlanga

A pharmacy perspective on the epidemiology of antimicrobial drugs in the Kuilsriver area

Supervisor: Dr K Obikeze

V Ramburan

Integrating complementary and alternative medicines into pharmacy: identifying challenges in meeting professional responsibilities and training needs

Supervisor: Prof NC Butler

MB Sekhonyana-Khetsekile

The development and preparation of the quality control dossier for registration of *Artemisia afra* capsule

Supervisor: Prof J Syce

MSc Pharm Sciences

MK Abaniwonda

Polycyclic compounds as carriers for neuroactive non-steroidal anti-inflammatory drugs

Supervisor: Prof J Joubert

EN Alonjang

Active encapsulation of diclofenac sodium into liposome for ophthalmic preparations

Supervisor: Dr N Ebrahim

I Denya

Design, synthesis and evaluation of indole derivatives as multifunctional agents against Alzheimer's disease

Supervisor: Prof J Joubert

MSL Lerata

Discovery of cytotoxic natural products from South African marine sponge

Supervisor: Prof D Beukes

ER Mabande

Antimicrobial discovery from South African marine algae

Supervisor: Prof D Beukes

M Opute Yvette

Novel adamantane-chloroquinoline conjugates to overcome *Plasmodium falciparum* chloroquine

Supervisor: Prof J Joubert

R Swead

The development of a study protocol, and ethics and regulatory approval documentation, for evaluation of clinical efficacy of *Sutherlandia frutescens* in adult type 2 diabetes

Supervisor: Prof J Syce

MSc Pharm Admin**E Kabali**

Review of the effectiveness of the medicines regulatory system in Zambia over the period 1995 to 2015

Supervisor: Dr KL Ward

ML Kent

Investigating the economic impact of mandatory electronic prescribing requirements in the United States

Supervisor: Dr KL Ward

MF Khalil

Pharmacoeconomic evaluation in Egypt and its role in the medicine reimbursement

Supervisor: Dr N Ebrahim

OL Lekuni

Cost effectiveness of selecting an enantiopure formulation over a racemic mixture compound

Supervisor: Ms E Kapp

S Pillay

Evaluation of reporting all types of adverse drug reactions by parents of children younger than 18 years in South Africa

Supervisor: Prof M Viljoen

L Randall

The use of complementary and alternative medicines in the treatment of menopausal symptoms by private healthcare patients in Pretoria, South Africa

Supervisor: Dr M van Huyssteen

PhD**B Magadzire**

Understanding the dynamics of accessing chronic medicines in the public sector: Implications for provision of medicines in South Africa

Supervisor: Dr KL Ward

BD Symon

A reductionistic epistemology utilising brain laterality which investigates pharmacists' ideal interactive environment

Supervisor: Prof NC Butler

University of the Witwatersrand**MSc (Med)****A Ejike**

Antibiotic usage in an intensive care unit of a tertiary level public hospital

Supervisor: Ms D Johnston

N Sinyela

The usage of antibiotics in paediatric patients while admitted to the intensive care unit at a public tertiary hospital

Supervisor: Ms D Johnston

MPharm**Z Gami (with distinction)**

Endophytes hosted by medicinal plants may potentially exhibit antimicrobial activity

Supervisor: Prof S van Vuuren

N Khan

Codeine use in over-the-counter pain medication: a study of pharmacist knowledge and perception

Supervisor: Dr N Butkow

A Stephanou

Evaluation of patients with multidrug-resistant Gram-negative infections treated with colistin in four private sector hospitals in South Africa

Supervisor: Prof S van Vuuren