

13th ANNUAL EARLY CAREER SCIENTIST CONVENTION PROGRAMME BOOK



MESSAGE FROM DIVISION MANAGER

Dr Thabi Maitin

It is always such a joy to me to reach this time of the year when we all meet to encourage each other. We are very excited to have relaunched the oral presentation of work by beneficiaries and we hope that you will enjoy the programme with us.

Remember to celebrate yourselves: you are the cream of upcoming clinical and health research scholars in South Africa. The SAMRC has entrusted the generation of new knowledge in clinical health sciences to you to see us in to the digital frontier. I value each and every one of you and I wish you all the best in 2020!



KEY NOTE SPEAKER 1

Dr Darren Green

Dr Green specialized in Neurology and currently consults globally on Executive Corporate applications of Neuroscience in both business and high-performance sport. In addition he practices as an Emergency Physician at one of South Africa's Leading Cardiac Units and operates on all Media platforms as a Lifestyle Wellness Consultant.



KEY NOTE SPEAKER 2

Dr Goodman Sibeko

Dr Sibeko, PhD, serves as Head of Addiction Psychiatry at the University of Cape Town. He also serves as Co-Director of the South Africa HIV Addiction Technology Transfer Centre.

EARLY CAREER SCIENTIST CONVENTION: 9 – 11 OCTOBER 2019

Progress not perfection:
Balancing mental and physical health on your PhD journey

WEDNESDAY, 09 OCTOBER 2019: MASTERCLASSES		
09h30 – 10h00	Arrival/Registration	
10h00 – 10h10	Welcome and Housekeeping	Dr Nadine Harker, Programme director
10h10 – 10h20	Welcome	Dr Thabi Maitin, RCD Division Manager
10h20 – 10h30	Welcome address	Prof Glenda Gray & Mr Brinton Spies
10h30 – 11h15	Masterclass 1 (Plenary): Completing a PhD: Stories of hope and perseverance Facilitator: Dr Lawrence Mabasa Participants: Dr Salome Maswime, Dr Phumla Sinxadi, Dr Riaan Cedras	
11h15 – 11h30	Tea	
11h30 – 12h30	Masterclass 2: After the PhD: What now? Facilitators: Dr Carry Brooke-Sumner; Dr Kim Jonas	Masterclass 3: Surviving a PhD (mental wellbeing intact) Facilitators: Dr Ebrahim Samodien; Dr Jillian Hill; Dr Janan Dietrich
11h30 – 12h30	Breakaway session (Clinicians): Facilitators: Dr Salome Maswime; Dr Phumla Sinxadi	
12h30 – 13h30	Lunch	
13h30 – 15h30	Masterclass 4: Completing my PhD - Early stage laboratory (animal and human) studies Facilitators: Dr Tarryn Willmer; Dr Ntevhle Thovhogi , Dr Kim Nguyen	
	Masterclass 5: Completing my PhD - Early stage public health and clinical studies Facilitators: Dr Nadine Harker; Dr Tara Carney; Dr Kim Nguyen	
	Masterclass 6: Completing my PhD - Late stage laboratory (animal and human) studies Facilitators: Dr Nireskhi Chellan; Dr Brendon Pearce; Dr Awelani Mutshembele	
	Masterclass 7: Completing my PhD – Late stage public health and clinical studies Facilitators: Prof Andre Kengne; Dr Cindy George, Dr Jillian Hill	
10h30 – 15h30	Masterclass 8: IMVACC – Progress and Feedback Facilitators: Dr Nasheeta Peer; Dr Lindokuhle Ndlandla	

THURSDAY, 10 OCTOBER 2019: SCIENTIFIC PROGRAMME

08h30 – 08h55	Arrival/Registration	
08h55 – 09h00	Welcome and Housekeeping - Dr Nadine Harker	
09h00 – 09h30	Keynote Address - Dr Darren Green	
09h30 – 10h55	Session 1: NCDs Facilitator: Dr Nteve Thovhogi Adjudicator: Dr Awelani Mutshembele Timekeeper: Ms Philistia Joshua	Session 2: Mental Health/Public Health Facilitator: Dr Carrie Brooke-Sumner Adjudicator: Dr Tara Carney Timekeeper: Mr Thobile Mabuya
09h30 – 09h35	Introduction	Introduction
09h35 – 09h45	Exercise training improves whole body insulin sensitivity, but does not alter ectopic fat or hyperinsulinemia in obese black South African women M Fortuin-de Smidt	Exploring the perspectives of health service providers on applying mental health policy and interventions for school- children in the Western Cape, South Africa K Mgoqi
09h45 – 09h55	The impact of genetic polymorphisms on the SLC01B1 gene transcription factor binding sites on enalapril treatment outcome in hypertensive patients R Musoliwa	Feasibility and acceptability of a clinician monitored PTSD Coach Online intervention: A pilot randomised control trail in a low resource setting E Bröcker
09h55 – 10h05	Prevention of Doxorubicin-induced Cardiotoxicity by Galenia africana: A Mechanistic Study N Sangweni	Impact of Resilience on Depression in Mothers Exposed to Intimate Partner Violence or Trauma: Findings from a South African Birth Cohort W Barnett
10h05- 10h15	Lessertia frutescens and Echinacea purpurea effects the bioavailability and metabolism of ethinylestradiol based contraceptives N Hlangwa	Cannabis use and hippocampal subfield volumes in males with first episode schizophrenia and healthy controls F Scheffler
10h15-10h25	Utility of endoscopic duodenal biopsies in patients investigated for malabsorptive features: a South African National Health Laboratory Services database study S Hlatshwayo	Mental health system costs, resources and constraints in South Africa: a national survey and case study for universal health coverage S Docrat
10h25 – 10h40	Questions	Questions
10h40 – 11h00	Tea (PHOTO SHOOT – BMNHSP GROUP)	
	Session 3: NCDs Facilitator: Dr Nteve Thovhogi Adjudicator: Dr Kim Nguyen Timekeeper: Ms Colleen van Wyk	Session 4: Communicable Diseases Facilitator: Dr Janan Dietrich Adjudicator: Dr Rabia Johnson Timekeeper: Ms Philistia Joshua
11h00 – 11h05	Introduction	Introduction

THURSDAY, 10 OCTOBER 2019: SCIENTIFIC PROGRAMME

11h05 – 11h15	The effect of Beta Secretase Inhibitor and Rooibos treatment on C57BLKS db/db mice Y Ntamo	Pulmonary rehabilitation for people with Tuberculosis in a high HIV-positive setting: A pilot randomised control trial S Manie
11h15 11h25	Impact of salt induced hypertension on captive-bred Vervet monkeys (Chlorocebus aethiops) S Khoza	HIV treatment and blood pressure in adolescents and young adults from a hospital-based HIV-treatment cohort N Dwane
11h25 – 11h35	Validation of equations to estimate glomerular filtration rate in South Africans of mixed ancestry J Holness	The decentralised drug-resistant TB programme in South Africa: From policy to implementation W Jassat
11h35 – 11h45	Overweight and obesity trends in South African women of childbearing age: 1998 to 2017 M Nglazi	IL-4i1 regulates macrophage mediated immune responses to acute Mycobacterium tuberculosis infection L Hlaka
11h45 – 11h55	Synthesis and characterization of N-Acetylcysteine-loaded PLGA nanofibers as a neuro-scaffold G Mahumane	The effect of asymptomatic STI's on male foreskin susceptibility to HIV L Rametse
11h55 – 12h10	Questions	Questions
12h10 – 12h45	Lunch (PHOTO SHOOT – BIostat & CLINICIAN GROUPS)	

12h45 – 14h00	Day 2: Afternoon Session - Poster Presentations (short orals)		
	<p>Session 5: Facilitator: Dr Jillian Hill Adjudicators: Dr Kim Nguyen; Dr Cindy George; Dr Ntevhe Thovhogi Timekeeper: Ms Colleen van Wyk</p>	<p>Session 6: Facilitator: Dr Lawrence Mabasa Adjudicators: Dr Anelisa Jaca, Dr Kim Jonas, Dr Brendon Pearce Timekeeper: Mr Thobile Mabuya</p>	<p>Session 7: Facilitator: Dr Tarryn Willmer Adjudicators: Dr Awelani Mutshembele, Dr Carrie Brooke-Sumner, Dr Ebrahim Samsodien Timekeeper: Ms Philistia Joshua</p>
1.	How children make meaning of sexual trauma N Titi	The effects of indigenous South African plant extracts (Cotyledon orbiculata and Tulbaghia. Violacea) on triple negative breast cancer cells M Alouna	Molecular characterization of proteins involved in iron-sulphur cluster assembly in mycobacteria J Arries

THURSDAY, 10 OCTOBER 2019: SCIENTIFIC PROGRAMME

2.	Supervision System of WBOTs in Ngaka Modiri Molema District, North West Province T Assegai	Experience of women who started pre-exposure prophylaxis (PrEP) in Durban, South Africa as part of a standard HIV prevention package in a large multicenter clinical trial I Beesham	Preliminary Findings: Psychological Impacts of Environmental Degradation in Vhembe District, Limpopo Province G Barnwell
3.	Novel proteomic biomarkers for acral lentiginous melanoma I Basson	Designing research for individualization B Carpenter	Biomarkers to predict TB treatment response I Boshieo
4.	Classifying gene expression data with mixture models M Botes-de Klerk	Introducing an arteriovenous fistula pre-cannulation assessment care-bundle to reduce complications in patients with an arteriovenous fistula on haemodialysis A Damons	A prospective longitudinal study of the impact of ante- and postnatal maternal mental health on the neuro-developmental trajectories of children during the first 18 months M Burger
5.	Monoclonal antibody production against Mycobacterium tuberculosis curli pili T Butelezi	Impact of ART adherence and retention interventions on viral load and vertical transmission during pregnancy and breastfeeding, a simulation model T Glass	Patient Cost of Accessing HIV/TB Healthcare Services in Rural KZN T Chetty
6.	Integrative analysis of epigenetic modifications in a breast cancer cell line (MCF-7) treated with a bioactive extract of Bidens Pilosa PK Chokoe	Is the introduction of violence and injury observatories associated with a reduction in violence-related injury in adult populations? A systematic review and meta-analysis A Jabar	Statistical Measures for Multivariate Spatial Autocorrelation TB Darikwa
7.	Identifying biomarkers of subclinical TB and protective immunity through the molecular and cellular comparison between peripheral and local disease sites N Sibiya	Predicting patient outcomes in the South African pharmacovigilance study using joint modelling M Lekganyane	In vivo and in vitro studies to investigate the role of autophagy in human tuberculosis In vivo and in vitro studies to investigate the role of autophagy in human tuberculosis NP Gina

THURSDAY, 10 OCTOBER 2019: SCIENTIFIC PROGRAMME

8.	Investigating the cardioprotective effect of intralipid in both pre-clinical and clinical settings N Hadebe	Evidence on factors influencing contraceptive use and sexual behaviour in South Africa: A systematic scoping review M Hlongwa	Modelling risk factors of diabetes in South Africa N Grundlingh
9.	Neutrophils as effector cells in resistance to infection by Mycobacterium tuberculosis in HIV-infected persons E Kroon	Systematic review on plant based diet in relation to CVD risk in Africa T Lopes	Can biomarkers in scalp hair identify patients at risk of a heart attack? E Mabothe
10.	Inter-individual genetic variation and the development of uncontrolled hypertension in patients with concomitant type 2 diabetes mellitus in Eastern Cape South Africa S Mabhidia	Pharmacogenetics of tenofovir K Motjane	Investigating the uptake efficiency of Cisplatin within African-specific haplotypes of OCT2 M Sedres
	Questions	Questions	Questions
14h00 14h10	Break		
14h10 – 14h55	Session 8: Facilitator: Dr Cindy George Adjudicators: Dr Kim Nguyen; Dr Jillian Hill; Dr Nteveh Thovhogi Timekeeper: Ms Philistia Joshua	Session 9: Facilitator: Dr Kim Jonas Adjudicators: Dr Anelisa Jaka, Dr Lindo Ndlanla, Dr Brendon Pearce Timekeeper: Ms Colleen van Wyk	Session 10: Facilitator: Dr Janan Dietrich Adjudicators: Dr Awelani Mutshembele, Dr Carrie Brooke-Sumner, Dr Ebrahim Samsodien Timekeeper: Mr Thobile Mabuya
1.	Evaluation of anticancer activity of Momordica balsamina extracts and potential interactions with a conventional anticancer drug in colon cancer K Malemela	Differentiation in high glucose increases lipid accumulation, lipolysis and oxidative stress 3T3-L1 adipocytes M Mamushi	The economic burden of depression co-morbidity with chronic disease and its association with utilization, adherence and quality of life: a baseline analysis V Mafunda
2.	A prospective study of the epidemiology and immunological basis of epidermal necrolysis-associated depression E Zitha	The association of single Nucleotide Polymorphisms with the anti-hypertensive drug hydrochlorothiazide among indigenous South African Zulu patients CM Masilela	Effects of rooibos phenolic compounds on the gut microbiota of Vervet monkeys (Chlorocebus pygerythrus) N Mangwana

THURSDAY, 10 OCTOBER 2019: SCIENTIFIC PROGRAMME VENUE

3.	Latent Variable Models for Longitudinal Outcomes from a Parenting Intervention Study C McCreedy	Joint Modelling the CD4 Count and Mortality in a Cohort of Patients Initiated on HAART: a longitudinal study NN Mchunu	Multilevel modelling for cross-classification and multiple membership data in data in public health M Mazinu
4.	Cancer mortality in South Africa (1997 – 2016): Adopting temporal, spatial and health economic modelling approaches ML Nhleko	Early life factors and longitudinal blood pressure trajectories are associated with elevated blood pressure in early adulthood: Birth to Twenty Plus Cohort S Naidoo	The role of Mycobacterium tuberculosis L,D-transpeptidase in TB pathogenesis N Mkhwanazi
5.	Mouse and human macrophages upregulate MX1 and MX2 genes upon infection with mycobacteria RD Pietersen	Joint modelling of longitudinal colony forming unit count and time-to-event data emanating from tuberculosis trials S Nigrini	Semiparametric techniques for multilevel discrete survival data T Nevhingoni
6.	Effect of an educational intervention on knowledge and perceived quality of life amongst diabetes patients of Centres for Diabetes and Endocrinology in North-West Province and Gauteng Province S Richter	Phenotypic of lewis and secretor histo-blood group antigens from saliva of infants suffering from gastroenteritis K Rakau	
7.	The Role of Extracellular Matrix on Esophageal Cancer Cell Drug Response DA Senthebane	Investigating the anti-cancer properties of Dodonaea viscosa, a medicinal plant used by Cape Bush doctors A Saferdien	Determinants of anaemia in women and men in South Africa: Application of GLMMs and Spatial statistics SI Sithole
8.	Plasma cytokine biomarkers in African patients with HIV-associated Kaposi sarcoma F Shaik	Homocysteine, genetic variants and dietary predictors' cross-sectional associations with cardiovascular measures in a group of black South Africans J Van Schalkwyk	Beneficial effect of isoorientin in insulin-resistant adipocytes K Ziqubu
	Questions	Questions	Questions
15h00	Busses leave for Gold Restaurant (PHOTO SHOOT - ECSC GROUP IN FRONT OF THE CONFERENCE CENTRE)		

FRIDAY, 11 OCTOBER 2019: SCIENTIFIC PROGRAM

08h55 – 09h00	Welcome and Housekeeping	
09h00 – 09h30	Keynote Address 2- Dr Goodman Sibeko	
	Oral Presentations (Parallel Sessions)	
09h35 – 11h30	Session 11: Communicable diseases Facilitator: Dr Awelani Mutshembele Adjudicator: Dr Lawrence Mabasa Timekeeper: Ms Colleen van Wyk	Session 12: NCDs Facilitator: Dr Carrie Brooke-Sumner Adjudicator: Dr Anelisa Jaca Timekeeper: Ms Philisitia Joshua
09h35 – 09h40	Introduction	Introduction
09h40 – 09h50	Whole-genome Transposon Mutagenesis to Elucidate the Genetic Requirements for Vitamin B12 Biosynthesis and Assimilation in Mycobacteria R Mbau	Epigenetic alterations associated with childhood trauma and adult mental health outcomes: A systematic review J Nothling
09h50– 10h00	The role of antigen presenting cells and T cells in mice infected with CNS-TB K Kgoadi	Misuse of codeine in South Africa: A multifaceted study of the nature and extent of the problem and methodological considerations S Dada
10h00– 10h10	Infant lung function at one year of age after admission for RSV infection: a case control study C Verwey	Trends in suicide mortality in South Africa, 1997 to 2016 T Kootbodien
10h10 – 10h20	Targeted depletion of RibF, a putative bifunctional FAD synthetase/ flavokinase in Mycobacterium smegmatis MB Raphela	Using Maternity Case Records to obtain births data for estimation purposes: Documenting methodological challenges M Nhlapo
	Breaching the barrier: targeting cell wall enzymes of Mycobacterium tuberculosis for development of novel TB drugs M Shaku	Validation process of a vaccine hesitancy measuring tool in the Western Cape E Oduwole
10h20 – 10h35	Questions	Questions
10h35 – 10h50	Tea	
	Session 13: Communicable Disease Facilitator: Dr Brendon Pearce Adjudicator: Dr Ntevhle Thovhogi Timekeeper: Mr Thobile Mabuya	Session 14: NCDs Facilitator: Dr Annelisa Jaca Adjudicator: Dr Kim Nguyen Timekeeper: Ms Philistia Joshua
10h50 – 10h55	Introduction	

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10h55 – 11h05	Haplotype structure of solute carrier (SLC) promoters in the Xhosa population of South Africa Z Abrahams-October	The design and implementation of a patient-centred therapeutic exercise and sport intervention for young people with substance-use disorders in treatment settings: improving behavioural health and quality of life in South Africa W Lucas
11h05 – 11h15	Hospitalisation in Perinatally HIV-infected adolescents on antiretroviral therapy in South Africa: A prospective study L Frigati	Understanding violence within protest: A case-study of the Rhodes Must Fall movement at the University of Cape Town (2015–2016) M Motimele
11h15 – 11h25	Cardiopulmonary dysfunction in perinatally HIV infected South African adolescents on antiretroviral therapy: Baseline findings from the Cape Town Adolescent Antiretroviral Cohort L Githinji	Preliminary report of late effects of childhood cancer and treatment in a South African cohort A Van Zyl
11h25 – 11h35	Adaptation to living with HIV as a chronic illness and patient self-management: A scoping review N Sematlane	Dietary diversity, food choices and nutritional status of adults at risk of Diabetes Mellitus type II, residing in resource poor communities around Cape Town S Madlala
11h35 – 11h45	Discussion	
11h50 – 12h20	Celebrating the completers	
12h20 - 13h00	Closure and award ceremony	Closing address: Prof Jeffrey Mphahlele Vice President SAMRC Votes of Thanks: Mr W Lucas/Dr A de Villiers /Dr T Maitin Awards: Dr Thabi Maitin and Prof J Mphahlele Final word: Programme Director Dr Nadine Harker
13h00 -	Lunch	

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