



Department of Human Biology



Integrative Biomedical Sciences

Computational • Molecular • Systems



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**Research Day**  
**21 November 2023**

## HIP RESEARCH DAY 2023: NOVEMBER 21

7:15	Registration
8:00	Welcome Address
8:30	<b>Keynote Speaker:</b> Prof. Quarraisha Abdool Karim Preventing HIV infection in young women – a 30 year journey. <i>New Learning Centre</i>

<b>Oral Session 1: 9:00-10:00</b> <i>New Learning Centre</i> <b>Session Chairs: Dr. Sharief Hendricks &amp; Dr. Ghodeejah Higgins</b>		
9:00	S1.1	Elevated KSHV VL is associated with systemic HIV-related illness in Kaposi's sarcoma patients in South Africa. R Tibenderana, <b>M Blumenthal</b> , E Bukajumbe, G Schafer, Z Mohammed.
9:10	S1.2	Systematic KSHV genome analysis from a South African HIV/KSHV-positive patient cohort. <b>M Thomas</b> , V Marshall, C Goodman, et al.
9:20	S1.3	An assessment of the status of the regulatory B cell population (CD45+CD19+CD24++ CD38++) and programmed death-ligand 1 positivity (CD45+CD19+CD274++) in the PBMC of HIV-positive and HIV-negative newly diagnosed DLBCL patients at a South African Health care facility. <b>Z Latib</b> , S Mowla
9:30	S1.4	Pharmacogenomics of Tamoxifen: The role of genetic variation in phase II pharmacogenes on Tamoxifen response among breast cancer patients in South Africa. <b>B Kruger</b> , AP Kengne, D Shamley, C Dandara.
9:40	S1.5	HIV infection, secretor status and antiretroviral initiation timing influence HMO concentrations. <b>E Mbirbah</b> , N Mulder, A van der Kouwe, et al.
9:50	<b>Question &amp; Answer Oral Session 1</b>	

<b>Poster Session 1 (Odd Numbers) &amp; Break: 10:00-11:00</b> <i>Barnard Fuller Building &amp; Frances Ames</i>		
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<b>Oral Session 2: 11:00-12:30</b> <i>New Learning Centre</i> <b>Session Chairs: Prof. Goran Štrkalj &amp; Dr. Adeyemi Adetimehin</b>		
11:00	S2.1	Effects of acupuncture treatment on resting-state functional connectivity in stroke patients with unilateral limb dysfunction. <b>S Fouché</b> , H Lu, F Warton, et al.
11:10	S2.2	Deciphering the dynamic gene regulation driving differential gene expression in the maturing human brain. <b>J van Greenen</b> , R Dangarembizi, D Hockman.
11:20	S2.3	Forensic DNA profiling on human teeth exposed to marine environments. <b>L Malan</b> , L Heathfield, VE Gibbon, C Finaughty.
11:30	S2.4	Role of genetic variations of SLCO1B1 and ABCG2 on the occurrence of statin associated muscle symptoms in a cohort of South African dyslipidemia patients. <b>Z Lusiki</b> , D Blom, S Malema, et al.
11:40	S2.5	Patient-specific computational study of myocardial mechanics for improved diagnosis of peripartum cardiomyopathy. <b>J Nagawa</b> , KL Sack, M Sirry, et al.

11:50	S2.6	To investigate whether VEGF and KDR polymorphisms are associated with chronic midportion Achilles tendinopathy and self-reported measurements of tendon pain. <b>CD Brazier</b> , A September, M-J Laguette, M Collins.
12:00	S2.7	Eyes never lie: Utilising quantitative measures of eye colour to estimate the age of <i>Chrysomya chloropyga</i> pupae. <b>W Uys</b> , CG Mole, M Heyns.
12:10	S2.8	Distinct alterations in white matter properties and organization related to maternal treatment initiation in neonates exposed to HIV but uninfected. <b>N Magondo</b> , E Meintjes, M Holmes, et al.
12:20	<b>Question &amp; Answer Oral Session 2</b>	

**Lunch Break & Poster Session 2 (Even Numbers): 12:30-14:00**  
*Barnard Fuller Building & Frances Ames*

**Oral Session 3: 14:00-15:30**

*New Learning Centre*

**Session Chairs: Dr. Rachael Dangarembizi & Dr. Lucy Macharia**

14:00	S3.1	Therapeutic Evaluation of CD64-based Immunotherapeutics towards CD64+ cells and ex-vivo differentiated macrophages. <b>EA Fajemisin</b> , AO Akinrinmade, S Barth.
14:10	S3.2	Aqueous extracts of <i>Dodonaea viscosa</i> induce potent and selective cytotoxicity in DLBCL cells. <b>B Yekelo</b> , S Mowla.
14:20	S3.3	Evaluation of apoptotic impact of atorvastatin on peripheral blood mononuclear cells infected with <i>Mycobacterium tuberculosis</i> . <b>S Sabeel</b> , B Motaung, R Guler.
14:30	S3.4	Development of an ultraviolet irradiation device: Initial bacterial inactivation profile. <b>J Oehley</b> , L Paul, V Louw, S Sivarasu
14:40	S3.5	Development of 3D multicellular human liver organoid derived from induced pluripotent stem cells as the tool to model liver diseases. <b>SW Maepa</b> , MJ Marakalala, H Ndlovu.
14:50	S3.6	The prevalence and significance of MYD88 <sup>L265P</sup> and CD79 <sup>BY196</sup> activating mutations in a South African cohort of DLBCL patients. <b>BR Ramorola</b> , K Antel, DR Chetty, S Mowla.
15:00	S3.7	The anatomical variations of the recurrent laryngeal nerve and its relationship with the inferior thyroid artery. <b>N Mpanza</b> , A Bhagwandin, K Mpolokeng.
15:10	S3.8	Repurposing drugs that target the oncogenic TBOX transcription factors TBX3 and TBX2 to treat pancreatic cancer. <b>K Serala</b> , S Prince.
15:20	<b>Question &amp; Answer Oral Session 3</b>	

**Break 15:30-16:00:**

*Barnard Fuller Building & Frances Ames*

16:00-16:30	<b>Keynote speaker:</b> Dr. Emmanuel San Applying of the first principles approach in research to solve complex problems and uncover new insights. <i>New Learning Centre</i>
16:30-17:00	Prize Giving, Closing Remarks & Cocktail Function. <i>Anatomy Building Foyer</i>

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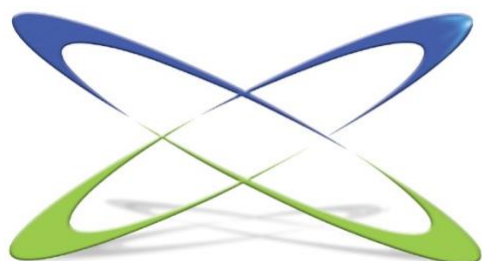
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**POSTER SESSIONS - Barnard Fuller Building & Frances Ames****Session 1 Morning Break 10-11: Odd Numbers Chairs: Ms. Megan Petersen & Dr. Roopam Dey****Session 2 Lunch 13:00-14:00: Even Numbers Chairs: Dr. Ashwin Isaacs & Dr. Anja De Langa**

PS1	Does size matter: preliminary observations on the influence of cadaver size on decomposition rate, insect assemblage and soil chemistry in the summer season of Cape Town, South Africa. <b>AD Adetimehin</b> , CG Mole, DA Finaughty, M Heyns.
PS2	Distinct T cell functional profiles in unvaccinated SARS-CoV-2 seropositive and seronegative children associated with endemic human coronavirus HKU1 cross-reactivity. <b>SB Benede</b> , MB Tincho, A Walters, et al.
PS3	Investigating the co-operation between the human papillomavirus (HPV) oncoproteins E6/E7 with the oncogenic T-box transcription factor 3 (TBX3) to promote cervical cancer. <b>C Burmeister</b> , S Khan, G Schäfer, S Prince.
PS4	Enhancing immune recognition and clearance of oncogenic HPVs with surfactant protein A. <b>S Carse</b> , MB Marusic, G Schafer.
PS5	Modulation of the riboflavin biosynthesis pathway in mycobacteria. <b>MD Chengalroyen</b> , C Mehaffy, M Lucas, et al.
PS6	Exploration of oxidative stress markers in type 2 diabetes mellitus. <b>B Dyira</b> , J Rusch, B Southon, D Blackhurst.
PS7	WITHDRAWN: The role of genetic signatures within the ABCB1, ORPM1 and COMT genes in the development of chronic shoulder pain and shoulder disability in breast cancer survivors. <b>F Firfirey</b> , A September, D Shamley.
PS8	Impact of intrauterine HIV exposure on infant antiviral antibody repertoire. <b>R Gachogo</b> , AU Happel, B Alinde, CM Gray, H Jaspan, S Dzanibe.
PS9	Variations in the circulus arteriosus cerebri in a South African cadaveric sample. <b>J Garlick</b> , K Mpolokeng, G Louw.
PS10	Effect of neurohumoral stimulation on stem cell- derived cardiac-like cells. <b>P Joubert</b> , K Samodien, A Gwanyanya.
PS11	Assessing the applicability of the pulp/tooth area ratio (PAR) method for estimating adult age-at-death in a South African cadaveric sample. <b>D Kotze</b> , VE Gibbon, C Mole.
PS12	Regulation of lymphomagenic factor AICDA by miRNA-181b in HIV-associated aggressive B-cell Lymphomas. <b>T Kubheka</b> , LA De Souza Rios, S Mowla.
PS13	Reactivation of KSHV by co-infections and inflammation in HIV-infected patients from South Africa. <b>H Lambarey</b> , M Blumenthal, A Chetram, G Shafer.
PS14	Retrospective audit of inherited metabolic disease diagnoses: implications for newborn screening in South Africa. <b>S Lampert</b> , D van der Westhuizen, S Meldau, J Rusch, G van der Watt.
PS15	Repurposing TBX3 targeting drugs niclosamide, piroctone olamine and pyrvinium pamoate for the treatment of cervical cancer. <b>LW Macharia</b> , S Khan, G Goding, S Prince.
PS16	WITHDRAWN: Evidence of functional connectivity disruptions between auditory and non-auditory regions in children living with HIV. <b>J Madzime</b> , M Jankiewicz, EM Meintjes, P Torre III, B Laughton, M Holmes.
PS17	Selective binding and internalization of SNAP-tag based fusion protein on melanotransferrin/ p97-expressing tumors cells lines for an immunotheranostics purpose. <b>SH Magagoum</b> , M Karaan, F Augustin, N Biteghe, S Barth.



**POSTER SESSION CONTINUED**

PS18	Assessment of common metrical sex estimation parameters in southern African Holocene San and Khoekhoe populations. <b>S Malek</b> , JC Sealy, VE Gibbon.
PS19	Cooperation of Epstein-Barr virus and HIV in the pathogenesis of HIV-associated Burkitt Lymphoma. <b>L Mapekula</b> , D Chetty, S Mowla.
PS20	WITHDRAWN: Mitochondrial DNA copy number determination in a South African cohort of Type 2 diabetes mellitus patients with target organ damage. <b>T Mashilo</b> , JA Rusch, S Meldau, J Dave.
PS21	Development of recombinant immunotoxins targeting overexpressed tumour cell surface biomarkers Trop2 and Mesothelin for cervical cancer treatment. <b>S Masuku</b> , S Barth.
PS22	WITHDRAWN: Characterisation of a public T cell clonotype enriched in M.tb infected individuals who do not progress to tuberculosis. <b>M Matela</b> , TJ Scriba, M Musvosvi.
PS23	Investigating the exacerbating effects of HIV-proteins on the BBB: an in vitro BBB model. <b>S Matubatuba</b> , S Mentor.
PS24	Next generation version of Pseudomonas Exotoxin A based immunotoxins with reduced immunogenicity to target triple negative breast cancer cells. <b>J Mthehtwa</b> , S Barth.
PS25	Investigating and evaluating the use of the ND4 marker for the effective taxonomic delineation of <i>Lucilia sericata</i> and <i>Lucilia cuprina</i> within the Western Cape of South Africa. <b>D Naiker</b> , K Kulenkampff, L Heathfield.
PS26	Investigating neural tube development using an in vitro stem cell-based model. <b>A Rabeling</b> , M Goolam.
PS27	Digital PCR for the simultaneous enumeration and assessment of the replication potential of <i>Mycobacterium tuberculosis</i> . <b>D Ramamurthy</b> , A Moosa, DF Warner.
PS28	Elucidating interactions between the mycobacterial mutasome/SOS response and other DNA repair pathways. <b>A Ramudzuli</b> , S Gessner, M Mason, D Warner.
PS29	Investigating cellular mechanics in endothelial cells infected with a recombinant Kaposi's sarcoma-associated herpesvirus. <b>M Shabangu</b> , M Blumenthal, D Sass, D Lang, G Schäfer, T Franz.
PS30	The development of recombinant immunotoxins for the treatment of triple negative breast cancer. <b>J Singh</b> , S Barth.
PS31	Regulators of neuroimmune function in the manifestation of central nervous system tuberculosis in the absence of microglia. <b>L Thipane</b> , A Walters, S Geyer Benjamin, NJ Hsu, M Jacobs.
PS32	Mortality due to gendered violence and life stage vulnerability in South Africa. <b>C Voegt</b> , E Dinkele, T Galloway, VE Gibbon.

# HIP Research Day 2023 Programme



# HIP Research Day 2023 Abstracts



