SACCMA Conference 20-22 October 2025

20 October

TIME:	SESSION:	TOPIC:
08:00 – 08:45	**Arrival & Registration**	**Coffee / Tea**
08:45 – 09:00	**Welcome and Introduction:** Prof Fielding, Dean of Science Faculty, Stellenbosch University	
09:00 – 09:30	**Invited Plenary Lecture:** Prof Peter Loskill, University of Tubingen	Recapitulating complex immunocompetent tissues using organ-on-chip and organoid technologies
09:30 – 09:45	Daniel Nieto (University of La Coruña)	From single-cell to organoids: building advanced *in vitro* tissue models
09:45 – 10:00	Krzysztof Wrzesinski (NWU/Celvivo)	Clinostat 'farms' for intensification of organoid production
10:30 – 11:00	**Break**	**Coffee / Tea**
11:00 – 11:30	**Invited Plenary Lecture:** Dr Sanjeev Rambharose, Stellenbosch University	From bench to bedside: Nanotechnology in targeted drug delivery and precision medicine
11:30 – 11:45	*Kyle Allen Brinders (UWC)	Characterization of Blood-Brain Barrier endothelial spheroid model developed from mouse brain endothelial (bEnd.5) cell line: A cost-effective method
11:45 – 12:00	*Cayleigh de Sousa (SU)	Dual-targeted therapy: Novel interventions to inhibit metastasis and chemoresistance in cervical cancer
12:00 – 12:15	*Madré Meyer (SU)	Novel applications of senolytics to prevent treatment resistance in cervical cancer
12:15 – 12:30	Sartorius	Importance of live cell imaging for real-time data acquisition and analysis and overview of Sartorius Incucyte Live Imaging and Analysis Systems
12:30 – 13:30	**Lunch**	
13:30 – 15:00	**Sartorius Workshop**	**Simplifying Complex 3D Models with Sartorius Incucyte Live-Cell Analysis System**

15:00 – 15:30	**SACCMA AGM**	
15:30 – 16:00	**Break**	**Coffee / Tea**
16:00 – 16:15	*Wilfred Sibiya (AHRI/UKZN)	Investigating the sex differences in the immune response to Tuberculosis
16:15 – 16:30	*Davina-Nelson Apiyo (UCT)	Design of an engineered model for *in vitro* testing of biotherapeutics for treatment of bacterial vaginosis
16:30 – 16:45	*Sumari Marais (UP)	The influence of nanoparticle charge on potential radiosensitisation in cell monolayers and a spheroid model
16:45 – 17:00	*Alexa Rabeling (UCT)	BMP4 drives bipotent progenitor cell formation in a mouse model of neural tube development
17:00 – 17:15	*Rachel Brown (UCT)	Engineering mESC-derived neural organoids to study neurodevelopment and disease in Africa
17:15 – 17:30	*Charlene Fourie (UP)	Papaverine enhances radiation-induced cytotoxicity in lung- and breast cancer cell monolayers and spheroids
18:30 – 22:00	**Posters and Wine** Poster session and informal dinner	**Die Stal**

21 October

TIME:	SESSION:	TOPIC:
08:00 – 08:45	**Arrival & Registration**	**Coffee / Tea**
08:45 – 09:00	**Welcome and announcements**	
09:00 – 9:30	**Invited Plenary Lecture:** Prof Adelina Rogowska-Wrzesinska, University of Southern Denmark	From Pluripotency to Function: Hepatic Organoids in Low-Shear 3D Cultures
09:30 – 09:45	Marguerite Blignaut (SU)	Utilizing mitochondrial networks as metabolic sensors in 3D models
09:45 – 10:00	Anine Crous (UJ)	Enhancing neural differentiation in 3D stem cell models using photobiomodulation: A tissue engineering approach
10:00 – 10:15	Alandi van Niekerk (NWU)	Development of an *in vitro* U87MG glioblastoma spheroid model for high-throughput drug screening
10:15 – 11:00	**Break**	**Coffee / Tea**
11:00 – 11:30	**Invited Plenary Lecture:** Dr Tracey Hurrel, Council for Scientific and Industrial Research/University of Pretoria	Advanced cell culture models of the liver: Biological capabilities, research context, and environmental resources
11:30 – 12:30	3-min Flash presentations: • *Sima Jilanchi (NWU) • *Collette Powers (SU) • *Tasneem Farhad (Wits) • *Amy van der Hoven (UCT) • *Cara de Moura-Cunningham (UP) • *Bethaba Shazi (SU) • *Thulisa Mkatazo (UCT) • *Tiron Rietkerk (NWU) • *Hannes van Blerk (SU) • *Nokulunga Mlaba (SU)	
12:30 – 13:30	**Lunch**	

13:30 – 14:00	**Invited Plenary Lecture:** Prof Marie Arsenian Henriksson, Karolinska Institute, Sweden	Metabolic Reprogramming by MYC inhibition as Precision Medicine in childhood Neuroblastoma and clear cell Renal Carcinoma
14:00 – 14:15	*Lebogang Mashigo (UP)	A comparative analysis of senescence markers in chemotherapy-induced senescent 2D and 3D breast cancer models
14:15 – 14:30	*Unathi Ramashala (UP)	Characterisation of the metastatic potential of patient-derived breast cancer organoids
14:30 – 14:45	*Divan Janse van Rensburg (SU)	The development of an electrochemical biosensor for early detection of lipid peroxidation in neurodegenerative diseases
14:45 – 15:00	*Kate da Silva (Wits)	Regeneration and repair: A novel biomimetic 3D-printed scaffold for personalised liver restoration post-trauma
15:00 – 15:15	*Precious Mulaudzi (UJ)	Synergistic green and near-infrared light therapy drives neuroectodermal differentiation in cerebral organoids
15:15 – 15:30	*Karabo Mosiane (Wits)	The effect of polymer-betulinic acid conjugate on pancreatic cancer cells
15:30 – 16:00	**Break**	**Coffee / Tea**
16:00 – 16:15	*Radhini Veerappan (Wits)	Development and biomolecular characterization of neurospheroids
16:15 – 16:30	*Jaco Visagie (NWU)	Therapeutic implications of salicylic acid on hepatocellular carcinoma: Impacts on mitochondrial function and detoxification
16:30 – 16:45	*Ahmed Somaida (Philipps University of Marburg)	Intestinal organoids as a predictive model for assessing oral nano drug delivery systems
16:45 – 17:00	Afolake Arowolo (SAMRC)	Upregulation of FAM111B promotes fibrosis and mitochondrial dysfunction in a cellular model of diabetic cardiomyopathy
17:00 – 17:15	*Kosie Kruger (NWU)	A novel nose-to-brain drug delivery prediction model utilizing an *in vitro–ex vivo* combination
17:15 – 17:30	Mamello Mohale (University of Arkansas)	Improved label-free metabolic imaging through automated isolation of endogenous fluorophores
18:30 – 22:00	**Gala Dinner**	**La Pineta Restaurant**

22 October

TIME:	SESSION:	TOPIC:
08:00 – 09:00	**Arrival & Registration**	**Coffee / Tea**
08:45 – 09:00	**Welcome and announcements**	
09:00 – 9:30	**Invited Plenary Lecture:** Prof Mathieu Vinken, Vrije University Brussels	The European ONTOX project: ontology-driven and artificial intelligence-based repeated dose toxicity testing of chemicals for next generation risk assessment
9:30 – 09:45	Earl Prinsloo (RU)	Additive manufacturing of millifluidic devices for mammalian cell maintenance under perfusion conditions: A matter of printing scale
09:45 – 10:00	Marguerite Blignaut (SU)	Metabolic manipulation of a cardiac spheroid model to mimic insulin resistance associated with obesity
10:00 – 10:15	Divesha Essa (Wits)	Evaluation of anti-PSMA-functionalised PLGA-PEG nanoparticles in LnCap prostate cancer cells and 3D multicellular tumour spheroids
10:15 – 10:45	**Break**	**Coffee / Tea**
10:45 – 11:15	**Invited Plenary Lecture:** Prof Roan Louw, North-West University	Building mitochondrial disease models for Africa: iPSC-derived cell systems in action
11:15 – 11:30	Iman van der Bout (UP)	A new dawn: Vitalising translational oncology research in Africa with the help of advanced cell culture models
11:30 – 11:45	Chrisna Gouws (NWU)	The international explosion of new approach methodologies and the institutional and regulatory support thereof: How does it impact Africa?
11:45 – 12:15	Round table discussion	Advanced Cell Models in Africa – The way forward
12:15 – 14:00	**Lunch & Closing Ceremony**	
14:30 – 17:00	**PI Discussion Forum**	**Tygerberg**

Posters with flash talks:

*Sima Jilanchi (NWU)	Development of a ClinoStar™-based high-density spheroid model for multidrug-resistant small cell lung cancer
*Collette Powers (SU)	Development of a novel nanoparticle-based approach for enhanced antioxidant therapeutic efficacy in SH-SY5Y cell line
* Tasneem Farhad (Wits)	Development and characterization of a patient-derived liver organoid model of chronic HBV infection
*Nokulunga Mlaba (SU)	Establishment and characterization of a scaffold-free 3-dimensional human cardiomyocyte spheroid model
*Amy van der Hoven (UCT)	The role of retinoic acid in the formation of neural tube organoids
*Cara de Moura-Cunningham (UP)	Factors influencing the uptake of doxorubicin into BT-20 triple-negative breast carcinoma spheroids
*Bethaba Shazi (SU)	The combinatorial power of imaging modalities in rendering the *Mycobacterium tuberculosis*-autophagy niche in human lymph nodes
*Thulisa Mkatazo (UCT)	Modelling the early development of cartilage and bone in Mseleni Joint Disease using induced pluripotent stem cells
*Tiron Rietkerk (NWU)	Using a drug-resistant small cell lung cancer spheroid model to evaluate the anticancer potential of an ethanolic *Lessertia frutescens* extract
*Hannes van Blerk (SU)	Investigation of oxidative stress in an insulin resistant cardiac spheroid model

Posters:

Khayelihle Makhathini (UWC)	The effect of HL2/3 cell paracrine factors (HIV) and alcohol on the *in vitro* blood-brain barrier model (bEnd5 cells)
*Kelly Fick (UWC)	The effects of methamphetamine on the Blood-Brain Barrier of addicts and recreational users: an *in vitro* study
*Mukondeleli Mavhungu (NWU)	Development of an hTERT-HME1 spheroid model for breast cancer aetiology research
*Skyler Bosman (UP)	The effect of a carbimazole analogue on the cytotoxicity of paclitaxel in multidrug-resistant small cell lung cancer cells and spheroids
*Bernie Groenewald (SAMRC/SU)	Standardising spheroid cryosection: Is a one-approach fit the way to go?
*Sonam Sahadeo (AHRI/UKZN)	Investigating fibroblast-macrophage crosstalk in Human TB-infected lung tissue
*Mbalenhle Ntuli (SU)	Characterization of spatiotemporal autophagosome flux and its impact on the cognitive-motor function of a Fly model
Ndivhuwo Tshililo (SU)	Regulatory role of calcium/calmodulin-dependent protein kinase family in triple-negative breast cancer progression
Mamello Sekhoacha (UFS)	Establishing a cisplatin-resistant triple-negative breast cancer 3D spheroid model
*Jeanne Du Plessis (SU)	Unravelling cardiovascular differentiation: The effects of two growth serums in a novel human ventricular cardiac spheroid model
*Bernice Monchusi (CSIR/Wits)	Advancing precision oncology: Patient-derived 3D spheroid models for personalized drug screening in South African leukemia and ovarian cancer patients
Beynon Abrahams (UFS)	Chemotherapeutic response in a 3D-MDA-MB 231 triple-negative breast cancer spheroid model

*Keith Ncube (UP)	Understanding chemoresistance in TNBC spheroids: interlinked mechanisms and future directions
*Danielle Brink (SU)	Exploring the role of alphα-synuclein in an amyloid precursor protein (APP) neuronal injury model
Charl Du Plessis (NWU)	Development and characterisation of a digital light processing-bioprinted 3D melanoma model

*** Young Scientists**