

EPSRC-SFI Joint Centre for Doctoral Training in Engineered Tissues for Discovery, Industry and Medicine (lifETIME) Student Day

27th September 2022

Fry Suite | Ground floor | Edgbaston Park Hotel and Conference Centre | 53 Edgbaston Park
Road | Birmingham | B15 2RS

PROGRAMME

Session one chair: Liam Grover

- 09:00 – 09:15** **Registration and Refreshments**
- 09:15 – 09:25** **Welcome**
Liam Grover | University of Birmingham
- 09:25 – 09:40** **Using novel combination therapies to target acute myeloid leukaemia (AML)**
Lauren Hope | 3rd year lifETIME Student | University of Glasgow
- 09:40 – 09:55** **Engineered 3D printed scaffolds to control immunological responses in bone regeneration**
Simon Clark | 3rd year lifETIME Student | University of Glasgow
- 09:55 – 10:00** **Creating a 3-dimensional skin substitute to model normal skin, wound healing and scarring using PODS[®] technology**
Aleksandar Atanasov | 2nd year lifETIME Student | University of Birmingham
- 10:00 – 10:05** **On-Demand sensors for cell therapy bioprocessing**
Hannah Williamson | 2nd year lifETIME Student | University of Birmingham
- 10:05 – 10:10** **Magnetic nanoparticle-mediated orientation of collagen hydrogels for engineering of tendon-mimetic constructs**
Abigail Wright | 2nd year lifETIME Student | University of Birmingham
- 10:10 – 10:25** **Identifying self-generated gradients in pancreatic cancer using FLIM-FRET**
Elena Mandrou | 3rd year lifETIME Student | University of Glasgow
- 10:25 – 10:40** **Organ-on-a-chip platforms for the study of traditional Chinese medicine**
Narina Bileckaja | 3rd year lifETIME Student | University of Glasgow
- 10:40 – 11:05** **Refreshment break**

Session two chair: James Wolffsohn

- 11:05 – 11:10** **Optimizing Mycobacterial drug discovery using picodroplet technology**
Antonia Molloy | 2nd year lifETIME Student | Aston University
- 11:10 – 11:15** **Scaling-up of keratinocyte expansion for the treatment of large burn wounds**
Edward Contreras | 2nd year lifETIME Student | Aston University
- 11:15 – 11:30** **Small molecule signaling in stem cell differentiation**
Chara Dimitriadi Evgenidi | 3rd year lifETIME Student | University of Glasgow
- 11:30 – 11:35** **Advanced immunotherapies and delivery strategies for the treatment of ovarian cancer**
Aoibhin Sheedy | 2nd year lifETIME Student | NUI Galway
- 11:35 – 11:40** **Development of new experimental models of inflammatory bowel disease**
Ibrahim Erbay | 2nd year lifETIME Student | NUI Galway
- 11:40 – 11:55** **Developing a soft tissue diseased model for diabetic foot ulcer using a scalable manufacturing platform**
Mirella Ejiugwo | 3rd year lifETIME Student | NUI Galway
- 11:55 – 12:10** **Developing a 3D in vitro model of pancreatic ductal adenocarcinoma metastasis**
Elaine Ma | 3rd year lifETIME Student | University of Glasgow
- 12:10 – 13:25** **Lunch & Industry exhibition**

Session three chair: Matthew Dalby

- 13:25 – 13:30** **Fibrotic glial scar formation and modulation in vitro**
Sorour Nemati | 2nd year lifETIME Student | NUI Galway
- 13:30 – 13:35** **Building a 3D spatial spheroid atlas of tumour stromal interaction**
Suguna Sundararaman | 2nd year lifETIME Student | NUI Galway
- 13:35 – 13:50** **Investigation and treatment of trabecular meshwork fibrosis using 3D glaucoma models**
Hannah Lamont | 3rd year lifETIME Student | University of Birmingham
- 13:50 – 14:05** **Towards development of eye-safe multiplex resonance raman (ESMR2) device for point-of-care neurodiagnostics**
Georgia Harris | 3rd year lifETIME Student | University of Birmingham
- 14:05 – 14:10** **Label-free physical biomarkers for next generation cell sorting**
Anna Maria Kapetanaki | 2nd year lifETIME Student | University of Glasgow
- 14:10 – 14:15** **Bioactive hydrogels for stem cell engineering**
Alexandre Trubert | 2nd year lifETIME Student | University of Glasgow
- 14:15 – 14:45** **Refreshment break**

Session four chair: Paula Mendes

- 14:45 – 14:50** **Synthetic niches for haematopoietic stem cell maintenance and genetic manipulation**
Sebastian Doherty-Boyd | 2nd year lifETIME Student | University of Glasgow
- 14:50 – 14:55** **New Hydrogels for Encapsulation and Biomedical Applications**
Chloe Wallace | 2nd year lifETIME Student | University of Glasgow
- 14:55 – 15:10** **Development of a 3D model of the cortex for the investigation of neurodegenerative diseases**
Paige Walczak | 3rd year lifETIME Student | Aston University
- 15:10 – 15:25** **Scale up and in vitro testing of exosomes for regenerative medicine applications**
Megan Boseley | 3rd year lifETIME Student | Aston University
- 15:25 – 15:30** **Identification of label-free biomarkers in visceral myopathy**
Sabah Sardar | 2nd year lifETIME Student | University of Glasgow
- 15:30 – 15:35** **Droplet based microfluidics for probing the metabolom of cells**
Mathew Woods | 2nd year lifETIME Student | University of Glasgow
- 15:35 – 16:00** **Refreshment break**

Session five chair: Ivan Wall

16:00 – 16:30

Keynote talk

Morgan Alexander | Professor of Biomedical Surfaces at the University of Nottingham

16:30 – 17:00

Industry session | 5-minute technology overviews:

- Meghna Mathur | Qkine
- Steve Swioklo | Atelerix
- Ravi Girdhar | Sphere Fluidics
- Michael Jones | Cell Guidance Systems
- Darren Heywood | Promega
- Luke William | Manchester Biogel

17:00 – 17:50

1st year poster session

University of Birmingham:

- **Adam Efrat** | Bioprocess development for production of 3D tissues to underpin creation of engineered meat
- **Amaziah Alipio** | Cell-based therapies for liver regeneration
- **James Kennedy** | Recapitulating the liver tumour microenvironment using three-dimensional culture of human epithelial, endothelial, and immune cells
- **Matthias Lim** | Development of microengineered integrated noninvasive Diagnostic technology for traumatic brain injury (MINDTBI)
- **Victoria Hughes** | Dynamic in vitro cornea model for designing regenerative medicine approaches

Aston University:

- **Jennifer Willis** | Investigating bioengineering approaches to produce immunomodulatory mesenchymal stromal cells and their extracellular vesicles for therapy
- **Santino Chander** | Developing eye models to improve eye treatments and contact/intraocular lens technologies

University of Glasgow:

- **Conor Robinson** | Bioengineering of pharma ready bone marrow models for cancer drug screening
- **Elaine Duncan** | Bioengineering 3D adipose organoids for type 2 diabetes drug discovery
- **Judita Milvidaite** | Engineering encapsulation materials and methods to preserve organoids and biopsy material
- **Theodora Rogkoti** | Engineered mechanochemical cancer microenvironments
- **William Mills** | Development of automated imaging and spectroscopic cell sorting platforms for research into cancer and metabolic diseases

NUI Galway

- **Bianca Castelli** | Precision clinical management of chronic neurodegeneration via novel point-of-care device
- **Josep Fumadó Navarro** | Overcoming the challenges of vasculature in the organoid landscape
- **Patrick Hurley** | Brain organoid and multiple sclerosis-on-a-chip platform for CNS drug discovery
- **Seyedmohammad Moosavizadeh** | Development of a biomaterial releasing immunomodulatory extracellular vesicles for enhanced ocular cell and nerve healing following corneal injury: An in-vitro investigation
- **Viswanath Vittaladevaram** | Multiscale characterisation of synthetic blood-brain barrier models

17:50 – 18:20

Free time

Delegates can use this time to check-in to hotel rooms or to relax between the daytime and evening activities.

18:20

Student Day Dinner

Lloyd Suite | Hornton Grange