



# lifetime in Birmingham



UNIVERSITY OF  
BIRMINGHAM



**Professor Liam Grover**  
University of Birmingham





Birmingham Health Partners

Delivered by

UNIVERSITY OF  
BIRMINGHAM

**NHS**  
University Hospitals  
Birmingham  
NHS Foundation Trust

**NHS**  
Birmingham Women's  
and Children's  
NHS Foundation Trust



Birmingham Clinical Trials Unit

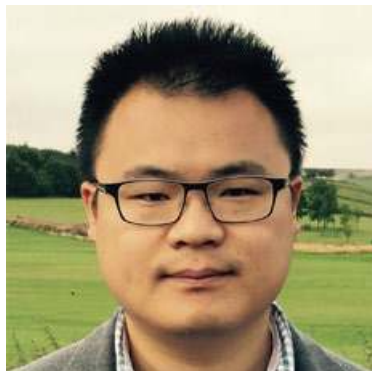




# Chemical Engineering Supervisors



(The  
Boss)



# Other supervisors across campus.....



Plus many  
More.....

# Facilities...

- Advanced Materials Characterisation Lab
- Musculoskeletal Tissues – CMAR
- NIHR Surgical Reconstruction and Microbiology Research Centre (Trauma Centre)
- Scar Free Foundation Conflict Wound Centre
- Healthcare Technologies Institute
- Birmingham Advanced Light Microscopy Centre
- COMPARE (Centre of Membrane Proteins and Receptors)





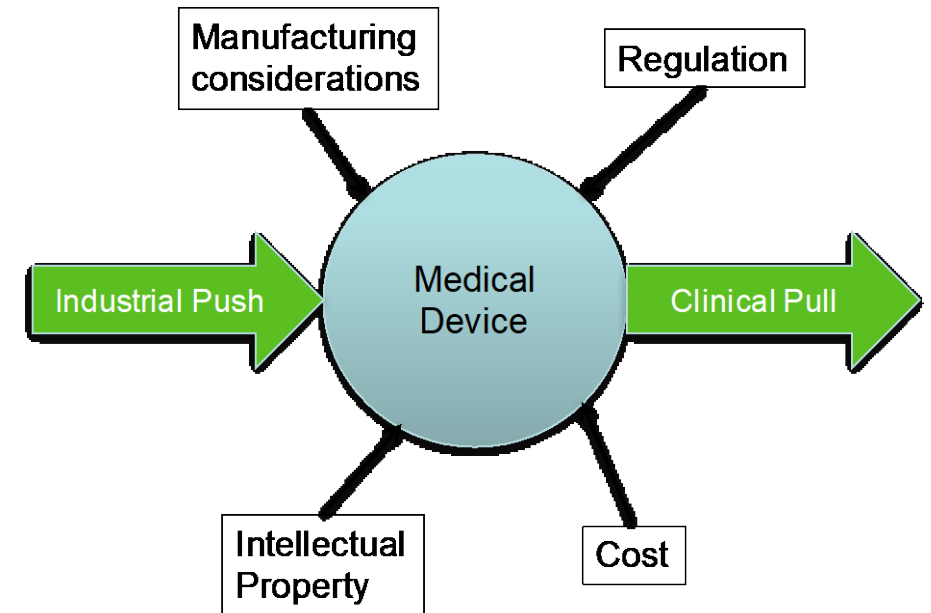
1000m<sup>2</sup> high quality lab space

Imaging

Cell culture

Process design

Assistance with all aspects of translation



# Rotational Training - 2019



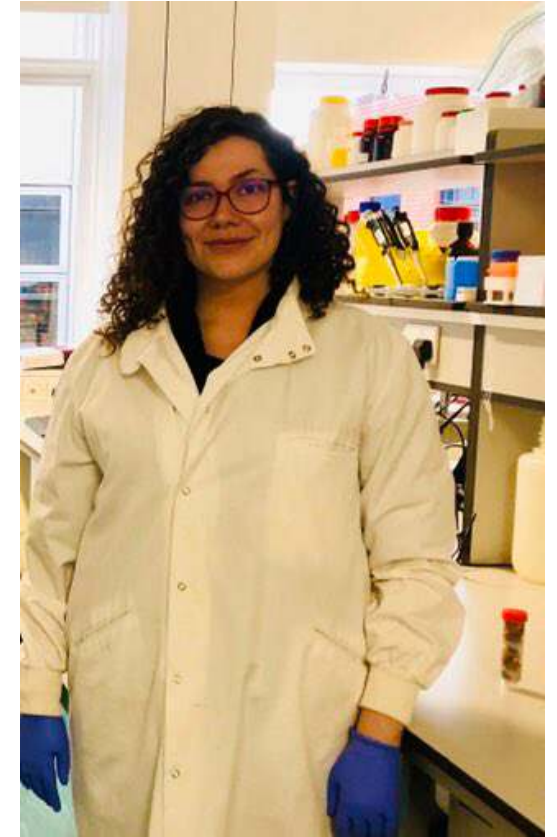
In October, the 2019 cohort visited the University of Birmingham & Aston University for the first week of the Rotational Training course.

# Project: Investigation and treatment of trabecular meshwork fibrosis using 3D glaucoma models

Hannah Lamont, lifETIME PhD student at the **University of Birmingham** is supervised by Dr Lisa Hill, Professor Alicia El Haj & Professor Liam Grover.

Stakeholder supervisor: Dr Michael Jones from Cell Guidance Systems Ltd

Hannah started her project in October 2019. The project aim is to design a novel in vitro 'organ on a chip' model to understand the pathology which occurs in the TM in glaucoma and to identify novel anti-scarring compounds for the treatment of glaucoma.





# Project: Towards development of Eye-Safe Multiplex Resonance Raman (ESMR<sub>2</sub>) Device for Point-of-Care Neurodiagnostics

Georgia Harris, lifETIME PhD student at the **University of Birmingham** is supervised by Dr Pola Goldberg Oppenheimer.

Stakeholder supervisors: Dr Abigail Spear and Dr Chris Howle from DSTL

Georgia started her project in October 2019. The project aim is focused towards development and implementation of advanced technology for in-vivo human eye-Safe mMultiplex resonance Raman (ESMR<sub>2</sub>) device for Point-of-Care neurodiagnostics.



# Project: Scale up and in vitro testing of exosomes for regenerative medicine applications

Megan Boseley, lifETIME PhD student at the **Aston University** is supervised by Professor Ivan Wall & Dr Petra Hanga.

Stakeholder supervisors: Dr Julian Braybrook and Dr Jonathan Campbell, LGC

Megan started her project in October 2019. The project aims to develop organ-on-a-chip in vitro models to study efficiency and actions of TCMs.

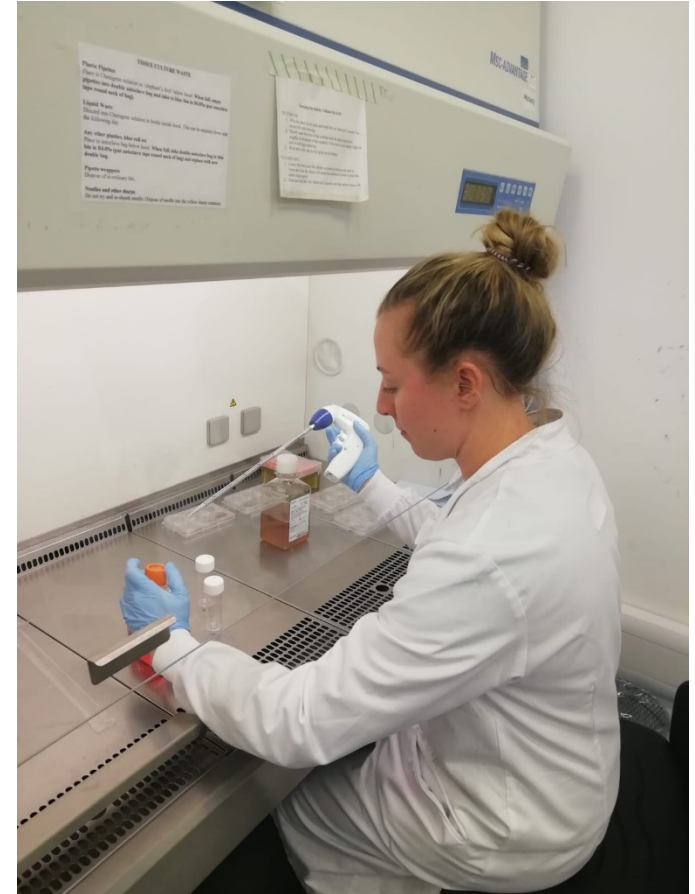


# Project: Development of a 3D model of the cortex for the investigation of neurodegenerative diseases.

Paige Walczak, lifETIME PhD student at the **Aston University** is supervised by Dr Eric Hill (Aston) and Dr David Bassett (Birmingham)

Stakeholder supervisor: Don Wellings, Spheritech

Paige started her project in October 2019 and the project aim is produce exosomes in large quantities that can be tested for different therapeutic applications.





# Lake District trip – 14<sup>th</sup> – 18<sup>th</sup> September 2020



The 2019 cohort will visit the Raymond Priestley Centre in Coniston, Lake District in September.

# Birmingham cohort activities

## Projects:

University of Birmingham – 4 projects (2 started in 2019 and 2 starting in 2020)

Aston University – 4 projects (2 started in 2019 and 2 starting in 2020)

Application deadline: 31 January 2020

Birmingham interviews: 26<sup>th</sup> & 27<sup>th</sup> February 2020

## Next steps for Birmingham:

- Aiming to build cohort on a local level – We span two separate locations
- Monthly meetings of University of Birmingham and Aston University CDT students and supervisors
  - Project updates
  - Journal club
  - Social activities