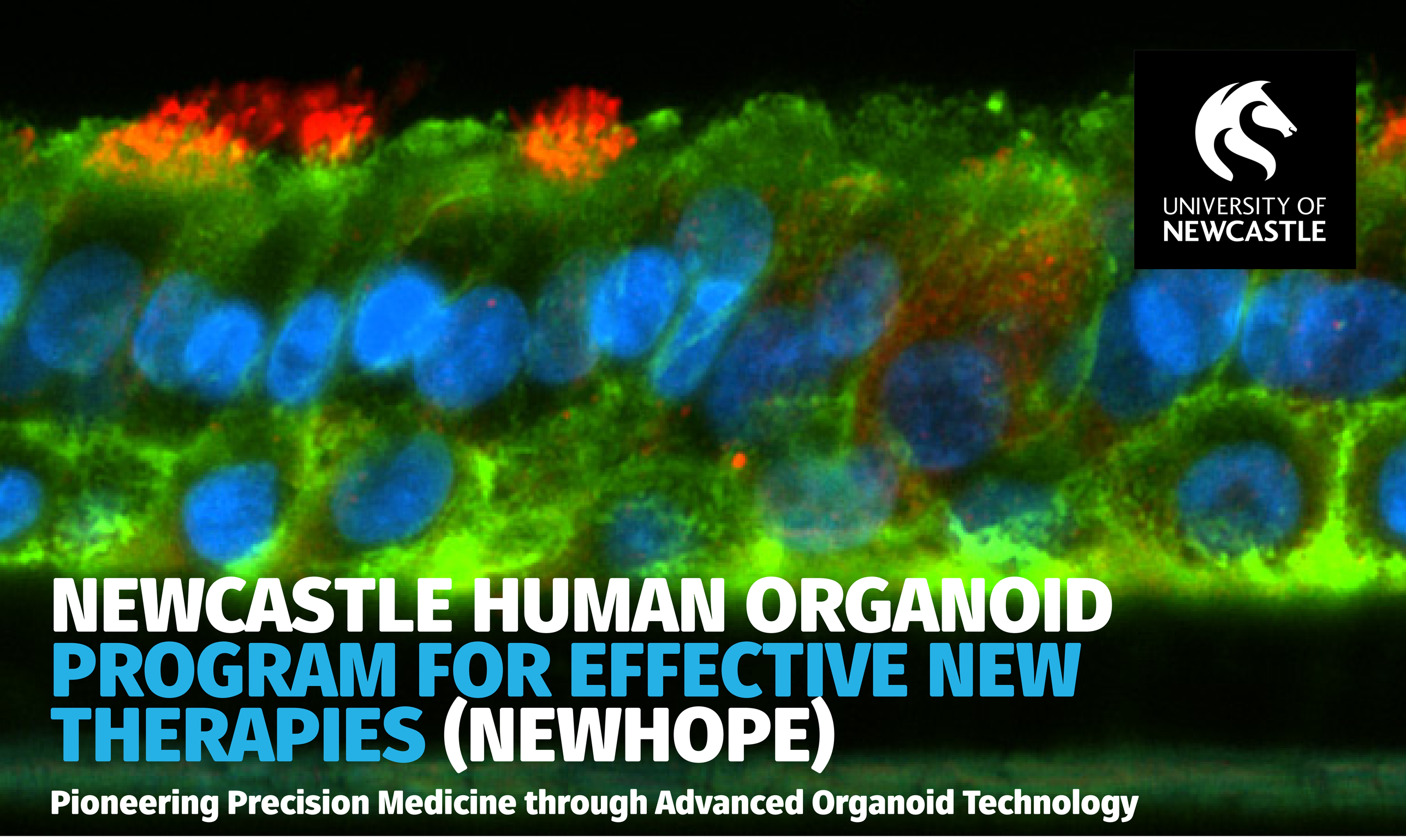


UNIVERSITY OF NEWCASTLE

NEWCASTLE HUMAN ORGANOID PROGRAM FOR EFFECTIVE NEW THERAPIES (NEWHOPE)

Pioneering Precision Medicine through Advanced Organoid Technology

NewHOPE is establishing a revolutionary research platform that integrates patient-derived organoids with rich clinical data to advance disease modelling and therapeutic development, offering a powerful alternative to animal testing and opening new frontiers in precision medicine.

PARTNERSHIP CAPABILITIES

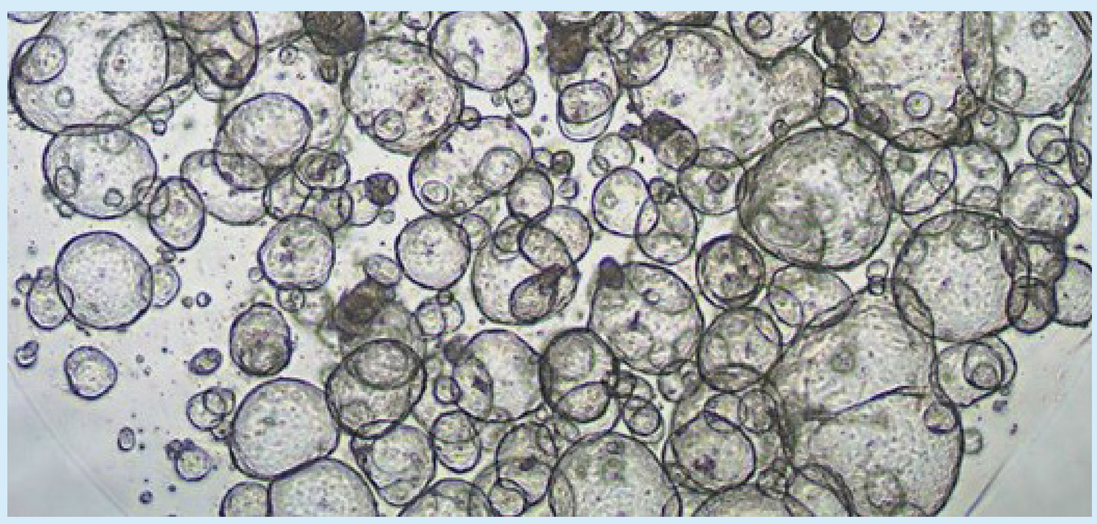
- Patient-derived organoid and biopsy platform for drug testing
- Integration of clinical data (immune profiles, microbiome, genetics, diet, medications)
- Biomarker discovery and patient stratification
- Collaborative research agreements and service contracts
- Co-development partnerships for preclinical prediction
- **Digestive Health Biobank (DHB):** Diseases include Inflammatory Bowel Disease (IBD), Irritable Bowel Syndrome (IBS), Coeliac Disease, Functional Dyspepsia (FD), Reflux, Esophagitis, Eosinophilic Disorders and healthy controls
- **Respiratory Health Biobank (RHB):** Diseases include Asthma, Bronchiectasis, Chronic Obstructive Pulmonary Disease (COPD) and healthy controls (both smokers and non-smokers)
- **Kidney and Urinary Biobank (KUB):** Diseases include Chronic Kidney Disease (CKD), End-Stage Renal Disease (ESRD), Urinary Tract Diseases, Kidney Replacement Therapy (Dialysis or Transplant), Kidney Donors, Healthy Controls

PROVEN IMPACT

- Enhanced patient outcomes through precision medicine approaches
- Streamlined drug development processes
- Reduced reliance on animal testing
- Accelerated translation from discovery to clinical application
- Improved preclinical prediction and reduced drug development risks

MATCHING THE RIGHT TREATMENT TO THE RIGHT PERSON

Patient-derived organoids were used to predict how people with cystic fibrosis would respond to CFTR modulator drugs. This pioneering approach proved highly accurate when compared with real patient outcomes in the clinic and is now being translated into a clinical trial, ORIGIN-1 (ORganoId GuIded N-of-1). Importantly, it also revealed that some patients with rare genetic forms of CF – previously excluded from access –could benefit from life-changing treatments. This discovery is opening the door to more inclusive, personalised therapies and marks a major step forward in precision medicine for cystic fibrosis. The NewHOPE organoid platform has the potential to deliver similar advances – helping researchers test therapies directly on patient-derived cells, match the right treatment to the right person, and open access to new therapies for people who currently have limited options.



CONTACT US:

Marie Parsons
Project Manager
Marie.J.Parsons@newcastle.edu.au