**Respiratory Genomics Conference Programme**

**St Martin’s House Conference Centre, Leicester, UK**

**Tuesday 14th November 2023**

8.30 - 9.15 Arrival Refreshments and Networking (St Martins House Conference Centre Foyer)

9.15 - 9.30  Welcome and introduction – Professor Martin Tobin, University of Leicester​ *(The Grand Hall)*

**Session 1: Genomics in drug discovery (Chair: Professor Ian Hall, University of Nottingham)***(The Grand Hall)*

**9.30 – 10.05 The drug discovery challenge: how can omics technologies accelerate the delivery of efficacious
 therapies? – Dr Iain Kilty, Sitryx Therapeutics**

10.05 - 10.20 *Highlighting uses of DeepPheWAS for understanding pleiotropy in lung function genetics*.
 Dr Richard Packer, University of Leicester.

**10.20 - 10.50 Genetics of Idiopathic Pulmonary Fibrosis. - Professor Louise Wain, University of Leicester**

*10.50 - 11.20 Refreshments and Networking (Kempe and Bardsley Rooms)*

**Session 2: Genetic epidemiology of respiratory disease (Chair: Professor Louise Wain, University of Leicester)**
*(The Grand Hall)*

**11.20 - 12.05 Epigenome Wide Association Studies of Pulmonary Function – Professor Stephanie London, National Institute of Environmental Health Sciences**

12.05 - 12.20 Improving power and accuracy using alternative genetic models in IPF susceptibility genome-wide
 association studies. Dr Tamara Hernandez Beeftink, University of Leicester.

12.20 - 12.35 Assessment of the association of a polygenic risk score for chronic obstructive pulmonary disease
 with lung function from childhood to adulthood. Mr Ashish Kumar, Karolinska
 Institutet, Sweden.

12.35 - 12.50 Age and sex-stratified association between polygenic risk of idiopathic pulmonary fibrosis and
COVID-19 severity. Mr Jose Lorenzo Salazar, Hospital Universitario Ntra. Sra. de Candelaria, Santa Cruz de Tenerife.

*12.50 - 13.50 Lunch ​ (The Grand Hall)*

**Session 3: From Genetic Epidemiology to Functional Genomics (Chair: Dr Emma Rawlins, University of Cambridge)**
*(The Grand Hall)*

**13.50 - 14.35 Approaches to Understand Function of COPD GWAS Loci – Professor Michael Cho, Harvard Medical School**

14.35 - 14.50 *Genome-wide association study in second-generation antihistamine use and underlying chronic traits*   *among the Finns.* Prof Tarja Laitinen, Tampere University Hospital, Finland. (10min + questions)

14.50 - 15.05 Childhood-onset asthma is characterized by airway epithelial hillock-to-squamous differentiation
 in early life. Professor Gerard Koppelman, Beatrix Children’s Hospital, University of Groningen, The
 Netherlands.

15.05 – 15.20 Chronic, repeated exposure of human bronchial epithelial cells to smoke extracts from indoor
 cooking leads to altered gene expression with a similar but enhanced response compared to acute
 exposures.​ Dr Rob Hall, University of Nottingham.

15.20 – 15.35 Elucidating the role of CFTR in human fetal lung development. Dr Amy Wong, Toronto Hospital for
Sick Children

*15.35 - 16.00 Refreshments and Networking (Kempe and Bardsley Rooms)*

**Session 4: Poster Session**
*(Kempe and Bardsley Rooms)*

16.00 - 17.30 Presenters to be available to discuss their posters

**18.30 Conference Drinks Reception and Dinner – The City Rooms**

**21.00** Professor Turi King, After Dinner Speech – ‘Cracking one of the most famous cold cases of all time: identifying the remains of King Richard III’

For the conference we have developed and interactive google map, which can be accessed here:



**Wednesday 15th November**

8.30 - 9.15 Arrival Refreshments and Networking (St Martins House Conference Centre Foyer)

9.15 - 9.30  Welcome – Professor Ian Hall, University of Nottingham *(The Grand Hall)*

**Session 5: Multi-omics in respiratory disease (Chair: Professor Ian Sayers, University of Nottingham)**
*(The Grand Hall)*

**9.30 – 10.05 The Human Lung Cell Atlas in healthy and disease: challenges & opportunities – Professor Martin Nawijn, University of Groningen, The Netherlands**

10.05 - 10.20 A multi-omics approach identifies functional non-coding variants associated with severe COVID-19.
 Dr Simon Biddie, MRC Human Genetics Unit, Institute of Genetics and Cancer, University of
 Edinburgh.

10.20 - 10.35 Transcriptomic analysis of in utero and current exposure to tobacco smoke: does prenatal exposure
 program response to personal smoking? Mr John G Holloway, Faculty of Medicine, University of
 Southampton.

10.35 - 10.50 Epigenetic clock-derived age acceleration is associated with lung function in the Lifelines cohort
 study. Dr Maaike de Vries, Department of Epidemiology and Groningen Research Institute for
 Asthma and COPD (GRIAC), Groningen, The Netherlands.

*10.50 - 11.20 Refreshments and Networking (Kempe and Bardsley Rooms)*

*10.50 - 11.20 Poster Viewing (Kempe and Bardsley Rooms)*

**Session 6: Functional genomics in respiratory disease (Chair: Dr Anna Guyatt, University of Leicester)**
*(The Grand Hall)*

**11.20 - 12.05 Human lung development and disease: lessons from organoids, Dr Emma Rawlins, University of
Cambridge (40 mins + 5 mins)**

12.05 - 12.20 How can gene editing of human pluripotent stem cells help respiratory diseases?
 Dr Sara Cuevas Ocana, University of Nottingham.

12.20 - 12.35 Hypoxia regulates the fate of human fetal lung epithelial progenitors.
 Mr Ziqi Dong, University of Cambridge.

12.35 - 12.50 Alternative splicing is a major factor shaping transcriptome diversity in mild and severe COPD
 ​Dr Dimitri Khalenkow, University Medical Center Groningen.

*12.50 - 13.50 Lunch ​ (The Grand Hall)*

*12.50 - 13.50 Poster Viewing (Kempe and Bardsley Rooms)*

**Session 7: Future frontiers in genetic epidemiology and functional genomics (Chair: Dr Rachel Clifford, University of Nottingham)** *(The Grand Hall)*

13.50 – 14.05 Foetal human lung immune cell development and its role in epithelial cell fate
 Dr Kerstin Meyer, Sanger Institute

14.05 – 14.20 Interrogation of functional variants in Five COPD GWAS loci by massively parallel reporter assays
 (MPRA) Dr Anny Zhou, Harvard Medical School.

**14.20 – 15.05 From Genomes to Function and Medicine – Olly Burren, AstraZeneca**

*15.05 - 15.35 Refreshments and Networking (Kempe and Bardsley Rooms)*

**15.35 - 16.05 Discussion on future opportunities**
*(The Grand Hall)*

**16.05 - 16.20 Award of Conference Prizes – Rachel Hipkin, Oxford Nanopore Technologies & Dr Emma Rawlins, Cambridge University**

**16.20 - 16.30 Summary and Conference Close – Professor Martin Tobin, University of Leicester**

We hope you have enjoyed the conference, please feel free to email any feedback to respiratorygenomics@leicester.ac.uk