

IGMM: Usher 'Show and tell' day

Wednesday 6th December 9am - 4.30pm

MRC Institute of Genetics and Molecular Medicine Lecture Theatre

Chairs/Organisers: Jim Wilson (Usher) & Helen Colhoun (IGMM)

MEETING DESCRIPTION

This meeting will bring together researchers from the IGMM and Usher Institutes at the University of Edinburgh, and will showcase representative examples of areas where science is synergistic. Major themes will include high-volume data acquisition, novel analytical methods and how findings from big data might be linked to molecular function through collaboration. Discussion will focus on how we can best work together to leverage strengths at each centre towards stronger data science and, where applicable, functional follow up.

GOALS AND OBJECTIVES

- Increase mutual understanding of common research interests
- Identify areas for new collaboration
- Identify common challenges and joint strategies to tackle
- Identify potential to collaborate using new/future funding streams
- Understand the best approaches to working together, including in training

09:00	Registration And Coffee (IGMM Nucleus)
09:30	WHERE ARE WE NOW AND WHERE ARE WE GOING?
09:30	Intro and theme setting - major priorities, needs and new opportunities. Helen Colhoun and Jim Wilson
09:35	Usher Institute - Aziz Sheikh
09:40	IGMM - Wendy Bickmore
09:45	UK-HDR bid - process and plans - Cathie Sudlow
09:55	City deal - Aziz Sheikh
10:05	Global Challenges Research Fund - experience, opportunities - Harry Campbell
10:15 - 11:15	DATA (Chair: Jackie Price). 2 x 15' slots (10' talk + 5' questions), 2 x 7' Primers (5' talk +2' Qs).
10:15	15' Helen Colhoun - EHR data - what datasets are available, process for acquiring data - pathway analyses
10:30	15' Tim Aitman - SGP and new opportunities in genomics
10:45	Primer: accessing Clinical Practice Research Datalink - Mome Mukherjee
10:52	Primer: state of the art in epigenomics - Riccardo Marioni
11:00	Primer: IGMM - MS facility - proteomic/metabolomic options - Andy Finch
11:15 - 11:45	Coffee / Networking (IGMM Nucleus)
11:45 - 12:45	ANALYSIS PART 1 (Chair: Jim Wilson). 3 x 15' slots (10' talk + 5' questions), 2 x 7' Primers (5' talk +2' Qs).
11:45	15' Chris Haley - using proteomic QTL to find causal pathways
12:00	15' Evi Theodoratou - PheWAS in UKB

12:15	15' Paul McKeigue - Statistical methods for biomarker discovery and validation
12:30	Primer - Jonine Figueroa - Omics data in molecular epidemiology
12:37	Primer - Xia Shen multivariate methods and (/or) causal inference methods
12:45 - 13:45	Lunch (IGMM Nucleus) / Networking
13:45 - 14:30	ANALYSIS PART 2 Chair: Helen Colhoun. 3 x 15' slots (10' talk + 5' questions).
13:45	15' Albert Tenesa - methods for megascale GWAS
14:00	15' Peter Joshi - large consortia/the genomics of lifespan
14:15	15' David FitzPatrick - challenges of rare disease work using EHR datasets
14:30 - 15:30	LINKING BIG DATA TO FUNCTION Chair: Chris Ponting. 4 x 15' slots (10' talk + 5' questions).
14:30	15' Joe Marsh - protein modelling
14:45	15' Colin Semple - determining variant significance
15:00	15' Greg Kudla - functional testing at scale
15:15	15' Chloe Stanton - Through thick and thin: genetic regulation of central corneal thickness
15:30 - 15:40	Brief Break
15:40 - 16:10	INSTITUTE SYNERGIES AND COMMON CHALLENGES Chairs: Aziz Sheikh and Wendy Bickmore. 5 minute rapid fire, followed by 5' discussion
15:40	Philippa Saunders and Martin Taylor - Precision medicine DTP and attracting STEM researchers
15:50	Cathie Sudlow - best practice for large joint funding applications
16:00	Helen Colhoun/Caroline Hayward - Working with industry with healthcare data
16:10 - 16:30	NEXT STEPS AND FUTURE ACTIONS (Chairs and Institute Directors: Wilson, Colhoun, Sheikh, Aitman, Bickmore, Frame) <ul style="list-style-type: none"> • Collective data assets/ gaps in data • Synergy of health informatics and bioinformatics • Synthesis and cross-learning • Precision Medicine
16:30	Networking Drinks (IGMM Nucleus)

ABOUT

The Usher Institute of Population Health Sciences and Informatics is a high-energy, interdisciplinary environment dedicated to improving the health of individuals and populations locally and globally through research, innovation, knowledge exchange and education. The Usher has ~400 staff and PhD students who transcend the full range of applied and population health sciences including epidemiology/genetic epidemiology, statistics, clinical trials, health economics, sociology and anthropology. It sits within the Edinburgh Medical School in the College of Medicine and Veterinary Medicine and is physically based at Teviot Place and Edinburgh Bioquarter.

The Institute of Genetics and Molecular Medicine (IGMM) constitutes one of the largest aggregates of human molecular genetics and biology research capacity in the UK with over 70 Principal Investigators and 500 staff and PhD students. By pooling the resources and complementary skills of the constituent centres, IGMM brings together the scientific expertise, technology and support services needed to maximise scientific discovery. IGMM enables rapid translation of basic scientific discoveries into new treatments, clinical guidelines and innovative products that have significant impact on the society in the UK and worldwide.