

# SIGNET 2023

## Scottish Immunology Groups Network symposium

8 February 2023  
Perth Concert Hall, Perth

09:00 Registration

09:45 Welcome

### SESSION ONE

Chairs: Ananya Kar, University of Dundee, UK  
and Marco De Donatis, Beatson Institute, Glasgow, UK

10:00 **Lessons from 'de novo' gene variants into human B cell tolerance**  
Carola Vinuesa, Francis Crick Institute, UK (*Keynote speaker*)

10:40 **Intraepithelial T lymphocytes at the forefront of intestinal immunity**  
Mahima Swamy, University of Dundee, UK (*Invited speaker*)

11:00 Networking break, posters and refreshments

### SESSION TWO

Chairs: Bert Malengier Devlies, University of Edinburgh, UK  
and Kerrie Hargrave, University of Glasgow, UK

11:20 **Halting pulmonary fibrosis through interference in the IL-25, IL-33 and TSLP pathways**  
Samuele Di Carmine, University of Dundee, UK (*Selected abstract*)

11:30 **Decoding the high mannose glycan as immune signal for cellular aging, infection and oxidative stress**  
Patrick Cao, University of Aberdeen, UK (*Invited speaker*)

11:50 **Aptamers can act as adjuvants by enhancing DC function and DC/T cell interaction**  
Larissa Camargo da Rosa, University of Glasgow, UK (*Selected abstract*)

12:00 **Enteric damage from helminth infection induces systemic monocytosis and protects against respiratory syncytial virus infection**  
Matthew Burgess, University of Edinburgh, UK (*Selected abstract*)

12:10 **The Parasitic Worm Product ES-62 resolves chronic inflammation and promotes health- and life-span**  
Margaret Harnett, University of Glasgow, UK (*Invited speaker*)

12:30 Lunch, networking, posters

### SESSION THREE

Chairs: Shiva Nickaria, University of Aberdeen, UK and Gareth Rhys-Jones,  
University of Edinburgh, UK

14:00 **Ccr2-mediated monocyte recruitment is essential for non-fibrotic endometrial repair and re-epithelialisation during experimentally induced menstruation**  
Phoebe Kirkwood, University of Edinburgh, UK (*Selected abstract*)

14:10 **Salt-Inducible Kinases (SIKs): Recently identified regulators of mast cell function**  
Nicola Darling, University of Dundee, UK (*Selected abstract*)

14:20 **Dissecting the molecular control of mucosal macrophage differentiation**  
Calum Bain, University of Edinburgh, UK (*Invited speaker*)

14:40 **NK cells acquire memory to Nippostrongylus brasiliensis infection in mice**  
Orhan Rasid, University of Glasgow, UK (*Selected abstract*)

14:50 **Hypoxia shapes the immune landscape in lung injury and promotes the persistence of inflammation**  
Ananda Mirchandani, University of Edinburgh, UK (*Selected abstract*)

15:00 **Distinct human synovial-tissue CD1c+ dendritic cell clusters govern healthy immune homeostasis and the active and remission phases of Rheumatoid Arthritis**  
Domenico Somma, University of Glasgow, UK (*BD Biosciences Sponsored talk*)

15:10 Networking break, posters and refreshments

### SESSION FOUR

Chairs: Alejandro Brenes, University of Dundee, UK and Raquel Barroso Ferro,  
University of Aberdeen, UK

15:35 Discovery Immunology  
Simon Milling, University of Glasgow, UK

15:40 Connecting myeloid cell metabolism and function  
David Sancho, CNIC, Spain (*Keynote speaker*)

16:20 Closing remarks

16:30 Networking reception and posters

17:30 Close

# SIGNET 2023

## Scottish Immunology Groups Network symposium

8 February 2023

Perth Concert Hall, Perth

### Poster presentations

- P.01 **Investigating T cell homing across the gut-joint axis in Crohn's disease and axial spondyloarthritis**  
Annabelle N. Ferguson, University of Glasgow, UK
- P.02 **The WNT pathway disrupts intraepithelial lymphocyte immunosurveillance in colon cancer**  
Federico Lupo, University of Glasgow, UK
- P.03 **Lung stromal cell dynamics are altered by infection experience and ongoing antigen presentation following influenza re-challenge**  
Julie C. Worrell, University of Glasgow, UK
- P.04 **How does RNA cap methylation regulate T-cell differentiation?**  
Katarzyna Knop, CRUK Beatson, UK
- P.05 **Antigen presenting cells: T cell interactions in the lung: exploring the generation and phenotype of Interferon- $\gamma$  producing memory CD4 T cells during influenza virus infection**  
Hargrave, K.E, University of Glasgow, UK
- P.06 **FocuSCOPE: A High-Throughput Single-Cell Multi-Omics Solution For Combination Whole-Transcriptome And Targeted Transcript Recovery**  
Samuel Kerr, Singleron Biotechnologies GmbH, Cologne, Germany
- P.07 **Intestinal helminth infection activates tissue-based IL-10 and IFN $\gamma$  signalling, promoting the Th2 response and restricting bacterial spread**  
Perona-Wright G, University of Glasgow, UK
- P.08 **Using the power of social media to tackle vaccine hesitancy**  
Perona-Wright G, University of Glasgow, UK
- P.09 **Characterization of fetal mast cells in extraembryonic and barrier tissues**  
Shin Li Chia, University of Edinburgh, UK
- P.10 **Investigating the diversity of the RNA cap binding interactome and the role of RNA binding in NF $\kappa$ B function**  
Ditsova D, University of Dundee, UK
- P.11 **Ontogeny and maturation of macrophages in the postnatal synovial lining**  
Anna Ahlback, University of Edinburgh, UK
- P.12 **Lung basal cells stimulate the immune system to clear influenza virus then calm the immune system to repair the damage**  
Patrick A Shearer, University of Glasgow, UK
- P.13 **Defective splenic immunity and infection susceptibility persist during chronic stroke recovery**  
Isobel C. Mouat, University of Edinburgh, UK
- P.14 **Structural epitope profiling implicates a T independent antigen on SARS-CoV-2 virion surface associated with immunopathology**  
Patrick K.A. Kearns, University of Edinburgh, UK
- P.15 **Changing TIMES: Altering the Chemokine Composition of the TME to Improve Immunotherapeutic Outcomes**  
Alexander Young, Beatson Institute for Cancer Research, UK
- P.16 **iRhom2 as a Novel Therapeutic Target for Inflammatory Bowel Disease**  
Catriona Laverty, University of Glasgow, UK
- P.17 **Atg16l1 preserves intestinal homeostasis by differentially regulating CD4+ peripheral T cells**  
Annika Frede, University of Glasgow, UK
- P.18 **Targeting Protein Tyrosine Phosphatase 1B (PTP1B) as a Novel Treatment for Diabetic Wound Healing (DWH)**  
Abrar Othman, University of Aberdeen, UK
- P.19 **Role of Long-lived TIM4 CD4 macrophages in regulating stem cells in the gut**  
Vignesh Jayaraman, University of Edinburgh, UK
- P.20 **Effects of NLRP3 and Gasdermin D and Gasdermin E on the Maturation of Neutrophils in Atherosclerosis**  
Emma L. Hunter, La Jolla Institute for Immunology, USA
- P.21 **Predisposition of blood group incompatibility and G6PD deficiency to severe neonatal hyperbilirunaemia**  
Eugene Jassim Brefo Freiku, Komfo Anokye Teaching Hospital, Ghana
- P.22 **Co-transfer of antigen and contextual information harmonises peripheral and lymph node cDC activation**  
Pirillo C, Beatson Institute for Cancer Research, UK
- P.23 **Investigating the role of adhesion proteins in immune modulation of glioblastoma**  
Annabel Black, University of Edinburgh, UK
- P.24 **Non-Ionic Surfactant Vesicles as an Anti-inflammatory**  
Logan Mackie, University of Strathclyde, UK
- P.25 **Visualising of mucosal antigen uptake and trafficking to uncover how dendritic cells control immunity and tolerance**  
Anna Andrusaite, University of Glasgow, UK

# SIGNET 2023

## Scottish Immunology Groups Network symposium

8 February 2023

Perth Concert Hall, Perth

### Poster presentations

- P.26 **Addressing the role of CD103+CD11b+ dendritic cells in a model of pancreatic ductal adenocarcinoma lung metastasis**  
Marco De Donatis, Cancer Research UK Beatson Institute, Glasgow, UK
- P.27 **Tumour associated macrophages (TAMs) conditioned by breast cancer cells differentially impact growth of mammospheres depending on their origin and the breast cancer cell type**  
Martina Mesiarikova, University of Aberdeen, UK
- P.28 **Glioma-secreted factors activate Nrf2 in human and mouse macrophages**  
Jialin Feng, University of Dundee, UK
- P.29 **Quantitative mass spectrometry reveals stem like regulation mechanisms of the cell cycle in expansion phase CD8+ T cells**  
David Alexander Lewis, University of Edinburgh, UK
- P.30 **Distinct human synovial-tissue CD1c<sup>+</sup> dendritic cell clusters govern healthy immune homeostasis and the active and remission phases of Rheumatoid Arthritis**  
Domenico Somma, University of Glasgow, UK
- P.31 **Aconitate decarboxylase 1 (ACOD1) represents a crucial regulator of monocyte recruitment, survival and proinflammatory status in intestinal inflammation**  
Jones GR, University of Edinburgh, UK
- P.32 **Manipulation of the intestinal epithelium by *H. polygyrus***  
Marta Campillo Poveda, University of Glasgow, UK
- P.33 **Investigating the role of hypoxia inducible factor-1a (HIF-1a) in controlling monocyte behaviour in the intestine**  
Claire E Adams, University of Edinburgh, UK
- P.34 **Investigating the effects of inflammation on colonic macrophages**  
Lizi M Hegarty, University of Edinburgh, UK
- P.35 **Live *Candida albicans* Infection Selectively Suppresses IL-6 in Bone Marrow Derived Macrophages**  
Christa P. Baker, University of Dundee, UK
- P.36 **RNA cap methyltransferases RNMT and CMTR1 drive gene expression programmes required for T cell maintenance and activation**  
Alison Galloway, University of Dundee, UK
- P.37 **Non-Ionic Surfactant Vesicles as a Platform for Drug Delivery**  
Holly Van Dessel, University of Strathclyde UK
- P.38 **Development and functions of mammary gland mast cells**  
Simran Kapoor, University of Edinburgh, UK
- P.39 **Developmental origins of melanoma-associated mast cells**  
Cyril Carvalho, University of Edinburgh, UK
- P.40 **Unique wiring of TCR signalling in Intraepithelial T lymphocytes drives intestinal tolerance**  
Harriet Watt, University of Dundee, UK
- P.41 **Imaging immune Evasion by *Heligmosomoides bakeri***  
Thomas Fenton, University of Edinburgh, UK
- P.42 **Investigating the impact of IL-33 on human macrophage responses**  
Molly M Scott, University of Dundee, UK
- P.43 **The Immunology of Alopecia Areata: How do Macrophages Contribute to Hair Loss?**  
Alana Brown, University of Glasgow, UK
- P.44 **Early life adversity and rheumatoid arthritis: Are synovial macrophages the missing link?**  
Bert Malengier-Devlies, University of Edinburgh, UK
- P.45 **Pim Kinase inhibition blocks IL-15 mediated effector functions in T cells**  
Neema Skariah, University of Dundee, UK
- P.46 **Investigating the Role of IL-33, ST2 and *H. polygyrus* in the Intestinal Niche**  
Suzanne H Hodge, University of Dundee, UK
- P.47 **Immunosuppressive, migratory and metabolic proteins in neutrophils correlate with disease severity and delayed recovery following SARS-Cov2 infection**  
Alejandro J. Brenes, University of Dundee, UK
- P.48 **The intestinal parasite *Heligmosomoides polygyrus* both amplifies and suppresses IL-33 responses**  
Florent Colomb, University of Dundee, UK
- P.49 **The impact of *Helicobacter hepaticus* infection on host innate immunity**  
Anna Heawood, University of Glasgow, UK
- P.50 **Interrogating *H.bakeri* infections using proteomics**  
Youdale, T, University of Edinburgh, UK
- P.51 **Kinetics of Immunomodulation by *Heligmosomoides polygyrus***  
Nicole W. P. Ong, University of Dundee, UK

# SIGNET 2023

## Scottish Immunology Groups Network symposium

8 February 2023

Perth Concert Hall, Perth

## Poster presentations

- P.52 **The HpARI paradox : suppressor of asthma, driver of eosinophilia**  
Josh Richards, University of Dundee, UK
- P.53 **TGF-beta mimics from Heligmosomoides polygyrus and their effect on macrophage subsets**  
Natalia Wąsowska, University of Glasgow, UK
- P.54 **H. bakeri extracellular vesicles modulate the intestinal epithelium in 2-D organoid models**  
Ruby White, University of Edinburgh, UK
- P.55 **Understanding the role of Innate Like B-Cells in Visceral Adipose Tissue and how they are Influenced by the Gut Microbiome**  
Alexander Daley, University of Edinburgh, UK
- P.56 **A family of helminth-derived TGF- $\beta$  mimics provide key insights to Treg and innate immune cell activation**  
Kyle T. Cunningham, University of Glasgow UK
- P.57 **Cyclin dependent kinases 4 and 6: at the intersection of immune function and proliferation control**  
Ananya Kar, University of Dundee, UK
- P.58 **cDC recruitment to the tumour microenvironment: A novel screen determining the heterogeneous chemokine signals driving preDC migration**  
A. L. Shergold, Beatson Institute for Cancer Research, UK
- P.59 **Altering Future Immune Challenges, Priming and Metastasis Through Long-Term Changes to Acute IAV Infection**  
Ryan Devlin, CRUK Beatson Institute, UK
- P.60 **beta-catenin obstructs gamma delta T cell immunosurveillance in colon cancer through loss of BTNL expression**  
Toshiyasu Suzuki, Cancer Research UK Beatson Institute, UK
- P.61 **Investigating how Heligmosomoides polygyrus infection affects gut barrier integrity**  
Olivia J. Ridgewell, University of Glasgow UK
- P.62 **Investigating the Association Between Malaria and Autoimmunity Using Murine Disease models**  
Rinter K. Kimathi, University of Glasgow UK
- P.63 **Elucidating the role of p62 in Salmonella Typhimurium infections**  
Daniel Underwood, University of Aberdeen, UK
- P.64 **Amphiregulin-producing  $\gamma\delta$  T cells drive colorectal cancer growth**  
Anna Pidoux, Cancer Research UK Beatson Institute, UK
- P.65 **CD18-dependent alteration of neutrophil behaviour in the breast cancer pre-metastatic niche**  
Gemma S. Cairns, Cancer Research UK Beatson Institute, UK
- P.66 **The Role of Lipid Metabolism in an Active T Follicular Helper Cell Response**  
Jack Jones, University of Glasgow UK
- P.67 **Roles of MERTK\PROTEIN S pathway in modulating the innate inflammation caused by SARS-CoV-2 infection**  
Theodoros Simakou, University of Glasgow UK
- P.68 **Transforming growth factor beta (TGF $\beta$ ) mimics (TGM) of Heligmosomoides polygyrus induce pSMAD signalling through CD44 and Galectin-9**  
Shashi Prakash Singh, University of Glasgow UK
- P.69 **Developing nano-particle adjuvants to manipulate vaccine induced immune responses**  
Arianna Raponi, University of Glasgow UK
- P.70 **Halting pulmonary fibrosis through interference in the IL-25, IL-33 and TSLP pathways**  
Samuele Di Carmine, University of Dundee, UK
- P.71 **Salt-Inducible Kinases (SIKs): Recently identified regulators of mast cell function**  
Nicola Darling, University of Dundee, UK
- P.72 **Aptamers can act as adjuvants by enhancing DC function and DC/T cell interaction**  
Larissa C da Rosa, University of Glasgow, UK
- P.73 **Ccr2-mediated monocyte recruitment is essential for non-fibrotic endometrial repair and re-epithelialisation during experimentally induced menstruation**  
Kirkwood P.M, University of Edinburgh, UK
- P.74 **Enteric damage from helminth infection induces systemic monocytosis and protects against respiratory syncytial virus infection**  
Matthew Burgess, University of Edinburgh, UK
- P.75 **Hypoxia shapes the immune landscape in lung injury and promotes the persistence of inflammation**  
Ananda Mirchandani, University of Edinburgh, UK

# SIGNET 2023

## Scottish Immunology Groups Network symposium

8 February 2023

Perth Concert Hall, Perth

**We gratefully thank our sponsors for their support:**



Delivering innovative tools to basic and translational researchers. Our focus is directed towards advancing cellular analysis with flow cytometry cell analysers and sorters, fluorescently conjugated monoclonal antibodies as well as systems for single cell multiomics analysis. Bespoke antibody formulations, applications and assay design/development/optimization support as well as specific product training deliver holistic solutions to meet diverse customer needs



Beckman Coulter Life Sciences is dedicated to developing and providing advanced technologies and equipment for research and discovery to explore new treatment methods. Our products are implemented in all major areas of Life Sciences to simplify and automate existing processes in the lab. For more information, please visit [www.beckman.com](http://www.beckman.com).



BioLegend creates world-class, cutting-edge antibodies and reagents—from flow cytometry to immunoassays to multiomics. With over 28,000 trusted reagents, 80,000+ citations in peer-reviewed publications, and a dedicated team to create custom solutions for your lab, there's nothing our expertise doesn't cover. Discover the BioLegend difference at [BioLegend.com](http://BioLegend.com)



Miltenyi Biotec is a global provider of products and services that empower biomedical discovery and advance cellular therapy. Our innovative technologies enable solutions for cellular research, cell therapy, and cell manufacturing. Our more than 30 years of expertise spans research areas including immunology, stem cell biology, neuroscience, and cancer.



Singleron develops single cell multi-omics products that can be used in both research and clinical settings. Its current product portfolio includes instruments, microfluidic devices, reagents, software analysis and database solutions that facilitate high-throughput single cell analysis. The company has offices, laboratories, and manufacturing facilities in Germany, Singapore, China, and US.



STEMCELL Technologies provides cell isolation products, specialized cell culture media, primary cells, and supporting reagents for immunology research. Our popular EasySep™ platform is the fastest and easiest cell separation technology available for the isolation of highly purified, functional human and mouse immune cells. Learn more at [www.easysp.com](http://www.easysp.com)!



To enable our customers to make the world healthier, cleaner and safer. The World Leader in serving science. To serve science, Thermo Fisher Scientific needs to stay ahead of it. We need to anticipate customer needs. We need to constantly think about advancing science, so customers have the freedom to be bolder and more innovative- we are committed to pushing science and technology a step beyond where it is today.