

Innate Immune Memory
14-16 March 2017

**Wellcome Genome Campus,
Hinxton, Cambridge, UK**

Draft Conference Programme

Tuesday, 14 March 2017

- 12:30-13:50 **Registration with lunch**
- 13:50-14:00 **Welcome and Introductions**
Programme Committee
- 14:00-15:00 **Keynote Lecture 1:**
Innate immune memory in plants
Uwe Conrath
RWTH Aachen University, Germany
Chair: Mihai Netea
- 15:00-16:00 **Session 1: Evolutionary aspects of innate memory**
Chair: Mihai Netea
- 15:00 Evolution of lymphocytes
Max Cooper
Emory University, USA
- 15:30 Analysis for trans-generational inheritance of epigenetic
change induced by pathogen infection via ATF7
Keisuke Yoshida
RIKEN, Japan
- 15:45 Trained immunity against viruses in *Drosophila melanogaster*
Emanuele Guimaraes Silva
Universidade Federal de Minas Gerais, Brazil
- 16:00-16:30 **Afternoon Tea**

16:30-18:00

Session 2: Innate immune memory in invertebrates

Chair: Luke O'Neill

16:30 Priming the inflammatory response in *Drosophila*: insights from live imaging and modelling

Helen Weavers

University of Bristol, UK

17:00 Innate immune memory, a new paradigm in invertebrates: the case of the vector snail *Biomphalaria glabrata*

Benjamin Gourbal

Interactions Hosts Pathogens Environments UMR 5244, France

17:30 Induction of trained immunity by *Plasmodium falciparum*

Jacob Schrum

University of Massachusetts Medical School, USA

17:45 Trained immunity induces transcriptional and metabolic rewiring in hematopoietic progenitor cells

Ioannis Mitroulis

TU Dresden, Germany

18:00-19:30

Poster Session 1 (odd numbers) with drinks reception

19:30

Dinner

Wednesday, 15 March 2017

09:00-10:30

Session 3: Memory of mammalian innate immunity: NK cells/ILCs

Chair: Luke O'Neill

09:00 Human innate lymphoid cells; how do they develop and functionally mature?

Hergen Spits

Academic Medical Center, The Netherlands

09.30 Human NK cell memory in response to CMV infection

Yenan Bryceson

Karolinska Institutet, Sweden

10.00 Natural killer cell memory to non-CMV antigens

Silke Paust

Baylor College of Medicine, USA

10.15 Human natural killer cells Learn from pregnancy

Moriya Gamliel

Hebrew University, Israel

10:30-11.00

Morning Coffee

11:00-13:00

Session 4: Memory of mammalian innate immunity: Mo/Mf

Chair: Mihai Netea

11:00 Myelopoietic memory – the influence of microbes and inflammation on hematopoiesis

Helen Goodridge

Cedars-Sinai Medical Center, USA

11:30 Epigenomic modifications induced during bacteria-host interactions

Melanie Hamon

Pasteur Institute, France

12:00 Innate immune memory in macrophages via ATF7-dependent epigenetic changes

Shunsuke Ishii

RIKEN, Japan

12.30 Interleukin-37 Reverses the metabolic derangements of inflammation and prevents non-specific resistance to infection

Charles Dinarello

University of Colorado, USA

13:00-14:00

Lunch

14.00-15:00

**Keynote Lecture 2:
Natural killer cells remember**

Lewis Lanier

University of California, San Francisco, USA

Chair: Eicke Latz

15:00-15:30

Afternoon Tea

15:30-17:45

Session 5: Molecular mechanisms of innate immune memory

Chair: Kingston Mills

15:30 Epigenetic basis of innate immune memory in monocytes and macrophages

Henk Stunnenberg

Radboud University, The Netherlands

16:00 Architecture and genetic basis of human trained immunity and tolerance responses

Yang Li

UMC Groningen, The Netherlands

16:30 IL-1 induces trained immunity responses via functional reprogramming of monocytes

Simone Moorlag

Radboudumc, The Netherlands

16:45 NOD1 and NOD2 activation prevent autoimmune diseases through innate immune training

Joseph DeCoursey
Trinity College Dublin, Ireland

17:00 DNA methylation is stably lost at thousands of CpG sites after bacterial infection in human dendritic cells
Florence Mailhot-Léonard
University of Montreal, Canada

17:15 Antigen non-specific immunological memory of group 2 innate lymphoid cells
Fumio Takei
University of British Columbia, Canada

17:30 Treatment with the TLR4 agonist Monophosphoryl Lipid A protects mice against severe *Staphylococcus aureus* infection via augmentation of innate antimicrobial cell functions
Julia Bohannon
Vanderbilt University Medical Center, USA

17:45-19:15 **Poster Session 2 (even numbers) with drinks reception**

19:15 **Dinner**

Thursday, 16 March 2017

09:00-10:45 **Session 6: Non-specific effects of vaccines**
Chair: Eicke Latz

09:00 The heterologous effects of BCG vaccination: a randomised controlled trial in infants and biobank collection (the MIS BAIR project)
Nigel Curtis
University of Melbourne, Australia

09:30 BCG induced trained immunity through epigenetic and metabolic reprogramming
Reinout van Crevel
Radboudumc, The Netherlands

10:00 On the point of a needle: planned immune training
Christine Stabell Benn
Statens Serum Institut, Germany

10:30 Anti-mycobacterial activity correlates with altered DNA methylation patterns in immune cells from BCG-vaccinated subjects
Maria Lerm
Linköping University, Sweden

10:45-11:15 **Morning Coffee**

11:15-13:00

Session 7: Trained immunity in disease

Chair: Kingston Mills

11:15 Hyperuricemia and trained immunity

Leo Joosten

Radboud UMC, The Netherlands

11:45 Reprogramming of monocyte/macrophage response in human disease

Subhra Biswas

*SIgN, A*STAR, Singapore*

12:15 Epigenetic microglial memory of peripheral inflammation shapes neurological disease

Jonas Neher

University of Tuebingen, Germany

12:30 Training innate immunity: a new approach for the treatment of sepsis

David Williams

East Tennessee State University, USA

13:00

Closing remarks

Programme Committee

13:15

Lunch

14:00

Coaches depart to Cambridge City Centre and Train Station, London Heathrow Airport via Stansted Airport