



# 3<sup>rd</sup> Biennial Meeting

## Sex Differences in the Immune System

**Event Location: Trinity Business School**

**Wednesday, June 12<sup>th</sup>, 2024 Registration**

4:00pm – 6:00pm

**Welcome and Opening Remarks: David Page & Lydia Lynch**

6:00pm

**Public Outreach Event with Prof. Rose Anne Kenny**

6:15pm, Trinity Business School

**Thursday, June 13<sup>th</sup>, 2024**

**Session 1: Genetics/Sex-linked chromosomes & hormones**

*Chair 1: Cliona O'Farrelly, TCD*

*Chair 2: Andrea Lisco, NIH*

9:15am – 11:15am

- David Page, Whitehead Institute, *"Stable and robust Xi and Y transcriptomes drive cell-type-specific autosomal (and Xa) responses in vivo and in vitro, in four human cell types"*
- Margaret McCarthy, University of Maryland School of Medicine, *"Sex differences in the brain at the intersection of neuroscience, endocrinology and immunology"*
- Diana Dou, Stanford University, *"Lnc"ing Xist ribonucleoproteins to the female sex bias in autoimmunity"*
- Jean-Charles Guery, Inserm, *"X chromosome inactivation escape: a driving force in B cell systemic autoimmunity"*

**Break**

11:15 am – 11:45am

**Session 2: Immunometabolism**

*Chair 1: Lizzy Rosser, UCL*

*Chair 2: Emily Day, TCD*

11:45am – 1:15pm

- Lydia Lynch, Princeton University & Trinity College Dublin, *"Linking sex differences in systemic metabolism and immunometabolism"*
- Vishnu Shankar, Stanford University, *"Oxidative Stress is a shared characteristic of ME/CFS and Long COVID"*
- Jaclyn Kline, Harvard Medical School, *"Sex differences in T cell metabolism"*
- Luke O'Neill, Trinity College Dublin, *"A break in mitochondrial endosymbiosis as a basis for inflammatory diseases"*

**Lunch**

1:15pm – 2:00pm

**Session 3: Sex differences across the lifespan**

*Chair 1: Michal Tal, MIT*

*Chair 2: Sarah Doyle, TCD*

2:00pm – 3:30pm

- Darragh Duffy, Institut Pasteur, *"Understanding sex and age effects on healthy immune responses"*
- Dong Gao, Shanghai Institute of Biochemistry and Cell Biology, Chinese Academy of Sciences, *"Sex differences orchestrated by androgens at single-cell resolution"*
- Rebecca Harris, Whitehead Institute, *"Sex chromosomes regulate gene expression more robustly and stably than sex hormones in immune cells from cis- and transgender individuals"*
- Maureen Su, University of California, Los Angeles, *"The X chromosome and Immunity"*



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### Break

3:30pm - 4:00pm

### Session 4: Disease/Cancer

Chair 1: Seth Scanlon, Science Immunology

Chair 2: Rebecca Coll, QUB

4:00pm - 5:15pm

- Amy Moran, Oregon Health & Science University, "*Mechanisms of androgen receptor regulation of immunity*"
- Sebastian Schloer, Leibniz Institute of Virology, "*The RNA helicase DDX3 mediates sex dimorphism in the IFN $\alpha$  response of plasmacytoid dendritic cells upon viral sensing*"
- Molly Ingersoll, Institut Cochin, "*The impact of sex on bladder mucosal immunity*"

### Poster Session & Presentation of EFIS Travel Fellowships

5:15pm - 7:15pm, Concourse

### Networking Fork Supper

7:30pm, Medley, Fleet St.

### Friday, June 14<sup>th</sup>, 2024

### Session 5: Viral diseases, complement & vaccines

Chair 1: Sabra Klein, John Hopkins

Chair 2: Kiva Brennan, TCD

9:30am - 11:15am

- Mihai Netea, Radboud University Medical Center, "*Variation in trained immunity responses*"
- Claudia Kemper, National Heart, Lung & Blood Institute, NIH, "*Cell-autonomous complement as determinant of sex-specific immunity?*"
- Lorena Garcia-del Rio, Trinity College Dublin, "*IL33 modulates vaccine adjuvant induced cell-mediated immunity in a sex-dependent manner*"
- Ed Lavelle, Trinity College Dublin, "*Sex differences in immune responses to vaccine adjuvants*"

### Break

11:15am - 11:45am

### Session 6: Systems Biology/Translational Immunology

Chair 1: Nollaig Bourke, TCD

Chair 2: Jamie Sugrue, Institut Pasteur

11:45am - 1:15pm

- Marc Dionne, Imperial College London, "*Sex differences in Drosophila humoral immunity: causes and consequences*"
- Kyuson Yun, Houston Methodist Research Institute, "*Sex biased YAP1 function at the cancer:immune interface*"
- Elizabeth Maloney, Institut Pasteur, "*Sex-specific effects of temperature on the immune system*"
- Petter Brodin, Karolinska Institute & Imperial College London, "*Immune system adaptation during gender-affirming sex-hormone treatment*"

### Lunch

1:15pm - 2:00pm



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### Session 7: Inflammation & Infection

Chair 1: Dorothee Schwinge, UKE

Chair 2: Irini Sereti, NIH

2:00pm - 4:00pm

- Jenny Regan, The University of Edinburg, "*Sex-specific regulation of phagocytes determines susceptibility to Staphylococcus aureus infection*"
- Shannon Dunn, University of Toronto, "*Obesity Intensifies Sex-specific Interferon (IFN) Signaling to Selectively Worsen Central Nervous System Autoimmunity in Females*"
- Rachael Bell, Wellcome-Wolfson Institute for Experimental Medicine, Queen's University Belfast, "*Regulatory T cells mediate the increased susceptibility of females to Pseudomonas aeruginosa infection*"
- Marcus Altfeld, Leibniz Institute of Virology, "*Sex differences in Type I IFN responses*"
- Yasmine Belkaid, National Institute of Allergy & Infectious Diseases, NIH & Institut Pasteur, "*Tissue specific sex immune control*"

### Break

4:00pm - 4:30pm

### Plenary Speaker: Nick Lane, University College London

*"Why do mitochondria produce sex differences?"*

4:30 - 5:30

### Closing Remarks