

### THURSDAY NOVEMBER 25TH

New Venue: Hilton Dublin (Charlemont)



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### Kindly supported by:















14:55 - 15:45

16:00 - 17:00

17:00 - 17:10

17:10 - 18:00

### 1<sup>st</sup> Early Career Meeting 2021

Irish Society for Immunology	Programme
9:30 – 9:55	Arrival and Registration
9:30 – 9:55	TEA/COFFEE NETWORKING & TRADE EXHIBITIONS
10:00 – 10:15	Conference Open/Welcome: Conference Chair, Dr Danny Johnston, University College Dublin.
SESSION 1:	
10:15 – 10:45	Invited speaker: Dr Rebecca Coll, Queens University Belfast, United Kingdom.
	"Targeting Inflammasomes for the Treatment of Inflammatory Diseases"

0:45 – 10:55	Sponsored Talk: Fluidigm – "Next Generation Cytometry for Immunology Research" – Dr Daniel Dancer	
	"Targeting Inflammasomes for the Treatment of Inflammatory Diseases"	
0:15 – 10:45	Invited speaker: Dr Rebecca Coll, Queens University Belfast, United Kingdom.	

CECCION 3	Construction Description Description
12:00 – 12:30	TEA/COFFEE NETWORKING & TRADE EXHIBITIONS
10:55 – 12:00	Selected PhD student talks x5

SESSION 2:	Careers panel – Becoming a Principal Investigator
12:30 – 13:30	Panel discussion with Dr Mark Robinson, Dr Stephen Lalor, Dr Annie Curtis, Prof Kingston Mills and Prof Catherine Godson
13·30 – 14·15	LUNCH AND TRADE EXHIBITIONS

SESSION 3:	
14:15 – 14:45	Invited speaker: Dr David Loane, Trinity College Dublin

	"Brain-systemic immune interactions in the pathophysiology of traumatic brain injury"
14:45 – 14:55	Sponsored Talk: BioSciences, part of ThermoFisherScientific – "Flow Cytometry Panel Building" – Dr Jamal Sulaimani

15:45 – 16:00	TEA/COFFEE AND TRADE EXHIBITIONS	

Award of presentation prizes

15:45 – 16:00	TEA/COFFEE AND TRADE EXHIBITIONS
SESSION 4:	Careers panel – Maximizing Your Postdoctoral Potential

Selected Postdoctoral researcher talks x4

ESSION 4:	Careers panel – Maximizing Your Postdoctoral Potential

Panel discussion with current/former immunologists in various sectors and short talk from Dr Alice Du	bois (QUB)

David Finlay,	Trinity	College	Dublin.

**Keynote lecture: Dr D** "Science, nutrients and immunity: What is all the stress about!"

Close of meeting



## 1<sup>st</sup> Early Career Meeting 2021 Selected talks

11:00 – 12:00	PhD Selected talks
11:00 – 11.10	"IL-17-producing CD4 tissue-resident memory T cells mediate protective immunity against Bordetella pertussis infection in
	the nasal mucosae" Lucy Curham, Trinity College Dublin
11:10 – 11:20	"Mechanistic understanding of an inflammatory bowel disease-associated pathobiont and NSAIDs in inducing intestinal
	inflammation" Raminder Singh, University College Cork
11:20 – 11:30	"Investigating the regenerative capacity of Th22 cells in the CNS" Katie Mayne, Queens University Belfast
11:30 – 11:40	"Dysregulation of IL-17A and Calprotectin in the female reproductive tract affects pregnancy outcome following assisted
	reproductive therapy" Frederica Giangrazi, Trinity College Dublin
11:40 – 11:50	"Tumour Derived MicroRNA-21 Reprograms Macrophage Responses" Sarah Case, Trinity College Dublin
14:45 – 15.35	Postdoc Selected talks
14:45 – 14:55	"Serum proteome analysis of innate antiviral mediators in patients with advanced liver disease awaiting transplantation"
	Dr Gordon Greville, Maynooth University
14:55 – 15:05	"Enrichment of a novel, pathogenic macrophage population with distinct transcriptional and metabolic signatures
	in Rheumatoid Arthritis synovial tissue" Dr Megan Hanlon, Trinity College Dublin.
15:05 – 15:15	"iPSC-derived Extracellular Vesicles Regulate Human Macrophage Inflammation"
	Dr Stephen Fitzsimons, Royal College of Surgeons Ireland/University College Dublin

Dr Yasmina Esther Hernadez-Santana, Trinity College Dublin



### Keynote Speaker: Dr David Finlay

"Science, nutrients and immunity: What is all the stress about!"



### **Dr David Finlay**

David Finlay is Associate Professor in Immunometabolism in the Schools of Biochemistry and Immunology, and Pharmacy and Pharmaceutical Science at Trinity College Dublin. He was awarded a B.A. (Mod) in Biochemistry in 2001. He completed his PhD (2006) and postdoctoral training at the University of Dundee in Scotland and was elected to fellowship of Trinity College Dublin in 2018. He has been a principal investigator in the Trinity Biomedical Sciences Institute since 2011. His research expertise lies at the interface of immunology and cellular metabolism with a focus on Natural Killer cells and Dendritic cells. His team is revealing novel strategies to modulate immune cell function through targeting metabolism and metabolic signalling pathways. Dr Finlay's research has been supported by awards including a Science Foundation Ireland Career Development Award in 2014 and a European Research Council Consolidator Award in 2017.



## Invited Speakers



Dr Rebecca Coll, Queen's University Belfast

"Targeting Inflammasomes for the Treatment of Inflammatory Diseases"

Rebecca received her PhD in Immunology in 2013 from Trinity College Dublin and moved to the Institute for Molecular Bioscience at the University of Queensland in 2014 to continue her work on innate immunity and novel anti-inflammatory molecules. Rebecca joined The Wellcome-Wolfson Institute for Experimental Medicine at Queen's University Belfast as a Lecturer in Immunobiology and principal investigator in 2019. Rebecca's research is focused on inflammasomes – protein complexes at the heart of inflammation and disease – and how these complexes can be targeted therapeutically to prevent damaging inflammation. Rebecca led the biological characterisation of MCC950, a small molecule inhibitor of the NLRP3 inflammasome and an exciting prospect as a new therapy for treating patients with NLRP3-mediated diseases. In 2016 Rebecca was awarded the Research Australia Discovery Award for her work on NLRP3 inhibitors.



### Dr David Loane, Trinity College Dublin

"Brain-systemic immune interactions in the pathophysiology of traumatic brain injury"

Dr David Loane is Lead of the Neurotrauma and Neuroimmunology Research Group in Trinity College Dublin. This multi-disciplinary research team dedicated to studying the complexities of TBI, neuroinflammation and tissue repair. Specifically, his research program investigates the activation status and functional role of resident microglia and infiltrating blood-borne monocytes in the TBI brain, and to determine how they contribute to chronic neurodegeneration and long-term neurological dysfunction after brain trauma.

Previous to his time in TCD Dr Loane was Associate Professor and Faculty Member at the Shock, Trauma and Anesthesiology Research (STAR) Center at the University of Maryland School of Medicine, Baltimore, Maryland. Dr. Loane conducted his graduate studies at the Department of Pharmacology and MRC Center for Synaptic Plasticity, University of Bristol, England, and obtained his PhD in Neuroscience in 2005. He then pursued postdoctoral training with Dr. Marina Lynch at Trinity College Institute of Neuroscience, Trinity College Dublin, Ireland, where he studied neuroinflammatory changes in the aged and Alzheimer's disease (AD) brain. In 2007 Dr. Loane was recruited to the Department of Neuroscience, Georgetown University Medical Center, Washington D.C., to perform further postdoctoral training on experimental models of traumatic brain injury (TBI) under the mentorship of Dr. Alan Faden. He joined the faculty of the University of Maryland School of Medicine in November 2009 and is currently Associate Professor of Anesthesiology.



### "Becoming a PI" panel discussion



### **Prof Kingston Mills, Trinity College Dublin**

Kingston Mills is Professor of Experimental Immunology, School of Biochemistry and Immunology, Trinity College Dublin (TCD). He is Academic Director of Trinity Biomedical Sciences Institute (TBSI) and TCD Research Theme Champion for Immunology, Inflammation and Infection. He is Co-lead on the Trinity COVID-19 Research hub. He is a graduate of TCD and trained at as a Postdoctoral Fellow at University College London and the National Institute for Medical Research, Mill Hill (now the Crick Institute), London, before joining the Scientific Staff of NIBSC, Herts, UK. He returned to Ireland in 1993 to take up an academic position at Maynooth University. He was appointed to a Personal Chair at Trinity College Dublin in 2001 and was Head of the School of Biochemistry and Immunology from 2008-2011. He heads an active research team focusing on T cells in infection and autoimmunity, mentoring numerous students and postdocs, several of whom have gone on to run their own research groups. He is co-founder of Opsona Therapeutics, TriMod Therapeutics and Parvalis Tx, biotech companies focused on developing immunotherapeutics for inflammatory diseases and cancer.



### Prof Catherine Godson, University College Dublin

Catherine Godson is Professor of Molecular Medicine and Director of the UCD Diabetes Complications Research Centre. She leads an international, multidisciplinary group of investigators including faculty, postdoctoral fellows, clinicians, clinical fellows, graduate students and undergraduates whose research focuses on innate immunity and chronic complications of diabetes. Her work focuses on the molecular mechanisms underlying the initiation, progression and potential regression of diabetic kidney disease have identified several novel therapeutic targets, susceptibility genes and potential modulators of disease.

Prof Godson has mentored many PhD students and postdocs using experience gained in her research work and in academic service. She has served on the board of The Health Research Board, Ireland; The European Medical Research Council and The Wellcome Trust Physiological Sciences Committee [2007-2010]. I served as Vice President Innovation at University College Dublin. She is a member of the editorial board of J Biol Chem and Mol Pharmacol, acts as an adviser to the board of Bart's Charity, London, serves on the executive of the European Diabetic Nephropathy Subgroup of the EASD. Prof Godson was elected a member of the Royal Irish Academy in 2011 and Chaired the RIA Life and Medical Sciences Committee [2014-2019].



### "Becoming a PI" panel discussion



### Dr Annie Curtis, Royal College of Surgeons Ireland

Annie Curtis is a Senior Lecturer in RCSI and President of the ISI. She has had a varied career spanning academics, the public sector and industry. She completed a B.A in Genetics in Trinity College Dublin and conducted her PhD in the laboratory of Prof. Garret FitzGerald at University of Pennsylvania.. Upon graduation, Annie was recruited to GlaxoSmithKline (GSK) in Philadelphia before returning to Ireland as Scientific Programme Manager for Science Foundation Ireland (SFI) (2008-2010) followed by Medical Advisor for Immunotherapeutics with Bristol-Myers Squibb (BMS) (2010 - 2011). After returning to academic research as a postdoc with Professor Luke O'Neill, she was awarded an SFI Starting Investigator Research Grant (SIRG) in2014 to begin to establish an independent research group studying the impact of clocks on the immune system. She was recruited to RCSI as a Research Lecturer in August 2016 and since been awarded a SFI Career Development Award, anIrish Research Council Laureate Award, and a L'Oreal Women in Science Fellowship in 2017.



### Dr Mark Robinson, Maynooth

Dr Mark Robinson is a lecturer in biology and his research group studies the immunology of chronic disease. His group focuses on understanding the role of tissue-resident innate lymphocytes in the progression of chronic liver disease and liver cirrhosis. He obtained his PhD in Immunology from the University of Otago, Dunedin, New Zealand. After postdoctoral fellowships in the UK MRC-University of Glasgow Centre for Virus Research and Trinity College Dublin, Ireland, he was awarded an HRB Emerging Investigator Award in 2017. In 2018, Dr Mark Robinson moved to the National University of Ireland, Maynooth, where he is a faculty member in the Department of Biology and the Maynooth University Human Health Institute.





Stephen received his undergraduate degree in Biochemistry from NUI, Galway before completing an MSc in Molecular Medicine and PhD in Immunology, under the supervision of Prof. Kingston Mills, at Trinity College Dublin. Following his PhD, Stephen undertook two postdocs, firstly with Prof. Ben Segal in the Dept of Neurology at the University of Michigan – where he was awarded a National MS Society postdoctoral fellowship – and then with Prof. Rachel McLoughlin in the School of Biochemistry and Immunology at TCD, before being awarded a Starting Investigator research grant by SFI to establish his own independent research programme, under Rachel's mentorship. In January 2020, Stephen joined the academic faculty of the UCD School of Medicine as an Assistant Professor in Pathology where his research focuses on T cell orchestration of chronic inflammation and the impact of the airway microbiome on pathogenic mechanisms of disease.



# "Maximising your postdoc potential" panel discussion



Dr Alice Dubois, Postdoctoral Development Centre, Queen's University Belfast

Alice is the Head of the <u>Postdoctoral Development Centre (PDC)</u>, which provides bespoke career development support to postdoctoral researchers at Queen's, with a particular focus on the Faculty of Medicine, Health and Life Sciences.

While previously a postdoc herself, Alice is no longer actively involved in research.



Dr Kevin Lynch, Senior Scientist, Becton Dickinson

Dr Kevin Lynch holds BA (MOD) In Microbiology from TCD and an, MSc in Immunology from Maynooth. He then moved to NUIG where he obtained his PhD In Immunology/transplantation. Kevin this spent two more years in NUIG as a PostDoc researching blood cancers, particularly multiple myeloma. In 2019, Kevin moved to industry in 2019 and currently working for Becton Dickinson as Senior scientist/manager in Design Assurance Engineering. He is also leading a global team developing combined medical device / assays for the diagnosis of lymphomas, leukaemia and plasma cell diseases.



### Dr Simon Lawless, Senior Scientist, PPD

Dr Simon Lawless is a Senior Scientist at PPD, a CRO based in Athlone. He studied Biotechnology at NUI Galway before being accepted onto the PRTLI PhD programme to investigate molecular mechanisms underlying inflammatory processes in the Department of Biochemistry and Immunology at Trinity College Dublin. Following his PhD, he undertook a PostDoc in the Max Planck Institute for Immunology and Epigenetics in Freiburg, Germany investigating the metabolism of innate immune cells. He made the move to industry on his return to Dublin, joining Nuritas as a Molecular Biologist working on Al led peptide drug discovery and pre-clinical development. He is now a Senior Scientist in PPD working on the development of clinical stage drugs, in particular the development of potency assays and bioassays to aid in drug release and approval.



# "Maximising your postdoc potential" panel discussion



Dr Aoife Corcoran, Communications Officer, Environmental Research Institute, University College Cork.

A trained scientist, Aoife has PhD in Cancer Biology and a BSc in Genetics, both from UCC. Prior to joining the Environmental Research Institute (ERI), Aoife held a postdoctoral position in paediatric medical oncology at the Dana Farber Cancer Research Institute in Boston, MA. She has also worked in the SME sector, both as a biochemistry applications specialist and scientific content writer with material science company Glantreo, and as an EU proposal writer with PrimeUCC. Aoife now brings her experience in both research and scientific communication to the ERI where she is providing support for the communication & dissemination activities of individual research projects as well as the Institute as a whole. Her remit also includes the management of press and public relations, writing press releases and management of outreach and stakeholder event, as well as developing content for the Institutes social media and website. Aoife is also a Director of the NGO Wildlife Rehabilitation Ireland, where she is involved in writing funding applications and developing fundraising strategies to support the newly launched wildlife hospital.



Dr Sarah Corcoran, Senior Scientist

Sarah studied Molecular Medicine at Trinity College Dublin before completing a PhD in Immunology at Trinity College Dublin where she investigated the immunomodulatory properties of metabolites secreted by trypanosomes. Following on from this work, Sarah took up a Scientist role in the inflammasome-focused spinout company Inflammasome, where she worked to characterize novel NLRP3 antagonists. After a successful spell with the company, Sarah moved in the the cell therapy area, taking up a position as Senior Scientist with Galway-based ONK Therapeutics. In the new year, she will take up another cell therapy role in London with Achilles Therapeutics.



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