The Immunology of Ageing

Monday, 24 February 2014 09:00 - 17:00
Cineworld: The O2, London, SE10 0DX, UK

It is clear that the immune system undergoes age-associated alterations, producing a progressive deterioration in the ability to respond to infections and to develop immunity after vaccination. This event will discuss this Immunosenescence, both within the innate and adaptive immune systems. While discussing the mechanisms that contribute to immunosenescence, there will be plenty of networking opportunities and also debate relating to potential therapies that could be employed to help the population live longer, fuller and healthier lives. This event has CPD accreditation. This event is part of the 2014 Ageing Summit:

www.AgeingSummit2014.com

Meeting Chairs:
Dr Neil A Mabbott, The Roslin Institute & Royal (Dick) School of Veterinary Sciences, University of Edinburgh, Scotland, UK
Dr Milica Vukmanovic-Stejic, Senior Research Fellow, UCL Medical School, London, UK

Who Should Attend
Biotech and Pharma Industry: CEOs, Chief Scientists, Group Heads, Senior and Junior Scientists, Research Managers
Academic and Research Institutes: Group and Lab Heads, Postdoctoral Scientists and Research Students

The deadline for abstract submissions for oral presentation is November 10th 2013
Abstracts for poster presentation only can be submitted up to two weeks before the event. You can download the instructions for authors at www.euroscicon.com/AbstractsForOralAndPosterPresentation.pdf

Talk times include 5 – 10 minutes for questions

9:00 – 9:45 Registration

9:45 – 9:50 Introduction by the Chairs:
Dr Neil A Mabbott, The Roslin Institute & Royal (Dick) School of Veterinary Sciences, University of Edinburgh, Scotland, UK
Dr Milica Vukmanovic-Stejic, Senior Research Fellow, UCL Medical School, London, UK

9:50 – 10:20 Old B cells, what are the chances they will help us?
Dr Deborah Dunn-Walters, Reader in Immunology, Department of Immunobiology, King’s College London School of Medicine, UK
A diverse B cell repertoire is essential in order to increase the chances of being able to recognise foreign antigen. At the same time the repertoire has to avoid carrying specificities for self antigens. Older people are more prone to infection, less able to respond well to vaccine and generally have more autoantibodies in their blood. We will discuss this in the context of our findings on B cell repertoire changes with age, and different types of B cells that respond to different types of antigen challenge.

10:20 – 10:50 Talk title to be confirmed
Dr Neil A Mabbott, The Roslin Institute & Royal (Dick) School of Veterinary Sciences University of Edinburgh, Scotland

10:50 – 11:20 Talk title to be confirmed
Professor Jacek Witkowski, Medical University of Gdańsk, Poland

11:20 – 11:50 Speakers’ photo then mid-morning break and poster exhibition and trade show
Please try to visit all the exhibition stands during your day at this event. Not only do our sponsors enable Euroscicon to keep the registration fees competitive, but they are also here specifically to talk to you.

11:50 – 12:20 Para-inflammation and Age-related Macular Degeneration
Dr Heping Xu, Centre for Vision and Vascular Science (CVVS) Queen’s University Belfast Institute of Clinical Science, Ireland
Para-inflammation is an immune response to chronic noxious stimuli at a low magnitude that lies between the basal homeostatic state and overt inflammation. The physiological role is to maintain tissue homeostasis and functionality. Dysregulation in the para-inflammatory response underlies many chronic diseases such as diabetes, atherosclerosis and various age-related degenerative disorders. The nature of retinal para-inflammation under normal ageing conditions and the role of dysregulated or maladapted para-inflammatory response in age-related macular degeneration will be discussed.

12:20 – 12:50 Oral Presentations

12:50 – 13:45 Lunch, poster exhibition and trade show
Please try to visit all the exhibition stands during your day at this event. Not only do our sponsors enable Euroscicon to keep the registration fees competitive, but they are also here specifically to talk to you.

13:45 – 14:30  Question and Answer Session

14:30 – 15:00  Ageing of the immune system – Role of CMV for Coronary Heart Disease  

*Professor Ioakim Spyridopoulos*, Chair of Cardiovascular Gerontology, Hon. Consultant Interventional Cardiology, Newcastle University and Freeman Hospital, UK

While human cytomegalovirus (CMV), a herpesvirus that is never cleared from individuals following primary infection, is deemed harmless in immunocompetent people, there is mounting evidence that it adversely affects human lifespan linked to a higher incidence of coronary heart disease (CHD) in seropositive individuals. This talk will look into the potential link between an ageing immune system, cytomegalovirus infection and progression of atherosclerosis. It will attempt to link cellular changes in the CD8 T cell compartment secondary to CMV, telomere biology and inflammation with the pathophysiology of coronary artery disease.

15:00 – 15:30  Afternoon Tea, last poster session and trade show

15:30 – 16:00  Old before our time? Cytomegalovirus establishes the rudimentary signs of an ageing immune system even in young and healthy adults.  

*Dr James Turner*, Lecturer, Department for Health, University of Bath, Bath, UK.

Ageing is associated with a decline in immune competence termed immunosenescence. In the elderly, this process has been associated with increased susceptibility to infection, accelerated cognitive decline, frailty and increased mortality. It has become clear that many features of an ageing immune system are determined by Cytomegalovirus (CMV) infection. Until recently, it remained largely unexplored whether CMV drives immunity towards a senescent profile in young and healthy adults. In this talk I will present the results of a recent investigation, whereby several hallmarks of immunosenescence were assessed in a chronologically young population of healthy university students.

16:00 – 16:30  Talk title to be confirmed  

*Professor Elissaveta Naumova*, Head, Department of Clinical Immunology, University Hospital Alexandrovska, Bulgaria

16:30 – 17:00  Talk title to be confirmed  

*Dr Irene Maeve Rea*, Senior Lecturer and Consultant Physician Geriatric Medicine, Queens University Belfast, Ireland

17:00  Chairman’s Summing Up and Close of Meeting

Keywords: B cells, repertoire, antibody genes, immunity, Ageing, para-inflammation, age-related macular degeneration, microglia, complement, Ageing, Cardiovascular, Telomeres, CD8 T lymphocytes, Cytomegalovirus, Immunosenescence, Cytomegalovirus, Vaccination, Interleukin-6, CD8+ T cells

Registration Website: https://www.regonline.co.uk/AgeingImm2014

Media partners

Dont forget to sign up to Euroscicons’ e-newsletter at www.euroscicon.com/signup.htm to keep up to date with European Life Science news and events and to be notified of the follow up to this event.

This meeting was organised by Euroscicon (www.euroscicon.com), a team of dedicated professionals working for the continuous improvement of technical knowledge transfer to all scientists. Euroscicon believe that they can make a positive difference to the quality of science by providing cutting edge information on new technological advancements to the scientific community. This is provided via our exceptional services to individual scientists, research institutions and industry.
**About the Speakers**

**Deborah Dunn-Walters** is Reader in Immunology at King’s College London, with extensive experience in B cell repertoire analysis, and molecular events involving the immunoglobulin gene during B cell development. She combines traditional molecular biology techniques with novel mathematical analyses to devise new ways of investigating the humoral immune system. She is particularly interested in research that aims to improve the health of older people.

**Heping Xu** graduated in medicine from Hengyang Medical College, China in 1987. He completed his ophthalmology training in XiangYa Hospital and obtained his PhD in vision science from Hunan Medical University in 1994. He carried out his post-doc training, first in cell biology in Japan (1997-2000), and then in ocular immunology at the University of Aberdeen (2000-2004). Dr Xu was awarded a Research Council UK (RCUK) fellowship in 2005, and was promoted to Senior RCUK fellow in 2008. Dr Xu moved to the Centre for Vision and Vascular Science, Queen’s University Belfast in 2009 as a Senior Lecturer, and was promoted to Reader in 2011. Dr Xu’s research is centred on the immunopathogenesis of sight-threatening retinal diseases, including uveoretinitis, age-related macular degeneration and diabetic retinopathy.

**Ioakim Spyridopoulos** has received his Medical degree in 1992 at the University of Hannover, Germany. He has been a postdoctoral fellow at TUFTS University in Boston/MA from 1995-1997. Further research stays at Tübingen University and Frankfurt University have added to his work on atherosclerosis research. Following his appointment as Hon. Consultant in Interventional Cardiology at the Freeman Hospital at Newcastle Upon Tyne Trust in 2008 he was also appointed Chair of Cardiovascular Gerontology with Newcastle University. His main research field is “Inflammaging” in cardiovascular system, especially in the context of coronary heart disease. He is supported by the British Heart Foundation and the NIHR Biomedical Research Centre.

**James Turner** undertook a PhD between 2007-2010 at the University of Birmingham. His thesis covered topics including immunosenescence, oxidative stress and exercise. James remained in Birmingham to undertake two post-doctoral research positions; first between 2011-2012, characterising T cell responses to novel leukaemia antigens, and second, from 2012-present, conducting research towards producing a prophylactic Epstein-Barr Virus vaccine. From September 2013, James became employed as a Lecturer in the Department for Health at The University of Bath, where he will lead a programme of research that spans the domains of physical activity, immune competence, and ageing.

**NOTES ABOUT THIS EUROSCICon EVENT**

For your convenience we would like to bring your attention to the following:

- You will be issued with a FULL delegate list within 14 days of the event, which will include the email addresses of the delegates (we are sorry that there is this delay in emailing the list, but we need to make sure that it takes into account any late arrivals). You will not be included in this list if you have opted out and you can do this by logging into your registration details. This list will not be sold or ever give out to third parties. Only people attending or sponsoring the event have access to the list.
- There may be an independent meeting report published within a few months of this event. If this is published we will send you an email to let you know the reference details.
- Notepads and pens are available from the EuroSciCon reception desk.
- We cannot give out the slides from our speaker’s presentations as they are deleted immediately after each event. If you require a particular set of slides please approach the speaker.
- Please remember that EuroSciCon is a small independent company with no subsidies from society memberships or academic rates for venues. We try to be as reasonably priced as possible and our delegate rates are substantially lower than comparable commercial meeting organisations.
- To keep updated on our events and other Life Science News, please sign up for our newsletter at www.eurosciconews.com.
- We may take pictures during the meeting. These pictures will be used to promote our events and placed on our various websites and the closed EuroSciCon group on Facebook. If you do not want your photograph distributed please let one of the EuroSciCon staff know.