

Thematic PhD in Infection Biology Research Day

Tuesday 12th May 2015 10:30am-1pm

UCD Charles Institute

10:30: Coffee and student poster presentations, Kevin Barry Foyer

11:30: Seminar: Max Gutierrez, FCI, London.

12:30: Buffet lunch and Prize Presentations, Kevin Barry Foyer

Intracellular trafficking of phagosomes: lessons from mycobacteria

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Summary

The dynamic and complex process of phagosome maturation in phagocytes is the result of multiple interactions between the phagosome and various intracellular compartments. Critical events occurring in the lumen and membrane of phagosomes have a profound impact in the development of an appropriate innate and adaptive immune response and intracellular pathogens, such as *Mycobacterium tuberculosis*, have learnt to subvert the normal phagosome maturation pathway for their own benefit. Using a combination of biochemical and advanced light microscopy techniques, we have recently contributed to the characterization of novel host factors involved in the trafficking and function of phagosomes in macrophages. Altogether, our studies uncover novel players in phagosome maturation and highlight the importance of uncharacterised trafficking regulators in phagosome biology and killing of intracellular mycobacteria.

Biography

Max studied biochemistry and molecular biology at the University of San Luis in Argentina. In 2005, he was awarded a PhD in cell biology from the University of San Luis, Argentina, where he focused on the interactions between intracellular pathogens and the autophagic pathway. From 2006, he was a postdoc in Gareth Griffiths Laboratory at EMBL, Heidelberg, Germany as a fellow of the von Humboldt foundation and EMBO focusing on the cell biology of macrophages and mycobacteria. In 2009, he moved to the Helmholtz Centre for Infection Research in Braunschweig, Germany as a head of the Junior Research Group "Phagosome Biology". Since 2012, he was a Group Leader at the National Institute for Medical Research and from 2015, a group leader at The Francis Crick Institute in London, United Kingdom.

