

ARMI EXTERNAL SEMINAR SERIES 2022



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Epithelial cell fate transitions; an oesophageal tale

Dr Maria Alcolea

Principal Investigator, Wellcome – MRC Cambridge Stem Cell Institute, University of Cambridge, Cambridge

Abstract

Maria Alcolea's laboratory focusses on understanding the behaviour of epithelial stem and progenitor cells in health and disease. Combining genetic lineage tracing approaches with a novel 3D organ culture system, Maria's work has revealed the remarkable fate plasticity of the oesophageal epithelium. Her work has shown how cells are not only able to rewire their programme of cell behaviour in response to developmental cues, injury and early tumour formation, but has also demonstrated their ability to switch their identity well beyond physiological constraints under the right environmental cues. Investigating the cellular and molecular mechanisms governing this dynamic cell behaviour, and the potential implications for early cancer development represent Maria's main interests.

Bio

Maria Alcolea is a Cell Biologist who is currently focused on understanding changes in epithelial cell behaviour in response to tissue perturbations using the epithelium of the mouse oesophagus as a model. In 2007 Maria received her PhD in Biochemistry at the University of the Balearic Islands, Spain. She then moved to Barts Cancer Institute - Queen Mary University of London to start her Postdoctoral training with Dr. P.R. Cutillas, where she used phosphoproteomic approaches to study cancer drug resistance. In 2009 she joined Prof Phil Jones laboratory at the Hutchison/MRC cancer unit where she was awarded a Marie Curie Intra-European Fellowship (FP7). There she spent a total of 6 years studying oesophageal cell behaviour using genetic lineage tracing approaches and methods from statistical physics. In 2015, Maria was awarded a Wellcome Trust/The Royal Society Sir Henry Dale Fellowship to establish her own laboratory to study epithelial cell plasticity in response to injury and tumour development. Her current work presents a particular emphasis in understanding the potential contribution of surrounding neighbour cells to this process. Maria is currently a Principal Investigator at the Wellcome Trust/MRC Cambridge Stem Cell Institute and affiliate to the Oncology Department, University of Cambridge, UK.



EVENT DETAILS

DATE:

Tuesday, 10 May 2022

TIME:

5pm AEST

ZOOM:

Zoom details to be circulated via email on 10 May 2022

HOST:

Dr Alberto Rosello-Diez



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