LOWY CANCER RESEARCH CENTRE

SEMINAR SERIES 2019

Dr Mick Milsom, PhD

German Cancer Research Centre (DKFZ)

The functional and molecular characterization of hematopoietic stem cells during homeostasis and in response to stress

11 am - 12 pm, Thursday 15th August 2019

Kirby Seminar Room 638, Level 6 Wallace Wurth

Mick Milsom joined the DKFZ as a Junior Group Leader in September 2010, having previously carried out postdoctoral research work in the laboratories of David Williams (Harvard Medical School/Boston Children's & Cincinnati Children's) and Leslie Fairbairn (Paterson Institute for Cancer Research, Manchester). In 2017, he achieved tenure at the DKFZ and was promoted to head of The Division of Experimental Hematology. His research group is primarily focussed upon the study of normal and diseased hematopoiesis, with an emphasis on the role of hematopoietic stem cells (HSC) in both of these settings. Having previously identified inflammation as a key mediator of HSC attrition and bone marrow failure in the setting of Fanconi anemia (Walter et al., Nature, 2015), the group continues to study the role of environmental agonists in driving HSCs out of their dormant status and the impact that this has on stem cell functionality. The group also has an interest in the analysis of molecular events that likely impact of HSC function in these settings, such as mutation burden and epigenome remodelling. In this context, previous work of the group has documented the correlation between DNA methylome and transcriptome in defined HSC/progenitor populations (Cabezas-Wallsheid et al., Cell Stem Cell, 2014). Current efforts on this topic are now focussed on the identification of discreet methylation remodelling events that correlate with commitment to a particular differentiated lineage, and which therefore can be used to reconstruct lineage trajectories across the entire blood system.

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