Postdoc in Ubiquitin-Mediated Gene Expression

A Postdoctoral Research Assistant position is available in the laboratory of Dr. Steven Spoel at the School of Biological Sciences, University of Edinburgh. You will join an active research programme funded by the European Research Council (ERC) that is aimed at elucidating the mechanisms of gene regulation during plant immune responses.

Activation of plant immunity is associated with dramatic reprogramming of the transcriptome to prioritise development of immunity over normal cellular growth functions. Transcription reprogramming is largely orchestrated by the immune hormone, salicylic acid (SA), which accumulates upon infection and establishes both local and broad-spectrum systemic immunity. We previously reported that perception of SA is mediated by ubiquitin ligases that alter the stability of an indispensable transcriptional coactivator (Spoel et al. Cell 2009, 137: p.860 & Fu et al. Nature 2012, 486: p.228). Further work has established that ubiquitination and degradation play complex roles in regulating the intrinsic activities of transcription (co)activators in general (Skelly et al. Curr Opin Plant Biol 2016, 33: p.126). However, it remains unclear how protein modifications by ubiquitin signal to the transcription machinery and fine-tune gene expression at the single cell level. Moreover, different types of protein ubiquitination have diverse cell signalling roles but how they contribute to immune gene regulation remains largely unknown. This position offers an exciting opportunity to explore this emerging field with a suite of biochemical, -omics and single cell microscopy approaches. You will be highly motivated, have excellent communication skills, enjoy working in a multidisciplinary team, and show commitment to delivering high quality data.

The position is for a fixed term of 3 years.

For more information and to apply: http://spoel.bio.ed.ac.uk/Opportunities.html