GAVIN WRIGHT

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Gavin's research focuses on taking large-scale systematic approaches to identify novel receptor-ligand pairs that initiate intercellular signaling.
Gavin graduated from the University of Oxford with a degree in Biochemistry in 1996 before studying for a D.Phil. within the Medical Research Council (MRC) Cellular Immunology Unit with Professor Neil Barclay at the Sir William Dunn School of Pathology.

He initially worked on CD200 (formally OX2), a cell surface protein expressed in both the immune and nervous systems and discovered its receptor, which was found to be restricted to myeloid-lineage cells. Together with collaborators, Gavin's team showed that endogenous CD200 and also close homologues of this protein which had been captured by both pox and herpes viruses delivered restrictive signals to macrophages to locally suppress their activation. It is these studies that sparked his broad interests in cell surface receptor proteins and their role in cellular signaling and recognition processes. For his postdoc, Gavin worked with Dr Julian Lewis at Cancer Research UK, London where he studied the Notch signaling pathway, using the zebrafish model organism.

His research at the Wellcome Trust Sanger Institute has focused on taking large-scale systematic approaches to identify novel receptor-ligand pairs that initiate intercellular signaling. In particular, Gavin is interested in the low affinity interactions that are a common feature of cell surface receptor interactions and has developed a new high throughput method to identify this type of binding event which cannot be easily detected using other scalable techniques. The laboratory has identified many novel receptor-ligand pairs and uses the experimental tractability of the zebrafish to determine the functional role of these interactions *in vivo*. Since cell surface receptors are good drug targets, Gavin's team are planning to apply their methods to more clinically-relevant applications and have recently started collaborative projects to study heart disease and malaria.

http://www.sanger.ac.uk/research/faculty/gwright/