Nick Plant, Reader in Molecular Toxicology, **University Of Surrey**

Nick Plant has 20 years' experience researching the coordination of cellular responses to xenobiotic challenge. His research has focussed on members of the super-family of nuclear receptors, which act as ligand-activated transcription factors, sensing their cellular surroundings and coordinating network responses to any disruption of homeostasis. In particular, he has championed the understanding of nuclear receptor interactions, including the pregnane-X receptor (PXR; the main nuclear receptor responsible for cellular response to xenobiotic challenge), the glucocorticoid receptor (GR), vitamin D receptor (VDR), peroxisome proliferator activated receptors (PPARα/β/γ) and the closely related Aryl hydrocarbon receptor (AhR).

Nuclear receptor interactions are examined through the generation of predictive, mechanism-based computational models, which are validated through experimental data. These models then allow the design of targeted in vitro experiments to examine critical checkpoints in the biological response to chemical perturbation.