Perturbations in cellular signalling play a fundamental role in human cancer and provide the rationale for many targeted therapies. The goal of the Signalling Network Laboratory is to characterize at the molecular level how signalling is altered in cancer, and thereby identify novel therapeutic strategies for particular poor prognosis human cancers, as well as biomarkers that aid classification of patients towards optimal treatments. Ultimately this work will lead to improved treatments for cancer patients with resulting reductions in morbidity and mortality. We utilise a variety of molecular, cellular and biochemical techniques, including mass spectrometry (MS)-based phosphoproteomics and kinomics, siRNA library screens, cellular imaging and protein-protein interaction analysis. In addition, bioinformatic approaches are used to analyse our datasets and integrate these with publically-available data from cancer genome studies and functional genomic screens.

**Research Projects**

1. Characterization of the SgK269 and SgK223 pseudokinase scaffolds
2. Definition and functional characterization of the Src-regulated kinome
3. Novel oncogenic drivers, therapeutic targets and biomarkers in prostate cancer

**Selected significant publications:**