This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Crystal structure of the JH2 domain of Janus kinase-2 (JAK-2)	<p><i>In vitro</i> studies identified the crystal structure of the JH2 domain of JAK-2, which could guide the development of new drugs to treat myeloproliferative disorders. Activating mutations in the JH2 domain of JAK-2 are associated with myeloproliferative disorders, but most JAK-2 inhibitors target the protein's catalytic JH1 domain. Crystallography studies of JAK-2 showed that the JH2 mutant stabilizes an α-helix in the N-terminal lobe of JH2 to increase phosphorylation of JH1. Next steps include screening for compounds that can bind the V617F JH2 mutant and reduce JAK-2 kinase activity to basal levels.</p> <p>At least 10 companies have JAK-2 inhibitors in development stages ranging from preclinical to marketed to treat myeloproliferative disorders and various cancers.</p> <p>SciBX 5(30); doi:10.1038/scibx.2012.799 Published online Aug. 2, 2012</p>	Provisional patent application filed; unavailable for licensing	<p>Bandaranayake, R.M. <i>et al. Nat. Struct. Mol. Biol.</i>; published online July 22, 2012; doi:10.1038/nsmb.2348</p> <p>Contact: Stevan R. Hubbard, New York University School of Medicine, New York, N.Y. e-mail: stevan.hubbard@med.nyu.edu</p> <p>Contact: Olli Silvennoinen, University of Tampere and Tampere University Hospital, Tampere, Finland e-mail: olli.silvennoinen@uta.fi</p>