This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Crystal structures of serotonin (5-HT) receptor-bound agonists	<p>Crystal structures of agonists bound to 5-HT receptors could aid the development of new compounds selective for 5-HT receptor subtypes. The crystal structures of serotonin (5-HT_{1B}) receptor and serotonin (5-HT_{2B}) receptor bound to ergotamine and dihydroergotamine showed that the small molecules occupy an orthosteric binding pocket on the receptors. Biochemical studies showed that ergotamine preferentially activated noncanonical arrestin-β signaling pathways at 5-HT_{2B}. Next steps include using the crystal structure data to aid the design of compounds specific for different 5-HT receptor subtypes. Ergotamine and dihydroergotamine are both generic migraine drugs.</p> <p>SciBX 6(13); doi:10.1038/scibx.2013.321 Published online April 4, 2013</p>	Findings from both studies unpatented; licensing status not applicable	<p>Wang, C. <i>et al. Science</i>; published online March 21, 2013; doi:10.1126/science.1232807 Contact: H. Eric Xu, Chinese Academy of Sciences, Shanghai, China e-mail: eric.xu@vai.org Contact: Raymond C. Stevens, The Scripps Research Institute, La Jolla, Calif. e-mail: stevens@scripps.edu</p> <p>Wacker, D. <i>et al. Science</i>; published online March 21, 2013; doi:10.1126/science.1232808 Contact: Bryan L. Roth, The University of North Carolina at Chapel Hill School of Medicine, Chapel Hill, N.C. e-mail: bryan_roth@med.unc.edu Contact: Raymond C. Stevens, The Scripps Research Institute, La Jolla, Calif. e-mail: stevens@scripps.edu</p>