This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Crystal structures of HCV NS3/4A protease complex with HCV protease inhibitors	<p>Crystal structures of HCV NS3/4A proteases complexed with HCV protease inhibitors could aid the development of new therapeutics against drug-resistant HCV strains. Researchers generated crystal structures of wild-type HCV NS3/4A protease and three common drug-resistant variants in complex with four small molecule protease inhibitors. The structures showed that Incivek telaprevir, danoprevir, vaniprevir and MK-5172 interact at sites on the wild-type protease that are mutated in drug-resistant variants, such as R155, A156 and D168. Next steps include characterizing additional drug-resistant variants of the HCV NS3/4A protease complex and conducting studies to better understand the role of the protease's helicase domain.</p> <p>Vertex Pharmaceuticals Inc., Johnson & Johnson and Mitsubishi Tanabe Pharma Corp. market Incivek to treat HCV.</p> <p>Merck & Co. Inc.'s vaniprevir is in Phase III testing and MK-5172 is in Phase II testing for HCV.</p> <p>Roche's danoprevir is in Phase II testing to treat HCV.</p> <p>SciBX 5(32); doi:10.1038/scibx.2012.853 Published online Aug. 16, 2012</p>	Unpatented; licensing status not applicable; available for partnering and collaborations	<p>Romano, K.P. <i>et al. PLoS Pathog.</i>; published online July 26, 2012; doi:10.1371/journal.ppat.1002832</p> <p>Contact: Celia A. Schiffer, University of Massachusetts Medical School, Worcester, Mass. e-mail: celia.schiffer@umassmed.edu</p>