This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Humanized shark variable new antigen receptors (VNARs)	<p>Humanized versions of VNARs could be used to bind protein epitopes that are difficult to access using traditional antibodies. VNARs are a class of small, immunoglobulin-like molecules from the shark immune system. A VNAR specific for human serum albumin (ALB) was isolated from the spiny dogfish shark, and humanized variants were generated by substituting over 60% of the antibody's non-complementarity-determining region (CDR) residues with those from a human antibody sequence. <i>In vitro</i> immunoassays showed that the lead humanized VNAR retained its specificity and ability to bind human serum ALB. Crystal structures in complex with human serum ALB showed that the VNARs bound in a manner distinct from that of previously described VNARs. Next steps could include generating humanized shark VNARs against known disease targets. Separately, Ossianix Inc. and H. Lundbeck A/S have partnered to develop shark VNARs to treat CNS diseases.</p> <p>SciBX 6(22); doi:10.1038/scibx.2013.560 Published online June 6, 2013</p>	Patent and licensing status unavailable	<p>Kovalenko, O.V. <i>et al. J. Biol. Chem.</i>; published online April 30, 2013; doi:10.1074/jbc.M112.435289 Contact: Oleg V. Kovalenko, Pfizer Inc., Cambridge, Mass. e-mail: oleg.kovalenko@pfizer.com</p>