This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Computational models			
Algorithm to predict risk of developing neutralizing antibodies to factor VIII	<p>A computational algorithm to predict the risk of developing factor VIII-neutralizing inhibitory antibodies could help guide the treatment of patients with hemophilia A. Sequencing and gene expression analysis of samples from patients who have hemophilia A caused by intron 22 inverted (I22I) <i>factor VIII</i> found that the entire factor VIII protein was expressed as two polypeptides, which explains why patients carrying this inversion have decreased risk of developing inhibitory antibodies against factor VIII replacement therapy compared with patients who have <i>factor VIII</i> deletions.</p> <p>A computational algorithm that analyzes the affinity of major histocompatibility complex class II (MHCII) for foreign peptides was developed. The algorithm was used to predict whether differences between recombinant factor VIII products and patient-encoded I22I factor VIII would lead to inhibitor development. Next steps include applying this algorithm to analyze the immune response to other foreign peptides.</p> <p>SciBX 6(41); doi:10.1038/scibx.2013.1168 Published online Oct. 24, 2013</p>	Patent applications filed covering the development of personalized factor VIII replacement therapies; licensed to HaploMics Inc.	<p>Pandey, G.S. <i>et al. Nat. Med.</i>; published online Sept. 15, 2013; doi:10.1038/nm.3270</p> <p>Contact: Zuben E. Sauna, Food and Drug Administration, Bethesda, Md. e-mail: zuben.sauna@fda.hhs.gov</p> <p>Contact: Tom E. Howard, VA Greater Los Angeles Healthcare System, Los Angeles, Calif. e-mail: tom.howard@va.gov</p>