This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Assays & screens			
Single-molecule ELISA for serum protein detection (digital ELISA)	<p>The detection of serum proteins at subfemtomolar concentrations with digital ELISA could aid early disease diagnosis and treatment. Disease-relevant serum proteins are often present in subfemtomolar ($<10^{-15}$) to picomolar (10^{-12}) concentrations, but current immunoassays typically only measure proteins at concentrations above 10^{-12} M. Digital ELISA, which uses single-molecule array (SiMoA) technology to isolate single proteins into femtoliter-sized wells, detected clinically relevant proteins in serum at levels below 10^{-15} M. In serum from prostate cancer patients that had undergone radical prostatectomy, digital ELISA detected prostate-specific antigen (KLK3; PSA) at levels as low as 4×10^{-16} M. Next steps include further developing the PSA assay and evaluating the use of digital ELISA to detect urological markers in blood.</p> <p>SciBX 3(22); doi:10.1038/scibx.2010.683 Published online June 3, 2010</p>	Multiple patents filed covering the SiMoA technology; available for licensing from Quanterix Corp. for certain nondiagnostic and nonprognostic applications	<p>Rissin, D.M. <i>et al. Nat. Biotechnol.</i>; published online May 23, 2010; doi:10.1038/nbt.1641</p> <p>Contact: David C. Duffy, Quanterix Corp., Cambridge, Mass. e-mail: dduffy@quanterix.com</p>