This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
Biospleen platform to remove microorganisms and endotoxins from blood to treat sepsis	<p><i>In vitro</i> and rat studies suggest a biospleen platform could be used to remove microorganisms and endotoxins from the blood to treat sepsis. Magnetic nanoparticles were modified with a recombinant form of the human opsonin mannan-binding lectin (MBL2; MBL) to capture pathogens, and a microfluidic device mimicking the microarchitecture of the spleen was engineered to remove the pathogen-bound nanoparticles from blood. In human blood spiked with multiple microorganisms, the biospleen and magnetic nanoparticles enabled removal of over 98% of anaerobic bacteria and over 80% of aerobic bacteria. In rat models of sepsis, the biospleen system increased survival and decreased levels of infiltrating immune cells, pathogens and endotoxins across multiple tissues compared with no treatment. Next steps include planning the launch of a newco around the biospleen system and related technologies.</p> <p>SciBX 7(36); doi:10.1038/scibx.2014.1081 Published online Sept. 18, 2014</p>	Patent application filed; available for licensing	<p>Kang, J.H. <i>et al. Nat. Med.</i>; published online Sept. 14, 2014; doi:10.1038/nm.3640 Contact: Donald E. Ingber, Harvard University, Cambridge, Mass. e-mail: don.ingber@wyss.harvard.edu</p>