This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Markers			
An inflammatory cytokine signature to improve diagnosis of endometriosis	<p><i>In vitro</i> and <i>in silico</i> studies suggest an inflammatory cytokine signature could be used to diagnose endometriosis and identify new targets to treat the disease. In peritoneal aspirates from women, elevated concentrations of 13 cytokines comprised an inflammatory signature in patients with endometriosis. In <i>in silico</i> analyses, c-Jun N-terminal kinase (JNK) transcription factor binding sites were enriched in genes associated with the cytokine signature. In cultured macrophages with elevated levels of the 13 cytokines, inhibition of JNK and MAP kinase kinase 1 (MAP2K1; MEK1) decreased cytokine secretion compared with vehicle treatment or inhibition of unrelated kinases. Next steps could include extending the approach to more indications and determining whether interfering with the cytokine signature can help treat endometriosis.</p> <p>Xigen S.A. and Auris Medical AG have D-JNKI-1 (AM-111; XG-102), a JNK inhibitor, in Phase II testing to treat hearing loss. The compound is also in Phase I testing to treat stroke.</p> <p>Opko Health Inc. and The Scripps Research Institute have the JNK inhibitor SR-3306 in preclinical development to treat Parkinson's disease (PD).</p> <p>Japan Tobacco Inc. and GlaxoSmithKline plc market the MEK inhibitor Mekinist trametinib to treat melanoma and have the compound in Phase I/II testing to treat additional cancers.</p> <p>SciBX 7(8); doi:10.1038/scibx.2014.241 Published online Feb. 27, 2014</p>	Patent and licensing status unknown	<p>Beste, M.T. <i>et al. Sci. Transl. Med.</i>; published online Feb. 5, 2014; doi:10.1126/scitranslmed.3007988</p> <p>Contact: Linda G. Griffith, Massachusetts Institute of Technology, Cambridge, Mass. e-mail: griff@mit.edu</p>