This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Sepsis	Macrophage migration inhibitory factor (MIF)	<p><i>In vitro</i>, mouse and patient studies suggest inhibiting MIF with the thyroid hormone thyroxine could help treat sepsis. In patients with severe sepsis, high serum levels of the proinflammatory cytokine MIF correlated with low thyroxine levels ($p=0.0001$).</p> <p><i>In vitro</i> binding assays identified both the L- and D-isomers of thyroxine as MIF antagonists. In two mouse models of sepsis, the hormonally inactive D-isomer increased survival compared with vehicle. Planned work includes clinical testing of D-thyroxine to treat sepsis.</p> <p>The generic levothyroxine (L-isomer of thyroxine) is marketed to treat thyroid disease.</p> <p>4-IPP, a small molecule MIF inhibitor from Advanced Cancer Therapeutics LLC, is in preclinical testing to treat cancer.</p> <p>Cortical Pty. Ltd. has small molecule MIF antagonists in lead optimization to treat autoimmune diseases.</p> <p>SciBX 4(20); doi:10.1038/scibx.2011.577 Published online May 19, 2011</p>	Patented by The Feinstein Institute for Medical Research; available for licensing	<p>Al-Abed, Y. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online May 2, 2011; doi:10.1073/pnas.1017624108</p> <p>Contact: Yousef Al-Abed, North Shore University Hospital, Manhasset, N.Y. e-mail: yalabed@nshs.edu</p>