

### This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
<b>Endocrine disease</b>				
Obesity	Toll-like receptor 4 (TLR4)	<p>Studies in mice suggest that antagonizing TLR4 could help treat obesity-induced insulin resistance. In a murine model of high-fat diet-induced obesity, mice with macrophage-specific <i>Tlr4</i> knockout had improved hyperinsulinemia, insulin resistance and glucose tolerance compared with wild-type controls. The liver and adipose tissue of mice with <i>Tlr4</i>-deficient macrophages had decreased levels of proinflammatory cytokines that interfere with insulin signaling. Ongoing studies are seeking to identify TLR4's specific mechanism of action in insulin resistance and to test TLR4 antagonists in animal models of insulin resistance and other metabolic diseases.</p> <p>Eritoran (E5564), a TLR4 antagonist from Eisai Co. Ltd., is in Phase III testing to treat severe sepsis. NovImmune S.A.'s NI-0101, a humanized mAb against TLR4, is in preclinical testing to treat autoimmune and inflammatory indications.</p> <p><b>SciBX 2(44); doi:10.1038/scibx.2009.1632</b>  <b>Published online Nov. 12, 2009</b></p>	Patent and licensing status undisclosed	<p>Saberi, M. <i>et al. Cell Metab.</i>; published online Nov. 3, 2009; doi:10.1016/j.cmet.2009.09.006</p> <p><b>Contact:</b> Jerrold M. Olefsky, University of California, San Diego, La Jolla, Calif.            e-mail: <a href="mailto:jolefsky@ucsd.edu">jolefsky@ucsd.edu</a></p>