This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Alzheimer's disease (AD)	Toll-like receptor 4 (TLR4)	<p>Cell culture and mouse studies suggest moderately agonizing TLR4 could help treat AD. In cell culture, mouse microglia treated with the moderate TLR4 agonist monophosphoryl lipid A (MPL) had increased levels of proinflammatory activity and phagocytic behavior compared with negative controls treated with vehicle but had a decreased inflammatory response compared with positive controls treated with the strong TLR4 agonist lipopolysaccharide (LPS). In a mouse model of AD, intraperitoneal injection of MPL decreased β-amyloid (Aβ) plaque levels in the brain compared with injection of vehicle or LPS and induced a modest proinflammatory response and stimulated blood monocyte activity. Next steps include optimizing MPL dosing and testing the compound in other mouse models of AD.</p> <p>MPL is a component of Cervarix, a bivalent vaccine against HPV types 16 and 18 that is marketed by GlaxoSmithKline plc.</p> <p>SciBX 6(4); doi:10.1038/scibx.2013.93 Published online Jan. 31, 2013</p>	Patents on the use of MPL as an immunomodulatory agent held by GlaxoSmithKline; licensing status undisclosed	<p>Michaud, J.-P. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Jan. 15, 2013; doi:10.1073/pnas.1215165110</p> <p>Contact: Serge Rivest, Laval University, Quebec City, Quebec, Canada e-mail: serge.rivest@crchul.ulaval.ca</p> <p>Contact: Daniel Larocque, GlaxoSmithKline Vaccines, Laval, Quebec, Canada e-mail: daniel.a.larocque@gsk.com</p>