This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Inflammation				
Asthma	Matrix metalloproteinase 7 (matrilysin, uterine) (MMP7); IL-25; aldehyde dehydrogenase 1 family, member A1 (ALDH1A1; RALDH1A1)	<p>Studies in cell culture and in mice suggest that targeting MMP7 could help treat asthma. In mice challenged with allergen, airway epithelial cells produced MMP7, and <i>in vitro</i> MMP7 cleaved IL-25, which drives allergen-induced T helper type 2 (Th2) immune response. MMP7 knockout mice had higher levels of ALDH1A1, less airway hyper-reactivity, lower proinflammatory cytokine production and lower Th2 response than control mice. In human volunteers challenged with allergen, only asthma patients—not healthy subjects—expressed MMP7 in airway epithelial samples. Future studies will examine why ALDH1A1 is upregulated in the absence of MMP7 and how these two proteins regulate inflammatory responses in the lung.</p> <p>GlaxoSmithKline plc has GSK2190915 in Phase II testing to treat mild, severe and exercise-induced asthma. Novartis AG has FTY720 in Phase II testing to treat moderate asthma. AstraZeneca plc's MedImmune Inc. business unit has MEDI-563 in Phase II testing in adult asthma.</p> <p>SciBX 2(13); doi:10.1038/scibx.2009.541 Published online April 2, 2009</p>	Unpatented; unlicensed	<p>Goswami, S. <i>et al. Nat. Immunol.</i>; published online March 29, 2009; doi:10.1038/ni.1719</p> <p>Contact: Farrah Kheradmand, Baylor College of Medicine, Houston, Texas e-mail: farrahk@bcm.edu</p> <p>Contact: David B. Corry, same affiliation as above e-mail: dcorry@bcm.edu</p>