This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Fungal infection	IL-1 β ; NLR family pyrin domain containing 3 (NLRP3; NALP3); syk tyrosine kinase (SYK)	<p>A study in mice and in cell culture suggests that activating the SYK-NLRP3 inflammasome pathway could help treat fungal infections. In a mouse model of <i>Candida albicans</i> challenge, <i>Nlrp3</i> knockout led to significantly less survival than that seen in wild-type controls ($p < 0.0001$), and it also led to defective production of IL-1β, a cytokine that mediates fungal immunity. Studies in bone marrow-derived dendritic cells (DCs) showed that SYK signaling is involved in fungus-mediated activation of the NLRP3 inflammasome. Next steps include studying the functions of SYK in inflammasome activation. Tamatinib fosdium, a SYK kinase inhibitor from Rigel Pharmaceuticals Inc., is in Phase II testing for various cancers and autoimmune diseases.</p> <p>SciBX 2(15); doi:10.1038/scibx.2009.624 Published online April 16, 2009</p>	Patent and licensing status unavailable	<p>Gross, O. <i>et al. Nature</i>; published online April 2, 2009; doi:10.1038/nature07965</p> <p>Contact: Jürgen Ruland, Technical University of Munchen, Munich, Germany e-mail: jruland@lrz.tum.de</p>