This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Fungal infection	Ergosterol	<p><i>In vitro</i> and mouse studies identified analogs of the polyene macrolide nystatin that could potentially treat fungal infections with less toxicity than marketed antifungals. Polyene macrolides disrupt fungal cell membranes by binding ergosterol and other sterols with greater affinity than they have for sterols in mammalian cell membranes. In <i>Streptomyces noursei</i>, genetic modification of nystatin's biosynthetic pathway resulted in nystatin analogs with higher antifungal and lower hemolytic activity <i>in vitro</i> than nystatin. In mice, two of the analogs were effective against candidiasis, with lower toxicity than the systemic antifungal agent amphotericin B. Further studies are necessary to identify and optimize the lead analog for GMP production before further preclinical and clinical testing.</p> <p>Nystatin is a generic lipid-based polyene antifungal agent.</p> <p>Bioral Amphotericin B (CAMB), an oral cochleate formulation of amphotericin B from BioDelivery Sciences International Inc., is in Phase I testing to treat and prevent fungal infections.</p> <p>iCo-009, an oral formulation of amphotericin B from iCO Therapeutics Inc., is in preclinical testing to treat fungal infections.</p> <p>SciBX 1(44); doi:10.1038/scibx.2008.1076 Published online Dec. 11, 2008</p>	Patent application filed covering use of a range of nystatin analogs as antifungal agents; available for licensing	<p>Brautaset, T. <i>et al. Cell</i>; published online Nov. 21, 2008; doi:10.1016/j.chembiol.2008.08.009</p> <p>Contact: Sergey B. Zotchev, Norwegian University of Science and Technology, Trondheim, Norway e-mail: sergey.zotchev@nt.ntnu.no</p>