This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Bacterial infection	Bacterial topoisomerase IIA	<p>A cell culture and X-ray crystal structure study identified a topoisomerase IIA inhibitor that could help treat antibiotic-resistant bacterial infections. In a panel of Gram-positive and Gram-negative bacteria, GSK299423 showed broad-spectrum antibacterial activity, even toward bacteria with mutations that cause resistance to marketed fluoroquinolone antibiotics. A crystal structure of GSK299423 complexed with <i>Staphylococcus aureus</i> topoisomerase IIA and DNA showed that the compound binds between two active sites on the enzyme, a position that is distinct from the two binding sites of fluoroquinolone antibiotics. GSK299423 is a research reagent from GlaxoSmithKline plc, and next steps include developing a topoisomerase IIA inhibitor as a therapeutic candidate.</p> <p>SciBX 3(32); doi:10.1038/scibx.2010.989 Published online Aug. 19, 2010</p>	Patent status undisclosed; unavailable for licensing	<p>Bax, B.D. <i>et al. Nature</i>; published online Aug. 4, 2010; doi:10.1038/nature09197</p> <p>Contact: Michael N. Gwynn, GlaxoSmithKline plc, Collegeville, Pa. e-mail: mick.gwynn@gsk.com</p>