This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Tuberculosis (TB)	<i>Mycobacterium tuberculosis</i> carbonic anhydrase (Rv1284); <i>M. tuberculosis</i> transmembrane carbonic anhydrase (Rv3273)	<p><i>In vitro</i> studies suggest that compounds incorporating an indole sulfonamide scaffold could selectively inhibit bacterial carbonic anhydrases to treat TB. <i>In vitro</i>, 15 synthetic sulfonamide analogs inhibited two <i>M. tuberculosis</i> β-carbonic anhydrases at low or sub-nanomolar concentrations. Human carbonic anhydrase II was only inhibited at high nanomolar-to-micromolar concentrations, indicating that the analogs were selective for bacterial carbonic anhydrases. Future studies could include testing the analogs in animal models of TB.</p> <p>In 2008, partners Novartis AG and the Global Alliance for TB Drug Development completed Phase II testing of nitroimidazopyran (PA-824) to treat TB. Otsuka Pharmaceutical Co. Ltd.'s OPC-67683, a nitro-dihydro-imidazooxazole derivative, is in Phase II testing to treat TB. Johnson & Johnson's Tibotec unit has the diarylquinone (DARQ) antibiotic TMC207 in Phase II testing to treat TB.</p> <p>SciBX 2(21); doi:10.1038/scibx.2009.879 Published online May 28, 2009</p>	Patent and licensing status unavailable	<p>Güzel, Ö. <i>et al. J. Med. Chem.</i>; published online May 13, 2009; doi:10.1021/jm9004016</p> <p>Contact: Claudiu T. Supuran, University of Florence, Florence, Italy e-mail: claudiu.supuran@unifi.it</p>