This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Pulmonary disease				
Chronic obstructive pulmonary disorder (COPD)	Muscarinic M3 receptor (CHRM3)	<i>In vitro</i> and <i>in vivo</i> studies identified 4-hydroxyl(diphenyl)methyl-substituted quinuclidines as CHRM3 antagonists that could help treat COPD and other conditions related to bronchoconstriction. In a mouse model of bronchoconstriction, one of the quinuclidines had an <i>in vivo</i> IC₅₀ of <10nM and its activity lasted more than 48 hours. In isolated human bronchus, the compound exhibited potency and its activity persisted after washout. Next steps include further optimization of the compounds before testing in humans. Boehringer Ingelheim GmbH and Pfizer Inc. market the CHRM3 antagonist Spiriva tiotropium to treat COPD. Chiesi Farmaceutici S.p.A.'s CHF 5407, also a CHRM3 antagonist, is in preclinical testing for the indication. SciBX 2(15); doi:10.1038/scibx.2009.636 Published online April 16, 2009	Patent and licensing status unavailable	Laine, D. <i>et al. J. Med. Chem.</i>; published online March 24, 2009; doi:10.1021/jm801601v Contact: Dramane I. Laine, GlaxoSmithKline plc, King of Prussia, Pa. e-mail: dramane.i.laine@gsk.com