This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Genitourinary disease				
Incontinence	Muscarinic acetylcholine receptor M3 (CHRM3; HM3)	*In vitro* and rat studies suggest 1,4-dioxane–based HM3 antagonists could help treat overactive bladder (OAB). Chemical synthesis and *in vitro* testing identified two lead compounds that were selective, low nanomolar antagonists of HM3. In a rat model of OAB, the two compounds decreased volume-induced bladder contractions compared with the approved OAB drug oxybutynin without affecting mean blood pressure or heart rate. Future studies could include testing the compounds in animal models of chronic obstructive pulmonary disease (COPD), irritable bowel syndrome (IBS) and other diseases in which HM3 plays a role. Oxybutynin is a generic competitive antagonist of CHRM1 (HM1), CHRM2 (HM2) and HM3. At least seven companies market muscarinic receptor antagonists to treat OAB.	Patent and licensing status unavailable	Del Bello, F. *et al. J. Med. Chem.*; published online Jan. 13, 2012; doi:10.1021/jm2013216 **Contact:** Alessandro Piergentili, University of Camerino, Camerino, Italy e-mail: alessandro.piergentili@unicam.it

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