This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Alzheimer's disease (AD)	Serotonin (5-HT ₄) receptor; acetylcholinesterase (AChE); amyloid precursor protein (APP)	<i>In vitro</i> and mouse studies identified a dual serotonin (5-HT ₄) receptor partial agonist and AChE inhibitor that could help treat AD. Chemical synthesis and <i>in vitro</i> testing identified a small molecule, dubbed donecopride, that partially agonized serotonin (5-HT ₄) receptor and inhibited AChE at low nanomolar concentrations. In a primate cell-based APP processing assay, donecopride induced production of a soluble, nonamyloidogenic form of APP in a dose-dependent manner. In mice, i.p. injection of donecopride increased performance in long-term memory tests compared with vehicle injection. Next steps include validating the safety of donecopride before clinical testing.	Patent application filed; available for licensing	Lecoutey, C. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online Aug. 25, 2014; doi:10.1073/pnas.1410315111 Contact: Patrick Dallemagne, University of Caen Lower Normandy, Caen, France e-mail: patrick.dallemagne@unicaen.fr
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