This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Neurology				
Depression	NMDA receptor (NMDAR); mammalian target of rapamycin (mTOR; FRAP; RAFT1)	Rat studies suggest that NMDAR antagonists that activate the mTOR pathway could help treat depression. In rats, the NMDAR antagonist ketamine rapidly activated mtor and increased synapse formation in the prefrontal cortex compared with vehicle control. In three rat models of depression, ketamine-mediated activation of mtor led to decreases in depressive-like behavior compared with vehicle control. Next steps include mechanistic studies to better understand how antagonizing NMDAR activates mTOR. Ketamine is a generic drug approved to treat severe and chronic pain. At least five companies have NMDAR antagonists in development to treat various types of pain. AstraZeneca plc's AZD6765, an NMDAR antagonist, is in Phase II testing for depression. Evotec AG and Roche are developing ENS101 and ENS103, which are NMDA receptor NR2B subtype (GRIN2B; NR2B) antagonists in Phase I/II testing for depression. *SciBX* **3**(34); doi:10.1038/scibx.2010.1043 Published online Sept. 2, 2010	Findings unpatented; licensing status not applicable	Li, N. *et al. Science*; published online Aug. 20, 2010; doi:10.1126/science.1190287 **Contact:** Ronald S. Duman, Yale School of Medicine, New Haven, Conn. e-mail: ronald.duman@yale.edu