This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Alzheimer's disease (AD); cognitive dysfunction	Microtubule-associated protein- τ (MAPT; TAU; FTDP-17)	Transgenic mouse studies suggest microtubule-stabilizing compounds that penetrate the blood brain barrier could help treat AD. In transgenic mice with Tau-mediated neurodegenerative disease, the microtubule stabilizer epothilone D decreased axonal degeneration and Tau pathology and improved memory and spatial learning compared with vehicle. Planned work by the authors includes testing epothilone D in additional transgenic mouse models of AD, and planned work by Bristol-Myers Squibb Co. includes a Phase Ib trial of epothilone D to treat AD. Epothilone D (KOS-862; R1492) was evaluated in Phase II trials for multiple cancers, but Kosan Biosciences Inc. (now part of Bristol-Myers) and Roche discontinued its development in 2007. Bristol-Myers and Otsuka Pharmaceutical Co. Ltd. market Ixempria ixabepilone, a tubulin-binding agent derived from epothilone B, to treat breast cancer. Davunetide (AL 108), an eight-amino-acid, activity-dependent neuroprotective protein targeting tubulin from Allon Therapeutics Inc., has completed Phase II testing to treat AD and cognitive dysfunction and is in Phase II/III testing to treat progressive supranuclear palsy (PSP). SciBX 5(12); doi:10.1038/scibx.2012.312 Published online March 22, 2012	Use of epothilone D to treat AD and other TAU-associated diseases patented by Bristol-Myers; licensing status unavailable	Zhang, B. <i>et al. J. Neurosci.</i>; published online March 14, 2012; doi:10.1523/JNEUROSCI.4922-11.2012 Contact: Kurt R. Brunden, Center for Neurodegenerative Disease Research, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pa. e-mail: kbrunden@upenn.edu