This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Neurology				
Alzheimer's disease (AD)	Phosphorylated- τ 231 (p- τ 231)	<i>In vitro</i> and mouse studies identified antibodies against the <i>cis</i> conformation of p- τ 231 that could help treat or diagnose AD. Antibodies specific for <i>cis</i> p- τ 231 detected higher levels of the target in brains from patients with AD or mild cognitive impairment than in brains from healthy controls. In a microtubule assay, <i>trans</i> p- τ 231 assembled microtubules similarly to healthy unphosphorylated- τ 231, whereas <i>cis</i> p- τ 231 failed to assemble microtubules and aggregated, which led to pathological tangles. In AD mouse models, overexpression of protein peptidylprolyl <i>cis/trans</i> isomerase NIMA-interacting 1 (PIN1), which is downregulated in brains of patients with AD, caused conversion of pathogenic <i>cis</i> p- τ 231 to the functional <i>trans</i> conformation. Next steps include testing the antibodies in AD animal models.	Patent applications filed; available for licensing	Nakamura, K. <i>et al. Cell</i> ; published online March 30, 2012; doi:10.1016/j.cell.2012.02.016 Contact: Kun Ping Lu, Harvard Medical School, Boston, Mass. e-mail: klu@bidmc.harvard.edu Contact: Xiao Zhen Zhou, same affiliation as above e-mail: xzhou@bidmc.harvard.edu
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