

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Alzheimer's disease (AD)	Phospholipase A ₂ , group IVA (cytosolic, calcium-dependent) (PLA ₂ G4A)	<p>Mouse and cultured neuron studies suggest that PLA₂G4A could be targeted to treat AD. PLA₂G4A cleaves phospholipids to produce arachidonic acid and other bioactive lipids. Mass spectroscopic analysis of hippocampus tissue from mice overexpressing human β-amyloid (A4) precursor protein (APP) revealed higher levels of arachidonic acid than those seen in wild-type controls. Genetic disruption of PLA₂G4A in APP-overexpressing mice improved learning and memory compared with what was seen in wild-type controls. Pretreatment of cultured neurons with a phospholipase A₂ (PLA₂) inhibitor lowered cell death caused by amyloid-β peptide compared with what was seen in cultured neurons that did not receive a PLA₂ inhibitor.</p> <p>Amarin Corp. plc's AMR101 PLA₂ inhibitor is in Phase I, II and III trials to treat a range of metabolic, cardiovascular and neurological indications.</p> <p>Morria Biopharmaceuticals plc's MRX-4 PLA₂ inhibitor is in Phase II trials to treat allergy.</p> <p>SciBX 1(41); doi:10.1038/scibx.2008.999 Published online Nov. 13, 2008</p>	Unpatented; licensing status not applicable	<p>Sanchez-Mejia, R.O. <i>et al. Nat. Neurosci.</i>; published online Oct. 19, 2008; doi:10.1038/nn.2213</p> <p>Contact: Lennart Mucke, Gladstone Institute of Neurological Disease, San Francisco, Calif. e-mail: lmucke@gladstone.ucsf.edu</p> <p>Contact: Rene O. Sanchez-Mejia, Massachusetts General Hospital, Boston, Mass. e-mail: rene_sanchez@post.harvard.edu</p>