

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Alzheimer's disease (AD)	MicroRNA-188-3p (miR-188-3p); monoacylglycerol lipase (MAGL); β -site APP-cleaving enzyme 1 (BACE1)	Studies in human samples and mice suggest miR-188-3p could help treat AD. In brain tissue from a mouse model of AD or patients with AD, miR-188-3p levels were lower than those in tissue from healthy controls. In the mouse model, inhibition of Magl—an enzyme previously shown to induce amyloidogenic Bace1—increased levels of miR-188-3p and decreased levels of Bace1 in a miR-188-3p-dependent manner compared with vehicle, thus identifying Bace1 as a target of the miRNA. Also in the mouse model, hippocampal delivery of miR-188-3p decreased Bace1 levels and increased synaptic transmission, cognitive function and motor function compared with a scrambled control miRNA. Next steps include developing a safe and efficient vector for delivering miR-188-3p.	Provisional patent application filed; licensing status undisclosed	Zhang, J. <i>et al. J. Neurosci.</i> ; published online Nov. 5, 2014; doi:10.1523/JNEUROSCI.1165-14.2014 Contact: Chu Chen, Louisiana State University Health Sciences Center, New Orleans, La. e-mail: chen502@gmail.com or cchen@lsuhsc.edu
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