

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cardiovascular disease				
Fibrillation	Calcium calmodulin-dependent protein kinase II (CAMK2); ryanodine receptor 2 (RyR2)	<i>In vivo</i> and tissue studies suggest that antagonizing CAMK2 could help treat atrial fibrillation. In mice with a mutation in RyR2 that increased both calcium leakage and susceptibility to atrial fibrillation, as compared to wild-type mice, inhibition of Camk2 prevented fibrillation. Atrial biopsies showed that Camk2 phosphorylated RyR2 in mice susceptible to spontaneous fibrillation. Next steps include developing therapeutics to normalize RyR2 calcium channel activity. I.v. and oral formulations of Kynapid vernakalant, a mixed ion channel antagonist from Astellas Pharma Inc. and Cardiome Pharma Corp., are in Phase III and Phase II testing, respectively, to treat atrial fibrillation.	Unpatented; available for licensing	Chelu, M. <i>et al. J. Clin. Invest.</i> ; published online June 15, 2009; doi:10.1172/JCI37059 Contact: Xander H.T. Wehrens, Baylor College of Medicine, Houston, Texas e-mail: wehrens@bcm.edu Contact: Dobromir Dobrev, Dresden University of Technology, Dresden, Germany e-mail: dobrev@rcs.urz.tu-dresden.de
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