This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cardiovascular disease				
Arrhythmia	Phosphoinositide 3-kinase (PI3K)	*In vitro* and mouse studies suggest some doses of PI3K inhibitors may induce long QT syndrome when used to treat cancer. In cultured canine myocytes, the small molecule PI3K inhibitors BEZ235 and PI-103 produced dose-dependent prolongation of action potential, whereas vehicle did not. In mice, cardiac-specific knockout of the Pi3kα isoform led to action potential prolongation, whereas knockout of Pi3kβ had minimal effects on the action potential. Next steps include developing a method to reduce the risk of long QT syndrome when dosing PI3K inhibitors. BEZ235, a dual inhibitor of PI3Kα and mammalian target of rapamycin (mTOR; FRAP; RAFT1) from Novartis AG, is in Phase I/II testing to treat solid cancers. At least 27 other companies have compounds that inhibit PI3K in clinical and preclinical testing to treat cancer. PI-103 is a research reagent.	Unpatented; licensing status not applicable	Lu, Z. *et al. Sci. Transl. Med.*; published online April 25, 2012; doi:10.1126/scitranslmed.3003623 **Contact:** Ira S. Cohen, State University of New York at Stony Brook, Stony Brook, N.Y. e-mail: ira.cohen@stonybrook.edu **Contact:** Richard Z. Lin, same affiliation as above e-mail: richard.lin@stonybrook.edu

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