This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cardiovascular disease				
Restenosis	Mammalian target of rapamycin (mTOR; FRAP; RAFT1); phosphoinositide 3-kinase (PI3K)	<p>Studies in mice suggest that combination therapy with sirolimus and a PI3K inhibitor could be useful for preventing restenosis in patients with diabetes.</p> <p>In a murine femoral artery wire injury model, leptin administered at levels comparable to those found in obese humans promoted neointimal hyperplasia, which contributes to restenosis after stenting. An injection of a PI3K inhibitor and sirolimus inhibited leptin-enhanced neointimal hyperplasia. Next steps include formulating a PI3K inhibitor and sirolimus coating for a stent.</p> <p>Rapamune sirolimus (rapamycin), an mTOR pathway inhibitor from Wyeth, is marketed for renal cancer and various transplant indications.</p> <p>Cypher, a coronary stent coated with sirolimus from Johnson & Johnson, is marketed to treat coronary artery disease.</p> <p>NVP-BEZ235, a dual PI3K and mTOR inhibitor from Novartis AG, is in Phase I testing to treat cancer.</p> <p>XL765, a small molecule inhibitor of PI3K and mTOR from Exelixis Inc., is in Phase I testing to treat solid tumors.</p> <p>SciBX 1(43); doi:10.1038/scibx.2008.1048 Published online Dec. 4, 2008</p>	Patent application filed for use of a PI3K inhibitor and sirolimus on a stent to treat coronary artery disease; available for licensing	<p>Shan, J. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Nov. 6, 2008; doi:10.1073/pnas.0809743105</p> <p>Contact: Andrew R. Marks, Columbia University, New York, N.Y. e-mail: arm42@columbia.edu</p>