This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cardiovascular disease				
Cardiovascular disease; fibrosis	MicroRNA-21 (miRNA-21)	<p>Studies in mice suggest that antagonizing miRNA-21 could potentially lower cardiac fibrosis and treat cardiovascular disease. Myocardial miRNA-21 was upregulated in three different mouse models of cardiac failure and in patients with end-stage heart failure compared with what was seen in healthy controls. An antagomir targeting miRNA-21 lowered cardiac fibrosis, cardiomyocyte size and heart weight and improved cardiac function in two different mouse models of cardiac failure compared with what was seen in mice that received saline control. Further studies in larger animal models of heart failure are necessary to determine the therapeutic efficacy of an antagomir approach to silencing miRNA-21.</p> <p>Regulus Therapeutics LLC, which was an author on the paper, has an early-stage miRNA program targeting miRNA-21 for cardiovascular diseases and fibrosis. Regulus is a joint venture between Alnylam Pharmaceuticals Inc. and Isis Pharmaceuticals Inc.</p> <p>miRagen Therapeutics Inc. has multiple miRNA-targeting compounds in preclinical development to treat cardiovascular indications.</p> <p>SciBX 1(45); doi:10.1038/scibx.2008.1098 Published online Dec. 18, 2008</p>	Several patent applications filed covering diagnostic and therapeutic application of miRNAs in cardiovascular disease; available for licensing	<p>Thum, T. <i>et al. Nature</i>; published online Nov. 30, 2008; doi:10.1038/nature07511</p> <p>Contact: Stefan Engelhardt, University of Würzburg, Würzburg, Germany e-mail: stefan.engelhardt@virchow.uni-wuerzburg.de</p>