This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cardiovascular disease				
Ischemia/ reperfusion injury	Nuclear factor (erythroid-derived 2)-like 2 (NFE2L2; NRF2)	<p>Mouse studies suggest fumarate compounds could help treat cardiac ischemia/reperfusion injury. In a mouse model of ischemia/reperfusion injury, cardiac-specific knockout of fumarate hydratase (FH), an enzyme that breaks down fumarate, led to higher fumarate levels, lower myocardial necrosis and greater cardiac function than no knockout. In the same mouse model, the fumarate derivative dimethylfumarate increased NRF2 levels and decreased ischemia/reperfusion injury compared with vehicle. Next steps include studying the effects of delivering fumarate to patients prior to cardiac surgery.</p> <p>Biogen Idec Inc. has submitted an NDA to the FDA for the fumarate derivative BG-12 to treat multiple sclerosis (MS).</p> <p>SciBX 5(15); doi:10.1038/scibx.2012.391 Published online April 12, 2012</p>	Patent application filed; licensing status undisclosed	<p>Ashrafian, H. <i>et al. Cell Metab.</i>; published online March 7, 2012; doi:10.1016/j.cmet.2012.01.017</p> <p>Contact: Houman Ashrafian, University of Oxford, Oxford, U.K. e-mail: houman.ashrafian@cardiov.ox.ac.uk</p>