This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Various				
Cardiovascular disease; sickle cell disease (SCD)	Hemopexin (HPX); toll-like receptor 4 (TLR4)	<p>Mouse studies suggest TLR4 blockade or recombinant HPX could help prevent SCD-associated acute chest syndrome. In a transgenic mouse model of SCD, infusion of hemin, a breakdown product of hemoglobin, amplified endogenous hemin and caused acute lung injury, respiratory failure and death. In the mouse model, a TLR4 antagonist or the recombinant hemin scavenger HPX prevented hemin-induced respiratory failure and death, whereas vehicle did not. Next steps could include testing TLR4 antagonists or recombinant HPX in additional animal models of SCD-associated acute chest syndrome.</p> <p>Eisai Co. Ltd.'s TLR4 inhibitor, E5564, is in Phase III testing to treat sepsis.</p> <p>At least three other companies have TLR4 inhibitors in Phase II testing or earlier to treat sepsis, autoimmune disorders or inflammatory diseases.</p> <p>SciBX 6(42); doi:10.1038/scibx.2013.1198 Published online Oct. 31, 2013</p>	Patent and licensing status unavailable	<p>Ghosh, S. <i>et al. J. Clin. Invest.</i>; published online Oct. 1, 2013; doi:10.1172/JCI64578</p> <p>Contact: Solomon Fiifi Ofori-Acquah, Emory University School of Medicine, Atlanta, Ga. e-mail: soforia@emory.edu</p>