This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Breast cancer	Cytochrome P450 family 27 subfamily A polypeptide 1 (CYP27A1)	<p>Mouse studies suggest lowering cholesterol or inhibiting CYP27A1 could help treat estrogen-dependent breast cancer. In a mouse model of spontaneous, estrogen receptor-positive breast cancer, Cyp27a1-expressing mice fed a high-cholesterol diet showed greater intratumoral levels of 27-hydroxycholesterol, faster tumor growth and more metastases than Cyp27a1-deficient mice fed a high-cholesterol diet or Cyp27a1-expressing mice fed a control diet. In hypercholesterolemic mice with breast tumors, those fed a high-fat diet had greater levels of plasma 27-hydroxycholesterol and tumors that grew faster than mice fed a control diet or a high-fat diet and injected with a CYP27A1 inhibitor. Next steps include optimizing inhibitors of CYP27A1 and exploring new scaffolds.</p> <p>SciBX 7(2); doi:10.1038/scibx.2014.46 Published online Jan. 16, 2014</p>	<p>Patent applications filed; available for licensing from the Duke University Office of Licensing & Ventures</p> <p>Contact: Karthik Gopalakrishna, Duke University, Durham, N.C. phone: 919-668-3401 e-mail: gopal004@mc.duke.edu</p>	<p>Nelson, E.R. <i>et al. Science</i>; published online Nov. 29, 2013; doi:10.1126/science.1241908</p> <p>Contact: Donald P. McDonnell, Duke University School of Medicine, Durham, N.C. e-mail: donald.mcdonnell@duke.edu</p>