This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	Solute carrier family 16, member 1 (monocarboxylic acid transporter 1) (SLC16A1; MCT1)	<p>Cell culture and mouse studies suggest that inhibiting MCT1 could help treat some cancers. In cultured human cervix squamous carcinoma cells, MCT1 mediated the uptake of lactate, which is a metabolic substrate for oxygenated, outer tumor cells. In the same cell line, inhibition of MCT1 with α-cyano-4-hydroxycinnamate (CHC) or RNAi blocked lactate uptake and forced the cells to rely solely on glucose for energy production. In mouse models of lung and colorectal cancer, CHC forced the oxygenated, outer cells of the tumors into glycolytic energy production, thereby starving the hypoxic, interior cells of glucose, eventually killing them and slowing tumor growth. The surviving tumor cells were sensitive to radiation. Ongoing studies include lead optimization of CHC and the design of high throughput screening methods to identify new MCT1 inhibitors.</p> <p>SciBX 1(44); doi:10.1038/scibx.2008.1069 Published online Dec. 11, 2008</p>	Patent and licensing status undisclosed	<p>Sonveaux, P. <i>et al. J. Clin. Invest.</i>; published online Nov. 20, 2008; doi:10.1172/JCI36843</p> <p>Contact: Pierre Sonveaux, Université Catholique de Louvain, Brussels, Belgium e-mail: pierre.sonveaux@uclouvain.be</p>