This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Colorectal cancer	β-Catenin (CTNNB1); forkhead box O3 (FOXO3; FOXO3a); phosphoinositide 3-kinase (PI3K); protein kinase B (PKB; PKBA; AKT; AKT1)	<p>Patient and cell studies suggest inhibiting wingless-type MMTV integration site (WNT) and CTNNB1 signaling could help prevent drug resistance in colon cancer. In patient samples, high nuclear colocalization of CTNNB1 and the transcription factor FOXO3a, a downstream effector of PI3K and AKT signaling, was associated with a median survival of 25.7 months, whereas low nuclear colocalization of the 2 proteins was associated with a median survival of 33.7 months. In patient-derived colon cancer cells, high CTNNB1 levels were associated with increased resistance to PI3K and AKT inhibitors. In the patient-derived cells with high CTNNB1 levels, an inhibitor of WNT and CTNNB1 signaling reversed the resistance. Next steps include assessing nuclear CTNNB1 levels in patient colon cancer samples taken before and after treatment with a PI3K inhibitor.</p> <p>SciBX 5(22); doi:10.1038/scibx.2012.572 Published online May 31, 2012</p>	<p>Patent application filed covering nuclear CTNNB1 as a biomarker to predict response to FOXO3a-induced apoptosis by some targeted therapies; unavailable for licensing</p>	<p>Tenbaum, S.P. <i>et al. Nat. Med.</i>; published online May 20, 2012; doi:10.1038/nm.2772 Contact: Héctor G. Palmer, Vall d'Hebron Institute of Oncology, Barcelona, Spain e-mail: hgpalmer@vhio.net</p>