This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Brain cancer	Smoothened (SMO); phosphoinositide 3-kinase (PI3K); mammalian target of rapamycin (mTOR; FRAP; RAFT1)	<p>Studies in mice suggest that combining SMO antagonists with inhibitors of PI3K or mTOR could be useful for treating medulloblastoma. In tumor-bearing mice, a SMO antagonist plus a PI3K or mTOR inhibitor led to lower tumor volume and longer survival than a SMO antagonist alone. Next steps include clinical testing of a combination of SMO antagonist LDE225 with PI3K and/or mTOR antagonists. Novartis AG's LDE225 is in Phase I/II testing for a range of cancer indications including medulloblastoma and basal cell carcinoma. Novartis' PI3K inhibitor BKM120 is in Phase II testing for breast cancer in combination with Herceptin trastuzumab, a HER2 (ERBB2; neu)-targeting mAb from Roche's Genentech Inc. unit. Novartis' BEZ235, a dual inhibitor of PI3K and mTOR, is in Phase I/II testing for advanced breast cancer. At least 20 other companies have antagonists of SMO, PI3K or mTOR in development or on the market for a range of indications.</p> <p>SciBX 3(40); doi:10.1038/scibx.2010.1200 Published online Oct. 14, 2010</p>	Patents pending; available for licensing from Novartis	<p>Buonamici, S. <i>et al. Sci. Transl. Med.</i>; published online Sept. 29, 2010; doi:10.1126/scitranslmed.3001599 Contact: Silvia Buonamici, Novartis Institutes for BioMedical Research, Cambridge, Mass. e-mail: silvia.buonamici@novartis.com</p>