This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
T cell lymphoma; leukemia	K-Ras; NOTCH1; mammalian target of rapamycin (mTOR; FRAP; RAFT1); phosphoinositide 3-kinase (PI3K); protein kinase B (PKB; Akt)	Cell-culture studies suggest that compounds targeting the NOTCH1, PI3K/Akt/mTOR and RAS/mitogen-activated protein kinase (MAPK) pathways may help treat T cell lymphomas that express mutations in K-Ras. Mice that received whole bone marrow transplants expressing oncogenic K-Ras developed aggressive T cell lymphoma. Subsequent treatment of mouse-derived cell lines with small molecule inhibitors of each of these pathways led to dose-dependent decreases in cell proliferation compared with what was seen in untreated controls. Next steps include using the transgenic mouse model and the cell lines derived from it to identify additional therapeutics that show antiproliferative effects. MK0752, a NOTCH inhibitor from Merck & Co. Inc., is in Phase I trials to treat breast cancer. Rapamune sirolimus, an mTOR pathway inhibitor from Wyeth, is marketed for renal cancer and various transplant indications. At least seven companies have MAPK pathway inhibitors in Phase I and II trials for various cancer indications.	Patent and licensing status unavailable	Kindler, T. *et al. Blood*; published online July 28, 2008; doi:10.1182/blood-2008-03-147587 **Contact:** Thomas Kindler, Johannes Gutenberg-University Mainz, Mainz, Germany e-mail: thomas.kindler@ukmainz.de