This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Brain cancer	BRAF; cyclin dependent kinase inhibitor 2A (CDKN2A; INK4a; ARF; p16INK4a); cyclin dependent kinase 4 (CDK4); CDK6	Mouse studies suggest a BRAF inhibitor plus a CDK4 and CDK6 inhibitor could help treat pediatric astrocytomas that carry the BRAF V600E mutation and have a CDKN2A deficiency. In a mouse xenograft model of BRAF V600E-mutant and CDKN2A-deficient human astrocytoma, Zelboraf vemurafenib plus the CDK4 and CDK6 inhibitor PD-0332991 increased survival compared with either compound alone ($p=0.0018$). Next steps include evaluating Zelboraf and PD-0332991 as monotherapies in a Phase I trial in pediatric glioma before testing the combination. Zelboraf, an oral small molecule inhibitor of oncogenic BRAF V600E from Daiichi Sankyo Co. Ltd., Chugai Pharmaceutical Co. Ltd. and Roche, is marketed to treat melanoma. The drug also is in Phase II testing to treat thyroid cancer and Phase I testing to treat colorectal cancer. PD-0332991 from Onyx Pharmaceuticals Inc. and Pfizer Inc. is in Phase II testing to treat cancer. SciBX 5(21); doi:10.1038/scibx.2012.540 Published online May 24, 2012	Patented for use in melanoma; licensing status undisclosed	Huillard, E. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online May 14, 2012; doi:10.1073/pnas.1117255109 Contact: David H. Rowitch, University of California, San Francisco, Calif. e-mail: rowitchd@peds.ucsf.edu Contact: C. David James, same affiliation as above e-mail: david.james@ucsf.edu