This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Prostate cancer; gastric cancer; melanoma	BRAF; CRAF (RAF1); MAP kinase kinase 1 (MAP2K1; MEK1); MAP2K2 (MEK2)	<p>Genomic and <i>in vitro</i> studies suggest that RAF1 and MEK1 and MEK2 inhibitors could help treat certain subtypes of prostate cancer, gastric cancer and melanoma. Transcriptome analysis of primary tumors identified <i>BRAF</i> and <i>CRAF</i> rearrangements that produced oncogenic gene fusions in 1%–2% of prostate cancers, gastric cancers and melanomas. In human prostate epithelial cell lines containing <i>BRAF</i> or <i>CRAF</i> fusion genes, inhibitors of RAF1 or MEK1/MEK2 decreased cell proliferation compared with no treatment. Next steps include testing RAF1 and MEK1/MEK2 inhibitors in cellular and animal models of prostate cancer that express <i>BRAF</i> or <i>CRAF</i> gene fusions.</p> <p>Onyx Pharmaceuticals Inc. and Bayer AG's Nexavar sorafenib (BAY 43-9006), an inhibitor of RAF1 and multiple receptor tyrosine kinases, is marketed to treat kidney and liver cancer. Eisai Co. Ltd's E6201, an inhibitor of MEK1 and MAP3K1 (MEKK1), is in Phase II testing for psoriasis and Phase I for solid tumors.</p> <p>GlaxoSmithKline plc's GSK1120212, an inhibitor of MEK1 and MEK2, is in Phase II testing to treat <i>BRAF</i> mutation-positive melanoma and relapsed or refractory leukemias and is in Phase I testing to treat solid tumors and lymphoma.</p>	Patented; available for licensing	<p>Palanisamy, N. <i>et al.</i> <i>Nat. Med.</i>; published online June 6, 2010; doi:10.1038/nm.2166</p> <p>Contact: Arul Chinnaiyan, University of Michigan Medical School, Ann Arbor, Mich. e-mail: arul@umich.edu</p>
<p>SciBX 3(23); doi:10.1038/scibx.2010.699 Published online June 10, 2010</p>				