This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Acute myelogenous leukemia (AML)	Mitogen-activated protein kinase (MEK); p38 mitogen-activated protein kinase (p38 MAPK; MAPK14); calcium and DAG-regulated guanine nucleotide exchange factor 1 (RASGRP1); RASGRP4	<p>A study in mice suggests that agonizing p38 MAPK or antagonizing RASGRP1 and RASGRP4 could help treat AML tumors that are resistant to MEK inhibitors. In mice, MEK inhibitor-resistant leukemia cells had higher expression of RASGRP1 and RASGRP4 and lower expression of p38 MAPK than drug-sensitive control cells. Small hairpin RNA knockdown of RASGRP1 restored MEK inhibitor sensitivity compared with that of untreated controls. Next steps include screening of other drug-resistant tumor lines to identify secondary therapeutic targets. AZD6244, a MEK inhibitor from Array BioPharma Inc. and AstraZeneca plc, is in Phase II trials for non-small cell lung cancer (NSCLC). RDEA119, a MEK inhibitor from Ardea Biosciences Inc., is in Phase I/II testing for advanced solid tumors. Exelixis Inc. and Roche are developing XL518, a MEK inhibitor that is in Phase I testing to treat solid tumors.</p> <p>SciBX 2(36); doi:10.1038/scibx.2009.1367 Published online Sept. 17, 2009</p>	Unpatented; licensing status not applicable	<p>Potkin, S. <i>et al. Nature</i>; published online Sept. 2, 2009; doi:10.1038/nature08279</p> <p>Contact: Kevin Shannon, University of California, San Francisco, Calif. e-mail: shannonk@peds.ucsf.edu</p>