This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer; melanoma	Signal transducer and activator of transcription 3 (STAT3)	<p><i>In vitro</i> and mouse studies suggest compounds from a class of organometallic STAT3 inhibitors could help treat melanoma and other cancers. Chemical synthesis and <i>in vitro</i> testing of rhodium(III) complexes identified a lead compound that blocked STAT3 dimerization with a nanomolar IC₅₀ value. In human melanoma cell lines, the lead compound showed cytotoxicity with low micromolar IC₅₀ values. In mouse xenograft models of melanoma, the compound decreased tumor growth compared with vehicle. Ongoing work includes optimizing the lead compound and testing the other complexes in the series in leukemia, lymphoma and other cancer cell lines. Isis Pharmaceuticals Inc. and AstraZeneca plc have ISIS-STAT3Rx (AZD9150), an antisense inhibitor of STAT3, in Phase I/II testing or earlier to treat various cancers. Otsuka Pharmaceutical Co. Ltd. has OPB-31121, an inhibitor of STAT3, in Phase I testing to treat solid tumors. GLG Pharma LLC has four compounds that inhibit STAT3 activity in preclinical development to treat cancer.</p> <p>SciBX 7(26); doi:10.1038/scibx.2014.761 Published online July 10, 2014</p>	Patent application cofiled by the University of Macau, Kaohsiung Medical University and Hong Kong Baptist University; available for licensing	<p>Ma, D.-L. <i>et al. Angew. Chem. Int. Ed.</i>; published online May 30, 2014; doi:10.1002/anie.201404686 Contact: Chung-Hang Leung, Institute of Chinese Medical Sciences, University of Macau, Macau, China e-mail: duncanleung@umac.mo Contact: Hui-Min David Wang, Kaohsiung Medical University, Kaohsiung City, Taiwan e-mail: davidw@kmu.edu.tw Contact: Dik-Lung Ma, Hong Kong Baptist University, Hong Kong, China e-mail: edmondma@hkbu.edu.hk</p>