This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	IL-6; IL-6 signal transducer (IL-6ST; gp130; CD130); JAK kinase (JAK); signal transducer and activator of transcription 3 (STAT3)	<p><i>In vitro</i> studies suggest two marketed drugs could inform the design of inhibitors that block the IL-6-CD130 interaction and help treat cancer. Fragment-based drug design and virtual screening identified raloxifene and bazedoxifene as potential inhibitors of the IL-6-CD130 interaction that activates JAK and STAT3 signaling. In a CD130⁺ human pancreatic cancer cell line, both drugs reduced viability at micromolar IC₅₀ values. In an estrogen receptor-negative human breast cancer cell line, the drugs reduced viability at micromolar IC₅₀ values. Ongoing work includes optimizing the two drugs for potency against the IL-6-CD130 interaction. Eli Lilly and Co. and Takeda Pharmaceutical Co. Ltd. market Evista raloxifene, a selective estrogen receptor modulator (SERM), to treat osteoporosis and breast cancer. Ligand Pharmaceuticals Inc. and Pfizer Inc. market the SERM Conbriza bazedoxifene to treat osteoporosis.</p> <p>SciBX 7(6); doi:10.1038/scibx.2014.167 Published online Feb. 13, 2014</p>	Unpatented; unlicensed; available for partnering	<p>Li, H. <i>et al. J. Med. Chem.</i>; published online Jan. 23, 2014; doi:10.1021/jm401144z</p> <p>Contact: Chenglong Li, The Ohio State University, Columbus, Ohio e-mail: li.728@osu.edu</p>