This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	Topoisomerase I (TOP1); TOP2	<p><i>In vitro</i> and mouse studies suggest a class of dual inhibitors of TOP1 and TOP2 could help treat cancer. Chemical synthesis, <i>in vitro</i> testing and computational modeling of evodiamine analogs identified multiple compounds as dual inhibitors of TOP1 and TOP2 that inhibited growth of multiple human cancer cell lines at low nanomolar concentrations. In mice with human lung or colon tumors, several of the compounds were safe and decreased tumor growth compared with vehicle. Ongoing work includes optimization of the most potent compounds. Pfizer Inc. and Yakult Honsha Co. Ltd. market Camptosar irinotecan, a semisynthetic derivative of a camptothecin small molecule TOP1 inhibitor, to treat colorectal cancer and non-small cell lung cancer (NSCLC). Dainippon Sumitomo Pharma Co. Ltd. and Celgene Corp. market Calsed amrubicin, a third-generation synthetic anthracycline TOP2 inhibitor, to treat NSCLC and small cell lung cancer. GlaxoSmithKline plc markets the TOP1 inhibitor Hycamtin topotecan hydrochloride to treat small cell lung and cervical cancers.</p> <p>SciBX 5(33); doi:10.1038/scibx.2012.863 Published online Aug. 23, 2012</p>	Patented by Second Military Medical University; available for licensing or partnering	<p>Sheng, C. <i>et al. J. Med. Chem.</i>; published online Aug. 6, 2012; doi:10.1021/jm300605m</p> <p>Contact: Chunquan Sheng, Second Military Medical University, Shanghai, China e-mail: shengcq@hotmail.com</p>