This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Breast cancer	Granulocyte macrophage colony-stimulating factor (GM-CSF; CSF2); chemokine CC motif ligand 18 (CCL18); phosphatidylinositol transfer protein membrane associated family member 3 (PITPNM3)	<p>Mouse and human sample studies suggest blocking secreted GM-CSF or CCL18 could help prevent breast cancer metastasis. In a humanized mouse model of metastatic breast cancer, a neutralizing antibody against tumor cell-secreted GM-CSF reduced numbers of tumor-associated macrophages (TAMs), inhibited metastasis and prolonged metastasis-free survival. In the same model, a neutralizing antibody against TAM-secreted CCL18 reduced epithelial-to-mesenchymal transition of tumor cells, inhibited metastasis and prolonged metastasis-free survival. In human breast cancer samples or patient data collections, high GM-CSF expression correlated with elevated numbers of stromal CCL18⁺ cells or higher tumor grade and poor prognosis. Next steps include developing antibodies and identifying small molecules able to inhibit the CCL18 receptor PITPNM3.</p> <p>SciBX 7(24); doi:10.1038/scibx.2014.698 Published online June 19, 2014</p>	Patent application filed; licensing status undisclosed	<p>Su, S. <i>et al. Cancer Cell</i>; published online May 12, 2014; doi:10.1016/j.ccr.2014.03.021</p> <p>Contact: Erwei Song, Sun Yat-sen University, Guangzhou, China e-mail: songew@mail.sysu.edu.cn</p>