

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Pulmonary disease				
Pulmonary fibrosis	Amphiregulin (AREG); epidermal growth factor receptor 1 (EGFR1; HER1; ErbB1); transforming growth factor- β 1 (TGFB1)	<p><i>In vitro</i> and mouse studies suggest inhibiting AREG-EGFR1 signaling could help treat idiopathic pulmonary fibrosis (IPF). In the lungs of patients with IPF, TGFB1 levels were greater than those in lungs of healthy individuals. In a mouse fibroblast cell line, human and mouse TGFB1 upregulated Areg, which activated Egfr1 and increased proliferation compared with vehicle. In a transgenic <i>TGFB1</i>-expressing mouse model of pulmonary fibrosis, <i>AREG</i> small interfering RNA or an EGFR1 inhibitor decreased collagen accumulation and pulmonary fibrosis compared with a scrambled siRNA or vehicle. Ongoing work includes investigating expression of AREG in serum and tissues from patients with IPF and other fibrotic diseases.</p> <p>At least 16 companies market inhibitors of EGFR or EGFR1 to treat various cancers.</p> <p>SciBX 5(43); doi:10.1038/scibx.2012.1145 Published online Nov. 1, 2012</p>	Patented by Yale University and Bioneer Corp.; available for licensing	<p>Zhou, Y. <i>et al. J. Biol. Chem.</i>; published online Oct. 19, 2012; doi:10.1074/jbc.M112.356824 Contact: Chun Geun Lee, Yale School of Medicine, New Haven, Conn. e-mail: chungeun.lee@yale.edu</p>