This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Pulmonary disease				
Acute lung injury	Fibroblast growth factor 7 (FGF7; KGF)	<p><i>Ex vivo</i> studies of human lungs suggest that allogeneic mesenchymal stem cells (MSCs) could be useful for treating endotoxin-induced acute lung injury. In <i>ex vivo</i> human lung preparations subjected to <i>Escherichia coli</i> endotoxin-induced lung injury, allogeneic human MSCs reduced signs of pulmonary edema compared with those in control lung tissue. Small interfering RNA-mediated knockdown of KGF in MSCs reduced their protective effect by 80% compared with that of control MSCs. Next steps include elucidating other molecular factors besides KGF that give MSCs their protective effects in acute lung injury. Kepivance palifermin, a recombinant human KGF from Amgen Inc. and Biovitrum AB, is marketed to treat mucositis. Sivelestat, a small molecule inhibitor of neutrophil elastase from Ono Pharmaceutical Co. Ltd., is approved to treat acute lung injury. At least nine other companies have compounds in Phase II or earlier to treat acute lung injury.</p> <p>SciBX 2(36); doi:10.1038/scibx.2009.1388 Published online Sept. 17, 2009</p>	Patent and licensing status undisclosed	<p>Lee, J.W. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Aug. 31, 2009; doi:10.1073/pnas.0907996106</p> <p>Contact: Jae W. Lee, University of California, San Francisco, Calif. e-mail: leejw@anesthesia.ucsf.edu</p>