This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Respiratory syncytial virus (RSV)	RSV F protein	<p><i>In vitro</i> studies have identified resistance mechanisms to inhibitors targeting RSV entry via the RSV F protein. An <i>in vitro</i> screen identified a small molecule that inhibited RSV entry with a low micromolar EC₅₀ value. Mutations in the gene encoding RSV F protein conferred resistance to the compound and other RSV F protein-targeting agents. In biochemical and cell culture assays, the resistance mutations encoded RSV F proteins that formed destabilized prefusion complexes that promoted viral fusion. Next steps include the identification of fusion-inhibitor molecules that are not subject to this resistance mechanism.</p> <p>AstraZeneca plc and AbbVie Inc. market Synagis palivizumab, a humanized mAb against RSV F protein, to prevent and treat RSV.</p> <p>Ablynx N.V. has ALX-0171, an antibody fragment against RSV F protein, in Phase I testing to prevent and treat RSV.</p> <p>At least three companies have antibodies or small molecules in preclinical development to treat RSV.</p> <p>SciBX 7(34); doi:10.1038/scibx.2014.1017 Published online Sept. 4, 2014</p>	Patent application filed; available for licensing	<p>Yan, D. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Aug. 4, 2014; doi:10.1073/pnas.1405198111</p> <p>Contact: Richard Karl Plemper, Georgia State University, Atlanta, Ga. e-mail: rplemper@gsu.edu</p>