This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Sepsis	Integrin $\alpha_3\beta_1$ (VLA-3); integrin $\alpha_3\beta_1$; integrin $\alpha_v\beta_3$	<p>A study in mice and in cell culture suggests that inhibiting integrin-mediated neutrophil migration may help treat sepsis. Protein-binding and cellular-migration assays showed that recombinant human activated protein C (rhAPC) decreased neutrophil migration by inducing conformational changes in neutrophil-specific integrin $\alpha_3\beta_1$, integrin $\alpha_5\beta_1$ and integrin $\alpha_v\beta_3$. The Arg-Gly-Asp (RGD) motif of rhAPC was required for the integrin interaction. In a mouse model of sepsis, the RGD peptide significantly decreased mortality compared with that seen using a control peptide ($p < 0.05$). Next steps include identifying specific sepsis-relevant neutrophil integrins that bind to rhAPC and evaluating blockers of the integrins in preclinical sepsis models.</p> <p>Xigris drotrecogin alfa, a rhAPC from Eli Lilly and Co., is marketed to treat sepsis.</p> <p>At least 13 other companies have compounds in clinical and preclinical testing for the indication.</p> <p>SciBX 2(10); doi:10.1038/scibx.2009.410 Published online March 12, 2009</p>	<p>Patent application filed; available for licensing from the University of Rochester Office of Technology Transfer</p> <p>Contact: Harl Tolbert, University of Rochester, Rochester, N.Y. phone: 585-784-8862 e-mail: Harl_Tolbert@URMC.Rochester.edu</p>	<p>Elphick, G.F. <i>et al. Blood</i>; published online Feb. 24, 2009; doi:10.1182/blood-2008-09-180968</p> <p>Contact: Minsoo Kim, University of Rochester, Rochester, N.Y. e-mail: minsoo_kim@urmc.rochester.edu</p>