This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Brain cancer	<i>Pseudomonas aeruginosa</i> exotoxin; IL-13 receptor $\alpha 2$ (IL-13RA2; IL-13R; CD213A2)	Engineered <i>P. aeruginosa</i> exotoxin-producing neural stem cells could help treat glioblastoma multiforme (GBM). Human neural stem cells were engineered to be resistant to the exotoxin and to produce and secrete an IL13-exotoxin fusion protein (IL13-PE) that binds IL-13RA2, a receptor expressed by GBM but not normal brain cells. In primary GBM cell lines, coculture with IL13-PE-producing neural stem cells decreased viability compared with coculture using unmodified neural stem cells. In a mouse model of resected GBM, injection of the IL13-PE-producing neural stem cells into the resection cavity decreased the residual GBM tumor volume and increased survival compared with injection of cell-free IL13-PE fusion protein. Next steps include discussions with the FDA to plan a clinical trial.	Patent status undisclosed; unavailable for licensing	Stuckey, D.W. <i>et al. Stem Cells</i> ; published online Oct. 24, 2014; doi:10.1002/stem.1874 Contact: Khalid Shah, Massachusetts General Hospital, Boston, Mass. e-mail: kshah@mgh.harvard.edu
<i>SciBX</i> 7(46); doi:10.1038/scibx.2014.1342 Published online Dec. 4, 2014				