

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Influenza	Eukaryotic translation initiation factor 4E binding proteins 1 and 2 (4EBP1; 4EBP2); interferon regulatory factor-7 (IRF-7)	Studies in cell culture and in mice suggest that antagonizing 4EBP1 or 4EBP2 could improve immune responses to influenza and other viral infections. 4EBP1 and 4EBP2 are repressors of protein biosynthesis. Mouse embryonic fibroblasts (MEFs) lacking both proteins were better able to repress replication of encephalomyocarditis virus, vesicular stomatitis virus, Sindbis virus and influenza viruses compared with wild-type MEFs. Moreover, double knockout mice, deficient in 4EBP1 and 4EBP2, were more resistant to vesicular stomatitis virus infection and had enhanced interferon responses compared with wild-type mice. In MEFs, the improved interferon response was mediated by the upregulation of IRF-7. The authors are now screening for molecules that mimic the effect of the genetic knockout.	Patent applications filed; available for licensing through McGill University	Colina, R. <i>et al. Nature</i> ; published online Feb. 11, 2008; doi:10.1038/nature06730 Contact: Nahum Sonenberg, McGill Cancer Center, McGill University, Montreal, Quebec, Canada e-mail: nahum.sonenberg@mcgill.ca Contact: Mauro Costa-Mattioli, same affiliation as above e-mail: mauro.costa-mattioli@mail.mcgill.ca