This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Autoimmune disease				
Inflammatory bowel disease (IBD)	X-box binding protein 1 (XBP1); SNP rs35873774; endoplasmic reticulum to nucleus signaling 1 (ERN1; IRE1)	Studies in mice suggest that antagonizing XBP1 could be useful for treating IBD. In mice, *Xbp1* knockout in intestinal epithelial cells led to spontaneous enteritis and susceptibility to colitis. *Xbp1* deficiency also impaired Paneth cell function and induced endoplasmic reticulum stress, which led to an increased proinflammatory response of the epithelium to the IBD inducers flagelin and tumor necrosis factor-α (TNF-α). A genome-wide association study in patients with Crohn's disease or ulcerative colitis (UC) identified three SNPs in *XBP1* that were significantly associated with IBD; the strongest variant was the rs35873774D SNP (p=1.6×10^{-5}). Next steps include developing antagonists of IRE1 to treat IBD. In the presence of hypofunctioning XBP1, increased IRE1 activity has been linked to inflammation.	Patent application filed for use of XBP1 in IBD; unlicensed	Kaser, A. *et al. Cell*; published online Sept. 4, 2008; doi:10.1016/j.cell.2008.07.021 **Contact:** Richard S. Blumberg, Brigham and Women's Hospital, Harvard Medical School, Boston, Mass. e-mail: rblumberg@partners.org **Contact:** Laurie H. Glimcher, same affiliation as above e-mail: lglimche@hsph.harvard.edu