

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Various				
Autoimmune disease; inflammation	NF- κ B; tumor necrosis factor- α (TNF- α); ubiquitin-conjugating enzyme E2D 1 (UBE2D1; UbcH5)	<p>Mouse and <i>in vitro</i> studies have identified a sesquiterpene lactone derived from the <i>Inula japonica</i> Thunb herb that could help treat autoimmune and inflammatory diseases.</p> <p>In a human cell line, an <i>I. japonica</i>-derived sesquiterpene lactone, dubbed IJ-5, inhibited activation of the proinflammatory TNF-α and NF-κB pathways. <i>In vitro</i>, IJ-5 was shown to work by binding the catalytic cysteine residue of UbcH5 to inactivate the enzyme. In mouse models of hepatitis and collagen-induced arthritis, IJ-5 decreased disease severity compared with vehicle. Next steps could include studies to generate optimized derivatives of IJ-5.</p>	Patent and licensing status unavailable	<p>Liu, L. <i>et al. Chem. Biol.</i>; published online Sept. 3, 2014; doi:10.1016/j.chembiol.2014.07.021 Contact: Weidong Zhang, Second Military Medical University, Shanghai, China e-mail: wdzhangy@hotmail.com Contact: Zhenlin Hu, same affiliation as above e-mail: zhenlinhu@hotmail.com</p>
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