

### This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
<b>Autoimmune disease</b>				
Rheumatoid arthritis (RA)	Proteasome prosome macropain subunit- $\beta$ type 8 (PSMB8; LMP7)	Cell culture and mouse studies suggest that inhibiting LMP7 could be useful for treating RA. LMP7 is a protease that is a part of the immunoproteasome, a variant of the proteasome associated with inflammation and autoimmunity. In human peripheral blood mononuclear cells, Proteolix Inc.'s small molecule LMP7 inhibitor PR-957 reduced immunoproteasome activity but not regular proteasome activity and decreased production of inflammatory cytokines compared with mock treatment. In a mouse model of RA, PR-957 suppressed inflammatory cytokine production and histological signs of inflammation compared with mock-treated controls. Next steps include Phase I trials of PR-957 for autoimmune indications.	Patented; unavailable for licensing	Muchamuel, T. <i>et al. Nat. Med.</i> ; published online June 14, 2009; doi:10.1038/nm.1978 <b>Contact:</b> Marcus Groettrup, University of Constance, Konstanz, Germany e-mail: <a href="mailto:Marcus.Groettrup@uni-konstanz.de">Marcus.Groettrup@uni-konstanz.de</a> <b>Contact:</b> Christopher J. Kirk, Proteolix Inc., South San Francisco, Calif. e-mail: <a href="mailto:ckirk@proteolix.com">ckirk@proteolix.com</a>
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