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This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Neurology				
Amyotrophic lateral sclerosis (ALS)	IL-1β; IL-1 receptor; superoxide dismutase 1 (SOD1)	A study in mice suggests that inhibiting IL-1 receptor signaling could help treat ALS. In a mouse model of mutant SOD1-induced ALS, IL-1β deficiency resulted in increased survival compared with normal IL-1β expression ($p<0.001$). In the same model, IL-1 receptor antagonist Kineret also increased survival compared with placebo ($p<0.005$). Next steps could include identifying an IL-1 receptor antagonist that penetrates the blood brain barrier (BBB). Kineret anakinra, an IL-1 receptor antagonist from Amgen Inc., NPS Pharmaceuticals Inc. and Swedish Orphan Biovitrum AB, is marketed to treat rheumatoid arthritis (RA). Ilaris canakinumab, a human anti-IL-1β antibody from Bristol-Myers Squibb Co. and Novartis AG, is marketed to treat CIAS1-associated periodic syndrome (CAPS). Arcalyst rilonacept, a recombinant protein with the heterodimeric IL-1 receptor linked to the Fc portion of human IgG from Regeneron Pharmaceuticals Inc., is marketed for the same indication. At least seven other companies have compounds that inhibit IL-1 receptor signaling in Phase III or earlier to treat autoimmune, inflammatory or neurological conditions.	Patent and licensing status unavailable	Meissner, F. *et al. Proc. Natl. Acad. Sci. USA*; published online June 28, 2010; doi:10.1073/pnas.1002396107 **Contact:** Arturo Zychlinsky, Max Planck Institute for Infection Biology, Berlin, Germany e-mail: zychlinsky@mpiib-berlin.mpg.de

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