U.S. National Library of Medicine
National Center for Biotechnology Information

NLM Citation: LiverTox: Clinical and Research Information on Drug-Induced Liver Injury [Internet]. Bethesda (MD): National Institute of Diabetes and Digestive and Kidney Diseases; 2012-. Interleukin Receptor Antagonists. [Updated 2015 Jun 18].
Bookshelf URL: https://www.ncbi.nlm.nih.gov/books/

Interleukin Receptor Antagonists

Updated: June 18, 2015.

OVERVIEW

Interleukin-1 (IL-1) and interleukin-6 (IL-6) are potent pro-inflammatory cytokines that are synthesized by many cells throughout the body and play major roles in inflammation and cell damage associated with excessive inflammation. IL-1 is increased in inflammatory conditions and appears to play a role in autoinflammatory and autoimmune diseases. Blockage of IL-1 production or inibition of its activity decreases inflammatory responses and may be beneficial in many diseases associated with a heightened immune response such as rheumatoid arthritis, ankylosing spondylitis, gouty arthritis, osteoarthritis, juvenile idiopathic arthritis, Still disease, Familial Mediterranean fever, periodic fever and periodic syndromes. Blockage of IL-6 activity has similar clinical activity, although it has been assessed largely in inflammatory arthritidies. At least three IL-1 receptor antagonists have been approved for use in autoinflammatory conditions in the United States. In addition, a monoclonal antibody to the IL-6 receptor has been developed and shown to have beneficial effects in rheumatoid arthritis.

The interleukin receptor antagonists have been associated with rare instances of clinically apparent liver injury.

The interleukin receptor antagonists discussed in LiverTox include the following:

- Anakinira
- Canakinumab
- Rilonacept
- Sarilumab
- Tocilizumab