

JAX publishes online tool for exploring autoimmune disease gene networks

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The gene networks illustrated in "Pathways to Discovery: Autoimmune Diseases" promise to facilitate the discovery of targeted therapies for many autoimmune diseases. Credit: The Jackson Laboratory

Currently, 5-8% of the U.S. population is afflicted with an autoimmune disease. Many of these are chronic and require life-long care. Moreover, different autoimmune diseases aggregate within a single family, suggesting they are caused by disruptions in common biological pathways.

To help researchers investigate these common pathways, The Jackson Laboratory has published "Pathways to Discovery: Autoimmune Diseases" (www.jax.org/jaxmice/pathways/autoimmune), a unique, interactive, and publicly accessible online resource that illustrates the

genetic networks involved in five common autoimmune diseases: [inflammatory bowel disease](#), rheumatoid arthritis, asthma, multiple sclerosis, and [psoriasis](#).

The backbone of the new tool is five "spider-web" diagrams that depict the gene/proteins involved in two or more of the five diseases. The symbols in the diagrams represent cytokines, transmembrane receptors, enzymes, nuclear receptors, and transcriptional regulators. The resource also provides gene- and disease-specific references, links to JAX® Mice strains (including inducible mouse models) that can be used to research the five diseases, and descriptions of JAX® In Vivo Services for compound efficacy testing.

"Pathways to Discovery: [Autoimmune Diseases](#)" promises to accelerate the discovery of autoimmune disease mechanisms and therapeutic interventions for both new and existing targets.

Source: Jackson Laboratory

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