

Research in the news: Illuminating the immune system

Yale UniversityYale University

Two illuminating studies of the immune system have been published by leading researchers in the Department of Immunobiology of Yale School of Medicine.

A team led by Ruslan Medzhitov, professor of immunobiology and a Howard Hughes Medical Institute investigator, found that the body's ability to tolerate infectious disease pathogens is as important as the immune system's ability to fight them.

The team's research, published in Science Express, explored the balance between tolerance and immune response in mice infected with both the influenza virus and *legionella pneumophila* bacteria, which cause pneumonia. When the mice were given a dose of either the virus or bacteria alone, their bodies fought the infection, and they survived. But when they were given the same doses of both virus and bacteria within three days, and when they received the virus first, all of the mice died. A longer time between the infective disease allowed the mice to survive the subsequent bacterial infection. [Read more about this study.](#) [1]

Another team led by Richard Flavell, chair and professor of immunobiology, and published in the journal Nature Medicine, discovered markers for the cellular mechanism that can shut down the immune response, leading to diseases that based on immunodeficiency. This finding will help further the understanding of the role of immunosuppression in human disease. [Read more about this study](#) [2].

(Image via [Shutterstock](#) [3])

Source URL (retrieved on 03/06/2015 - 5:13am):

<http://www.ecnmag.com/news/2013/04/research-news-illuminating-immune-system>

Links:

[1] <http://www.hhmi.org/news/medzhitov20130425.html>

[2] <http://www.nature.com/nm/journal/vaop/ncurrent/full/nm.3179.html>

[3] http://www.shutterstock.com/pic-3447167/stock-photo-viruses-vs-immune-system.html?src=http://news.yale.edu/2013/04/30/csl_recent_image-5