Why we don't become immune to colds

March 8 2012

A team of researchers at the MedUni Vienna has discovered why we never become immune to colds, and why we are able to keep catching them: the MedUni Vienna study, published in *The FASEB Journal* in the USA by Katarzyna Niespodziana from the Institute of Pathophysiology and Allergy Research, shows that the human immune response to the rhinovirus is misdirected.

Scientists have discovered that the immune response to cold viruses targets the wrong part of the virus: the immune response attacks the inside of the virus cell and not the envelope, which is what the virus uses to become established in the patient's mucosal tissue. "Anyone who has a cold develops antibodies against the wrong part of the virus, so their immune response fails to protect them. It 'misfires'," explains Rudolf Valenta, head of the research from the University Department of Pathophysiology and Allergy Research at the MedUni Vienna. This could be the reason why humans cannot become immune to colds in the

same way as they do with other infectious diseases, such as measles. When someone develops another cold, the antibodies once again attack the wrong part of the virus.

This finding is expected now to contribute to the development of antibody tests that previously were not available for colds, and an effective vaccine against colds, which can trigger asthma attacks. Research in this field is currently taking place as part of the EU "Predicta" project (www.predicta.eu), which the researchers in Vienna are also involved with. Says Valenta: "Our role is not to fight colds per se. Much rather, we want to prevent patients with colds from becoming patients with exacerbated asthma."

More information: The Journal of the Federation of American Societies for Experimental Biology (The FASEB Journal), "Misdirected antibody responses against an N-terminal epitope on human rhinovirus VP1 as explanation for recurrent RV infections." K. Niespodziana, et al. *FASEB J*. 2011 Nov 25.

Provided by Medical University of Vienna

Citation: Why we don't become immune to colds (2012, March 8) retrieved 18 April 2024 from https://medicalxpress.com/news/2012-03-dont-immune-colds.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.