

PRESS RELEASE FROM
Journal of Investigative Dermatology
(<http://www.nature.com/jid/>)

This press release is copyrighted to the *Journal of Investigative Dermatology*. Its use is granted only for journalists and news media receiving it directly from the Nature Publishing Group.

EMBARGO:

1700 London Time (GMT) / 1200 US Eastern Time
0200 Japanese Time / 0400 Australian Eastern Time

Wire services' stories must always carry the embargo time at the head of each item, and may not be sent out more than 24 hours before that time.

Solely for the purpose of soliciting informed comment on this paper, you may show it to independent specialists - but you must ensure in advance that they understand and accept the embargo conditions.

A PDF of the paper mentioned on this release can be found in the Academic journals section of <http://press.nature.com>. Press contacts for the journals are listed at the end of this release.

Warning: This document, and the Academic Journal paper to which it refers, may contain information that is price sensitive (as legally defined, for example, in the UK Criminal Justice Act 1993 Part V) with respect to publicly quoted companies. Anyone dealing in securities using information contained in this document or in advanced copies of *Nature's* content may be guilty of insider trading under the US Securities Exchange Act of 1934.

PLEASE CITE THE *JOURNAL OF INVESTIGATIVE DERMATOLOGY* AND THE *JOURNAL OF INVESTIGATIVE DERMATOLOGY* WEBSITE AS THE SOURCE OF THE FOLLOWING ITEM. IF PUBLISHING ONLINE, PLEASE CARRY A HYPERLINK TO <http://www.nature.com/jid/>

[Household allergens make skin vulnerable to eczema](#)

Dust mite and cockroach allergens aggravate the symptoms of eczema and similar diseases by disrupting skin barrier function, a study published online this week in the *Journal of Investigative Dermatology* reports. The work provides a crucial step in understanding how the skin's defenses are weakened by allergens it encounters daily.

Over fifteen million Americans suffer from eczema, a chronic skin condition characterized by dry patches of extremely itchy skin. The most common form, atopic dermatitis affects between 10 and 20 percent of the world's population at some point during childhood. This study offers new insights into how common environmental triggers could contribute to this condition.

Using human volunteers, Seung Hun Lee and colleagues show that topically applied mite and cockroach allergens slowed skin barrier permeability recovery independent of an allergic response. The biological activity of mite and cockroach allergens disrupts skin permeability by activating PAR-2, a key receptor involved in maintaining skin barrier balance. Loss of skin barrier function causes increased inflammation and sensitivity to microbes and allergens. By delaying skin barrier restoration, mite and cockroach allergens could make the skin more susceptible to additional allergens and consequently trigger relapsing eczema lesions.

Author contact:

Seung Hun Lee (Yongdong Severance Hospital, Yonsei University College of Medicine, Seoul, Korea)
Tel: +82-2-2019-3360; E-mail: ydshderm@yumc.yonsei.ac.kr

Editorial contact:

Elizabeth Nelson Blalock (*Journal of Investigative Dermatology*, Chapel Hill, NC, USA)
Tel: +1 919-843-3094; E-mail: Blalock@sidnet.org

PRESS CONTACTS

For media inquiries relating to embargo policy for the Journal of Investigative Dermatology:

Katherine Anderson (*Nature* London)
Tel: +44 20 7843 4502; E-mail: k.anderson@nature.com

About Nature Publishing Group

Nature Publishing Group (NPG) is a division of Macmillan Publishers Ltd, dedicated to serving the academic, professional scientific and medical communities. NPG's flagship title, *Nature*, was first published in 1869. Other publications include *Nature* research journals, *Nature Reviews*, *Nature Clinical Practice* and a range of prestigious academic journals including society-owned publications. NPG also provides news content through *Nature News* and scientific career information through *Naturejobs*.

NPG is a global company with headquarters in London and offices in New York, San Francisco, Washington DC, Boston, Tokyo, Paris, Munich, Hong Kong, Melbourne, Delhi, Mexico City and Basingstoke. For more information, please go to www.nature.com