

Mechanisms of the Development of ALLergy

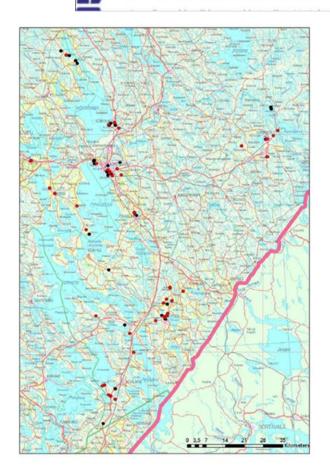


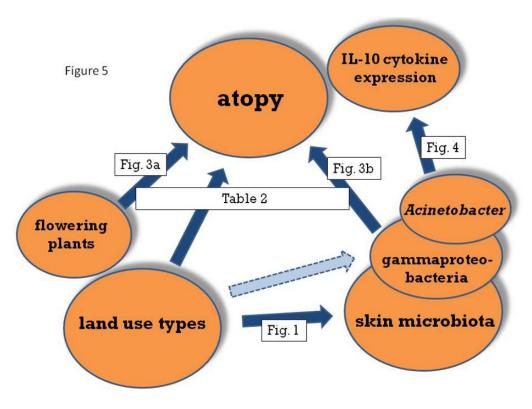


## Environmental biodiversity, human microbiota, and allergy are interrelated

Ilkka Hanski<sup>a,1</sup>, Leena von Hertzen<sup>b</sup>, Nanna Fyhrquist<sup>c</sup>, Kaisa Koskinen<sup>d</sup>, Kaisa Torppa<sup>a</sup>, Tiina Laatikainen<sup>e</sup>, Piia Karisola<sup>c</sup>, Petri Auvinen<sup>d</sup>, Lars Paulin<sup>d</sup>, Mika J. Mäkelä<sup>b</sup>, Erkki Vartiainen<sup>e</sup>, Timo U. Kosunen<sup>f</sup>, Harri Alenius<sup>c</sup>, and Tari Haahtela<sup>b,1</sup>

Department of Biosciences, University of Helsinki, FI-00014 Helsinki, Finland; bSkin and Allergy Hospital, Helsinki University Central Hospital, FI-00029 Helsinki, Finland; Finnand; Finnand; Finnand; Finland; Finland; Finland; Mational Institute of Occupational Health, FI-00250 Helsinki, Finland; Mational Institute for Health and Welfare, FI-00271 Helsinki, Finland; and Department of Bacteriology and Immunology, Haartman Institute, University of Helsinki, FI-00014 Helsinki, Finland











## **Biodiversity & Chronic non-communicable diseases**

Haahtela et al. World Allergy Organization Journal 2013, **6**:3 http://www.waojournal.org/content/6/1/3



REVIEW Open Access

## The biodiversity hypothesis and allergic disease: world allergy organization position statement

Tari Haahtela<sup>1\*</sup>, Stephen Holgate<sup>2</sup>, Ruby Pawankar<sup>3</sup>, Cezmi A Akdis<sup>4</sup>, Suwat Benjaponpitak<sup>5</sup>, Luis Caraballo<sup>6</sup>, Jeffrey Demain<sup>7</sup>, Jay Portnoy<sup>8</sup>, Leena von Hertzen<sup>1</sup>, and WAO Special Committee on Climate Change and Biodiversity



