

Beyond the Human Eye: Is Safe to Breath at Home?

Rafael Martínez-Girón^{1*} and Cristina Martínez-Torre²

¹INCLINICA Foundation for Clinical, Pneumological and Carcinogenic Research, Calvo Sotelo, Oviedo, Spain

²Faculty of Pharmacy, University of Salamanca, Campus Miguel de Unamuno, Salamanca, Spain

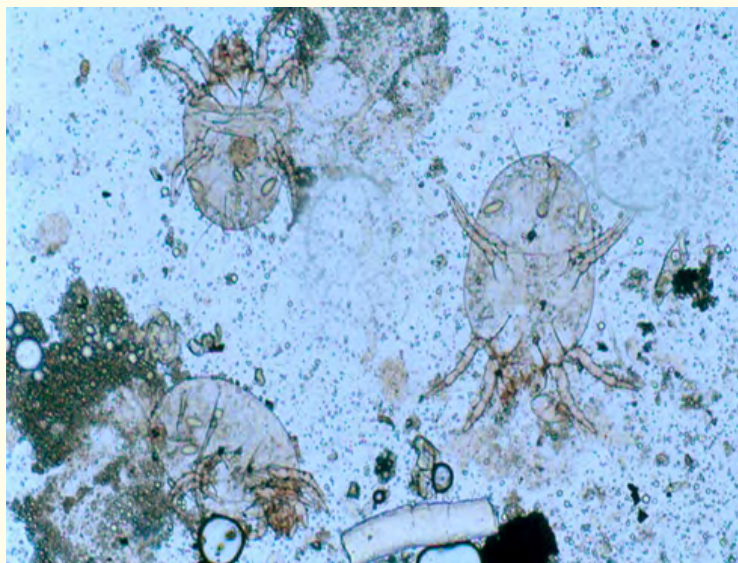
***Corresponding Author:** Rafael Martínez-Girón, INCLINICA Foundation for Clinical, Pneumological and Carcinogenic Research, Calvo Sotelo, Oviedo, Spain.

Received: April 23, 2018; **Published:** June 01, 2018

Keywords: Allergens; Dust Mites; House Dust Mites; Wing Scales

The allergens found in the interior of our homes are associated with the development of asthma, with domestic dust being one of the main sources these are found in [1]. Observation through a microscope is eye-catching, given the surprising amount of bodies and structures that exist in domestic dust, which can be inhaled and enter our airways.

Two types of structures can be observed through the microscope (dust mites and wing scales) which appear by two different means: domestic dust (Figure 1A and 1B) and stained sputum smears (Figure 1C and 1D).



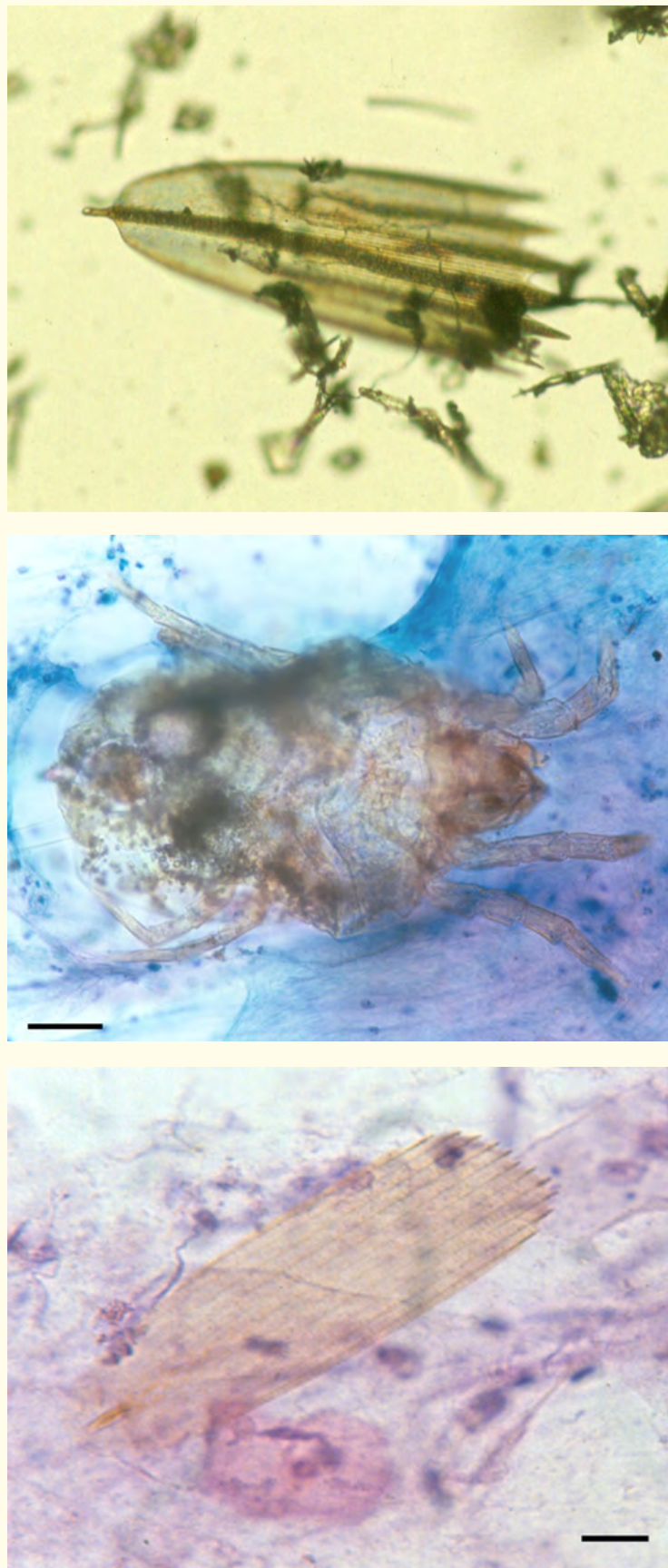


Figure 1: A: House dust mites (female specimens of *Dermatophagoides pteronyssinus*) (x 100). B: Wing scale of *Lepidoptera* (x 100). C: House dust mite (*Dermatophagoides pteronyssinus*) in sputum smear (scale bar = 6 µm. Papanicolaou stain, x 400). D: Wing scale of *Lepidoptera* in sputum smear (scale bar = 6 µm. Papanicolaou stain, x 400).

Dust mites are very small arthropods, practically invisible to the human eye (0.2 - 0.5 μm in length) and closely linked to allergy illnesses. Their bodies have four pairs of legs and are covered by a ribbed cuticle.

The wing scales of Lepidoptera, amongst which butterflies and moths are found, characterise this order of insects. Although a great diversity of forms exists, they have a similar structure. The body is formed of two layers (superior and inferior), the free edge appears serrated, whilst the on the opposite side the "pedicel" is found, through which the scales are attached to the wings. The scales assist in improving flight efficiency.

In this light, is it safe to breathe at home?

Bibliography

1. Pomés A., *et al.* "Indoor Allergens and Allergic Respiratory Disease". *Current Allergy and Asthma Reports* 16 (2016): 43.

Volume 6 Issue 6 June 2018

©All rights reserved by Rafael Martínez-Girón and Cristina Martínez-Torre.