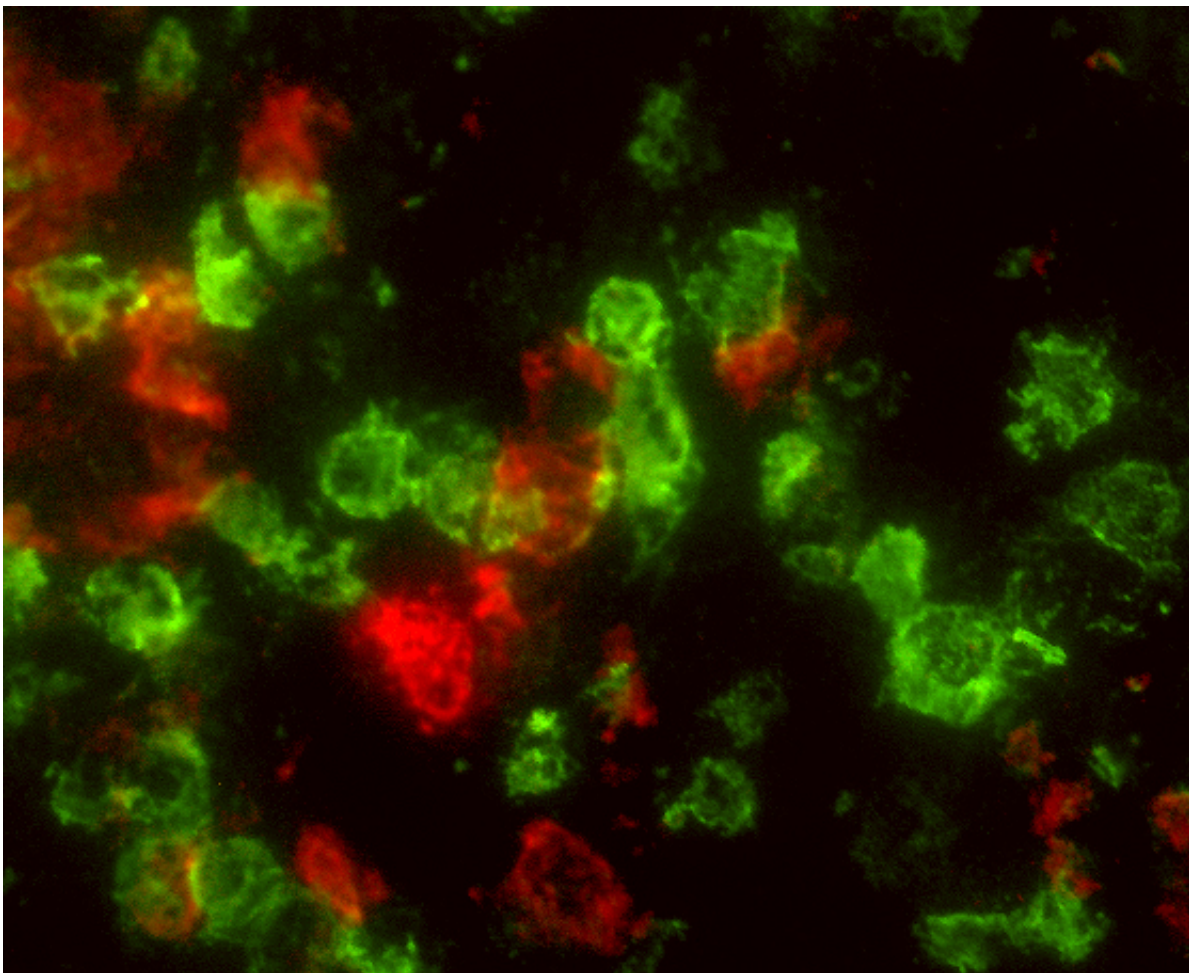


Treatment against seasonal hay fever should be initiated prior to season, according to study

May 5 2015



Antigen-presenting cells (red) activating T-cells (green) in biopsies from the nasal mucosa

Recently published findings from the University of Oslo show that allergen-specific T cells are resident in the mucosa outside the pollen season and react strongly to pollen extract, suggesting that these T cells are long-lived resident memory cells.

Researchers at the Centre for Immune Regulation, University of Oslo, have recently published findings showing that seasonal hay fever can be induced outside of the [pollen season](#). This may have an important impact on our approach to the treatment of seasonal hay fever.

The results indicate that anti-inflammatory therapy in seasonal hay fever targeted at allergen-specific T cells should be initiated prior to season.

By challenging nasal biopsies ex vivo during the winter time, the team show that allergen-specific T cells are resident in the mucosa outside the pollen season and react strongly to pollen extract. This suggests that these T cells are long-lived resident [memory cells](#).

Local T cells orchestrate the inflammatory reaction in seasonal hay fever by producing cytokines that activate [immune cells](#) and [stromal cells](#). However, it has long been unknown whether allergen-specific T cells reside in the mucosa outside the season or whether they are recruited from the circulation when the nasal mucosa is exposed to allergen (e.g. pollen). The results from this study provide evidence to the former, thus deepening our understanding of the mechanisms behind hay fever and how to approach it therapeutically.

More information: "IL-5 production by resident mucosal allergen-specific T cells in an explant model of allergic rhinitis." *Clin Exp Allergy*. 2015 Mar 28. [DOI: 10.1111/cea.12543](https://doi.org/10.1111/cea.12543)

Provided by University of Oslo

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