

New treatments for hay fever and house dust mite allergy successfully tested

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Researchers have successfully tested treatments for people with allergies to grasses and to dust mites.

There are two treatments, one for grass [allergy](#), which is commonly known as hay fever, and the other for [dust mite](#) allergy. They are expected to be helpful for the millions of people who, as a reaction to grass pollen or the tiny bugs that live in house dust, have sneezing, itching eyes and a running nose that often significantly impacts their productivity at school or work.

The two studies were conducted by Adiga Life Sciences, a joint venture between McMaster University and Circassia, a U.K. based [biotechnology company](#), and was supported by St. Joseph's Healthcare Hamilton.

It is estimated that together, these allergens are responsible for more than 50% of allergic respiratory disease. Between 15 and 25 per cent of the population in North America and Europe is sensitive to pollen from different grass species. One in four people is sensitized to house dust mites, more than any other common allergen, which includes millions of people in these regions.

The treatments are from a new class of therapy, known as 'synthetic peptide immuno-regulatory epitopes', or SPIREs.

The 280 patients in the phase two clinical trial for the grass allergy [treatment](#) recorded their [allergy symptoms](#) while exposed to grass pollen

in a controlled environment, both before treatment and at the end of the [hay fever](#) season. Study participants received one of three treatment regimens over three months, completed prior to the beginning of the pollen season. Those who had the optimal short course of therapy had significantly improved symptoms at the end of the season, compared to those who had a placebo. This treatment, called Grass-SPIRE, was well tolerated.

During the clinical trial for the dust mite treatment, 172 patients who received four doses of the treatment over 12 weeks had significantly improved allergy symptoms a year after the start of treatment, compared to patients who received a placebo. The treatment, called HDM-SPIRE, was well tolerated.

"This result is an important validation of the approach we are taking to treat allergic diseases," said Mark Larché, who led the design of the treatments. "Positive results, first with a cat allergy therapy and now with [house dust](#) mite and grass allergy treatments, suggest that this approach may be used for many common allergies."

Larché is a professor of medicine of the Michael G. DeGroote School of Medicine at McMaster and member of the Firestone Institute for Respiratory Health at St. Joseph's Healthcare Hamilton.

Hay fever is a seasonal response to many different grass pollens which are heaviest in the spring and fall.

Dust mites are close relatives of spiders and ticks and are too small to see without a microscope. They eat skin cells shed by people, and they thrive in warm, humid environments. Upholstered furniture, bedding and carpeting provide an ideal environment for dust mites.

Provided by McMaster University

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