

## Severe allergic asthma linked to gene variation

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(Medical Xpress)—A new study from the University of Alberta shows that your genes could be the reason your allergic asthma or hay fever is so severe.

Lisa Cameron, [GlaxoSmithKline](#)-CIHR Rx&D Chair in Airway Inflammation in the Faculty of Medicine & Dentistry, is looking at a specific protein called CRTh2. In her most recent study, published in the journal *Allergy*, her research team shows that levels of the protein are higher in the blood of people with allergies than of those with no allergies.

In the other part of her study, Cameron looked at patients' genomes and observed that patients who had a gene variation produced more of the CRTh2 protein.

"The change might be influencing the expression of the gene," she said.

Patients with severe [asthma](#) often have poor control of the disease, despite taking their medications regularly. New drugs that target CRTh2 are now in clinical trials; their approval could lead to better treatment plans for people with very bad [allergic asthma](#).

"It may be important that physicians know which individuals have this gene variation in terms of prescribing and dosing of these new drugs, since carriers would likely be the most responsive," said Cameron.

Cameron's study also showed that the protein is associated with a higher percentage of inflammatory cells associated with asthma.

"Coming to the emergency room with an asthma exacerbation is traumatic for the patient—and one of the most expensive ways to deal with asthma," Cameron says. "Identifying carriers of this gene variant may help to determine those at highest risk for asthma exacerbation."

Cameron will continue her research in this area. Further investigation is needed to determine whether it could be a marker for identifying asthma phenotypes and future treatment plans.

**More information:** [onlinelibrary.wiley.com/doi/10...  
1/all.12003/abstract](https://onlinelibrary.wiley.com/doi/10.1111/all.12003/abstract)

Provided by University of Alberta

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