

Theranostic Biomarker for Aspirin-Exacerbated Respiratory Disease

Published date: July 2, 2019

Technology description

Market Summary

Aspirin-exacerbated respiratory disease (AERD), also known as aspirin-induced asthma, Samter's triad, or Samter's syndrome, is a medical condition consisting of three key features: asthma, sinusitis with nasal polyps, and respiratory symptoms exacerbated by aspirin. In addition to aspirin, the syndrome's symptoms can be exacerbated by a large variety of other over the counter, nonsteroidal anti-inflammatory drugs (NSAIDs). Some Samter's Triad patients may not have asthma, though the reaction to aspirin can trigger asthma-like symptoms. Current AERD treatments are focused on disease management and treating the symptoms. Currently AERD/Samter's is identified using a provocative challenge in which escalating doses of aspirin are given over time to a patient under medical supervision and the patient's response is monitored until a reaction is detected. The current diagnostic method is both time consuming and uncomfortable for patients.

Technical Summary

Emory researchers have identified a biomarker for AERD, developed a diagnostic test for non-invasive detection of AERD, as well as developed an AERD treatment using a non-psychogenic cannabinoid. The non-invasive diagnostic method uses a combination of gene expression-based PCR of patient nasal airway cells coupled with leukotriene excretion in patient blood or urine. While endocannabinoid activity is associated with decreased inflammation, application to mucosal surfaces of the upper airway have not been described. The researchers are developing an aerosolized topical application of a CB2 agonist to treat AERD. This composition may have applications in other diseases of the upper respiratory tract.

Publication: [Corrado, A. et al. \(2018\).Int. Forum Allergy Rhinol., 8\(10\), 1184-89.](#)

Application area

Biomarkers for a clinical diagnostic tool and non-psychogenic therapy to detect and treat aspirin-exacerbated respiratory disease.

Advantages

Does not rely on aspirin challenge, increasing safety and availability for suspected patients.

May be used in patients who have respiratory compromise or are not stable.
Minimally-invasive approach.

Institution

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