Identification of rottlerin, a small molecule therapeutic for asthma with minimal side effects

Asthma is a condition that affects millions of people worldwide, yet has no cure and current treatment options only target symptoms. This technology identifies an ion channel agonist called rottlerin that combats airway inflammation to treat asthma with minimal side effects. Rottlerin is an anti-inflammatory airway smooth muscle relaxant that works on large voltage- and calcium-activated potassium channels.

**Asthma therapeutic with minimal side effects will allow for continued use to alleviate symptoms for extended amounts of time.**

Current treatments for symptoms and to prevent asthma attacks include using corticosteroids, an anti-inflammatory, multiple times a day. Long-term usage of corticosteroids brings about side effects, so dosing is usually decreased after a few months. Rottlerin alleviates symptoms of asthma without causing observable toxicities in mouse models, which suggests that the drug can be used to treat and prevent asthma attacks over a long period of time.

The therapeutic efficacy of rottlerin was tested in ovalbumin and house dust mite-induced Aeroallergen asthma mouse models.

**Lead Inventor:**

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**Applications:**

- Therapeutic use against asthma.
- Use in other diseases where BK channel inhibition might be useful, such as diabetes, arterial hypertension, epilepsy and cancer.
Advantages:

- Improves airway relaxation in response to ovalbumin and house dust-mite-induced asthma.
- Improves ability to treat chronic asthma symptoms by having minimal side-effects.

Patent information:

Patent Pending

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Related Publications:


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