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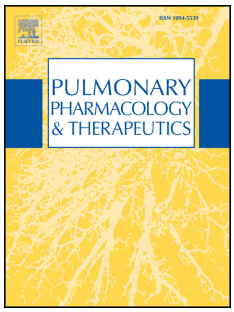

5-Aminosalicylic acid attenuates allergen-induced airway inflammation and oxidative stress in asthma

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ABSTRACT:

Pro-inflammatory cytokines regulate the magnitude of allergic reactions during asthma. Tumor necrosis factor - alpha (TNF-α), interleukin-6 (IL-6) and interleukin-13 (IL-13) play a crucial role in aggravating the inflammatory conditions during allergic asthma. In addition, oxidative stress contributes to the pathogenesis of asthma by altering the physiological condition resulting in the development of *status asthmaticus*. Anti-inflammatory corticosteroids are being widely used for treating allergic asthma. In the present study 5-aminosalicylic acid (5-ASA), a salicylic acid derivative, was evaluated, *in vivo* for its potential to suppress TNF-α, IL-6 and IL-13 using ovalbumin (OVA) induced allergic asthma in Balb/C mice. Oral administration of 65, 130 and 195 mg/kg 5-ASA significantly reduced the OVA induced total and differential leucocyte count, TNF-α, IL-6, IL-13, nitrite, nitrate, MDA, MPO and TPL levels in the lung lavage samples. Collectively, these findings suggest that 5-ASA is a potent immunomodulator and suppresses key Th_2 cytokines production and oxidative stress in OVA-induced asthma.