Eicosanoids, including 5-lipoxygenation products leukotrienes (LTs) and cyclooxygenases metabolites prostaglandins (PGs) are highly bio-active oxylipins involved in the asthmatic inflammation.

Rhinovirus infection induces PGE₂ biosynthesis in respiratory epithelium, especially exposed to TH2 cytokines.

Rhinoviruses are the most common respiratory viruses detected during asthma exacerbation.

In comparison with non-asthmatics, respiratory epithelium in asthma produces more PGD₂ and LTs following rhinovirus infection.

Respiratory epithelium not only organizes influx of inflammatory cells by release of chemokines, but also responses with altered biosynthesis of prostaglandins and leukotrienes.