

## Is the gut Microbiome an Important Trigger of Asthma Development?

Seyyede Masoume Athari<sup>1\*</sup> and Seyyed Shamsadin Athari<sup>2</sup>

<sup>1</sup>Department of Biology, Faculty of Basic Sciences, Maragheh University, Maragheh, Iran

<sup>2</sup>Department of Immunology, Faculty of Medicine, Zanjan University of Medical Sciences, Zanjan, Iran

**\*Corresponding Author:** Seyyed Shamsadin Athari, Department of Immunology, Faculty of Medicine, Zanjan University of Medical Sciences, Zanjan, Iran.

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Asthma is a complicated disease with multiple phenotypes. Th2 cytokines is main orchestrate of asthma pathophysiology. Genetic and environmental factors, psychological and neurological factors, public health problems, allergic reactions, inflammation, respiratory infections, smoking, stress, obesity, exercise, drugs, diet, gastroesophagus reflux and etc. have notable effects in immune system modulation (which would be resulted dysregulation of immune response) and lead to asthma in airway [1, 2].

The manuscript by Stokholm and colleagues, 2018 clearly presented the strong effects of the gut microbiome maturation (in the first year of life of newborn) in the development of children asthma (especially in children born to asthmatic mothers) and gut microbiome has an important role in asthma incidence [3].

Current study highlighted gut microbiome as important risk factors for asthma with other effective evidences that should have attention. The gut microbiome as natural flore has benefit immunomodulatory effect, but focusing in some bacteria for judgement about asthma is wrong. The life style and area of the children in have effect on gut microbiome and it cannot be heightened to all population. Cytokines imbalance in pregnancy is important trigger of maternal asthma and maternal asthma has effect on embryo. Also, sexual hormones of mothers can have effect on baby in pregnancy period [4]. Children asthma maybe influenced from maternal immune system condition, especially cytokines profile, not from gut

microbes and it is necessary to say that gut microbes can be effected by immune system changes. Asthma is one of the important disease in immunology and allergy field for any studied, immunological concepts should not ignore.

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