

## 2<sup>nd</sup> International Conference and Exhibition on **Probiotics & Functional Foods**

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## The immunomodulatory effect of probiotics beyond atopy: An update

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In the past decades the theory of "allergens avoidance" was considered the standard treatment for preventing the onset of allergic diseases. Recently, the concept of "immune tolerance" has replaced this old theory, and induction of tolerance by exposure is actually considered the appropriate method for prevention of atopic diseases and other immunomediated pathologies. On the other hand, it is obvious that for public health reasons it is not desirable to abandon current medical and hygienic practices; therefore, safe alternatives, such as probiotics, have been suggested for providing necessary microbial stimulation.

The recent literature is focusing its interest towards the immunologic properties of relatively harmless organisms, including lactobacilli and bifidobacteria, helminths and saprophytic mycobacteria that may skew immune responses toward immunoregulation by inducing Treg cells, rather than eliciting a proinflammatory immune response. For this reason, recent researches have been addressed on the use of probiotics to promote immunoregulation in atopic diseases, such as atopic/eczema dermatitis syndrome and food allergy, as far as in inflammatory-based diseases such inflammatory bowel diseases, rheumatoid arthritis and bronchial asthma.

The purpose of our review is to describe the immunomodulatory and anti-inflammatory properties of probiotics, and reporting literature data on their effect when used for the treatment of immuno-mediated diseases.

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