

Special Issue on
Breast Milk Derived Nutrients and the Occurrence of Allergic Diseases in Infants

CALL FOR PAPERS

The incidence of allergic diseases in childhood appears to have increased significantly over the last decades, including food allergy, atopic dermatitis, asthma, and rhinitis. Since environmental factors, including diet, have been thought to play a significant role in the development of these diseases, there is great interest in identifying prevention strategies related to early nutritional interventions.

Breast milk is the first feeding source for an infant, providing nutrients, growth factors, and immunological components, which are crucial for the correct immune development. There is emerging evidence of a relationship between breastfeeding, milk composition, and a lower risk of allergies. Human milk composition is highly variable among mothers, which can affect the developing infant immune system. Human milk also affects the infant gut microbiome, which is associated with allergic diseases.

Breast milk is a living tissue and various bioactive factors appear to be involved in the prevention of allergy, for example, polyunsaturated fatty acids, human milk oligosaccharides, probiotic, milk fat globule membrane, immune active factors (TGF- β 1, maternal antigen immune complexes, etc.). Alterations in these components can affect immunity and the development of flora. Specific oligosaccharides and lactic acid bacteria in breast milk are gradually being developed as food ingredients to prevent the development of allergic diseases. Other active ingredients of breast milk for the prevention of allergic diseases have yet to be explored and developed.

As mass spectrometry and gene sequencing technologies continue to advance, our understanding of the composition of breast milk continues to improve. This provides additional options to understand the research on the association of breast milk components with the development of allergic diseases in infants and to develop nutritional intervention strategies based on breast milk components. This Special Issue aims to contribute to filling the gap in the knowledge about breast milk-derived nutrients and bioactive compounds and prevention of allergic disease. We welcome original research and review articles.

Potential topics include but are not limited to the following:

- ▶ Investigation of the effect of breastfeeding versus formula feeding in susceptibility to allergic diseases in infants.
- ▶ Cohort and cross-sectional survey on the alteration of specific nutrients in breast milk on infant susceptibility to allergic diseases, focusing on milk lipids, human milk oligosaccharides, active protein peptides in human milk and human milk microbiota.
- ▶ Animal study or randomized controlled trial on the prevention or remission of allergic diseases in infants with breast milk-derived nutrients, such as human milk oligosaccharides, breast milk-derived probiotics, etc.
- ▶ Identification of components in breast milk with potential regulatory effects on immunomodulatory and flora development, and their altered patterns in different lactation periods.

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.wiley.com/submit?specialIssue=578717>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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