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The Role of IgE and IgG Antibodies in Allergic Reactions: Cellular Mechanisms and Biological Implications

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Message from the Guest Editors

The central role of IgE in allergic diseases has been extensively researched, placing IgE antibodies and their functions at the forefront of therapeutic efforts against allergies. IgE antibodies play a crucial role in initiating and perpetuating allergic inflammation by binding to Fc ϵ R1 receptors on effector cells. This interaction triggers effector cell activation, leading to the release of potent inflammatory mediators.

In recent years, it has become clear that IgG is an essential regulator of allergic responses. Both natural allergen-specific IgG and immunotherapy-induced IgG are capable of suppressing allergies either as blocking or inhibitory antibodies. Other research has shed light on the presence of endogenous anti-IgE IgG autoantibodies which can reduce IgE levels and suppress allergy. In addition, recent findings have highlighted the role of glycans in the induction of anti-IgE antibodies, revealing a complex dynamic between glycans, IgE, and IgG in allergic diseases.

This Special Issue aims to provide an overview of the latest progress in understanding the role of IgE and IgG in allergic diseases, covering both cellular mechanisms and biological implications.



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Special Issue



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