The Interaction between Neurological and Immune Systems in Food Allergy: Examining Enteric Neurons and Mucosal Mast Cells

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Abstract

The nervous system and the immune system individually play important roles in regulating the processes necessary to maintain physiological homeostasis, respond to acute stress and protect against external threats. These two regulating systems for maintaining the living body had often been assumed to function independently. Allergies develop as a result of an overreaction of the immune system to substances that are relatively harmless to the body, such as food, pollen and dust mites. Therefore, it has been generally supposed that the development and pathogenesis of allergies can be explained through an immunological interpretation. Recently, however, neuro-immune crosstalk has attracted increasing attention. Consequently, it is becoming clear that there is close morphological proximity and physiological and pathophysiological interactions between neurons and immune cells in various peripheral

Nervous system control:

Immune system in the intestine

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