

Lille, 23-25 octobre 2023

Focus on plant lipid transfer proteins (LTP) in clinical allergology: about a case report.

J	u	li	e	t	t	e	C	` <i>F</i>	١	3	C)	V	1	*

¹ Service d'Allergologie, Hôpital Saint Vince	ent de Paul, GHICL, Boulevard de Belfort, Lille, France					
Mots-Clés: food allergy, lipid transfer protein, molecular allergology, sensitization						
Doctorant/post-doctorant	Non					

Résumé: Plant LTPs are antimicrobial peptides defined by a conserved signature of eight cysteine residues and a compact structure with a flexible lipid-binding hydrophobic cavity. The antimicrobial activity of LTPs varies greatly among plant species [1–3]. Molecular allergology has revolutionized allergology over the last 15 years. For the most common food allergens, it is now possible to identify the protein(s) responsible for allergy. In case of IgE-sensitization to plant LTPs, some people develop food anaphylactic reactions. These allergies are the most common in southern Europe[4]. Through a case report, clinical aspects, diagnosis as well as treatments of LTP-mediated food allergy will be depicted[5]. Multisensitization to food and respiratory allergens as well as the absence of specific IgE dosage for each food allergen LTP limit the identification of these allergies.

Références:

- [1] Amador VC, Santos-Silva CAD, Vilela LMB, Oliveira-Lima M, De Santana Rêgo M, Roldan-Filho RS, et al. Lipid Transfer Proteins (LTPs)—Structure, Diversity and Roles beyond Antimicrobial Activity. Antibiotics 2021;10:1281.
- [2] Gao H, Ma K, Ji G, Pan L, Zhou Q. Lipid transfer proteins involved in plant–pathogen interactions and their molecular mechanisms. Molecular Plant Pathology 2022;23:1815–29.
- [3] Missaoui K, Gonzalez-Klein Z, Pazos-Castro D, Hernandez-Ramirez G, Garrido-Arandia M, Brini F, et al. Plant non-specific lipid transfer proteins: An overview. Plant Physiology and Biochemistry 2022;171:115–27.
- [4] Skypala IJ, Asero R, Barber D, Cecchi L, Diaz Perales A, Hoffmann-Sommergruber K, et al. Non-specific lipid-transfer proteins: Allergen structure and function, cross-reactivity, sensitization, and epidemiology. Clinical and Translational Allergy 2021;11.
- [5] Skypala IJ, Bartra J, Ebo DG, Antje Faber M, Fernández-Rivas M, Gomez F, et al. The diagnosis and management of allergic reactions in patients sensitized to non-specific lipid transfer proteins. Allergy 2021;76:2433–46.

^{*}Correspondance: juliette.anne.caron@gmail.com