NEW TREATMENT OF PEACH ALLERGY

TEC0120 / P0034

In southern Europe, peach allergy, mostly induced by lipid-transfer proteins (LTPs), has a high prevalence. We propose a simple, effective solution to treat this allergy, using an antigen whose composition is fully defined, controllable, independent of environmental factors and thus standardisable.

BACKGROUND

The prevalence of allergic reactions is on the increase in Western countries. Treating these illnesses is still greatly limited, basically acting palliative rather than on the immunopathological mechanism of the allergic illness. In the case of food allergies the situation is even more extreme, because the standard treatment consists of simply avoiding the foodstuff in question. In southern Europe, peach allergy, mostly induced by lipid-transfer proteins (LTPs), has a high prevalence. An immunotherapy based on a natural preparation from peach skin has been developed. However, this preparation has certain limits, due to the high dependence of performance on the purity of the LTPs, which depends on harvest conditions, the weather and productivity, making it difficult for the product to be standardised.

The new therapy has been developed jointly with IBIMA, CSIC and UPM.

THE TECHNOLOGY

We propose a simple, effective solution to treat this allergy, using an antigen whose composition is fully defined, controllable, independent of environmental factors and thus standardisable. The invention consists of a peptide fraction that reproduces the epitopes of the allergen, bound to a well-defined structure of sugars. This composition can easily be produced by proven chemical-synthesis methods, at reasonable costs and with good scaling potential. The first prototype has been based on the LTP Pru p 3, which is the main peach allergen, owing to its importance in the Mediterranean region of Europe.

ADVANTAGES

- Fully defined composition of the therapy.
- Chemical synthesis completely controlled, reproducible and standardisable.
- Reasonably cost and good scaling potential.
- Highly versatile and adaptable to other types of allergens.

STATE OF DEVELOPMENT

The immunotherapy crosses intestinal mucosa in vitro with no damage of the single layer intestinal epithelium. We have demonstrated the efficacy of the immunotherapy in anaphylactic mice exposed to the allergen.

INTELLECTUAL PROPERTY

Spanish patent application, September 21st , 2015
PCT application, September 21st , 2016

MARKET OPPORTUNITY

It is estimated that global industry sales of Allergy Immunotherapy products will grow to around EUR 0.9 billion with Europe and the USA accounting for approximately 90% of sales.

COMMERCIAL OPPORTUNITY

We are looking for an industrial partner for co-development or out-licensing the technology.

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KEYWORDS

Food allergies, peach allergy, immunotherapy, Pru p 3.

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