

Meeting: WAO Symposium on Immunotherapy & Biologics
Biologics Track 4: Critical Novel Molecules for Allergic Diseases
[Dec 14 (Saturday) @ 8-9:30 am]
Lecture: Advances in Synthetic Peptide Immuno-Regulatory Epitopes
Speaker: Peter Socrates Creticos, M.D.
Re: Handout #2

Cat Peptide Antigen Desensitisation for Treating Cat Allergic Rhinoconjunctivitis
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Introduction: Allergic rhinoconjunctivitis is an increasingly common source of morbidity with sensitivity to cats accounting for 10 – 15% of the disease burden. Allergy to cats is a major risk factor for the development of asthma.

Areas covered: Within the present manuscript, the current data on a novel therapeutic approach to treat cat allergy is reviewed. Cat Peptide Antigen Desensitisation (Cat-PAD) is a mixture of seven small peptides developed for the treatment of cat allergy. It is designed to induce immunological tolerance via binding to MHC class II on antigen presenting cells and interacting with regulatory T cells without triggering the cross-linking of IgE on mast cells and basophils. The peptide sequences are derived from the major cat allergen Fel d 1. The peptides have been selected to ensure a similar T cell response to that generated to whole cat dander in *ex-vivo* PBMC derived from cat allergic individuals. The size of the peptides is insufficient to induce cross-linking of IgE. Clinical data from a series of studies shows that Cat-PAD is able to significantly reduce allergic rhinoconjunctivitis symptoms after a short course of four injections over 12 weeks, and that the treatment effect is persistent lasting 2 years after the start of treatment.

Expert opinion: Taken together Cat-PAD is a novel, well tolerated and promising therapeutic approach to treat cat allergic patients. Data from the current international Phase III study will unravel whether the concept is also efficient and tolerable under daily life circumstances.