

**The antigenicity-allergenicity of camel milk proteins
(*camelus dromedarius*) in *BALB/c* mice after
oral sensitization**

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Abstract

Introduction: When the breastfeeding is not possible or not wished, it is usually replaced by cow's milk or by some conventional cow's milk-based infant formulas. However these proteins can involve at certain subjects pathological manifestations like the cow's milk allergy (CMA). The substitution of cow's milk by other treated milk, called "hypoallergenic", is currently the only alternative. The using of the camel milk, species taxonomically far away from the cow can be considered as solution of replacement of the cow's milk at subjects CMA. The aim of our work is to study the antigenicity-allergenicity of camel milk proteins starting from an animal model (Balb / c mice) orally sensitized with cow's milk.

Material and method: The first step is the study of the cross reactivity of the camel milk protein with IgG directed against proteins cow's milk, obtained starting from serums of Balb/c mice after oral sensitizing with cow's milk. The second step constitutes an approach of allergenicity study of the camel milk proteins realized *in-vivo*, by an oral provocation test (OPT), which consists on oral administration of the cow's and camels milk, to mice previously sensitized to cow's milk. The purpose is to verify the appearance of the clinical symptoms characteristic of the allergy.

Results The camel's milk proteins react very weakly with antibody anti cow's milk proteins and the introduction of camel milk presents minor clinical manifestations compared to those observed with cow's milk.

Conclusion: Camel milk seems to have a weak reactivity with antibodies anti- cow's milk proteins obtained by oral sensitization.

Key words: Allergenicity, Antigenicity, Camel milk, Cow's milk, Cross-reactivity- OPT.