Title: Investigation on the immunoreactivity of β-lactoglobulin from milk of different species.

Abstract: **Introduction:** β-Lactoglobulin (β-Lg) is the major whey protein of ruminant species and is also present in the milks of many, but not all, other mammal species. Its biological role is still not well known, and many studies have suggested a nutritional and a specific transporter role. It is also one of the most allergen proteins in the milk of ruminant species. In the present work, it is evaluated the binding of IgE from cow’s milk allergy (CMA) patients to β-Lg form different species.

**Material:** A series of 25 sera from CMA patients presenting various symptoms were used. For each patients, the specific IgE titer was determined for goat and bovine β-Lg. The experiment was repeated three times. All the specific IgE binding results confirmed by IgE binding inhibition experiments.

**Results:** The binding of IgE from patients having CMA on β-Lg from goat’s and cow’s milk were studied by Fluorimetric ELISA techniques. The mean IgE binding to goat’s β-Lg is higher than cow’s β-Lg. Lower binding of β-Lg specific IgE to goat’s β-Lg in comparison with bovine one was confirmed by IgE-binding inhibition experiments. Calculated IC<sub>50</sub> was 0.21 and 0.89 µg/mL for goat’s and cow’s β-Lg respectively, indicating that goat’s β-Lg is less recognized than bovine one by IgE from CMA patients.

**Conclusion:** It has been showed that β-Lg isolated from goat’s milk has weaker binding of IgE from CMA patients compared with the bovine one.

β-Lactoglobulin, Allergy, ELISA techniques, IgE binding

Presentation: Poster