

**Biochemical and Immunological Characterization of Antigen-5 from the
Venom of the Social Wasp <i>Polybia paulista</i>
(Hymenoptera, Vespidae).**

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There is a keen interest in the knowledge about the structure and function of the components from the Hymenopteran venoms; the Antigen-5 is recognized as one of the major allergens from these venoms. The purpose of this work is to get a better understanding about the biochemistry and immunology of Antigen-5 from the venom of *Polybia paulista*, through a proteomic approach. Different isoforms of this protein were identified during the proteomic analysis of *P. paulista* venom; the complete sequence of the intact form of this allergen was obtained from the largest and most abundant isoform by using the combination of *in gel* proteolytic digestions, mass spectrometry peptide sequencing and Western Blotting associated to microsequencing through degradation chemistry methods (N- and C-terminal sequencing). Six isoforms were identified in the venom of *P. paulista*, from which four isoforms were immunoreactive to specific-IgE; two of these isoforms also presented carbohydrates attached to their molecules. The comparison of the N- and C-terminal sequences of the isoforms with that of the intact protein suggests that the occurrence of isoforms must be resulting from proteolytic cleavages of the intact protein. Thus, the antigenicity of the Antigen-5 may be resulting from post-translation modifications.

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