

INVOLVEMENT OF HEMOCYTES IN THE
IMMUNITY OF THE SPIDER ACANTHOSCURRIA
GOMESIANA

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Invertebrates protect themselves against microbial infection by production of different antimicrobial peptides (AMPs). We previously presented the purification and characterization of two AMPs, gomesin and acanthoscurrin from the hemocytes of naïve spider *A. gomesiana*.

We are interested to determine the involvement of hemocytes and the role of AMPs in the spider immunity. Initially, the localization of gomesin and acanthoscurrin was compared by immunofluorescence, showing that 57% of hemocytes store both AMPs, either in the same granule or in different granules. Moreover, our results show that gomesin is addressed to the hemocyte granules as a pro-peptide.

We also demonstrate, by *in vivo* and *in vitro* experiments, that hemocytes migrate to the site of microbial infection. Once at the site of infection, hemocytes might secrete components of coagulation cascade and AMPs. Besides, our results suggest that phagocytosis is not the major defense mechanism activated after microbial challenge. Therefore the main reactions involved in the spider defense might be through the coagulation and AMPs secretion.

Key words: spider, immunity, hemocytes, antimicrobial peptides

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