

**A NOVEL CHEMOTACTIC PEPTIDE ISOLATED FROM THE VENOM OF THE SOCIAL
WASP *Agelaia pallipes pallipes***

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The wasp venoms present a great variety of polycationic peptides, generally involved in inflammatory processes, including cellular membrane lysis, mast cell degranulation (followed by histamine release), chemotaxis of neutrophils and T-helper cells (causing recruitment of leukocytes to the site of stinging). Moreover, the small peptides from animal venoms are now the focus of research since they can contribute with inflammatory actions during the envenomation process. The *Agelaia pallipes pallipes* venom was extracted in 50% (v/v) MeCN, purified by using RP-HPLC and analyzed by mass spectrometry (ESI-MS and ESI-MS/MS). The peptide of interest was manually synthesized on solid phase by using Fmoc chemistry. The biological activities tested were: hemolysis, mast cell degranulation and chemotaxis of PMNLs. In this study, the novel peptide revealed the sequence ILGTIL-NH₂, which corresponds to the first six amino acid residues of the multifunctional peptide Protonectin (ILGTILGLLKGL-NH₂). Because of this similarity the novel peptide was named Protonectin (1-6); it presented only chemotactic activity, which is much higher than that observed for Protonectin. This result suggests that the sequence ILGTIL corresponds to the motif for the activation of G-protein receptors, which are responsible by the initiation of the chemotaxis process.

Keywords: Small peptides; Chemotaxis; Wasp Venom; Peptide Synthesis

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