

**Stefanie HAEBERLI (1998): Characterisation of anti-bacterial peptides from the venom of *Cupiennius salei* (Araneae: Ctenidae).  
Diplomarbeit am Zoologischen Institut der Universität Bern, 19 S.**

The characterisation of the antimicrobial activity of six antibacterial peptides, isolated from the venom of the neotropical wandering spider *Cupiennius salei* is reported. The peptides have a molecular weight, determined by electrospray ionisation-mass spectrometry, between 3 to 4 kDa, and they consist of approximately 26 to 35 amino acids. All six peptides lack cysteines but they are rich in lysine. Peptide 1 is very closely related to CSTX-4, a known bactericidal and insecticidal toxin from the venom of *Cupiennius salei*.

Minimal inhibitory concentrations against five different bacteria species were determined by a liquid growth inhibition assay. All the six peptides showed minimal inhibitory concentrations that are comparable to those of other known antibacterial peptides, like insect defensins and cecropins, found in the last years in a large diversity of animals. The peptides are supposed to lyse the cells by formation of either distinct channels or pores, but their mode of action is not yet revealed. Those antibacterial peptides are supposed to protect *C. salei* from infections of the venom glands.

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