

TRIATOMA INFESTANS SALIVA PROTEOME IS RICH IN PLATELET AGGREGATION INHIBITORS

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Salivas of Chagas' disease vectors, such as the bloodsucking triatomine insect *Triatoma infestans*, contain molecular cocktails that prevent vertebrate-prey hemostatic events such as coagulation, vasoconstriction and platelet aggregation. In order to characterize the *T. infestans* saliva proteome, we separated secreted salivary proteins by two-dimensional gel electrophoresis (2-DE). More than 200 salivary proteins were detected in the 2-DE map, mainly in the alkaline region. By nanoLC MS/MS using a LTQ-Orbitrap equipment followed by Mascot and MS-Blast searches, we identified 58 main protein spots. Most of such proteins bear potential blood-feeding associated functions, particularly anti-platelet aggregation proteins belonging to lipocalin and apyrase families. This crude saliva distinguishes itself from other arthropod salivas by its apyrase diversity and abundance. Its protein composition indicates a highly specific molecular mechanism of early response to platelet aggregation. This first proteome study of *T. infestans* secreted saliva, provides basis for better understanding this fluid protein composition highly directed to counterpart hemostasis of the prey promoting blood-feeding.

Keywords: saliva; *Triatoma infestans*; Chagas' disease; apyrases; lipocalins