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**POSTER PRESENTATIONS**

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***Amblyomma variegatum* saliva effects on host immune responses by integrative proteomics and cellular biology approaches**

POSTER SESSION 2

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*Amblyomma variegatum* ticks are considered as main pest of ruminants in Africa and in the Caribbean, transmitting heartwater and reactivating bovine dermatophilosis. The objective of our study was to understand the role of *Amblyomma* saliva in tick-host interactions using proteomics and cellular biology approaches. Among the 336 proteins identified in *A. variegatum* saliva, a bioinformatics analysis highlighted bioactive molecules with anti-inflammatory and immuno-modulatory properties. We also characterised an ubiquitination complex that could participate in saliva-induced immune suppression of the host. We focused on the immuno-modulating effects of *A. variegatum* saliva on bovine peripheral blood mononuclear cells (PBMCs) and on macrophages *in vitro*. We first evidenced a significant decrease of lymphoproliferation for ConA stimulated PBMCs indicative of saliva immuno-suppressive properties. Then, we studied the effect of saliva on bovine macrophages, by measuring nitric oxide production and pro- or anti-inflammatory cytokines such as interleukins IL-10, IL-12p40, and TNF- $\alpha$ . We also analyzed activation and co-stimulatory molecules such as MHC-II, CD40, CD80 or CD86. Finally, we suggest an integrated model of interaction between tick saliva and host immune cells, with a potential effect during tick feeding to favour pathogens dissemination by decreasing host immune response efficacy. Our results bring new insights for a better understanding of tick-ruminant interactions at the molecular level, and pave the way towards integrative strategies to interfere with both the immunosuppressive and infectious processes in corresponding tick-borne diseases.