Microvesicles (MVs) releasing from Giardia intestinalis modulate the parasite - host cell interaction

Ingrid Evans 1,*Veronica Aran 2 Marta Monguio , Francesc Borras , Antonio Marcilla and Marcel I. Ramirez 1Andres Mojoli 1 1 Instituto Oswaldo Cruz, laboratorio de Biologia Molecular de Parasitas e Vetores, 2Coordination of Clinical Research and Technology Incorporation, , National Cancer Institute of Brazil (INCA), Rio de Janeiro, Brazil. , Rio de janeiro, Brazil

Giardia intestinalis (G.I) is an anaerobic protozoa and agent of giardiasis, an infection that induces a loss of epithelial barrier function and functional injuries of the enterocyte, producing diarrhoea and other symptoms. Recently, microvesicles (MVs) have been widely detected in various biological fluids and eukaryotic cells. We have seen a high production of MVs from G.I. trophozoites in response to different environmental conditions during the course of infection.MVs from G.I. alter the proliferation and integrity of Caco cells releasing some virulent factors and miRNA MVs were also internalized by human immature dendritic cells (iDCs) leading iDCs activation. Functionally, MVs from Giardia intestinalis could modulate innate immunity and host cell interaction.