

# Antiangiogenic and antitumor effects of trypanosoma cruzi Calreticulin

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**Background:** In Latin America, 18 million people are infected with *Trypanosoma cruzi*, the agent of Chagas' disease, with the greatest economic burden. Vertebrate calreticulins (CRT) are multifunctional, intra- and extracellular proteins. In the endoplasmic reticulum (ER) they bind calcium and act as chaperones. Since human CRT (HuCRT) is antiangiogenic and suppresses tumor growth, the presence of these functions in the parasite orthologue may have consequences in the host/ parasite interaction. Previously, we have cloned and expressed *T. cruzi* calreticulin (TcCRT) and shown that TcCRT, translocated from the ER to the area of trypomastigote flagellum emergence, promotes infectivity, inactivates the complement system and inhibits angiogenesis in the chorioallantoid chicken egg membrane. Most likely, derived from these properties, TcCRT displays in vivo inhibitory effects against an experimental mammary tumor. **Methodology and Principal Findings:** TcCRT (or its N-terminal vasostatin-like dom