EFFECTS OF A PURIFIED SUBSTANCE FROM PHYSALIS SP. IN LEISHMANIA INFECTION. Luana A. Santos, Milena B. P. Soares, Yvone M. Ribeiro, Therezinha Tomassini e Ricardo R. Santos. Laboratório de I走向farmacologia – Centro de Pesquisas Gonçalo Moniz – FIOCRUZ/BA; Laboratório de Química de Produtos Naturais - Far/Manaus, FIOCRUZ/RJ

The discovery of new drugs for treatment of leishmaniasis with less toxicity than the conventional pentamidine drugs is of great interest. Extracts from Physalis spp. have been widely used in the popular medicine for a variety of pathologies. Using an in vitro assay, we have investigated the potential effects of a purified substance from Physalis spp. on the viability of promastigotes of Leishmania amazonensis. YMRR13 showed potent anti-leishmanial activity, as compared to untreated and to amphotericin B-treated controls. Similar results were obtained in cultures of promastigotes of L. major. To investigate the effects of this substance in amastigote forms, we treated L. amazonensis - infected peritoneal macrophages with various doses of YMRR13 lead to a reduction of 100% in the number of infected macrophages and in the number of parasites. Similar results were obtained with L. amazonensis infection of J774 macrophage cell line. We next tested the in vivo effects of this substance in experimental leishmania infection. Treatment of L. amazonensis-infected BALB/c mice with intraleosional injections of YMRR13 caused a significant reduction in the lesion size, as compared to control-treated group. Although YMRR13-treated lesions did not completely heal, they remained stable for several weeks, whereas lesions from control group showed progressively increased size and ulceration. New schemes of treatment, as well as possible toxic effects are currently under investigation.