AQUEOUS EXTRACT OF *BIXA ORELLANA* INDUCES PROTECTIVE EFFECT ON CELLS INFECTED BY ZIKA VIRUS

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Zika virus (ZIKV) is a virus phylogenetically related to dengue virus and yellow fever virus. The new disseminated generation is transmitted by mosquitoes of the *Aedes* genus and its rapid spread, especially in territories with other arbovirus circulation, due to the difficulty in the differential diagnosis and overload of health services. According to the Epidemiological data of the Emergency Operations Center on Public Health on Microcephaly of the Ministry of Health, since 2015, Brazil has presented a total of 3,087 cases of microcephaly. In this way, the aim of this study is to evaluate the protector effect of *Bixa orellana* in Zika virus infection. For this, Vero cells were cultured and infected with ZIKV virus for a period of time of seven days for the cytopathic effect. As a method of control, it was proposed to use of the aqueous extract of *Bixa orellana* (urucum) due its medicinal properties. Therefore, Vero cells were cultured and infected with ZIKV virus, and simultaneously, it was treatment with aqueous extract of *B. orellana* in different concentrations. The cell viability post-infection and treated with *B. orellana* extract were performed using the method of 3- (4,5-dimethylthiazol-2-yl) -2,5-diphenettrazolium bromide (MTT). In addition, to the analysis of kinetics of ZIKV, as well as the evaluation of lysosomal activity of cells in the presence of Zika virus, as well as treated with *B. orellana*. ZIKV induced a membrane damage of Vero cells, and the aqueous extract of *B. orellana* promotes an effect protector of this. Thus, it was possible to show that fractions of *B. orellana* did not show any toxic effect to Vero cells. In addition, aqueous fraction of *B. orellana* was able to reduce the cytopathic effect of ZIKV and could therefore be a good candidate for the treatment of Zika virus infections.

Keywords: Arbovirose; Zika virus; *Bixa orellana*

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