

P-107: IN VITRO AND IN VIVO ACTIVITIES OF DIBENZYL BUTYROLACTONE LIGNAN DERIVATIVES AGAINST TRYPOMASTIGOTE FORMS OF *TRYPANOSOMA CRUZI*

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This work reports the trypanocidal activity of (-)-cubebin derivatives using an in vitro assay against trypomastigote forms of *T. cruzi*. The following compounds we assayed (-)-cubebin, (-)-hinokinin, (-)-6,6'-dinitrohinokinin, (-)-*O*-(*N,N*-dimethylamino-ethyl)-cubebin, (-)-*O*-acetyl cubebin, and (-)-*O*-methyl cubebin. It was observed that the introduction of polar groups at the oxygen of (-)-cubebin linked at C-9 increased the trypanocidal activity. In addition, the presence of a lactonic ring was crucial for the trypanocidal activity, which was drawn by the significant activity displayed by (-)-hinokinin. This derivative was the most active one in the in vitro assay, displaying an IC₅₀ = 0.9 µg/mL. Therefore, (-)-hinokinin was selected for the in vivo assay, and the results showed that it was able not only to decrease the level of parasitism but also to increase the survival of the treated animals, in comparison with both negative and positive control groups.

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