EVALUATION OF THE LEISHMANICIDAL POTENTIAL OF FOUR MICROALGAL ETHANOLIC EXTRACTS

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Leishmaniases are neglected tropical diseases caused by protozoa of the *Leishmania* genus, manifesting in cutaneous, mucocutaneous, and visceral forms. Current therapies present limitations, highlighting the need for novel therapeutic approaches. In this context, microalgae have emerged as promising sources of therapeutic biomolecules. This study evaluated the leishmanicidal potential of extracts from four microalgae species (IBLC 002, IBLC 103, IBLC 106, and IBLC 118) from the Microalgae Bank at Labbiotec, Federal University of Bahia, against three *Leishmania* species. The microalgae were cultivated in media Conway or LC Oligo, then centrifuged, lyophilized, and extracted using absolute ethanol. After rotary evaporation, the extracts were tested on *Leishmania* promastigotes cultured in Schneider and 199 supplemented media, and their leishmanicidal activity was evaluated by direct counting using a Neubauer chamber. The extracts demonstrated significant inhibitory activity. IC_{50}, CC_{50}, and selectivity index values were calculated, revealing differences in biological activity against axenic Leishmania promastigotes and variations in cytotoxicity in RAW cells. The IBLC 002 and IBLC 106 extracts showed IC_{50} values of 346.1 µg/mL and 82.02 µg/mL, respectively, against *L. infantum*; 161.9 µg/mL and 38.1 µg/mL against *L. braziliensis*; and 440.3 µg/mL and 181.9 µg/mL against *L. amazonensis*, with CC_{50} values of 537.8 µg/mL and 377.8 µg/mL for all tested extracts. On the other hand, IBLC 103 and IBLC 118 extracts showed greater selectivity, presenting IC_{50} values of 36.5 µg/mL and 118 µg/mL against *L. amazonensis,* 99.9 µg/mL and 43.6 µg/mL against *L. braziliensis*, and 18.7 µg/mL and 55.43 µg/mL against *L. infantum*, along with CC_{50} values of 755.1 µg/mL and 464.4 µg/mL, respectively. Thus, the results indicate that IBLC 103 and IBLC 118 exhibit the highest selectivity indices, highlighting them promising sources of bioactive molecules with leishmanicidal potential.

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