MATHEMATICAL MODELING OF NANOTOPOGRAPHY OF THE BORDERS LESION IN INFECTED TISSUES CAUSED BY *LEISHMANIA BRAZILIENSIS* COMPARED TO OTHER MICROORGANISMS

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Abstract

American cutaneous leishmaniasis (CL) is full geographic expansion in Brazil, is a non contagious infectious disease of eminently chronic progression, caused by several species of protozoan called *Leishmania sp*. The ulcer is the most frequent presentation of CL, it is painless and usually located on exposed skin areas, with a round or oval shape. It has an erythematos base, infiltrated with hard consistency. The CL can be found in well-delimited raised borders of the ulcer. As sometimes is difficult to find CL into the skin in the border of ulcer with optical microscopy, we try to develop study and mathematical modeling of nanotopography of the target tissue trying to find a previous indirect presence of CL with an Atomic Force Microscope.