Molecular unveiling of Leishmania spp. parasites in feline squamous cell carcinoma: preliminary results

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Objectives: Feline leishmaniosis due to *Leishmania infantum* is an emerging vector-borne disease, often coexisting with other morbidities, including neoplasia. This study aims to explore the possible association between *Leishmania* spp. infection and squamous cell carcinoma (SCC) in cats, through the employment of advanced molecular techniques.
Material and Methods: Genomic DNA was extracted from 86 paraffin-embedded blocks containing feline biopsy lesions with a histopathological pattern compatible with SCC diagnosis. The presence of *Leishmania* DNA in SCC samples was screened using a nested-PCR protocol with primers targeting the parasites' small ribosomal DNA (*SSU*-rDNA).
Results: *Leishmania SSU*-rDNA was identified in a sample (1.2%, 1/86) of an SCC located on the nasal planum of a 10-year-old female European Shorthair cat.
Conclusion: The molecular evidence of *Leishmania* parasites in a feline SCC reinforces the hypothesis that *Leishmania* infection may be associated with SCC. This finding highlights the need for further investigation into the role of *Leishmania* in the pathogenesis of SCC, as well as the importance of considering *Leishmania* infection in the differential diagnosis and treatment of this malignancy.

Keywords: Squamous cell carcinoma, *Leishmania*, DNA, Nested-PCR.
Funding: This study was supported by the Instituto Lusófono de Investigação e Desenvolvimento under the exploratory project "FELIS - Feline Exploration of *Leishmania* in Squamous Cell Carcinoma" (https://imvet.ulusofona.pt/investigacao).