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Applied biotechnology to identify new circulating species of leishmaniasis in Taza province, Morocco

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Background: In Morocco, leishmaniasis is an endemic disease. Two forms of leishmaniasis are reported: visceral leishmaniasis due to *Leishmania infantum* and cutaneous leishmaniasis caused by three *Leishmania* species (*Leishmania tropica*, *Leishmania major* and *Leishmania infantum*). The identification of these species remains important for a better control strategy. In fact, this study aims to apply the biotechnological assays especially the PCR-ITS1-RFLP to identify the *Leishmania* species circulating and responsible of the recent cases of CL and VL leishmaniasis in Taza province which continues to record a high number of cases.

Results: The molecular study in Taza Province has shown for the first time the presence of 41% cases of CL due to *L. infantum* with a percentage (27/63) beside *L. tropica*. Also, this study shows the coexistence of these two species in the same sectors of Taza, namely Taza High, Oued Amlil, Tahla, Tainaste and Bouhlou. The abundance of *L. infantum* among the total could be due firstly to the presence (plus touche) of VL due to *L. infantum* in this province and in the neighboring areas.

Conclusions: The results of this study show for the first time, the existence of non-sporadic cases of CL due to *L. infantum*. They also indicated that CL due to this species is more prevalent than reported in the literature. These results will be helpful for better management and control of this disease which it is crucial to target the various links of the cycles of disease by targeting dogs that constitute a reservoir of *Leishmania infantum*.

Biography

Maryam Hakkour from Rabat - Morocco, PhD Student at university Mohamed V, Faculty of science-Rabat my research topic is about the epidemiological study of leishmaniasis in humans and animals in northern Morocco. This work is performed at the National Reference Laboratory of Leishmaniasis in National Institute of Hygiene (NIH) with a collaboration of the Agronomic and Veterinary Institute Hassan 2 (AVI) (Rabat). I have published three articles until now.

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