



CYTED-RIMLEV

**WORKSHOP ON  
CANINE VISCERAL  
LEISHMANIASIS**

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## **Zoonotic *L. infantum* visceral leishmaniasis in the Neotropics: what are the needs for canine reservoir and vector control?**

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Zoonotic visceral leishmaniasis (ZVL) is a neglected disease resulting in a global morbidity of 2,090 thousand Disability-Adjusted Life Years and a mortality rate of approximately 60,000 per year. ZVL represents a serious public health problem in endemic regions and is rapidly emerging as an opportunistic infection in HIV patients. Despite that, current strategies for ZVL control have been unsuccessful; as a result ZVL has become increasingly prevalent and reached urban areas, including large Latin American cities. A similar trend has been reported in Mediterranean areas during the past decade. Phlebotomine sandflies are the vectors of *Leishmania* spp. in at least 88 countries, including over 40 *Phlebotomus* species in the Old World and a further 30 belonging to the genus *Lutzomyia* in the New World. Insecticidal control of sandflies has been suggested to represent a more effective way of reducing *L. infantum* transmission than the strategy of culling infected dogs. Different measures of vector control have been proposed, including residual spraying of dwellings and animal shelters, insecticide treated nets, application of repellents/insecticides to skin or to fabrics and impregnated dog collars. In the Americas, the domestic dogs are the main animal reservoirs of ZVL; however, measures directed against the canine reservoir have failed to prevent/control this zoonosis. There is currently no vaccine for ZVL. In endemic areas, the majority of those infected do not develop clinical symptoms and past infection leads to robust immunity against reinfection. Thus, the development of a vaccine for *Leishmania* is a realistic public health goal and could play a major role in ZVL control. Here, we review routine control strategies against the canine reservoirs and insect vectors, and discuss the basis and evidence for these strategies, as well as the need for new approaches such as vaccine development.