

INTERNATIONAL SCIVAC CONGRESS
CANINE LEISHMANIOSIS AND OTHER VECTOR-BORNE DISEASES: OUR CURRENT STATE OF KNOWLEDGE
MARCH 8TH -10TH 2013 - PISA - ITALY

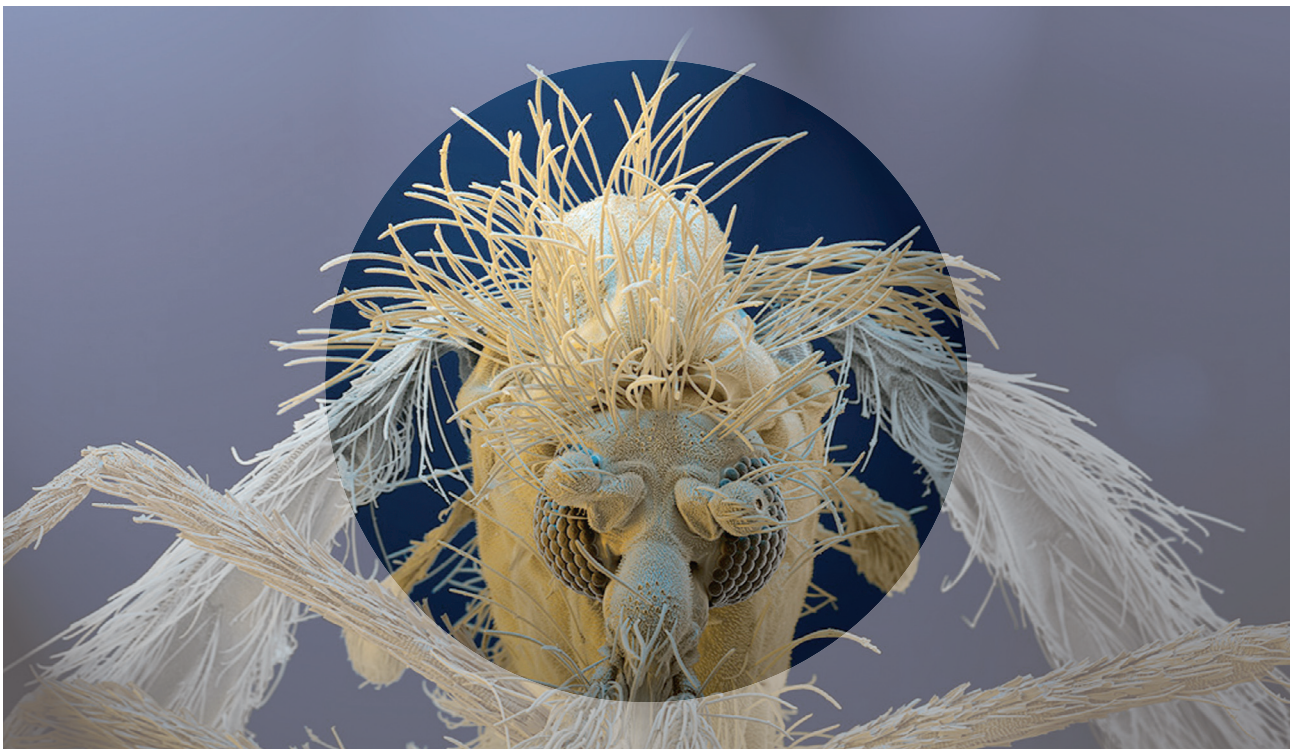
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**New strategies
for Leishmaniosis prevention**

Friday, March 8th 2013 - 5.40 pm



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In a broad sense, the term prevention includes the application of measures intended to avoid instances of infection by a pathogen or the pathologic outcome of such instances. Leishmaniasis control strategies have varied little for decades, but in recent years there have been advances in the prevention of the disease. Advances in prevention include evidence confirming that the incidence of leishmaniasis, in both humans and dogs, can be reduced.

As a brief summary, three canine leishmaniasis prevention strategies have shown to be effective and are used ever more commonly: (1) in the dog, the regular use of topical insecticides – repellents (pyrethroids), (2) vaccination and (3) oral treatment with domperidone. It is however necessary to understand that the protection of each single dog, although high, is not 100% guaranteed with any of these methods. The preventive efficacy of pyrethroids is of 84-96% in the individual animal and of 100% at population-level; the preventive efficacy of vaccination is of 70% in the individual animal, and of 80% using domperidone. The various existing preventive strategies can be combined, in order to increase their efficacy, however no data is available confirming that this approach increases the degree of protection compared to their use alone. In areas where leishmaniasis is endemic the use of topical insecticides with a proven efficacy against sandflies is recommended. Pyrethroids, and specifically deltamethrin and permethrin, are the agents for which a greater efficacy has been shown.

Deltamethrin collars (efficacy starts 7 days after application and is guaranteed for approximately 5 months) must be worn at the beginning of the sandfly season; permethrin pipettes/spot-on solutions (efficacy starts 2 days after application and is guaranteed for approximately 3-4 weeks) must be applied from April to November. Permethrin sprays may also be used (efficacy starts immediately after application and is guaranteed for approximately 3 weeks), however this last formulation is not commercialized in all countries. According to available data, leishmaniasis vaccination (3 vaccinations, each 3 weeks apart, followed by an annual booster) or domperidone (0,5 mg/Kg SID P.O. for 30 days with repetition of the treatment 2 or 3 times a year depending on the geographical area) do not eradicate the infection; they do however induce a strong cellular immune response which prevents the development of the disease. Furthermore, in dogs already affected by the disease these interventions may result in an effective immunotherapy, helping in the control of the disease by the immune system. Preventive measures are recommended in any healthy dog which is to visit areas in which leishmaniasis is endemic; the same is true for any dog which is either infected or sick with leishmaniasis, whether under treatment or not, as an effective strategy to reduce the risk of infecting both humans and dogs.

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