Press briefing
„Parasites are spreading - High time for repelling“
Circolo della Stampa di Milano, Milano, Italy
Friday, March 16, 2007, 10:00 a.m. – 1:00 p.m.

Key points Prof. Dr. Domenico Otranto

**Prevention of canine leishmaniosis under natural conditions –
results of a field trial in Italy**

- Canine leishmaniosis (CanL) due to infection with *Leishmania infantum* is among the most important diseases of dogs worldwide. The relevance of CanL has increased over the last decade also in terms of its potential to be transmitted to humans, especially under immunosuppressive health conditions.
- Prevention of sand fly bites is a priority to reduce the risk of canine and human leishmaniosis in areas where the disease is present.
- The repellent and insecticidal activity of imidacloprid 10% and permethrin 50% against bites from *Phlebotomus papatasi*, *Phlebotomus perniciosus* and *Lutzomyia longipalpis* has been demonstrated experimentally. It has therefore been speculated that the combination might be effective in protecting dogs against CanL (Mencke et al., 2005, Mirò et al. 2006).
- No data were available for the repellent activity of imidacloprid 10% and permethrin 50% against sand flies under natural conditions, nor on the efficacy in preventing CanL under these circumstances. Thus, it was the aim of our work to evaluate the efficacy of the combination in the field as a control measure to prevent CanL in kennel dogs in an endemic area of southern Italy.
- In February 2005, 845 dogs from two kennels of Apulia were initially tested for CanL with serological and parasitological examination. 631 negatively tested dogs were allocated to one of three groups: Group A - treated with imidacloprid 10%/permethrin 50% in a spot-on formulation once a month; Group B - treated every two weeks; and Group C - untreated control animals.
- *Leishmania* infection was again examined in November 2005 (end of the sand fly season) and in March 2006 (end of the study).
- Dogs treated with both application regimes displayed a very high percentage of protection from sand fly bites in Group A (treated once a month), between 88.9 and 90.36%, and Group B (treated twice a month), between 90.73 and 100%.

- These results showed that the combination imidacloprid 10% and permethrin 50% in a spot-on formulation is highly efficacious in preventing the infection by *Leishmania infantum* under natural conditions in endemic areas by virtue of its repellent activity against sand flies.

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