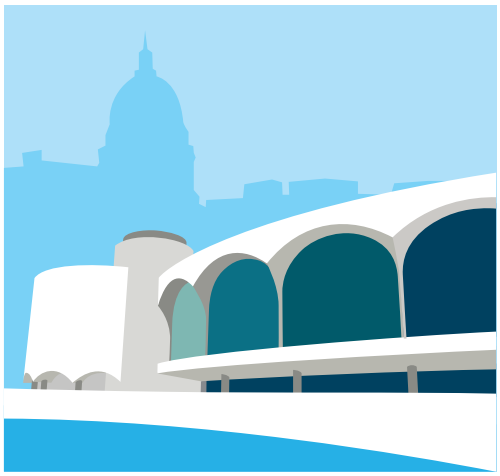

WAAVP

27th Conference of the World Association for the Advancement of Veterinary Parasitology

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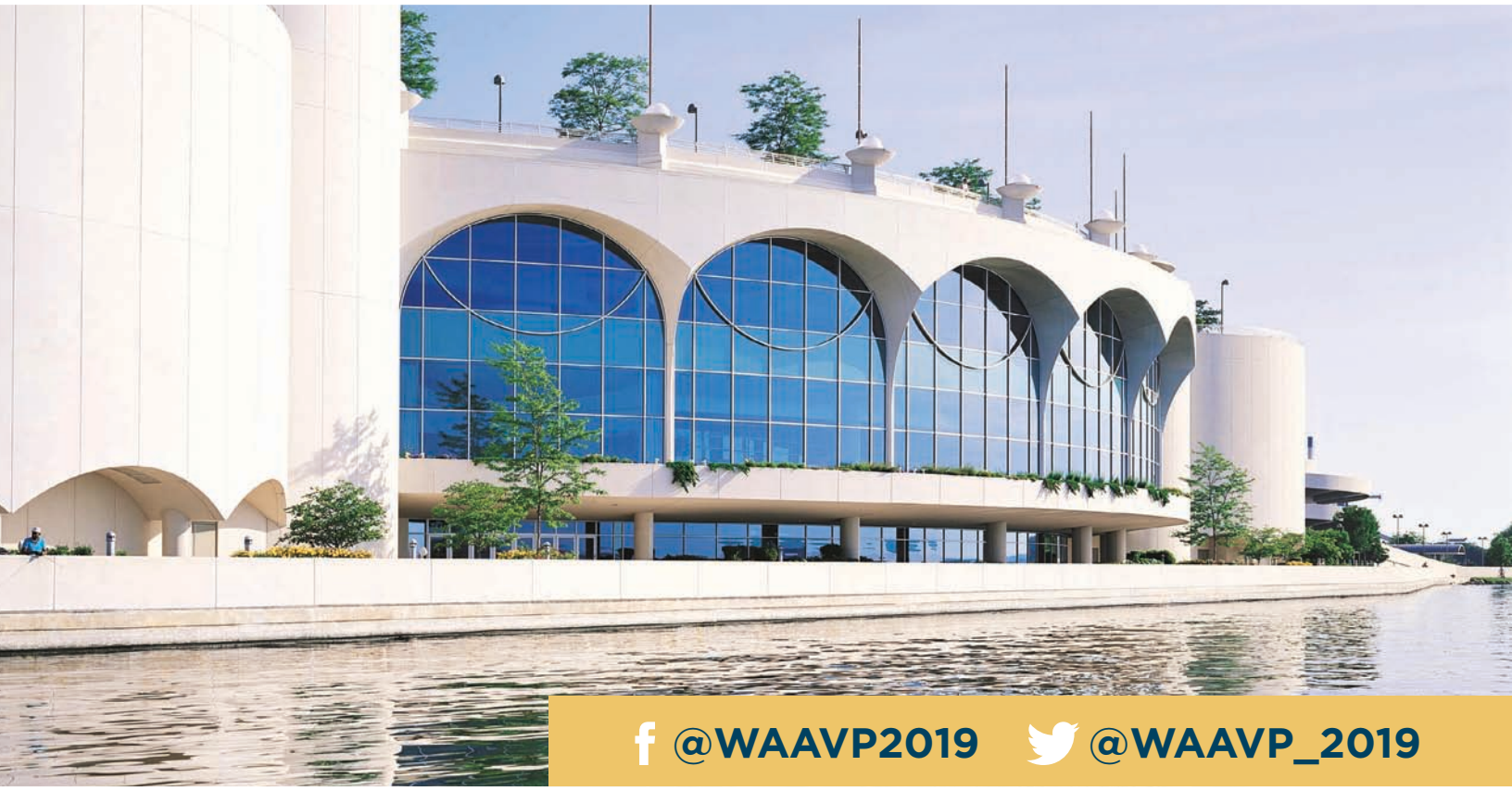

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Abstract Book

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PS02.40 Efficacy of a Single Oral Administration of Afoxolaner Alone or in Combination with Milbemycin Oxime Against Ixodes Hexagonus in Dogs

Prof. Frederic Beugnet[1], Dr. Wilfried Lebon[1], Dr. Pascal Dumont[1], Dr. Marielle Servonnet[1]
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The efficacy of afoxolaner (NexGard® and NexGard Spectra®, Boehringer-Ingelheim), administered once orally at the minimum recommended dose, was assessed in dogs experimentally infested with Ixodes hexagonus ticks.

The study was a blinded, negative controlled clinical efficacy study using a randomized block design. Twenty-four purpose bred Beagle dogs, 12 females and 12 males were included. Dogs were randomly allocated either to the negative control group, or to one of the two treated groups. Infestations were performed with 50 adult I. hexagonus ticks on days -2, 7 and 28. On day 0, dogs in groups 2 and 3 were treated with NexGard ® (afoxolaner) or NexGard Spectra® (afoxolaner + milbemycin oxime), respectively. Live tick counts were conducted 48 hours after treatment (day 2) and 48 hours after each subsequent infestation (days 9 and 30).

In both treated groups, afoxolaner was 100% effective against existing infestations ($p<0.0001$). Regarding the re-infestations, overall efficacy of afoxolaner was 100% at day 9 and 98.5% at day 30.

NexGard and NexGard Spectra chewable tablets administered once orally at the minimum recommended dose were highly effective against I. hexagonus infestations for the 4 weeks duration of the study.

PS02.41 Nanocarrier Formulations Against Rhipicephalus (Boophilus) Microplus Larvae

Dr. Amanda Figueiredo[1,3], Dr. D.F. Cola[2], Dr. Y.A. Gainza[1,3], Dr. L.F. Fraceto[2], Dr. A.C.S. Chagas[3]
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The aim of this study was to evaluate the larvicidal potential of formulations developed from a nanocarrier system based on cypermethrin (CPM) + chlorpyrifos (CPF) and its association with bioactives isolated from plants. The CPM + CPF based formulations were developed from Nanostructured Lipid Carriers (NLC) and associated with substances isolated from plants commercially acquired (Sigma-Aldrich): cytral (Form. A), menthol (Form. B), and limonene (Form. C). The formulations A, B, C and NLC (alone) were then evaluated against R. microplus larvae from 100 to 0.78 µl.mL-1 concentrations by the Larval Packet Test (LPT), in triplicates, negative (water) and positive (Colosso® CPM+CPF at 1.25 µL.mL-1) control. After 24h of incubation (± 27 °C; > 80% RH) the count of live and dead larvae was performed. The results were analyzed by ANOVA One-way followed by Tukey's test. Formulations A, B and C caused 100% mortality at 1.56, 3.12 and 6.25 µL.mL-1, respectively, with a dose-dependent effect, and significant differences ($p\geq0.05$). The positive control had 100% efficacy, and the formulations A and B caused 81.31 and 76.27% mortality at 0.78 µL.mL-1. Moreover, CLN caused mortality > 40% at 50µL.mL-1. It was demonstrated that the nanocarrier system evaluated was effective, since the active compouds, even reduced, caused mortality rates similar to those of the commercial reference product. In 100 mL, Colosso® and Formulations (A, B and C) contained, respectively: 15.0g and 0.1875g of CPM; 25.0g and 0.3125g of CPF; 1.0g of citronellal and 0.0125g of isolated from plant (cytral, menthol or limonene) in addition to 5.87*1015 of CLN in the formulations of present study. Thus, the CLN system can be considered a possible option on the development of new acaricides. New studies are necessary to elucidate the function of these associations, and to validate its efficacy against R. microplus.