



WAAVP

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Dedicated to the legacy of Professor Arlie C. Todd

Sifting and Winnowing the Evidence in Veterinary Parasitology



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Abstract Book

*Joint meeting with the 64th American Association of Veterinary Parasitologists
Annual Meeting & the 63rd Annual Livestock Insect Workers Conference*

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Days 19 and 20 the animals were euthanized and the livers were removed and sliced into 2cm pieces to recover adult specimens of *Fasciola hepatica* on bile ducts. All flukes recovered were counted. No specimens of *Fasciola hepatica* were recovered from Treated Group animals, while in Control Group mean fluke number observed per animal was 12.60 ± 8.64 . In conclusion, Ivomec® F efficacy was 100% on the treatment of *Fasciola hepatica* in bovine naturally infected.

PS02.83 Comparative Ivermectin Plasma Concentration Profiles After Subcutaneous Administration of Different Long-Acting Formulations to Cattle

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The pharmacokinetic behaviour and systemic availability of ivermectin were compared following subcutaneous application of six different Long-Acting formulations to cattle. Forty-two healthy calves were randomly allocated into six experimental groups (n=7). Animals in each group were subcutaneously treated with one ivermectin formulation at label recommended dose rate (Formulation A= 700 µg/kg; B= 700 µg/kg; C= 630 µg/kg, D= 800 µg/kg; E= 700 µg/kg; F= 630 µg/kg). Blood samples were collected over 120 days post-treatment (14 sampling times). Ivermectin concentrations in plasma were measured by HPLC. Complete pharmacokinetic analysis were performed for all ivermectin preparations. The mean peak plasma concentration (C_{max}) and the area under the concentration vs time curves (AUC, drug exposure) obtained for each formulation were compared following dose rate normalization. The statistically significant differences observed in the kinetic

parameters reflecting the rate and extent of IVM absorption, indicate the existence of some differences among preparations in terms of pharmaceutical behaviour. The relationship between the plasma kinetic profiles of the different formulations and the “theoretical threshold” to obtain an optimal efficacy against ticks was calculated using the period of time during which ivermectin concentrations were above 10 ng/mL. Formulations A, B and D remained above 10 ng/mL for a longer period of time compared to Formulations C, E and F (a highest dose rate of 800 µg/kg was used for formulation D). The tested Long-Acting ivermectin formulations showed slight differences in their absorption patterns, which was reflected in the observed plasma pharmacokinetic behavior. Formulations A and B showed the best performance from the pharmacokinetic point of view, showing initial higher ivermectin concentrations followed by sustained plasma concentrations above 10 ng/mL for more than 40 days that may be relevant to obtain an optimal efficacy against ticks.

PS02.84 Effect of Monepantel on Gastrointestinal Nematodes Infection and the Influence on Gestant Sheep

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One of the main impasses in sheep breeding is the gastrointestinal nematodes (GN) caused by the high morbidity and mortality of the animals. Several anti-helminthic molecules have been used to control GN, especially during the critical period of sheep peripartum. However, the indiscriminate use of drugs favors the development of resistance by helminths. Monepantel belongs to the new class of aminoacetonitrile derivatives and is indicated for the treatment and control of multiresistant GN in sheep. The objective of this study was to evaluate the influence