



Proceedings



APICOMPLEXA IN FARM ANIMALS

3rd International meeting • Edinburgh, 30th June - 3rd July 2015

Vaccination, 11:00 – 12:30

Chair: **Luis Ortega-Mora** co-chair: **Mark Jenkins**

11:00 - 11:30 Keynote 07	Ivan Morrison , University of Edinburgh, UK Challenges faced in developing of a parasite vaccine based on induction of protective T-cell mediated immune responses
11:30 - 11:45 S17	Adriana Aguado-Martínez , University of Bern, Switzerland Evaluation of new bacterial lipoprotein-based vaccine formulations against neosporosis in mice
11:45 - 12:00 S18	Virginia Marugán-Hernández , Royal Veterinary College, UK Study of the ability of microneme signal peptides of <i>Eimeria tenella</i> to deliver foreign antigens
12:00 - 12:15 S19	Theo Schetters , ProtActivity, The Netherlands Successful vaccination of calves against <i>Rhipicephalus microplus</i> and <i>R. annulatus</i> ticks using Bm86 and Subolesin antigens
12:15 - 12:30 S20	Sarah Thomson , Moredun Research Institute, UK Can infection with one genotype of <i>Cryptosporidium parvum</i> protect against infection with another?
12:30 - 13:30	Lunch
12:30 - 13:30	EuPathDB workshop

Prevention and control, 13:30 – 15:00

Chair: **Damer Blake** co-chair: **Luís Fernando Pita Gondim**

13:30 - 14:00 Keynote 08	Luis Ortega-Mora , SALUVET, Spain Variability in <i>Neospora caninum</i> and its relevance to cattle infection
14:00 - 14:15 S21	Isabel Hostettler , University of Bern, Switzerland Development and application of a novel quantitative reverse transcriptase PCR (qRT-PCR) assay to identify drugs targeting intracellular <i>Theileria annulata</i> schizonts
14:15 - 14:30 S22	Anja Joachim , Institute of Parasitology, University of Vienna, Austria Neonatal porcine coccidiosis – do we understand it yet?
14:30 - 14:45 S23	Kayode Ojo , University of Washington, USA <i>Sarcocystis neurona</i> calcium-dependent protein kinase 1 is targeted in selective therapeutic development for Equine protozoal myeloencephalitis
14:45 - 15:00 S24	Loredana Pop , University of Cluj Napoca, Romania Effect of artemisinin and <i>Artemisia annua</i> on <i>E. tenella</i> infection in broiler chickens
15:00 - 15:30	Coffee break

Effect of artemisinin and *Artemisia annua* on *E. tenella* infection in broiler chickens**S24**

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The anticoccidial effects of artemisinin and *A. annua* were assessed by experimental infection of 14 day-old chickens with 1×10^4 *E. tenella* oocysts in a battery trial. Two independent experiments (A, B) were designed, with 3 control groups each: negative control, positive control and treated control (monensin). Experiment A contained 3 experimental groups (infected and treated with 5, 50 and 500 ppm artemisinin) and experiment B - 4 experimental groups (infected and treated with *A. annua* German [5 and 50 ppm artemisinin] and Romanian [5 and 21,3 ppm artemisinin] cultivars). The experimental feed was administered two days prior infection. The efficacy of artemisinin and *A. annua* against *E. tenella* infection was quantified by body weight gain, feed conversion ratio, oocysts shedded per gram of feces (OPG), lesion score and oocysts sporulation rate. Neither artemisinin nor *A. annua* had an effect on reducing the OPG, but artemisinin, in concentrations of 5 and 50 ppm, reduced the coecal lesions and the number of sporulated oocysts. Although *A. annua* had no anticoccidial effect, it improved the weight gain of the chickens, which was even greater than the control groups. Further studies need to be done in order to correlate the positive effect of the plant in broiler growth and the possible anticoccidial effect of artemisinin against *E. tenella*.

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