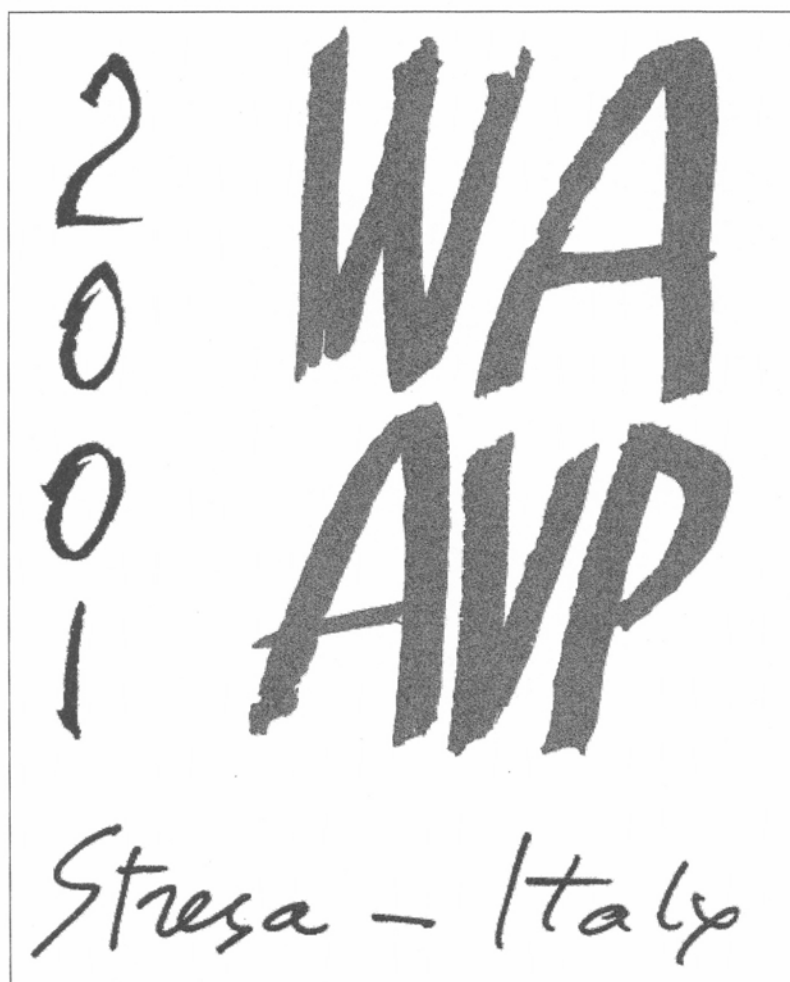


ABSTRACTS



The 18th International Conference
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**Promoting Advancement,
Preserving Tradition**

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C14 p ULTRASTRUCTURAL CHANGES FOLLOWING A SINGLE INFECTION OF THE NASAL MUCOSAE WITH OESTRUS OVIS IN SHEEP.

H. Hoste, G. Tabouret, Ph Jacquet, AM Moureu, JP Bergeaud, C Duranton, F Prevot, HT Yacob, Ph Dorchies.

Unité Mixte INRA/ENVY "Physiopathologie des Maladies Infectieuses et Parasitaires des Ruminants" 23 chemin des capelles, F31076 Toulouse FRANCE

The nasal bot fly, *Oestrus ovis*, is responsible for clinical signs and losses of production. Previous pathological studies have described the histological lesions related to the parasites. However, no ultrastructural observations were available on the changes induced to the epithelial cells. This point represented the objective of the current study in order to improve the understanding of pathogenic mechanisms associated with *O. ovis*. Six lambs were infected with *O. ovis* larvae; 6 non-infected lambs composed a control group. Infection persisted for 8 weeks before lambs were necropsied. Immediately after death, the heads were split opened and the number and stages of the larvae in the nasal cavities were recorded. Tissue samples for transmission electron microscopy (TEM) were taken from the septum, turbinates, ethmoid and sinuses in infected and control lambs. After routine TEM processing for fixation and staining, the tissues were examined. First to third instar larvae were recovered at necropsy. The ultrastructural changes presented a gradation depending on the anatomical sites. Less epithelial damage was found in the septum whereas the most severe lesions occurred in the sinuses. The general organization of epithelium was conserved in the septum where the main lesions were limited to cell vacuolations and a swelling of mitochondria. In contrast, the epithelial cells were nearly dissociated in the sinuses, presenting rounded shape, enlarged intercellular spaces and showing signs of degeneration.

C15 p CROSS-REACTIVITY BETWEEN *Fasciola hepatica* AND *Toxocara canis* ANTIGENS IN EXPERIMENTAL RAT FASCIOSIS

Sánchez-Andrade, R., Paz-Silva, A., Lomba, C., Arias, M., Suárez, J.L., Panadero, R., Pedreira, J., Rojo, F., & Morondo, P.

Parasitología y Enfermedades Parasitarias, Departamento de Patología Animal, Facultad de Veterinaria, Universidad de Santiago de Compostela, 27071-LUGO (Spain).

The evolution of IgG immunoglobulins in rats with fasciolosis was evaluated by means of an indirect-ELISA test and excretory/secretory antigens from adults of *F. hepatica* and *T. canis*. One group of 24 rats (G-I) was infected by gastric tubing with 25 metacercariae of *F. hepatica*, and another group of 12 rats remained uninfected as control (G-C). Faecal and serum samples were obtained weekly, from two weeks prior to 14 weeks after infection (w.a.i.).

Antibodies against *F. hepatica* increased from the 2nd w.a.i. in the infected animals, and non-specific response was observed in the control group. Absorbances rose to the 7th w.a.i. and significant differences between G-I and G-C were proved ($U = -9.570$, $z = 0.000$). The IgG response against *T. canis* excretory/secretory antigens was lower than that against *F. hepatica* antigens. The IgG values increased significantly in the rats of G-I at the 1st, 2nd w.a.i., and from the 4th w.a.i. again. By means of the Mann-Whitney U test, significant differences were established ($U = -7.482$, $z = 0.000$). Significant correlation was also observed between the *F. hepatica* and *T. canis* antibodies curves in G-I ($r = 0.363$, $p = 0.000$).

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C16 p IMMUNOHISTOCHEMICAL STUDY IN EXPERIMENTAL OVINE DICROCOELIOSIS

Ferreras¹, M.C., Manga-González², M.Y., Pérez¹, C., García-Iglesias¹, M.J., Campo², R., González-Lanza², C., Escudero¹, A. & García-Marín¹, J.F.

¹Departamento de Patología Animal: Medicina Animal, Universidad de León, Campus de Vegazana, s/n 24071 León, Spain. ²Consejo Superior de Investigaciones Científicas (CSIC), Estación Agrícola Experimental, Aptdo. 788, 24080 León, Spain.

Purpose: To characterize the inflammatory cells in liver and hepatic lymph nodes (HLN) of lambs experimentally infected with *Dicrocoelium dendriticum*.

Methods: Sixteen 4-month-old male lambs of the Churra breed were used. Six were infected with 1000 *D. dendriticum* metacercariae each, six with 3000 and four were not infected. Paraffin-wax and fresh frozen sections of liver and HLN from lambs slaughtered at 6 months p.i. were immunolabelled for the anti-ovine macrophages (VPM-32), anti-MHC class II β , anti-WC1, anti-CD8, anti-CD3, anti-CD45R, anti-CD79 α cy and anti-IgG antibodies.

Results: Numerous VPM-32 positive macrophages around septal bile ducts (SBD) were immunostained by the anti-MHC class II β . Lymphoid follicles surrounding SBD were reactive for CD79 α cy and CD45R B lymphocytes whereas diffuse CD3⁺ and CD8⁺ T lymphocytes were present. $\gamma\delta$ T cells and plasma cells expressing cytoplasmic IgG were scattered near SBD. Increased positive immunostaining for all anti-leucocyte antibodies were observed in HLN of infected lambs.

Conclusions: Local immune response observed, probably due to continuous stimulation by antigens of adult worms, was qualitatively similar, suggesting a dose-independent effect. Likewise, this response did not seem to confer a protective effect.

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C17 p ACQUIRED IMMUNITY TO A LOCAL STRAIN OF *HAEMONCHUS CONTORTUS* BY DWARF GOATS

Fakae, BB¹, Chiejina, S.N.¹, Nnadi, P.A.¹, Musongong, G.A.², Behnke, J.M.³ & Wakelin, D.³

¹Faculty of Veterinary medicine, University of Nigeria, Nsukka, Nigeria,

²Wakwa Regional Centre for Agricultural Research for Development, Ngaoundere, Cameroon, ³School of Life and Environmental Sciences, University of Nottingham, Nottingham NG7 2RD

Background: The capacity of young Nigerian West African Dwarf (WAD) goats to develop good acquired immunity to their native geographical strain of *Haemonchus contortus* and the correlates of this responsiveness were studied in a laboratory experiment.

Method: 42 7-8 month old kids divided into 6 groups were either not given or given a primary immunising infection of 2000 L3 with or without challenge of 2000 L3 on day 42 (D42). The immunising infection of a group was however truncated with fenbedazole on D35 before the challenge infection.

Result: Infections resulted in a mild chronic infection with a prepatent period of 18-20 days and little or no reduction in worm burden between D14 and D56. However, the group of kids with truncated infection, developed good protection against challenge. Of the measures of infection namely, faecal egg count (FEC), eosinophil responses, packed cell volume (PCV) and body weight, FEC and PCV showed strong correlation with worm burden ($r_s = 0.965$, $P < 0.001$ and $r_s = 0.577$, $P = 0.008$ respectively). The kids exhibited good tolerance to the size of the inoculum used.

Conclusion: The wide individual variability observed in FEC and its strong positive correlation with worm burden are pointers to its genetic origin. There are therefore good prospects for its use for the identification of parasite resistant genotypes among the WAD goat population.