The differences observed between females and males were statistically significant ($p = 0.001$). It was detected a virus infection of equine Viral Arteritis in 53% of the samples obtained in feral donkeys, which could indicate some degree of viral circulation in these animal populations. It suggests later studies that they allow to characterize these viruses of donkeys, to see his phylogeny. Chile is free of EVA in horses, the disease has not been detected in domestic horses and it is of compulsory notification. The detection of antibodies anti-vEVA in wild species was communicated to the World Organization for Animal Health (OIE).

**165 Isolation of *Leptospira* sp. from an equine abortion**

B.F. Brihuega 1, S. Grune 1,2, C.D. Auteri 1, G.N. Romero 1, L.E. Samartino 1

1 Laboratory of Leptospirosis, Institute of Pathobiology, National Institute of Agricultural Technology, Buenos Aires, Argentina; 2 National Research Council of Argentina (CONICET), Buenos Aires, Argentina

Leptospirosis in equines produces uveitis, abortion and in foals produces marked jaundice however, is not considered a neglected disease in this species. The aim of this study was to confirm an equine abortion produced by *Leptospira* sp. by isolating the bacteria from clinical samples of fetuses. In the farm of Canuelas, a livestock area of Buenos Aires province, a mare aborted and Leptospirosis was suspected, since at the same farm positive bovines of Leptospirosis by serology were detected. Serum samples of the aborted mare and organs of the fetus were analyzed. The fetus was necropsied and liver, spleen, lung, and the kidney were cultured in a specific media for leptospirosa growth (Fletcher). Cultures were incubated at 30°C and were observed by dark field microscopy (160X) every 14 days. Also imprints of the organs cultured were analyzed by direct immunofluorescence, with a specific conjugate for leptospirosa. The serum of the mare was analyzed by the Micro Agulination Test (MAT) for eight serovars: Canicola, Pomona, Icterohaemorrhagiae, Wolfii, Hardjo, Grippotyphosa, Tarassovi and Castellonis (cutoff at 1/100). The titers obtained of the mare were 1/6400 Pomona, 1/800 Icterohaemorrhagiae, 1/800 Wolfii all serovars belong to the species *Leptospira interrogans*. The immunofluorescence was positive for the lung and the liver of the fetus. One positive culture was obtained from the lung cultures of the fetus in Fletcher medium. This strain was studied by PCR and was characterized as *Leptospira* 810s L.* interrogans*. Leptospirosis in equines is an infectious disease, which affects adult animals producing abortions. In this study we isolated for the first time in Argentina a pathogenic strain of *Leptospira interrogans* from an equine abortion, this way we could confirm an equine clinical case of Leptospirosis. The isolated strain is currently studied to characterize the genotype of this strain.

**173 Immunological changes in BALB/c pregnant mice model induced by intranasal infection with Equine herpesvirus 1**

M.E. Bravi 1,8, M.R. Scrochi 1,2,6, N.A. Fuentenalba 1,6, G.H. Sguazzaz 1, F. Nishida 1, V. Cid de la Paz 1,7, S.G. Corvá 1, E.J. Gimeno 1, E.L. Portiansky 1,6, C.G. Barbeito 1,3,6, C.I. Muglia 1,3, C.N. Zanuzzi 1,6, C.G. Galosi 1,7

1 Department of Virology; 2 Histology and Embryology; 3 General Pathology; 4 Epidemiology, School of Veterinary Sciences, Department of Biological Sciences; 5 LISIN Laboratory, School of Exact Sciences, National University of La Plata, La Plata, Buenos Aires, Argentina; 6 CONICET; 7 CIC-PBA; 8 ANPCyT

Equine herpesvirus 1 (EHV-1) is an endemic pathogen that induces equine death causing important economic losses. The virus cause respiratory, nervous and reproductive diseases, such as abortions and neonatal syndrome. Up to now, the pathogeny of the abortion has not been completely elucidated, but it is known that the establishment of a viremic phase is necessary to allow the arrival of the virus to the pregnant uterus. As it has been shown in other infectious processes, our hypothesis is that during EHV-1 infection there are changes in local profile of cytokines towards a predominance of those that can interfere the normal pregnancy. Most of the investigations related to EHV-1 abortion were performed using the BALB/c mouse model that allows complete and comparable data that may be extrapolated to horses. The aim of this first study was to analyze changes at the local immune response in uteri and placentas of females intranasally inoculated with the Argentinean AR8 strain of EHV-1 and in control mice.

**Figure 1.** Positive Immunofluorescence obtained from the lung imprint of the aborted fetus (400X).
inoculated with culture medium, on day 3 post-infection. To corroborate the infection viral isolation (VI) was carried out in lungs, uterus, placentas and fetuses taken at day 3 post-infection. Cytokine profile was analyzed in samples of uteri and placentas homogenized and treated with protease inhibitor by measuring mRNA of TNFα, IFN-γ and IL10 by Real-time RT-PCR; besides, the expression of IFN-γ and TNFα proteins were corroborated by ELISA and flow cytometry, respectively. In these experiments we found a lower number of fetoplacental units in infected animals than the average number for the mice strain used. VI was positive only in the lungs of the infected mice, thus confirming the infection. The relative quantification by qPCR of the cytokines studied expressed as 2^ΔΔCt showed significant differences in the three cytokines evaluated between groups. The increase in TNF indicates a predominance of Th1 response and that of IFN-γ is consistent with a viral infection. On the other hand, the moderate increase in IL-10, associated with a tolerogenic Th2 response, may be understand as a response to restore the homeostatic balance to infection. This project is funded by Argentine Agency for the Promotion of Science and Technology (FONCyT, PICT 2011-1123), Scientific Research Commission of the Province of Buenos Aires and National University of La Plata.

201 Histopathology of the placenta related with gestational age and foal viability

C.G. Wendt*, L.C. Oliveira, F.D. Belem, R. Scalco, B.S. Moraes, I.S. Finger, L.O. Araujo, F.M. Pazinato, B.R. Curcio, C.E.W. Nogueira Department of Veterinary Clinics, College of Veterinary Medicine, UFPel, Brazil

Ascending placentitis is the most common cause of late-term abortion and premature delivery in mares. Gestational age plays a major role in the development of the placental lesions and the fetal outcome. Histologic placental changes are frequently associated with the fetal and neonatal viability. The aim of this study was to evaluate placental histopathology and its relation with gestational age and foal viability after induction of placentitis in mares. This study was performed using 21 cross-breed mares. Placentitis was induced via intracervical inoculation of Streptococcus equi subsp. zooepidemicus (10^7 cfu) at 300 days of pregnancy. All mares presented clinical signs and ultrasonographic changes related to placentitis. The mares were treated with sulfamethoxazole and trimethoprim (30mg/kg, during 10 days) and flunixin meglumine (1.1mg/kg, during 7 days). All the parturitions were observed and the fetal membranes collected immediately after its expulsion. Nine points of each placenta were collected (cervical star area, pregnant horn, nonpregnant horn, uterine bifurcation, uterine body, amnion and three parts of the umbilical cord) and fixed in 10% formalin prior to processing for histology. Data of gestational age post-infection (PI) and foal viability were recorded. The mares were divided in three groups according to placental lesions, respectively: (1) subacute placentitis (19.05%), (2) acute placentitis (61.90%) and (3) chronic placentitis (19.05%). The first group (n=4/21) was characterized by mild neutrophilic infiltration with basophilic bacterial colonies present in the amnion and allantoic surface extending to the umbilical cord. They delivered stillbirth foals from 24h to 48h PI. The second group (n=13/21) presented suppurative inflammation with intense neutrophilic infiltration in regions of cervical star, uterine body and pregnant horn. The period between infection and parturition was from two to twenty four days. In this group eight mares delivered unviable foals. The other 5 mares delivered viable foals from 9 to 24 days PI. The third group (n=4/21) demonstrated infiltration of mononuclear inflammatory cells in the microcotiledinary trophoblast and chorionic stroma and also mild to moderate necrosis. The pregnancies were maintained for at least 36 days PI and all foals were viable. Placentitis can result in fetal and neonatal sepsis, leading to abortion and preterm delivery. However, in subacute and acute placentitis, the inflammatory processes may result in prostaglandin production and stimulation of myometrial contractility, thus resulting in preterm delivery. Furthermore, in some chronic placentitis, foals will experience accelerated fetal maturation, and even premature delivery. They will be mature enough to survive in the extrauterine environment. It was possible to observe that placental histopathology showed close relationship with the period between infection and parturition, beyond the neonatal viability. Mares with subacute and acute lesions of placentitis demonstrated lower gestational age and high neonatal mortality rate.