expand the knowledge of viral species present in feces of foals suffering diarrhea using Next Generation Sequencing. This will be useful to further explore the role of new infectious agents in this illness in foals.

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Detection and characterisation of *Clostridium difficile* in Australian Thoroughbred foals

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Diarrhoea is a common disease in young foals that is labour intensive and costly to manage. A large number of infectious agents have been detected in foals with diarrhoea, but the pathogenic importance of many of these agents is poorly understood. *Clostridium difficile* has been associated with severe necrotising enteritis in foals, but has also been isolated from healthy foals. Hypervirulent strains of *C. difficile*, such as ribotypes 027 and 078, commonly associated with human hospital outbreaks of diarrhoea, have also been detected in some animal populations. There are limited data on *C. difficile* disease in Australian horses. In a prospective case control investigation of diarrhoea in foals, faecal samples were collected on five Thoroughbred breeding farms in New South Wales, Australia, from foals with diarrhoea and age-matched control foals (age-matched pair). In addition, faeces were collected from foals with diarrhoea at an equine referral hospital. Foal faeces were tested for the presence of *C. difficile* using a quantitative polymerase chain reaction assay (qPCR) targeting the gene encoding triose phosphate isomerase. Anaerobic culture for *C. difficile* was performed on samples that tested positive by qPCR and isolates were further characterised by ribotyping. In total, 117 age-matched case control pairs and 26 hospitalised foals with diarrhoea were sampled. *C. difficile* was isolated from 3/3 case foals and 2/3 control foals positive by qPCR among the matched foals. *C. difficile* was isolated from 5/6 hospitalised foals with diarrhoea that were qPCR positive. Four different ribotypes were detected, including ribotype 012 and 078. This is the first report of the detection of *C. difficile* ribotype 078 in Australian horses. As this ribotype has been associated with severe disease in humans, this finding may have public health implications for veterinarians and horse owners.

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Equine rotavirus in Argentinean foals: an overview

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Group A equine rotavirus (RVA) associated diarrhea in foals represent a main sanitary problem for the equine industry, worldwide. In fact, equine RVA is considered to be the major cause of dehydrating diarrhea in foals younger than 3 month old. Young foals are highly susceptible to RVA infection and develop malabsorptive watery diarrhea leading to severe dehydration and sometimes death, especially in neonates with failure of passive antibody transference. Our group of research has been studying equine RVA since 1992. The circulating strains were characterized as genotypes G3A and G14 associated to P[12]. The complete genome of the equine RVA strains were described and the interaction among the antigens determining the genotypes were also studied. During these years important improvements in the diagnosis and characterization tools have been made as well as in the preventive strategies to control the disease in horse farms. The aim of the present work is to summarized our knowledge and discuss the future prospects regarding this important disease of foals.

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Comparison of serum amyloid A and fibrinogen, in the laboratory assessment of foals with diarrhea

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Diarrhea in young equines is very common and there are many causative agents and conditions (viral, bacterial, protozoa, parasites, drug or dietary associated, toxins and changes in the intestinal flora) that manifest with clinical signs of watery diarrhea in these foals. It is difficult to differentiate which foals may have an infectious cause of diarrhea and those of a non-infectious nature. It is estimated that a definitive cause of the diarrhea can only be reached in 40% of cases[1]. As part of a blinded controlled study to assess the use of a paste formulation of SB-300 in foals with watery diarrhea, assessments included fecal cultures, serum amyloid A (SAA), fibrinogen and complete cell counts. These assessments were performed upon admission to the trial, at the end of the treatment phase (T=72hours) and at the end of the observation period (T=144hours). SAA has been deemed a major acute phase protein in horses with usefulness in the assessment of inflammation and evaluation of response to therapy.[3] The usefulness of this acute phase protein has not been assessed in horses with diarrhea. This abstract aims to look at the relative and comparative usefulness of the acute phase proteins in assessment of foals with diarrhea and correlations if any to the causes of diarrhea and response to therapy. As this is an ongoing study (finish date November 22nd, 2015) the complete results are not yet available but preliminary findings indicate a marked comparative difference between the acute phase proteins. The full results will be published as part of this abstract presentation.

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