Serum amyloid A and haptoglobin concentrations increased ($P < 0.01$) and remained elevated until abortion in mares with experimentally induced ascending placentitis due to *Streptococcus equi* spp. *zooepidemicus*. These preliminary results suggest that serum amyloid A and haptoglobin are useful diagnostic aids in mares with spontaneously occurring placentitis for the late-term gestation. Authors' addresses: Reproduction Laboratory, The Maxwell H. Gluck Equine Research Center, Department of Veterinary Science, University of Kentucky, Lexington, KY 40546 (Ball, Canisso, Troedsson); and Division of Comparative Pathology, University of Miami Miller School of Medicine, Miami, FL 33136 (Cray); e-mail: b.a.ball@uky.edu. *Corresponding author; †Presenting author. © 2012 AAEP.

1. Introduction
In the horse, serum amyloid A (SAA) concentrations during pregnancy range between 0 to 7 $\mu$g/mL, whereas haptoglobin (HP) concentrations range between 0 to 0.2 $\mu$g/mL. Elevations above these reference ranges indicate inflammation. The objectives of this study were to evaluate plasma concentrations of SAA and HP in mares: (1) with experimentally induced placentitis and (2) carrying normal pregnancies.

2. Materials and Methods
Mares carrying normal pregnancies (260 to 280 days of gestation) were assigned to: (1) control mares with (n = 2) or without fetal fluid sampling (n = 2) and (2) treated mares with induced ascending placentitis with (n = 4) or without fetal fluid sampling (n = 6). Placentitis was induced via intracervical inoculation of streptococci ($5 \times 10^6$ cfu). Fetal fluid sampling was performed with ultrasound-guided transabdominal puncture (0, 5, and 12 days after inoculation or until abortion). Blood samples were obtained before inoculation (−7 to −10 days), at inoculation/initial fetal fluid sampling (d = 0), and then every 2 days for 10 days or until abortion. The concentrations of SAA and HP were determined by an immunoturbidimetric assay and by a colorimetric assay, respectively. The data were analyzed via ANOVA.

3. Results and Discussion
Treated mares (9 of 10) aborted within 7 days after inoculation, and one control mare aborted subsequent to fetal fluid sampling. The treated mare that failed to abort and the control mare that aborted were excluded from the analysis of acute-phase proteins.
There was no effect of fetal fluid sampling on concentrations of acute-phase proteins, and data were combined within groups for further analysis. SAA and HP increased ($P < 0.01$) in treated but not in control mares after inoculation. These data indicate that acute-phase proteins rapidly increase in mares subsequent to experimentally induced ascending placentitis due to *Streptococcus equi* spp. *zooepidemicus* and remain elevated until abortion.

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**Footnotes**

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