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Changes in maternal pregnane concentrations in mares with experimentally-induced, ascending placentitis

Michelle A.A. Wynn, Barry A. Ball, John May, Alejandro Esteller-Vico, Igor Canisso, Edward Squires, Mats Troedsson



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2 Changes in maternal pregnane concentrations in mares with experimentally-induced, ascending
3 placentitis

4 *Michelle A. A. Wynn^a, Barry A. Ball^a, John May^b, Alejandro Esteller-Vico^a, Igor Canisso^c,
5 Edward Squires^a, Mats Troedsson^a

6 ^aGluck Equine Research Center, Department of Veterinary Science and ^bCollege of
7 Engineering, University of Kentucky, Lexington, KY 40546

8 ^cDepartment of Veterinary Clinical Medicine, College of Veterinary Medicine, University of
9 Illinois, Urbana, Illinois 61802

10 *Corresponding author: b.a.ball@uky.edu

11 **Abstract**

12 The objectives of this study were to compare via liquid chromatography-tandem mass
13 spectrometry (LC-MS/MS) progesterone (P4), 5 α -dihydroprogesterone (DHP),
14 allopregnanolone, 3 β -hydroxy-5 α -pregnan-20-one (3 β 5P), 20 α -hydroxy-5 α -pregnan-3-one
15 (20 α 5P), 5 α -pregnan-3 β ,20 α -diol ($\beta\alpha$ -diol), and 5 α -pregnan-3 β ,20 β -diol ($\beta\beta$ -diol) concentrations
16 in plasma of mares with experimentally-induced, ascending placentitis compared to
17 gestationally age-matched control mares. Placentitis was induced via intracervical inoculation of
18 *Streptococcus equi* spp. *zooepidemicus* between 260-280 days of gestation. Placentitis mares
19 were subdivided into those which aborted in less than eight days (n = 6; acute) and those that
20 aborted at ≥ 8 days after inoculation (n = 9; chronic). Ten pregnant mares at similar gestational
21 ages served as healthy controls. Pregnanes were measured for days (-8), -6, -4, -3, -2, -1, and
22 0 days preceding abortion in the treated mares, and for the matched days of gestation in the
23 control mares by LC-MS/MS and by immunoassay for immunoreactive (ir) P4. In mares with
24 chronic placentitis, concentrations of DHP and its downstream metabolites (allopregnanolone,

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