



The effect of diet on cecal and fecal pH in horses

Jensen, Rasmus Bovbjerg; Tauson, Anne-Helene; Austbø

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FACULTY OF HEALTH AND MEDICAL SCIENCES
UNIVERSITY OF COPENHAGEN



PROGRAMME
& ABSTRACTS
PhD Day
16 May 2013

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The Review Committee consists of the heads of the 25 Graduate Programmes. They have made the initial review of the incoming abstracts.

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Scientific Committee

Based on the reviews made by the Review Committee, the Scientific Committee selected the eight third-year PhD students, who are going to present their research in the Lundsgaard Auditorium.

The Scientific Committee is also present at PhD Day, reviewing the eight oral presentations and finally nominating the "PhD Student of the Year 2013".

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SVCT2 between the three groups in any of the brain regions examined. In conclusion, perinatal vitC deficiency increases oxidative stress in the brain but was not associated with SVCT2 expression in the current study. Postnatal repletion of prenatally vitC depleted guinea pig pups prevented the oxidative stress observed in their deficient counterparts.

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The effect of diet on cecal and fecal pH in horses

Jensen¹, Tauson¹, Austbø²

¹Department of Clinical Veterinary and Animal Sciences, COPENHAGEN, Denmark

²Norwegian University of Life Sciences, Denmark

The horse is a hindgut fermenter with a highly specialized cecum and large colon capable of fermenting fibrous feedstuffs like grass and hay. Forage is an essential part of the ration fed to all horses to maintain gut health. However, the type and amount of forage in the ration varies to a large extent depending on several factors (e.g. availability and nutritional demands). It is common to increase the energy density of the ration to performance horses by feeding grain like barley and oats, but feeding unprocessed or large amounts of grain increases the risk of starch reaching the hindgut. Starch from grain is easily fermented in the hindgut, and it might disturb the microbial balance causing acidosis and in worst case lead to colic or laminitis.

Dietary effects on the hindgut environment are sometimes evaluated based on fecal samples, as the availability of cannulated horses is limited. Whether a fecal sample really mimics the hindgut environment is though questionable. Four cecum cannulated horses were used to study dietary effects on pH changes in the cecum and in feces simultaneously over 24 hours, when two different diets were fed in a cross over experiment. The diets were a hay only diet and hay supplemented with barley diet.