



Date: June 5, 2018

To: Veterinary Practices in Western Canada

From: Drs. Claire Card (senior clinician), Dr. Maria Lopez (resident), and Mikayla Swirski (summer student)

**Re: WCVM study on Congenital Hypothyroidism – Dysmaturity Syndrome (CHDS) in mares and foals**

Dear Colleagues,

We are contacting you regarding participation in a research study on a cause of neonatal loss, congenital hypothyroidism in foals (CHDS). The research is approved by the UCACS of the University of Saskatchewan (protocol number 2017074). The cardinal signs of CHDS in foals are: hypothermia, lower jaw protruded past the upper jaw, contracted tendons, ruptured common digital extensor tendons, large umbilicus, goitre, and abnormal carpal and tarsal bones (poorly ossified on radiographs). Cases may have some or all of the clinical signs. In mares the history often includes bagging up and then mammary gland development regressing before foaling, prolonged gestation compared to herd mates, and dystocia.

We are studying the relationships between iodine, thyroid hormone levels, and selenium in healthy and CHDS effected mare foal pairs. For this research we are asking you to provide us with serum (2 red top Vacutainer tubes from each), milk or colostrum (40 mls) and mane hair samples (2 inches cut from the withers) from CHDS affected foals and their dams. We are also interested in testing the thyroid function of mares that deliver CHDS foals by using a Thyroid Releasing Hormone (TRH) stimulation test (blood samples at 0, 45 min., 2hrs, 4 hrs). We would send your practice the hormone.

There is little information on the iodine levels in healthy mare and foal serum and the serum, colostrum/milk of mares. It is our objective to describe the current iodine status of mares and foals in western Canada. It is our goal to understand the role of iodine and selenium in CHDS cases in order to prevent them in the future

Please contact us if you see any of these cases. We will pay to ship the frozen samples to us. We would like to briefly interview the mare owners of CHDS about their feeding practices for their pregnant mares. We greatly appreciate your time and assistance. Thanks once again for your time and consideration, and your advocacy for improving equine health.

Yours,

Dr. Claire Card

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