# BIOMEDICAL & VETERINARY SCIENCES GRADUATE PROGRAM

## ANNOUNCES

The Master of Science Seminar and Examination of

**Caitlin Malik**

**“Use of Glucose Monitoring Systems in Horses”**

**Friday, July 1st, 2022**
**10:00AM**
**Vet Med Classroom 121**

## Bio

With dreams of becoming an equine veterinarian for as long as she could can remember, Dr. Malik completed her undergraduate degree in animal science then veterinary degree at Louisiana State University. (Go Tigers!) With the encouragement of wonderful mentors, she began my journey toward specialty training in large animal internal medicine. This started with a one-year rotating internship at Blue Ridge Equine in Earlysville, VA, which provided her with more focused training in equine medicine and surgery in hospital and ambulatory settings. After completing her internship, Dr. Malik was selected for a dual Master's research program and large animal internal medicine residency at the VMCVM. Her research has evaluated the use of glucose monitoring systems in equine patients, providing more comprehensive data for clinical decision making in a non-invasive manner.

## Lay Language Abstract

Monitoring of blood sugar, or glucose, concentrations is essential for the diagnosis and therapeutic plan of a variety of disorders in horses. Traditional methods for obtaining samples for testing include a blood draw using a needle, which can cause stress and discomfort to patients. Additionally, this methodology only allows for intermittent assessment of glucose concentrations, limiting the amount of information available for a veterinarian to make treatment decisions. The use of continuous glucose monitoring systems in the human medical field have allowed clinicians to obtain continuous or near-continuous glucose data via minimally invasive technology. These devices have nearly eliminated the need for blood sampling, instead relying on glucose concentrations within the interstitial space between the skin and the underlying tissue, which have been shown to compare favorably to blood levels. The use of these devices in cats and dogs with diabetes mellitus has been promising, but information regarding use in horses has been limited. The manuscript presented in this thesis evaluates the use of two widely available glucose monitoring systems, the Dexcom G6 and the FreeStyle Libre, in healthy adult horses.

## Funded by

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## Publications

**Malik CE**, Wong DM, Dembek KA, Wilson KE. Comparison of two glucose-monitoring systems for use in horses. American Journal of Veterinary Research 2022:1-7 doi: 10.2460/ajvr.21.05.0068.

Wong D, **Malik C**, Dembek K, Estell K, Marchitello M, Wilson K. Evaluation of a continuous glucose monitoring system in neonatal foals. J Vet Intern Med 2021;**35**(4):1995-2001 doi: 10.1111/jvim.16186 [published Online First: 20210606].

## Presentations

**Malik C**, "Comparison of two glucose monitoring systems for use in horses." Virtual ACVIM Forum, July 2021.
**Malik C,** "Comparison of two glucose monitoring systems for use in horses." 31st Annual Research Symposium (virtual), March 2021.

## Examination Graduate Committee

**Major Advisor/Chair:**

Harold McKenzie, DVM, MS, PG Dipl (Vet Ed), DACVIM (LAIM)
Associate Professor of Large Animal Medicine
Virginia-Maryland College of Veterinary Medicine

**Graduate Advising Committee Members:**

David Wong, DVM, MS, DACVIM (LAIM), DACVECC
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Clinical Assistant Professor of Large Animal Medicine
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