UNIVERSITY of GUELPH

ONTARIO AGRICULTURAL COLLEGE

DEPARTMENT OF ANIMAL BIOSCIENCES

MSc. Defence

The pulse of it: the effects of dietary pulse inclusion up to 45% on cardiac function, fasted sulfur amino acid status, body composition, and hematological and biochemical measurements in healthy adult dogs

Pawanpreet Singh

Date: November 11th 2022 at 9:30am

The MSc Defence for Pawanpreet Singh has been scheduled for November 11th, 2022 at 9:30am. The defence will be held online via Teams and in 141: https://teams.microsoft.com/l/meetup-join/19%3ameeting_ODllZWFjNDQtZjgxZC00MzcyLWExNjktM2RjYzNlMDE4Y2U4%40thread.v2/0?context=%7b%22Tid%22%3a%22be62a12b-2cad-49a1-a5fa-85f4f3156a7d%22%2c%22Oid%22%3a%22fbd28915-dda5-478f-8ecb-a3682dcf0c3a%22%7d

The exam committee will consist of:

Examining Chair: Dr. Ming Fan

Advisor: Dr. Anna Kate Shoveller

Adv. Committee Member: Dr. Shari Raheb (OVC)

Additional Graduate Member: Dr. Glen Pyle (OVC)

Abstract:

Due to the increasing global demand for dietary protein, it is necessary to investigate protein alternatives with regard to both meeting nutritional requirements and environmental impact. Pulse ingredients are an attractive protein alternative used in grain-free or plant-based canine diets. However, in recent years pulses have been speculated to be associated with dilated cardiomyopathy (DCM) in dogs. Therefore, this thesis aimed to investigate the effects of incremental pulse inclusion from 0 to 45% in micro and macronutrient balanced diets on canine cardiac and metabolic health. After 20 weeks, the inclusion of dietary pulses did not have negative effects on cardiac function, sulfur amino acid status, body composition or hematology and biochemistry indices in adult dogs. These results support that pulse ingredients are safe to include in canine diets, specifically a combination of pulses up to 45% inclusion in nutrient-balanced diets does not contribute to DCM in healthy adult dogs.