**SCHOOL OF VETERINARY MEDICINE**

**UNIVERSITY OF GHANA**



**Seminar for Appointment as an Assistant Lecturer**

Presenter: Dr. Kwaku Asare-Dompreh

Title: Quantitative Analysis of Liver Sizes of Domestic Canine Species Using Ultrasound Technology

Date: Thursday, February 2, 2023

Venue: School of Agriculture Conference Room

Time: 2:00 pm

 **Abstract**

This study sought to establish ultrasonographic liver size reference ranges and how these liver size measurements relate to selected morphometric parameters of domestic dogs in Ghana.

Sixty dogs of different breeds, sexes, ages, and body conformation were sampled. Dogs were selected based on presenting chief complaints, clinical signs and blood analysis. Blood samples were collected for Complete Blood Count (CBC) and serum biochemistry to further distinguish and truly confirm dogs that were apparently healthy and dogs that presented as clinically ill. Ultrasonographic liver size measurements in both longitudinal and transverse planes were obtained from all 60 dogs. Significant ultrasonographic liver measurement (longitudinal plane) reference ranges established for apparently healthy breeds of dogs sampled in the study were *Avuvi*/mongrel (52.1-63.9mm), Boer Boel (54.5-92.4mm), Doberman (71.6-86.3mm), German Shepherd Dog (72.8-81.4mm), Rottweiler (71.6-74.1mm). There was a strong positive correlation between mean longitudinal sonographic liver measurement and body height (*r*=0.646, *P*< 0.001), and a strong positive correlation between mean longitudinal sonographic liver measurement and body girth (*r*=0.793, *P*< 0.001). A strong positive correlation was seen between longitudinal liver measurements and the distance between the last rib and the tuber coxa (*r*=0.638, *P*<0.001), a moderate positive correlation between mean longitudinal liver measurements and the distance between the xiphoid and the tuber ischium (*r*=0.45, *P*<0.05).

This study helped to establish normal ultrasonographic liver size measurement in apparently healthy domestic dog breeds. It also showed associations between ultrasonographic longitudinal liver measurements, body height and body girth.

**Keywords:** Dogs, Ghana, Liver, Ultrasound measurement