I prefer:

□ ORAL presentation

R POSTER presentation

**Molecular detection of *Babesia* and *Theileria* infectionfrom Boer goat farms in Chiang Mai, Chiang Rai, and Lamphun**

**Pongpisid Koonyosying**1,2\*, Anucha Muenthaisong1,2, Kanokwan Sangkakam1, Amarin Rittipornlertrak1, Boondarika Nambooppha1, Nisachon Apinda1, Supawadee Maneekesorn1, Nattawooti Sthitmatee1

\*lead presenter: pongpisid.koo@cmu.ac.th

1 Laboratory of Veterinary Vaccine and Biological Products, Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai 50100, Thailand

2 Office of Research Administration, Chiang Mai University, Chiang Mai 50200, Thailand

**Abstract:**

**Background/Objective:** *Babesia* and *Theileria* is negatively effect to livestock animals and ﻿small ruminants. These losses inherently affect the economics of the livestock industry. Investigations of parasitic epidemiology in Thailand will be necessary to improve the existing parasite-control strategies for both of blood parasitic infections. Therefore, this study aims to investigate incidences of *Babesia* and *Theileria* infectionfrom Boer goat farms in Chiang Mai, Chiang Rai, and Lamphun.

**Methods:** 154 goats were randomly selected from Boer goat farms in Chiang Mai (n=62), Chiang Rai (n=60), and Lamphun (n=32). Blood parasitic infections were screened and identified by microscopic examination. Anemia status was determined by evaluation of the packed cell volume (PCV) of each animal. Genomic DNA was extracted from all blood samples using a genomic DNA mini kit. Furthermore, blood parasites were detected by species-specific primers through the polymerase chain reaction method.

**Results:** A total of 154 blood samples were found to be positive for blood parasitic infections as follows: 31 (20.13%), 29 (18.83%), and 2 (1.30%) for *Babesia ovis*, *Babesia bigemina,* and *Theileria ﻿luwenshuni*, and respectively. Furthermore, multiple hemoparasitic infections in the cattle were detected. The hematocrit results revealed 17 hemoparasitic infected samples from 62 blood samples, all of which exhibiting indications of anemia with no significant differences.

**Conclusion:** In this study, the analyzed incidence data of small ruminants hemoparasitic infection in three provinces of northern Thailand has provided valuable and basic information for the blood-borne parasitic infections proactive control strategies lead to the sustainable animal production.

**Keywords:** Small ruminants hemoparasites, *Babesia* infection, *Theileria* infection, Boer goat, Molecular detection