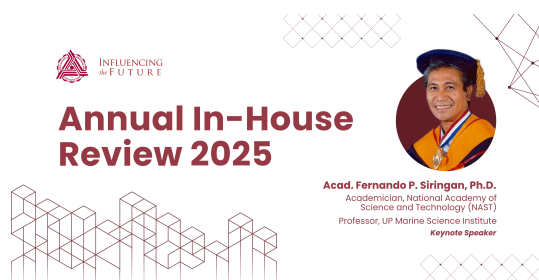


23rd MSU-IIT Annual In-House Review of Research and Development Projects



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Hidden Threat Revealed: First Report of *Anaplasma* spp. in Goats from Northern Mindanao, Philippines

Monday, October 20, 2025 1:00 PM (4 hours)

Abstract: Goat livestock plays a vital role in the economy by providing milk and meat, while also supporting household nutrition and livelihoods, particularly among the poor and smallholder farmers. Despite their importance, goats are highly susceptible to tick infestations, which not only cause direct harm, such as irritation and anemia, but also facilitate the transmission of tick-borne pathogens like *Anaplasma* species, the causative agents of anaplasmosis. In the Philippines, molecular studies on *Anaplasma* infections in goats remain limited and have largely focused on major cities, with no reported detection of *Anaplasma* directly from goat-associated ticks. To address this gap, this study screened DNA extracted from goat blood using conventional polymerase chain reaction (PCR) targeting the *Anaplasma* 16S rRNA gene. Of the 30 goat blood samples tested, 3.33% (1/30) were positive for *Anaplasma*. Phylogenetic analysis revealed a close relationship to *A. phagocytophilum*, and further genetic comparison showed similarity to the Ap-ha strain, a major variant of *A. phagocytophilum* that are known to be associated with humans. However, further studies are necessary to confirm its precise identity and to rule out the possibility that it represents a novel or unclassified *Anaplasma* species. This study provides the first molecular evidence of *Anaplasma* infection in goats from Northern Mindanao, Philippines, and offers valuable insights into the presence of tick-borne pathogens affecting livestock in the region.

Key Words: anaplasmosis, Ap-ha strain, phylogenetic analysis, tick-borne pathogens, 16S rRNA

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