



## Preface

# Ruminant Diagnostics: Emerging and Classical Approaches to Individuals and Populations



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Making a diagnosis is principal to medicine and precedes all other medical acts. Diagnostic testing is a critically important tool to help veterinarians diagnose disease or other medical conditions in clinical and population medicine. Livestock producers and veterinarians depend on accurate diagnostic information to explain clinical signs, rule at-risk diseases in or out, inform treatment and prevention strategies, provide a prognosis, and ultimately improve animal health and well-being. New methods and techniques, such as PCR, sequencing, and mass spectrometry, have revolutionized the amount and types of information that are available to clinicians on diagnostic reports. In the meantime, classical approaches, such as culture and serology, remain critical methods of disease investigation and risk management. The partnership between laboratorians, clinicians, and producers in utilizing diagnostics is becoming ever more important as a mix of new and classical diagnostic methodologies provides increased diagnostic sensitivity as well as result interpretation challenges.

In ruminant medicine, clinicians are tasked with not only making a diagnosis regarding the health condition of individual animals but also applying diagnostic findings to populations such as herds and flocks. This issue focuses on advances in diagnostic medicine and classical approaches to diagnostic medicine and has an emphasis on applying diagnostic findings to populations.

We truly appreciate all the authors, which include epidemiologists, internal medicine specialists, preventive medicine experts, microbiologists, immunologists, clinical and anatomical pathologists, pharmacologists, and toxicologists, among many others, for their contributions to this issue. We hope this issue provides an update and

reference on diagnostics to those working in ruminant medicine, and we are certain there is something for everyone within.

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