



## Protein and Amino Acid Digestion, Metabolism, and Utilization in Ruminants

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submissions:

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### Message from the Guest Editors

Dear Colleagues,

Protein is often the first limiting nutrient when formulating diets for beef and dairy cattle. Protein is the major nitrogenous macronutrient of the diet and has structural, signaling and physiological functions. Models to estimate protein requirements for beef and dairy cattle, also called the metabolizable protein system, separate the requirements of ruminal microorganisms for nitrogenous components from the protein requirements of the host animal. Adequate characterization of rumen degradable protein, rumen undegradable protein and microbial protein, as well as the correct estimates of animal requirements for amino acids during different physiological stages (e.g., growth, gestation, lactation) is essential to improve nitrogen utilization in ruminants.

This Special Issue aims to publish original research papers and literature reviews on protein and amino acid digestion, metabolism and utilization in ruminants, including the environmental aspects associated with nitrogen losses from beef and dairy production systems.

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*Guest Editors*





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## Message from the Editor-in-Chief

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