



Ruminant Nutrition Graduate Assistantship

The Ruminant Nutrition Research Lab at Clemson University is looking to fill two Ph.D. student positions to start this coming Summer/Fall 2018. If interested, please your GRE, TOEFL (if applies) scores and transcripts (BSc./MSc.). The assistantships for these positions have partially teaching (TA'ing one class per semester) or co-advising the dairy science club (Showing team and ADSA activities; i.e. quiz bowl, dairy challenge) and partially research. Below is some information about the program, projects and application process. After applicants have sent these documents, an academic and a behavioral interview will be conducted. Please direct your questions to Dr. Lascano (glascan@clermson.edu).

1) Ruminant Nutrition Lab at Clemson University

The areas of research that our lab focuses on are N and fatty acid metabolism, rumen fermentation, ingredient utilization, and screening of microbial modifiers. Nutrient utilization to improve feed efficiency, reduce metabolic costs of energy and protein, maximize microbial protein synthesis and milk production is the broad spectrum of my research program. The following areas are being studied to accomplish this objective:

- Understanding the relationships between forage to concentrate ratios, dietary components and mammary gland development and function when nutrients are provided precisely to meet the requirements dairy ruminant animals. We have unique approaches to answer our research questions and one the main questions that we will be pursuing is the interaction of N and fatty acid metabolism to ameliorate milk fat depression.
- Enabling nutrient utilization in ruminants by developing technology to increase their potential use. The use of by-products, waste products, novel coating technologies to replace conventional ingredients based on the production system and geographical location are a significant area of the current investigation.
- Rumen development and microbial establishment in neonatal calves to identify strategies and additives to improve animal health and performance during this critical period in the life of a ruminant animal.
- Using state of the art in-vitro (from batch to continuous culture) and in-vivo (metabolic studies using intensive research barn and robotic milking) methods to identify microbial modifiers, optimal delivery methods that enhance nutritional contributions to the animal. Different chemical, molecular and sequencing approaches for improving our basic knowledge of ruminant digestion are tools are currently being used to undertake this intriguing and exciting area of research.
- The use livestock production to reduce poverty, effects on climate change, and the implementation of efficient techniques to support sustainable (productive not subsistent) milk production for small farmers around the world.

2) **Application Process:**

Thanks for your interest in this position at Clemson University. Please make sure to send your TOEFL scores (if applies) and transcripts and have three people send their recommendations letters to Dr. Lascano. We will be conducting interviews (academic and behavioral) with shortlisted candidates. Notifications will be sent to you via e-mail.

Required Documents for your application are:

- 1) Letter of Intent
- 2) TOEFL/IELTS scores for International Students (institutional TOEFL scores are accepted for internships)
- 3) Transcripts
- 4) GPA > 3.5
- 5) Letters of Recommendation
- 6) International students if accepted will be expected to generate documents required for Visa applications

Further questions? Please e-mail us: glascan@clemson.edu

Below is the link for the application process for Clemson.

https://www.clemson.edu/graduate/academics/program-details.html?m_id=Veterinary-Sciences

Lab Website

<https://sites.google.com/g.clemson.edu/rnratclemson/home>