

GLOBAL  
RESEARCH  
ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES

# Rumen Microbial Genomics Network

Summary of relevant activities, future priorities and capability needs.

Input to 2024 Livestock Research Group Meeting  
Berlin, Germany

# Relevant activities

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- *Newsletters (3-4 times a year)*
  - *Covered topics : events, publications, labs, projects*
  - *219 members*
- *2024 RMG Webinar “Rumen Microbes: Back to the roots of culture”*

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2024 Rumen Microbiome Group Webinars

Rumen Microbiome: Back to the roots of culture

Speakers:



**Samantha Joan Noel**  
Aarhus University

Cultivating success:  
Progression of rumen  
bacteria culture  
techniques



**Jeyamalar Jeyanathan**  
Ghent University

Isolation of Rumen  
Methanogens Using  
Dilution to Extinction  
Technique



**Timothy John Hackman**  
UC Davis

Culture techniques for  
ciliate protozoa from  
rumen: Recent  
advances and  
persistent challenges



Day 1 – 28 May 2024



5 pm CET, 8 am PST, 11 pm CST, 2 am AEST)

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2024 Rumen Microbiome Group Webinars

Rumen Microbiome: Back to the roots of culture

Speakers:



**Yanfen Cheng**  
Nanjing Agricultural University

Anaerobic fungi and  
their role in the rumen



**Ros Gilbert**  
Department of Agriculture and Fisheries

Techniques to study  
rumen viruses and  
bacteriophages



Day 2 – 29 May 2024



9 am CET, 12 am PST, 3 pm CST, 5 pm AEST)



# Relevant activities

- *2024 RMG Webinar “Rumen Microbes: Back to the roots of culture” attracted ~ 90 participants for each session*
  - *In-depth discussions on the state-of-the-art techniques for culturing rumen microbes.*
  - *Expert insights on overcoming common cultivation hurdles.*
  - *Practical tips for wet lab techniques to explore the vast repertoire of the rumen microbiome.*
- *2024 RMG Workshop “Implications of the Nagoya Protocol for researchers working with biological material from abroad”*
  - *By German Nagoya Protocol Hub*
  - *Scheduled for November 21st 2024 1h00-3h00 PM*
  - *This event will explain what researchers need to know to comply with the Nagoya Protocol and the EU ABS regulation. It will also cover checks that have started in Germany, what happens if you don't comply and tools and tips to use.*
  - *Q&A session*

# Future priorities

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- *Literature reviews*
  - *Early life microbial acquisition ⇔ health, performance & environmental footprint in adulthood (L. Guan, I. Tapio, J. Seifert, M. Popova)*
  - *Extending knowledge on rumen microbes: qualitative/quantitative evidence synthesis of genomic data from public repositories (metagenomes/MAGs); meta-analysis type review (Y. Cheng)*
- *2025 In person Workshop*
  - *Focus on bioinformatics and/or SynComs*
  - *Keynote speaker : Hildebrand Lab <https://www.falk.science/>*