



## Microbiomes

**Organised by a Standing Committee:**      NO

### Meeting information

Date: July 29<sup>th</sup> 2021

Time: 1:00 am – 4:00 am (Central Standard Time)

Number of participants: >80

### Chair

Name: Claire ROGEL-GAILLARD

Affiliation: Université Paris-Saclay, INRAE, AgroParisTech, GABI, 78350, Jouy-en-Josas, France

Contact email: [claire.rogel-gaillard@inrae.fr](mailto:claire.rogel-gaillard@inrae.fr)

### Agenda

**1:00 am - 1:05 am - Introduction**

**1:05am - 1:20am - C. Larzul, M. Borey, Y. Billon, M.-N. Rossignol, G. Lemonnier, J. Estelle, C. Rogel-Gaillard.** *Response to selection on fecal microbiota composition in Large White piglets.* (W199)

**1:20am - 1:35am - A. Heras-Molina, J. Estellé, A. López-García, J. L. Pensantez-Pacheco, S. Astiz, C. Garcia-Contreras, M. Vazquez-Gomez, B. Isabel, A. Gonzalez-Bulnes, C. Ovilo.** *The impact of host genetics, independently of environmental factors, on porcine gut microbiota composition.* (W200)

**1:35am - 1:50am - A. Saborío-Montero, M. Gutiérrez-Rivas, R. Atxaerandio, A. García-Rodríguez, I. Goiri, J. López-Paredes, J. A. Jiménez-Montero, O. González-Recio.** *Rumen eukaryotes are the main risk factors for larger methane emissions in dairy cattle.* (W201).

**1:50am - 2:05am - M. Borey**, B. Bed Hom, N. Bruneau, J. Estellé, F. Larsen, F. Blanc, M.-H. Pinard-van der Laan, T. Dalgaard, F. Calenge. *Cecal microbiota composition of experimental laying hens infected with infectious bronchitis virus differs according to genetics and vaccination.* (W202).

**2:05am - 2:20am - C. Casto-Rebollo**, M. Argente, M. García, A. Blasco, N. Ibáñez-Escriche. *Could the gut microbiome modulate environmental variance and animal resilience?* (W203).

**2:20am - 2:40am – Break**

**2:40am - 2:55am - Y. Ma**, X. Yang, G. Hua, X. Deng. *The difference of lipid metabolism based on intestinal microbiome and transcriptome between Dorper and Tan sheep.* (W204)

**2:55am - 3:10am - T. Bilton**, M. Bastiaanse, M. Hess, J. Budel, G. Noronha, H. Henry, S. Hickey, G. Pile, P. Janssen, J. McEwan, S. Rowe. *The potential of using rumen microbial profiles for the prediction of enteric methane emissions traits for commercial livestock breeding.* (W205).

**3:10am - 3:40am - M. Watson**, L. Glendinning, A. Warr, J. Mattock. *Mapping the livestock microbiome.* (W206).

**3:40am - 4:00am - Business meeting**

## Summary of the meeting

The workshop was co-chaired by Óscar González-Recio (Spain) and Jordi Estellé (France).

### General comments

**1)** The chair, co-chairs and speakers are grateful to the ISAG executive committee to have renewed the opportunity to propose for a third time a workshop on animal microbiomes. The first Microbiomes workshop was organized during the ISAG conference in Dublin (2017) and the second in Lleida (2019), and the current workshop is the third consecutive one.

**2)** The chair and co-chairs thank all speakers for excellent presentations and all attendees for their active participation during the time slots dedicated to questions and discussion.

**3)** A three-hour session was organised, with seven 15-min talks and a final presentation lasting 30-min. Talks covered various species (pigs, cattle, rabbit, chicken, sheep) and also methodological issues, and were given by a panel of young and established researchers from five countries. We thank all speakers for having recorded their presentation in advance.

**4)** The high quality of the abstracts and presentations and the number of on-line attendees (with peaks having over 80 participants) have confirmed the relevance to consider animal microbiomes as a research field of interest for the ISAG community. This confirms that the ISAG can act as a forum for sharing resources, standardization methods and procedures. In this workshop, we have seen reports related to the covariations between microbiomes, host genomes (hologenomics) and relevant phenotypes. These approaches will help to better understand the biological steps from genomes to phenomes.

**5)** The workshop committee will interact with the scientific community who links animal genetics and microbiomes in order to further encourage contributions to ISAG activities and conferences.

#### **Discussion and decisions**

**1)** The opportunity to form a standing committee on animal microbiomes has been discussed and the proposal has been subjected to a vote using the “Rise hand” function in Zoom, and was validated with 19 votes in favour and none against. A motion has been submitted to the ISAG general business meeting to approve this new standing committee.

**2)** The name of the standing committee has been discussed during the workshop and a vote was performed. The winning option was “Microbiomes and animal genetics”. Other options were also considered: “Hologenomics and animal microbiomes”, “Animal microbial genetics”, “Animal genetics and the microbiome” and “Animal genetics and microbiomes”.

**3)** Claire Rogel-Gaillard, who initiated the Microbiomes workshop in 2017 and has acted as Chair since the beginning, has announced her willingness to transfer this responsibility to new Chair and Co-Chair who will lead the standing committee. All the workshop participants thank her for all efforts and leadership to introduce animal microbiomes into the scientific fields considered by the ISAG community.

**4)** Several attendees agreed to volunteer as members of the standing committee (in alphabetical order): Jordi Estellé (France), Oscar González-Recio (Spain), Peter Karlskov-Mortensen (Denmark), Farai Muchadeyi (South Africa), Suzanne Rowe (New Zealand) and Mick Watson (UK). Using the Zoom voting system, the workshop participants agreed in this composition and elected Jordi Estellé as Chair and Óscar González-Recio as Co-Chair. It was agreed that in the middle of the four-year term the Chair and Co-Chair roles will be exchanged between Jordi and Óscar.

## Motion submitted to the ISAG executive committee

The committee on Microbiomes started in 2017 and organized three consecutive workshops:

- 2017 : Dublin, Ireland
- 2019 : Lleida, Spain
- 2021 : virtual meeting

Since there have been three consecutive workshops on Microbiomes during ISAG conferences, we would like to propose:

- An ISAG standing committee on this topic
- A name for this new standing committee: Microbiomes and Animal Genetics

These two propositions were voted favourably during the workshop on July 29, 2021, and are submitted to the ISAG executive committee for approval.

## New Committee chair

Chair: Jordi Estellé
Term of service ( <i>add years of first and second term of service</i> ): 2021-2025 (first term)
Affiliation: Université Paris-Saclay, INRAE, AgroParisTech, GABI, 78350, Jouy-en-Josas, France
E-mail address: <a href="mailto:jordi.estelle@inrae.fr">jordi.estelle@inrae.fr</a>

## New Committee co-chair (optional)

Co-Chair: Oscar González-Recio
Term of service ( <i>add years of first and second term of service</i> ): 2021-2025 (first term)
Affiliation: Departamento de mejora genética animal, INIA-CSIC, 28040 Madrid, Spain
E-mail address: <a href="mailto:gonzalez.oscar@inia.es">gonzalez.oscar@inia.es</a>

*Note: One term runs for two bi-annual conferences (i.e. four years)*

### New Committee members

Other committee members	First term of service (from year to year)	Second term of service (from year to year)	Email address
Suzanne Rowe	2021-2025		<a href="mailto:Suzanne.Rowe@agresearch.co.nz">Suzanne.Rowe@agresearch.co.nz</a>
Peter Karlskov-Mortensen	2021-2025		<a href="mailto:pkm@sund.ku.dk">pkm@sund.ku.dk</a>
Mick Watson	2021-2025		<a href="mailto:mick.watson@roslin.ed.ac.uk">mick.watson@roslin.ed.ac.uk</a>
Farai Muchadeyi	2021-2025		<a href="mailto:MuchadeyiF@arc.agric.za">MuchadeyiF@arc.agric.za</a>

### SIGNATURES



Claire Rogel-Gaillard

**Chair**



Jordi Estellé

**Co-Chair**



Oscar González-Recio

**Co-Chair**