Matins d’Innovació: recerca en ramaderia ecològica

Seminari tècnic
SANTA COLOMA DE FARNERS, dijous 20 de setembre de 2018

Florencia Correa Fiz
ANIMAL PRODUCTION | Animal Health

Santa Coloma de Farners, 20/09/2018
ANIMAL PRODUCTION | Animal Health

0. Waste treatment
1. BSL3 animal facilities & laboratories
2. Air treatment
3. Administration and offices
4. BSL2 Laboratories

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Research focused on animal Health

- Research projects
- Services to companies
- Services to institutions
Subprograms & Research lines

Epidemiology

Exotic diseases

Endemic diseases
ALTERNATIVES TO ANTIMICROBIAL THERAPY

• Increase of antimicrobial resistances

• Public policies for antimicrobial use reduction in Veterinary medicine

• Need of alternative measures for disease control
  
  • Management improvement (biosafety)
  • Vaccines
  • Pre and Probiotics

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BACTERIAL ZOOONES AND ANTIMICROBIAL RESISTANCE

Epidemiology and control of enteric bacterial zoonoses and antimicrobial resistance.

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ANTIMICROBIALS AND MICROBIOTA

The effect of *perinatal* antimicrobials in the nasal microbiota composition at *weaning*

- **Reduction of diversity**

  Association with *predisposition* to suffer disease
The influence of nutrition in microbiota composition

- Prebiotics in feed efficiency and stimulation of the immune system
NUTRITION AND MICROBIOTA

Analysis of intestinal content

Microbiota composition

Ex vivo studies

Plant extracts

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MICROBIOTA IN HEALTH AND DISEASE

Nasal microbiota from pig farms with or without Glässer’s disease

Bioinformatic analysis

Putative probiotic isolation from “healthy” microbiota

Characterization: in vitro in vivo

Colonizers as antimicrobial substitutes

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Nasal and fecal microbiota from calves with or without pneumonia and/or diarrhea

Bioinformatic analysis
MICROBIOTA AND RESISTANCE TO DISEASE

Fecal transplant: from African warthogs to domestic pigs

The fecal microbiota of African warthog and its relationship with ASF resistance

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Subprograms & Research lines

Epidemiology

- Veterinary epidemiology and risk assessment (Sebastián Napp, Jordi Casal, Alberto Allepuz)

Exotic diseases

- Pathogenesis and prophylaxis of pestivirus infections (CSF) (Lillianne Ganges)
- Pathogenesis and prophylaxis of asfavirus infections (ASFV) (Fernando Rodríguez)
- Arboviruses and vectors (Núria Busquets)
- Pathogenesis, diagnosis, epidemiology and control of avian viral infections (Natàlia Majó)
- Middle East Respiratory Syndrome (Albert Bensaid)
- Prion diseases (Enric Vidal)

Endemic diseases

- Immunopathogenesis and protection against PRRSV (Enric Mateu)
- Pathogenesis, epidemiology and control of infections caused by ssDNA viruses (Joaquim Segalés)
- Viral Evolution (José Ignacio Nuñez, Ayub Darji)
- Respiratory bacterial infections (Virginia Aragón, Marina Sibila)
- Zoonotic bacterial infections and antimicrobial resistance
  - Tuberculosis (Bernat Pérez)
  - Antimicrobial resistance with a one-health perspective (Marta Cerdà, Lourdes Migura, Laila Darwich)
- Microbiota and health (Ignacio Badiola)