Rumigen

TOWARDS IMPROVEMENT OF **RUMI**NANT BREEDING
THROUGH **GEN**OMIC AND EPIGENOMIC APPROACHES

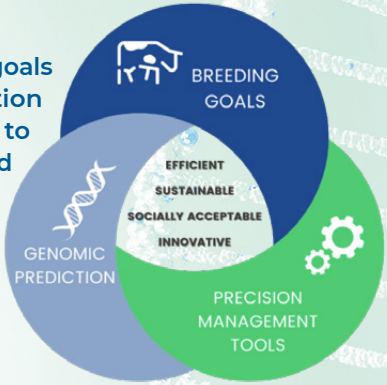
RUMIGEN at a glance:

Coordinator: Eric Pailhoux (INRAE)

- 13 European research institutes and higher education organisations
- 3 management & dissemination partners
- 2 SME's
- Duration: June 1st, 2021
  May 31st, 2026

What do we aim for?

RUMIGEN aims to provide future breeding goals and programs, innovative genomic prediction methods and precision management tools to optimise long-term genetic improvement and maintenance of genetic diversity. Citizen acceptance and social reception are pivotal in the development of these methods and tools.

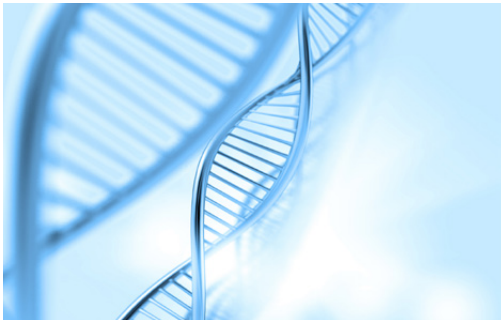


Why?

The ambition of the European Commission is to make Europe the world's first climate-neutral continent by 2050. For this purpose, the EU Commission is currently drafting the roadmap for a "Farm to Fork" strategy, which aims for a fair, healthy, and environmentally friendly food system. By providing efficient, sustainable, and socially acceptable breeding goals and programs, innovative genomic prediction methods and precision management tools, the RUMIGEN project will contribute to the Farm-to-Fork strategy.

Impacts

Breeding sector	Farmers	Consumers & Society
• *The RUMIGEN-project will contribute to more ethical and socially acceptable breeding objectives that care for eco-systemic consequences and animal welfare*		
Produce and market AI bulls well adapted to new farming systems and climate	Improvement of cattle resilience and health	More sustainable supply of high-quality milk and dairy products from healthier animals
• *RUMIGEN will provide a new set of phenotypes (adaptation to heat stress, sensitivity to environmental stress) as well as key molecular biomarkers useful to characterise the cattle epigenome.*		
Stimulate and help applied research on breeding strategies to maximise genetic improvement and avoid negative effects on animal production and health	Increased possibilities for the monitoring of cattle status	
• *The project will provide practical solutions for genomic selection in small and local breeds, reducing the technological gap with the largest breeds*		
Set of tools to guide breeders		
• *The project will contribute to the diversity and sustainability of livestock production*		
Benefit by tools to monitor semen quality and bull fertility	Improvement of profit and reduction of the carbon footprint	Improvement of profit and reduction of the carbon footprint



PROJECT PARTNERS

Research Institutes

- French National Institute for Agricultural Research (INRAE)
- Aarhus University (AU)
- Danish Board of Technology (DBT)
- Technical University of Denmark (DTU)
- University of Liège (GIGA)
- Institut de L'elevage (IDELE)
- Wageningen University (WU)
- Swedish University of Agricultrual Sciences (SLU)
- National Institute for Agricultural and Food Research and Technology (INIA)
- Regional Institute for Agri-Food and Forestry Research and Development (IRIAF)
- Norwegian Univeristy of Life Sciences (NMBU)
- Stichting Wageningen Research (WR)
- The University of Edinburgh (UEDIN)

Industry

- ELIANCE
- Valogene (VLG)

Dissemination and Management

- European Forum of Farm Animal Breeders (EFFAB)
- European Federation of Animal Science (EAAP)
- INRAE Transfert S.A. (IT)

Contact

Please send all your inquiries to: rumigenH2020@gmail.com

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