

## MEDIA INFORMATION

Leibniz Institute for Farm Animal Biology

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LEIBNIZ INSTITUTE  
FOR FARM ANIMAL BIOLOGY

### Cattle husbandry: European agricultural scientists break new ground in research cooperation

- [European Union supports pioneering project with 5 million euros](#)
- [SmartCow consortium to promote international exchange](#)
- [Leibniz Institute in Dummerstorf takes the lead in Germany](#)

It has long been common practice in the energy industry and maritime biotechnology, but it is uncharted territory for the European agricultural industry. The European Union has approved the joint project SmartCow, in which top-level research institutes from seven European countries are involved, including the Leibniz Institute for Farm Animal Biology in Dummerstorf. What is new is that these research facilities only provide their experimental infrastructure and know-how. Scientists from all European countries and business partners can use them for their own research activities. The four-year project will start on 19 February 2018 in Clermont-Ferrand, France. France is in charge of coordinating the EUR 5 million project. The main focus of research is the European cattle sector.

"Top locations for agricultural research are opening up with their excellent equipment to international science. Utilization of the highly specialized infrastructure is improved and knowledge transfer is optimized. This is the approach of the new model of research funding and it is a great success for our institute to act as a strong European partner in this new competence network", said Prof. Klaus Wimmers, Director of the Leibniz Institute for Farm Animal Biology in Dummerstorf (FBN).

By covering all physiologically relevant topics and covering the diversity of cattle breeds and production systems, SmartCow will provide academic and private research institutions with access to eleven large research facilities in seven countries with high-quality services and facilities. These are needed to develop innovative solutions for the efficient and ethical use of animal and feed resources that promote animal welfare and health and sustainable competitiveness.

In the context of SmartCow, scientific and technical questions mainly play a role in animal nutrition for nutrient utilization and emission measurement, in genetics to improve resource efficiency and in ethology for the automatic recording of behavioral characteristics.

#### [Attractive for scientists and research institutes](#)

The EU SmartCow project is a response to the ever more specialised farm animal research. "It is no longer possible to provide the equipment for a complete cutting-edge research at one location," explains Dr. Björn Kuhla, head of the subproject at the FBN's Institute of Nutritional Physiology. "In

addition, the challenges for sustainable cattle production are also growing, so that the more intensive networking of European research infrastructures is a logical step and unnecessary multiple funding is avoided."

In addition to the Institute of Nutritional Physiology, Prof. Birger Puppe and Dr. Jan Langbein from the Institute of Behavioural Physiology are also involved in SmartCow. The Leibniz Institute in Dummerstorf will receive a total of 400,000 euros for the next four years. "The research funding model is of great interest to both scientists and research institutions," said Kuhla. "Scientists can move more freely and according to their orientation in the best possible environment of their choice and the participating institutes will be more busy and internationally known."

With its modern experimental facility for cattle, the respiration chambers as well as the latest analysis methods for measuring methane emissions and more than 25 years of experience in behavioural research, the FBN offers ideal research conditions. In Dummerstorf, external researchers in the fields of cattle nutrition, metabolism and behavioral physiology are expected to be in particular. While in Germany, the main focus is on keeping Holstein cows in free stables and silage-based feeding, in France it is mainly the Limousin breed, which is widespread there, and in Ireland it is grazing livestock.

Through a coordination office, scientists from all EU countries can apply for research stays in SmartCow facilities on specific cattle production issues. Prof. Cornelia Metges from the Institute of Nutritional Physiology represents the FBN. The costs for research stays at the FBN are borne by the SmartCow project. 180,000 euros will be available until 2022.

A British industrial partner is responsible for the establishment of a cloud-based data platform in which all network activities, especially in the fields of animal husbandry and measurement, experimental planning, data collection and analysis, are recorded in a standardised manner. The results will be made available not only to European scientists, but also to agricultural associations and the business community, nature conservation organisations and political decision-makers

#### **Further information about the SmartCow project**

[https://cordis.europa.eu/project/rcn/212581\\_en.html](https://cordis.europa.eu/project/rcn/212581_en.html)

#### ***Photos: FBN/Nordlicht***

*Dummerstorfer respiratory chambers for measuring the energy balance of large animals including analysis of respiratory gases*

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*budget of the Institutes is more than 1.8 billion Euros.*

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