

## MEDIA INFORMATION

Leibniz Institute for Farm Animal  
Biology

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LEIBNIZ INSTITUTE  
FOR FARM ANIMAL BIOLOGY

# World first: pike perch genome to be mapped

## Promoting aquaculture to save natural resources

The Minister of Agriculture and the Environment in Mecklenburg-Vorpommern (MV), Dr. Till Backhaus, this week handed over a donation notification for another ambitious research project in sustainable aquaculture at the Leibniz Institute for Farm Animal Biology (FBN). The Federal State Government of Mecklenburg-Vorpommern will be financing the research project into pike perch (*Sander lucioperca*) genetics in Dummerstorf to a total of EUR 996,000 with funds from the European Maritime and Fisheries Fund and state coffers. The research will be done in cooperation with the Mecklenburg-Vorpommern Research Centre for Agriculture and Fisheries, Institute of Fisheries, and the results are expected in 2020.

Within the framework of the research project "Diversity analysis of the pike perch genome for the development of molecular bio-indicators for sustainable regional aquaculture", the pike perch genome is to be deciphered completely and the entirety of its genetic information identified. "The research project is a major challenge, but also a recognition of the scientific work done so far with the Born trout (*Oncorhynchus mykiss strain Born*) and the Baltic whitefish (*Coregonus maraena*)", emphasised Professor Klaus Wimmers, FBN director.

„In contrast to our domesticated animals, which have been around for 10,000 years, fish farming has only been taking place for a few centuries, and keeping game fish in aquaculture has only recently gained significance. The pike perch genome is almost unexplored. We want to identify the pike perch's genes and look for biomarkers that can be used as parameters for the welfare of the fish in further breeding," explained the project manager and biologist Dr. Tom Goldammer from the Institute of Genome Biology at FBN. The researchers want to investigate pike perch genes and compare the development of the fish using three breeding strains from the Müritz as well as from waters in Potsdam and Saxony. The pike perch, on average between 40 and 50 cm in length, are kept in the experimental aquaculture plant in Hohenwangelin near Waren/Müritz. Another smaller aquaculture facility will be newly constructed at Dummerstorf.

"Our goal is to optimise the keeping conditions and to enable, through our results, an economically viable and seasonally independent supply of the popular food fish while protecting the natural wild resource. In doing so, we place great emphasis on quality, i.e. on class instead of mass from MV," says Goldammer. Around 67 million tons of fish are produced in aquaculture globally, of which only three tons come from Europe. The Dummerstorf scientists want to contribute actively to a situation in which Germany's marginal part of 1.7 % of European fish production is significantly enlarged in future.

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sciences, economics, space and social sciences to the humanities. Leibniz Institutes devote themselves to socially, economically and ecologically relevant questions. They pursue knowledge-orientated and application-orientated research, also within inter- or transdisciplinary Leibniz research alliances, or support scientific infrastructures and provide research-based services. The Leibniz Association focuses on the transfer of knowledge, especially with the Leibniz Research Museums. It advises and informs politics, science, business and the public. Leibniz institutions maintain close co-operation with universities, among others in the form of the Leibniz ScienceCampi, with industry, and with other partners at home and abroad. They are subject to a transparent and independent Evaluation. Due to their national significance, the Federation and the Länder jointly promote and fund the institutes of the Leibniz Association. The Leibniz Institutes employ about 18,600 people, including 9,500 scientists. The institute's total budget is more than EUR 1.7 billion.

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*Photo: Hand-over of grant approval FBN/Frank Hormann*

*Minister of Agriculture Dr. Till Backhaus (R) handed over the grant approval to project manager Dr. Tom Goldammer.*

*Photo of pike perch: FBN*

*The pike perch, one of the most popular indigenous food fish species, gains around 800 g in weight per year in aquaculture. It needs around 15-18 months to develop from an egg to being processed as a food fish. The pike perch belongs to the perch family and is a predator that lives mainly in fresh water. Some pike perch can also be found in the brackish waters of the Baltic Sea. It has few bones and is delicious - and very popular in gastronomic circles. In 2014 only 893 tons of pike perch came into Europe from controlled breeding programmes; in contrast. 15,000 tons came from wild catches, mostly from Russia and Kazakhstan.*

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