MEDIA INFORMATION

Leibniz Institute for Farm Animal Biology

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LEIBNIZ INSTITUTE FOR FARM ANIMAL BIOLOGY

How fertile mice can help conserve the species of big cats

Major Leibniz project is to unravel fundamental mechanisms of fertility

Both humans and animals can be affected by infertility or reduced fertility. What causes mainly psychological problems in humans can lead to the extinction of endangered animal species. The causes of low fertility are many and often unknown.

The Leibniz Institute for Farm Animal Biology Dummerstorf (FBN) has unique mouse populations that carry the secret for particularly high fertility in their genome: after more than 45 years of consistent selection of fertility traits, they now produce almost twice as many young animals per litter as domestic mice.

Together with partners from science (Leibniz Institute for Zoo and Wildlife Research IZW, Institute for Reproduction of Farm Animals Schönow IFN, Institute for Clinical Molecular Biology of the University of Kiel) and industry (Federal Hybrid Breeding Programme BHZP and the international veterinary service GEOlifes), the researchers now want to decipher the phenomenon of fertility in the genome of these mice.

"In comparative studies in farm and wild animals, we are investigating whether the mechanisms effective in mice have general biological relevance," said the scientist. Together with IFN and BHZP, we are investigating whether genes of the same metabolic and signalling pathways are also responsible for different fertility in pigs. A subproject with the IZW and GEOlifes is concerned with the reproduction biology of wild cats such as lion populations in southern Africa and aims to apply the findings from the project in future within the framework of breeding programmes for species conservation.

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Association. The Leibniz institutes employ about 18,700 persons, including 9,500 scientists. The total budget of the Institutes is more than 1.8 billion Euros.
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Photo: private
PD Dr. Jennifer Schön came to the Dummerstorfer Leibniz Institute from the FU Berlin in 2014.

Photos: FBN/ Ralf Pöhland
Start of the project "signatures of selection" - participants of the kick-off meeting on 8 February at the Dummerstorfer Institute.

Photo: Joachim Kloock
From mouse to pig and lion - Infertility is a central problem for wildlife researchers and the conservation of species.

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