IGFBP stress detection (FBN):
Physiological stress adaptation measured in slaughter blood

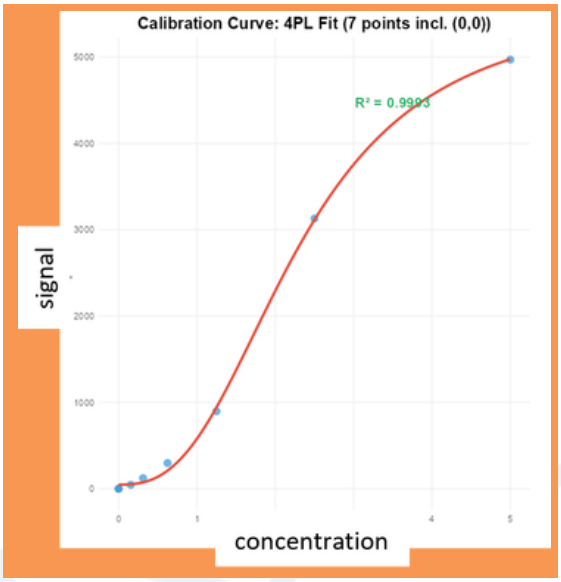
aWISH
ANIMAL WELFARE INDICATORS AT THE SLAUGHTERHOUSE

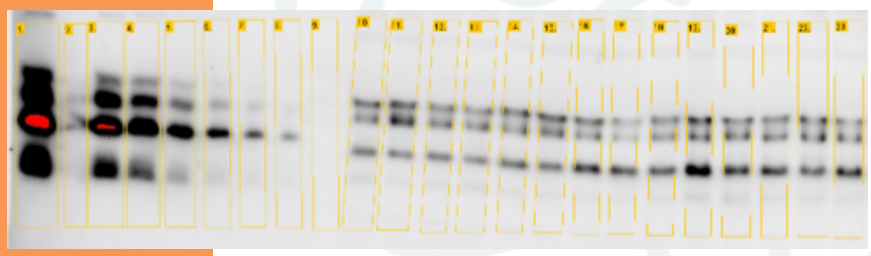
The Research Institute for Farm Animal Biology (FBN) conducts research into the physiological and ethological capabilities of farm animals, their interaction with the environment and the underlying regulatory and adaptive mechanisms.

The binding proteins (IGFBPs) for the insulin like growth factor (IGF) each regulate specific aspects of the metabolic response to immune challenges, growth processes and acute stress. In particular, they have the potential to act as an indicator for distress an animal accumulated during it's last days in live - which is not affected by the distress during slaughter itself. For which time period this can be inferred and what other factors have an effect on the measurements is part of on-going research.

In the slaughterhouse, IGFBPs measured in slaughter blood might be useful as a bioindicator for the physiological stress adaptation to infer information on preceding distress events e.g. during loading and transport.

During the aWish project, a profile of IGFBP values from different farms and different times was created to improve the level of knowledge on the variability of the values with regard to the highly standardized procedures within a slaughterhouse. This allows to infer information on how external factors such as transport details, breed differences or daytime and season may affect the measured values.
The IGFBP values were put into relation with classical stress parameters to gain insight on differences and similarities and where IGFBPs might outperform existing biomarkers.





IGFBP profile for several pigs and a calibration curve for quantitative Western-Ligand-Blot

Research Institute for Farm Animal Biology

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