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## **Advances in Animal Biosciences**

Proceedings of the XIII<sup>th</sup> International Symposium on Ruminant Physiology (ISRP 2019), 3–6 September 2019, Leipzig, Germany





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#### Advances in Animal Biosciences

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## Proceedings

of the

XIII<sup>th</sup> International Symposium on Ruminant Physiology (ISRP 2019), 3-6 September 2019, Leipzig, Germany

# 2019

## Advances in Animal Biosciences

This book is part of a series which is a companion to the journal ANIMAL



The Proceedings of the XIII<sup>th</sup> International Symposium on Ruminant Physiology constitute summaries of papers presented at the ISRP congress 2019 held at the KONGRESSHALLE am Zoo Leipzig, Germany, 3-6 September 2019.

The summaries have been edited. Views expressed in all contributions are those of the authors and not those of the organisers of the ISRP 2019.

This publication contains all the summaries that were available at the time of going to press.

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### A meta-analysis of the impact of the *Aspergillus oryzae* fermentation product on dairy cow performance

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Feed additives produced via microbial fermentation are capable of enhancing the innate ability of animals to degrade substrates such as fiber, and increase the harvest of nutrients from consumed feeds. These additives are valuable tools in modern animal production. A fermentation product based on fungus Aspergillus oryzae (AO) (Amaferm®, BioZyme Inc.) has a prebiotic-like action and is used to enhance milk yield, feed intake, and digestibility in dairy cows. Our objective was to run a meta-analysis from published literature of AO in dairy cows to evaluate the effects of this prebiotic-like additive on dry matter intake (DMI) and fat corrected milk (FCM) yield. A database was constructed from experiments involving AO supplemented to lactating dairy cows. Only in vivo experiments of selected peer review papers published in English from 1983 to 2018 were included to build the database. These experiments must have contained at least individual least squares means (LSM) and standard error of the mean (SEM) or means and standard deviation (SD) data of DMI and FCM in dairy cows. A total of 18 studies comprising 31 treatment means were pooled in a database. Data were analyzed by the means procedure of SAS (SAS 9.0, SAS Institute Inc., Cary, NC). Results from meta-analysis showed significance differences at all evaluated variables. The DMI and FCM average effect sizes were higher for AO treatments (0.390 and 1.028 for DMI and FCM respectively; P < 0.05). As AO is known to improve fiber digestion, results on DMI and FCM are sound. In conclusion, adding an AO prebiotic-like action additive to dairy cows diets have positive effects on animal performance.