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The Effect of Heat Stress on the Gastro-Intestinal Microbiota of Pigs

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Abstract : Heat stress (HS) negatively affects the physiology of pigs. In this study, 6 pigs will be subjected to temperatures of 35 ± 2℃ for 12 hrs/day for a duration of 21 days. The changes in the gastrointestinal tract (GIT) microbiota will be observed by analyzing the freshly collected faeces on days 1, 3, 7, 14 and 21. The changes will be compared to faeces from a set of 6 control pigs kept simultaneously at temperatures of 26 ± 2℃ for the same duration of 21 days. Different types of stresses such a weaning have a detrimental effect on GIT microflora. Similarly, HS is expected to have a harmful effect on the microbial diversity of the GIT. How these changes affect the immune system of the pigs will be studied and therapeutics to reduce the negative effects of HS will be developed.

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