



## Supplementary Material

# *Streptococcus bovis* JB1 Protects Against Oxidative Stress Caused by *comC* Knockout by Increasing Trehalose Secretion

Quanhui Peng<sup>1\*</sup>, Ali Mujtaba Shah<sup>2\*</sup>, Wang Zhi-Sheng<sup>1</sup>, Xue Bai<sup>1</sup>, Wang Li-Zhi<sup>1</sup>, Zou Hua-Wei<sup>1</sup>, Ali Raza Shah<sup>3</sup>, Jiang Ya-Hui<sup>1</sup>, Hu Rui<sup>1</sup> and Xiao Jian-Xing<sup>1</sup>

<sup>1</sup>Institute of Animal Nutrition, Key Laboratory of Bovine Low-Carbon Farming and Safe Production, Sichuan Agricultural University, Chengdu, 611130, PR China

<sup>2</sup>Key Laboratory of Animal Genetics, Breeding and Reproduction of Shaanxi Province, College of Animal Science and Technology, Northwest A and F University, Yangling 712100, China.

<sup>3</sup>Khairpur College of Agricultural Engineering and Technology, Sindh Agriculture University, Tandojam, 66000, Sindh, Pakistan

Quanhui Peng and Ali Mujtaba Shah contributed equally to this work.

**Supplementary Table S1. Composition and nutrient level of diet (Dry matter basis, %).**

| Ingredients         | Ratio | <sup>2</sup> Nutrient level |       |
|---------------------|-------|-----------------------------|-------|
| Corn                | 18.75 | ME (MJ/kg)                  | 7.55  |
| Wheat bran          | 6.00  | CP                          | 12.61 |
| Soybean meal        | 1.50  | NDF                         | 38.95 |
| Rapeseed meal       | 2.70  | ADF                         | 28.84 |
| Rice straw          | 40.00 | Ca                          | 0.60  |
| Distilled grain     | 30.00 | TP                          | 0.33  |
| CaCO <sub>3</sub>   | 0.45  |                             |       |
| NaHCO <sub>3</sub>  | 0.15  |                             |       |
| NaCl                | 0.15  |                             |       |
| <sup>1</sup> Premix | 0.30  |                             |       |

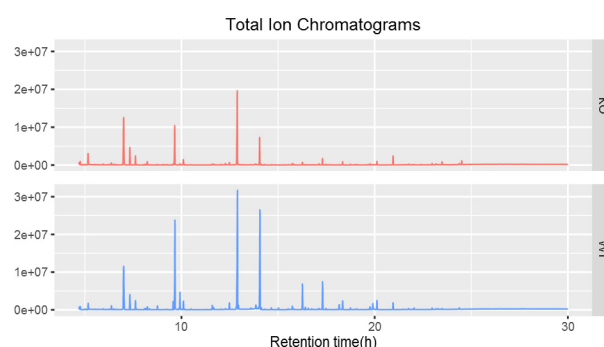
<sup>1</sup>One kilogram of premix contained: VA 1100000 IU, VD<sub>3</sub> 440000 IU, VE 3300 IU, Fe 16.67 g, Cu 3.33 g, Mn 6.67 g, Zn 10 g, I 170 mg, Se 70 mg, Co 30 mg. <sup>2</sup>ME was calculated, while the other nutrient levels were measured.

\* Corresponding author: pengquanhui@126.com, alimujtabashah@nwafu.edu.cn  
0030-9923/2025/0006-2707 \$ 9.00/00

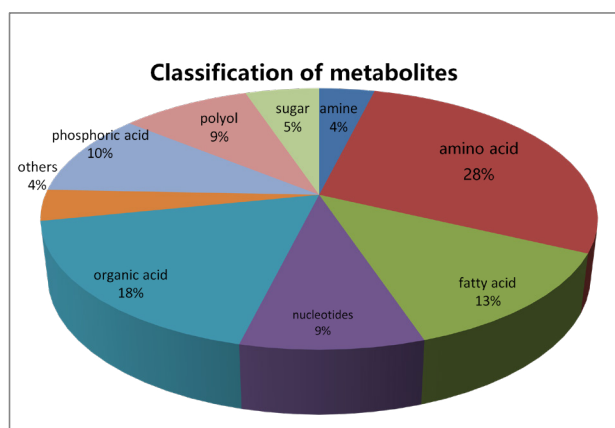


Copyright 2025 by the authors. Licensee Zoological Society of Pakistan.

This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).



Supplementary Fig. S1. Representative spectra of intracellular content obtained from *Streptococcus bovis* JB1 wild type and *ΔcomC* mutant.



Supplementary Fig. 2S. Classification of 78 annotated metabolites obtained from intracellular of *Streptococcus bovis* JB1 wild type and *ΔcomC* mutant.