PROCEEDINGS OF ABSTRACTS VII. INTERNATIONAL AGRICULTURAL, BIOLOGICAL, LIFE SCIENCE CONFERENCE AGBIOL 2025

07-10 SEPTEMBER 2025

ISTANBUL, TURKEY

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Organized by
Trakya University
Istanbul Beykent University
International Researchers Association

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WELCOME NOTES

You are welcome to our VII. AGBIOL Conference that is organized by Trakya University, Beykent University and International Researchers Association. The aim of our conference is to present scientific subjects of a broad interest to the scientific community, by providing an opportunity to present their work as oral or poster presentations that can be of great value for global science arena. Our goal was to bring three communities, namely science, research and private investment together in a friendly environment of Edirne, Turkey in order to share their interests and ideas and to get benefit from the interaction with each other.

In September 2018, we organized the first AGBIOL Conference with more than 700 scientists and researchers from all over the world with over 800 scientific papers. Due to COVID-19 situation, II. AGBIOL 2020 has organized fully on-line event which was one of the biggest online conferences in recent years in the world with 499 papers and 1133 authors with 333 oral and 166 e-poster presentations from 55 countries. Due to COVID-19 situation, AGBIOL 2021 was organized online again. AGBIOL 2022 conference was organized with a worldwide participation from 44 countries over 522 papers contributed by over 1300 authors. AGBIOL 2023 was organized with a record and worldwide participation from 33 countries 833 papers contributed by over 2000 authors with 522 oral and 311 poster presentations. AGBIOL 2024 consisted of 835 papers contributed by about 2000 authors with worldwide recodr participation again from 55 countries with 522 oral and 311 poster presentations.

There is a worldwide record participation from 60 countries 988 papers contributed over 2300 authors with 400 oral and 588 poster presentations in AGBIOL 2025.

The AGBIOL 2025 is normal participation as well as with online participation in Beykent University in Istanbul, Turkey on 07-10 September, 2025. The program included oral talks by invited prominent scientists and oral and e poster presentations by participants in selected topics from the submitted abstracts focusing on Agriculture, Biology and Life Sciences topics.

With care for our nature and environment, we aim the green congress, meaning that as little as possible papers will be used. Abstract book is published in electronic book and is distributed to the participants by e mail for online participants. All the e-posters are prepared in electronic form and then submit to via the conference e mail and exhibited in electronical poster boards as well as in online e poster hall in our web page during the conference.

The participants with paid conference fee accesssed all the normal and virtual presentation talks in each session, as well as to visit the virtual poster hall via preliminary provided. The abstracts were published in the Conference Abstract and Proceedings Book. Participants might send us their full papers, which based on their preferences are published either in our Conference Abstract and Proceedings Book or in selected International Indexed Scientific Journals.

Conference Topics:

Agriculture, Forestry, Life Sciences, Agricultural Engineering, Aquaculture and Biosystems, Animal Science, Biomedical science, Biochemistry and Molecular Biology, Biology, Bioengineering, Biomaterials, Biomechanics, Biophysics, Bioscience, Biotechnology, Botany, Chemistry, Chemical Engineering, Earth Sciences, Environmental Science, Food Science, Genetics and Human Genetics, Medical Science, Machinery, Pharmaceutical Sciences, Physics, Soil Science.

We would like to thank all of you for joining this conference and we would like to give also special thanks to TUBITAK and collaborators for giving us a big support to organize this event.

Prof Dr Yalcin KAYA
Head of the Organizing Committee

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IMPACT OF MASTITIS PATHOGENS ON BLOOD ANTIOXIDANT ENZYMES IN TRANSITION DAIRY COWS

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ABSTRACT

Dairy cows in early postpartum experience significant metabolic stress that increases their susceptibility to mastitis. This study examined the correlation between mastitis pathogens and the activity of superoxide dismutase (SOD) and glutathione peroxidase (GPX) in blood serum. Over a two-year study, udder health and antioxidant enzyme activity were assessed across three physiological periods, from the 21st day before calving up to the 42nd day of lactation. During the trial period, each cow in lactation was observed daily for clinical signs of mastitis. Categorisation of the observed population was done following screening for mastitis using udder clinical examination, the California Mastitis Test, and bacteriological culturing. The measurement of the SOD and GPX activity in blood serum was done with spectrophotometric assays expressed as mU/mg protein. Mastitis pathogens were isolated from 43.83% of udder quarters with milk secretion disorder, and the dominantly isolated microorganisms were grouped as contagious: Streptococcus agalactiae (19.14%) and Staphylococcus aureus (6.17%) or environmental: Enterococcus spp. (8.02%), Pseudomonas aeruginosa (7.41%), Escherichia coli (1.85%) and Aspergillus niger (1.23%). The results indicated that contagious mastitis pathogens had a statistically significant influence on the SOD and GPX activity in the blood serum of transition dairy cows. The relationship between oxidative stress, anti-oxidative enzymes, and mastitis in dairy cows underscores the importance of managing oxidative levels to enhance udder health and prevent mastitis.

Keywords: dairy cows, antioxidative enzymes, mastitis