

Preface

It is our great pleasure to have you at the 2022 4th International Conference on Biotechnology and Food Science (BFS 2022), which took place in Guangzhou, China from 16th to 18th December 2022 (virtual form). BFS 2022 was hosted by Guangzhou University, and chaired by Zhigang Liu (Northwest Agriculture and Forestry University, China) and Zhen Gu (Zhejiang University, China). The series conference of BFS has been successfully held for three sessions, and received unanimous praise from various experts and scholars all over the world.

BFS 2022 exists as an international forum for academic communications between experts and scholars in the fields of biotechnology and food science. It promoted the continuous development and collaborative innovation in related fields at home and abroad, and promoted the establishment of exchange and cooperation in technological research and development, industrial application and transformation of results among related industries, universities and research institutes.

After months of well preparation and hard work, the Proceedings of BFS 2022 covering a bunch of papers, having been checked through rigorous review and processes to meet the requirements of publication, are smoothly published. These papers feature but are not limited to the following topics: Micro/Nano Bioengineering, Microbial Physiology, Biodiversity and Dietary Diversity, Biomedical Engineering and Technology, Natural Products and Innovations, Agricultural Biotechnology, Nutrition and Food Security, etc.

We had about 80 participations both as speakers and participants, including researchers, teachers, students, industrial experts, and professionals. During the keynote speech part, each keynote speaker was given 30-40 minutes for keynote speech. The keynote speeches cover many topics, including: a) Accelerate the Innovation and Development of Precision Nutrition and Healthy Food -- Precision Nutrition: A Strong Guarantee for the Realization of Human Health; b) Intelligent Delivery Systems: Innovation and Transformation; c) Spatiotemporal Omics Techniques in Nutrition and Health; d) Study on the Regulation Mechanism of Betaine and Calcium Treatment on Chilling Injury of Fruit; e) Preparation and Application of Oil-Soluble Anthocyanins based on Enzymatic Acylation; etc.. The insightful speeches of each keynote speakers triggered interesting discussions and a good number of informal talks among all the participants.

We would like to express our gratitude to the organizers, keynote speakers and all the participants of BFS 2022, for their fruitful work and contribution to the success of the Conference. We are thankful to all the reviewers for providing constructive criticisms, stimulated comments and suggestions to the authors. Particularly, our special thanks go to the E3S Web of Conferences, for the endeavor of all its colleagues in publishing this paper volume.

May this event be a spark that ignites many new inventions in the fields related to biotechnology and food science!

The Committee of BFS 2022

Committee Member

Conference Chairmen

Prof. Zhigang Liu, Northwest Agriculture and Forestry University, China

Prof. Zhen Gu, Zhejiang University, China

Academic Committee Chairman

Prof. Jia Li, Guangzhou University, China

Technical Committee Chairman

Assoc. Prof. Xingran Kou, Shanghai Institute of Technology, China

Organizing Committee Chairman

Assoc. Prof. Yingbin Shen, Guangzhou University, China

Organizing Committees

Prof. Wenhua Yu, Guangzhou University, China

Prof. Xiaohu Luo, Ningbo University, China

Prof. Zhiyun Du, Guangdong University of Technology, China

Prof. Ruifen Zhang, Guangdong Academy of Agricultural Sciences, China

Prof. Furao Lai, South China University of Technology

Assoc. Prof. Dongxiao Su, Guangzhou University, China

Assoc. Prof. Jun Liu, China Agricultural University, China

Assoc. Prof. Yongsheng Chen, Jinan University, China

Assoc. Prof. Jie Zheng, Jinan University, China

Assoc. Researcher. Xingju Zhang, Beijing Genomics Institute, China

Dr. Hossein Hosseinkhani, Matrix, Inc, USA

Prof. Jihan Mohamed Kassem, National Research Centre, Egypt

Dr. Parvati Sharma, Chaudhary Bansi Lal University, India

Prof. Yi-Tao Yu, University of Rochester Medical Center, USA

Dr. Hossein Hosseinkhani, Matrix, Inc, USA

Assoc Prof. Deepika Koundal, University of Petroleum & Energy Studies, India

Academic Committees

Prof. Qingzhu Zeng, Guangzhou University, China

Prof. Weirong Hu, Guangzhou University, China

Prof. Shiyi Ou, Jinan University, China

Researcher. Xinquan Yang, Yazhouwan Seed Lab, China

Prof. Hongtao Lei, South China Agricultural University, China

Post Dr. Junyan Liu, University of Maryland, USA

Assoc. Prof. Anand Mohan, University of Georgia, USA

Assoc. Prof. Eugenio Demartini, University of Milan, Italy

Assoc. Prof. Vajiheh Fadaei, Islamic Azad University, Iran

Assoc. Prof. Anna Gaviglio, University of Milan, Italy