ES Food & Agroforestry
DOI: https://dx.doi.org/10.30919/esfaf1210

Food Technology and Security During the Pandemic

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Received: 25 November 2020; Accepted: 15 December 2020.
Article type: Editorial article.

We are stuck in the pandemic, deeply.

As the COVID-19 pandemic spreads and progresses, agricultural and food markets have been facing disruptions directly or indirectly, for both manufacturers and consumers. The pandemic is also challenging scientists to meet the manufacturers and consumers' demands with the fact of workforce reductions, raw material and ingredient shortages and price increases, etc. Many covid-19 cases have been reported with frozen chain related issue. The virus has been transported all over the world with the frozen sea products, meats and veggies on the food or the packages.

In this volume, ES Food & Agroforestry focuses on food security and innovative advances in food and agroforestry science and technology. Ensuring and providing low-cost but highly nutritious foods become a huge challenge in some communities. Prioritizing innovation in food science is always the key to fight against food insecurity and malnutrition, solve the new, repetitive challenges, and promote people's health and living standards. Thus, scientists from agriculture, biology, chemistry *et al* need to work together to achieve these good wishes. This issue selected current and significant developments in the multidisciplinary field of food science and technology. The topics include food security, frozen foods, electrospinning technology, bioactive peptides, food disinfection, food security and nutrition analysis, food nanotechnology, which are either novel, frontier technologies or closely related to people's daily life.

Bizimana *et al*. studied the impact of small-scale irrigation technologies on food security and nutrition, mainly focusing the Amhara region of Ethiopia, and provided some sparkling scenarios on nutrition and food security evaluation. A new extract from Echinacea purpurea was introduced by Che *et al*. to be used as natural alternative additive in drinking water to improve broiler production and meat quality. Pan *et al*. screened and identified angiotensin converting enzyme (ACE) and dipeptidyl peptidase IV (DPP-IV) inhibitory peptides, which is very valuable for the development of new medicines in pharmaceutical industry. Nolasco *et al*. focused on the frozen bakery products and used dried egg white to improve consumer acceptability on these foods, which also provides a solution to reduced-sugar bakery texture limitations.

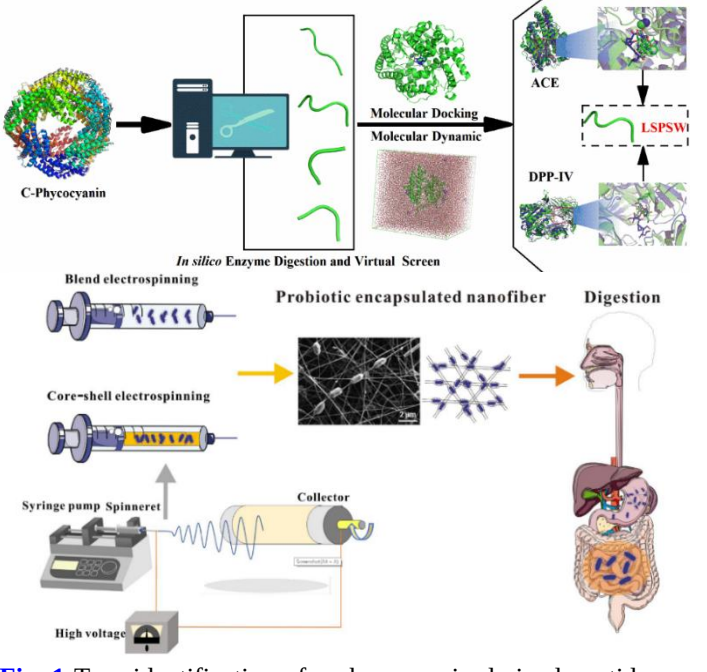

Fig. 1 Top: identification of c-phycocyanin-derived peptides as angiotensin converting enzyme and dipeptidyl peptidase iv inhibitors; bottom: recent advances in probiotics encapsulation by electrospinning.

Two review papers have been included in this volume: Chen *et al*. summarized starch-based carbonaceous nanofillers especially emphasized the properties and applications as

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composite material with carbon nanotubes and graphene; Drs. Lingli Deng and Hui Zhang introduced current state of electrospinning for the encapsulation of probiotics and the resultant applications as controlled delivery system, active packaging, and tissue engineering.

When the hunger is at the door, bullets are not far away. We are hoping for the best of the world and we try our best. The editor board of ES Food& Agroforestry would like to thank all contributors and reviewers for their valuable contributions.

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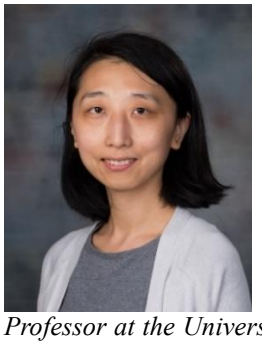

Dr. Yue Zhang *is a Professor in the School of Food Science and Biotechnology at Zhejiang Gongshang University, China. Dr. Zhang obtained her B.S in Chemistry and Ph.D. in Physical Chemistry from Wuhan University (2002-2011). She worked as a postdoc research associate at the University of Tennessee in 2011-2015, and then worked as an Assistant Professor at the University of Nebraska-Lincoln prior to joining Zhejiang Gongshang University in 2019. Dr. Zhang's research mainly focuses on the physicochemical properties of food biopolymers and the development of biopolymer-based nano-formulations for targeted delivery purpose.*

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