

ZHONG, TIAN Associate Professor of Food Science

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Dr. Zhong Tian is currently an associate professor at Faculty of Medicine, Macau University of Science and Technology (MUST). He received his bachelor's degree in Food Science and doctoral degree in Agricultural Engineering from Jilin University, and completed his postdoctoral research at School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University. Prior to joining MUST, Dr. Zhong Tian worked at Zhuhai College of Jilin University, serving as a professor and the head of the Department of Food Science, and concurrently as a master's supervisor at the Southern Research Institute of Jilin University. During this period, he served as a visiting scholar at the Institute of Food and Agricultural Sciences, University of Florida (UF/IFAS) in the United States. Dr. Zhong Tian's research mainly focuses on the applications of biomaterials and nanotechnology in food safety and drug delivery. Currently, he has published over 40 papers as the first or corresponding author in SCI-indexed journals, including *Trends in Food Science & Technology*, *Comprehensive Reviews in Food Science and Food Safety*, *Carbohydrate Polymers*, *Food Chemistry* and *Food Hydrocolloids*. As the principal investigator (PI), he has served as the principal investigator for over 10 research programs including the joint project supported by the National Natural Science Foundation of China and the Macao Science and Technology Development Fund (NSFC-FDCT). Furthermore, Dr. Zhong Tian also serves concurrently as a member of the Teaching Steering Committee for Food Science Specialties in Guangdong Province, a review expert for the "Bay Area Standards," a review expert for the "Macao Supervised Production" certification logo, and an editorial board member of the journal *Scientific Reports*. His research group welcomes students with academic backgrounds in food science, biomaterials, pharmacy, or related disciplines to join and pursue graduate studies at the master's or doctoral level.

Academic Qualification

PhD in Agricultural Biological Environmental and Energy Engineering, Jilin University;
BSc in Food Science and Engineering, Jilin University.

Teaching Area

Food chemistry and analysis, Food research and development, etc.

Research Area

The applications of biomaterials and nanotechnology in food safety and drug delivery

Working Experience

Associate Professor, Faculty of Medicine, Macau University of Science and

Technology (Jul 2024 - Now);
Assistant Professor, Faculty of Medicine, Macau University of Science and Technology (Sep 2020 - Jun 2024);
Visiting Scholar, Institute of Food and Agricultural Sciences, University of Florida (Aug 2018 - Aug 2019);
MSc supervisor, Southern Research Institute, Jilin University (Sep 2016 - Aug 2020);
Associate Professor/Professor/Department head, School of Pharmacy and Food Science, Zhuhai College of Jilin University (Sep 2015 - Aug 2020);
Postdoctoral fellow, School of Chemistry and Chemical Engineering, Shanghai Jiao Tong University (July 2013 - Oct 2015).

Academic Publication (selected)

21. Li Z., Dong Y., Wu T., Zhu W., Jing H., Jiang T., Liu Y., Yu X., Xiao Y., and **Zhong T.***, (2025). Pectin-coated liposomes for pectinase-triggered thymol release: A novel on-demand sterilization approach for orange preservation. *Food Hydrocolloids*, 111792. (Q1, IF: 12.4)
22. Dong Y., Jia X., Wu T., Zhu W., Zhang Z., Jiang T., Yu X., Xiao Y., Feng C., Huang X., and **Zhong T.*** (2025). Bacteria-triggered on-demand thymol release for salmon preservation: A self-destructive antibacterial strategy. *Food Chemistry*, 144563. (Q1, IF: 8.5)
23. Zhu W., Dong Y., Wu T., Jiang T., Xiao Y., Yu X., and **Zhong T.*** (2025). Synergies of Plant-derived Compounds in Controlling Foodborne Microorganisms: Antimicrobial Mechanisms, Determination Methods and Combined Effects. *Food Reviews International*, 2469594. (Q1, IF: 5.3)
24. Chen L., Jing H., Dong Y., Cao Y., Wu T., Zhu W., Dai F., Chen M., Liu Y., He N., Huang R., and **Zhong T.***, (2025). Sustained release of gaseous chlorine dioxide from alpha-cyclodextrin: An innovative method for strawberry preservation. *Food Chemistry*, 473, 143135. (Q1, IF: 8.5)
25. Cao Y., Dong Y., Wu T., Chen L., Zhu W., Jiang T., He N., Liu Y., Huang R., Yu X., Xiao Y., and **Zhong T.*** (2025). A carboxymethyl cellulose-based pH-responsive chlorine dioxide release film for strawberry preservation. *International Journal of Biological Macromolecules*, 294, 139457. (Q1, IF: 7.7)
26. Qiu J., Yang H., Zhang Y., Xiao Y., Wang L., Peng Y., Yu X., Huang X., and **Zhong T.*** (2024). Emerging trends in the application of riboflavin-mediated photodynamic inactivation for food preservation. *Trends in Food Science & Technology*, 143, 104295. (Q1, IF: 15.3)
27. Jiang T., Dong Y., Zhu W., Wu T., Chen L., Cao Y., Yu X., Peng Y., Wang L., Xiao Y., and **Zhong T.*** (2024). Underlying mechanisms and molecular targets of genistein in the management of type 2 diabetes mellitus and related complications. *Critical Reviews in Food Science and Nutrition*, 64(31), 11543-11555. (Q1, IF: 10.2)

28. Wu T., Zhu W., Chen L., Jiang T., Dong Y., Wang L., Tong X., Zhou H., Yu X., Peng Y., Wang L., Xiao Y., and **Zhong T.***, (2023). A review of natural plant extracts in beverages: Extraction process, nutritional function, and safety evaluation. *Food Research International*, 172, 113185. (Q1, IF: 8.1)
29. Zhang Y., Qiu J., Yang K., Lu Y., Xu Z., Yang H., Xu Y., Wang L., Lin Y., Tong X., He J., Xiao Y., Sun X., Huang R., Yu X.*, and **Zhong T.***, (2023). Generation, mechanisms, kinetics, and effects of gaseous chlorine dioxide in food preservation. *Comprehensive Reviews in Food Science and Food Safety*, 22(4), 3105-3129. (Q1, IF: 15.798)
30. Wang A., Feng X., He G., Xiao Y., **Zhong T.***, and Yu X.* (2023). Recent advances in digital microfluidic chips for food safety analysis: Preparation, mechanism and application. *Trends in Food Science & Technology*, 134, 136-148. (Q1, IF: 16.002)