



Preface to the Special Issue: Modern Explorations of Traditional Medicine—From Molecular Mechanisms to Clinical Translation

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Within the contemporary landscape of global medical research, traditional medicine, particularly Traditional Chinese Medicine (TCM), is attracting increasing scientific attention due to its unique theoretical framework and rich empirical history. A central academic focus lies in elucidating its mechanisms of action, validating its efficacy through modern research methodologies, and facilitating its standardization and international integration. This special issue entitled “Exploring the Wonders of Traditional Chinese Medicine” centers on the pharmacological effects and mechanisms of traditional medicinal substances and their active components across various disease models and clinical settings. The four research articles included herein demonstrate the breadth and depth of modern research on traditional medicine through diverse lenses: network pharmacology, microbiome analysis, clinical retrospective study, and monomeric compound application.

The first article “Network Pharmacology of Baicalein Targeting TNF Signaling in Inflammation” systematically elucidates how baicalein modulates tumor necrosis factor signaling through multiple targets to inhibit inflammatory responses, providing a theoretical basis for the application of TCM monomers in immune regulation^[1]. The second study “Structural Modulation of Gut Bacterial and Fungal Community of C57BL/6 Mice by Pseudobulbus Cremastrae Seu Pleiones Aqueous Extract” reveals the potential impact of a traditional medicinal material on the host gut microbiota from a microecological perspective, expanding the scope of mechanistic research on herbal medicines^[2]. The third paper “Anti-fibrosis Effect of the Traditional Chinese Medicine Compound Biejia Ruangan in Patients with Chronic Hepatitis B: A Retrospective Cohort Study” validates the potential of a TCM formula in treating liver fibrosis through clinical data, reflecting a research approach that integrates disease diagnosis with TCM syndrome patterns^[3]. The final article “Utilization of Traditional Chinese Medicine Monomers in the Thera-

peutic Management of Enteritis-Associated Inflammation” reviews the regulatory roles of various TCM monomers in intestinal inflammation, offering insights for precise, component-defined therapies^[4].

Although these four articles approach the subject from different angles, they collectively address a core question: how can the mechanisms and efficacy of traditional medicine be elucidated and verified within a modern scientific framework^[5]? These studies not only provide experimental evidence for the development and application of related medicinal agents but also highlight the significant role of interdisciplinary approaches in the modernization of traditional medicine^[6].

The publication of this special issue aims to gather cutting-edge findings, foster academic exchange, and inspire future research. We hope this work encourages more scholars to engage in this dynamic and challenging field, jointly advancing the innovative development and global sharing of traditional medicine.

Abbreviations

TCM, Traditional Chinese Medicine.

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Conflicts of interest

The author declared that there are no conflicts of interest.

Authors' contributions

The only author of this paper written, organized, and reviewed the whole article.

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