



澳門大學
UNIVERSIDADE DE MACAU
UNIVERSITY OF MACAU



中藥質量研究國家重點實驗室 (澳門大學)
Laboratório de Referência do Estado para Investigação de
Qualidade em Medicina Chinesa (Universidade de Macau)
State Key Laboratory of Quality Research in Chinese Medicine
(University of Macau)



中華醫藥研究院
Instituto de Ciências Médicas Chinesas
Institute of Chinese Medical Sciences

ICMS NEWSLETTER

ISSUE 01/ JANUARY 2024



1st International Symposium on Chinese Medicine and Natural Products
1st International Symposium on Pharmaceutical Sciences
University of Macau, Macau SAR, 2023

NEWS & FEATURES

- ❖ Traditional Chinese Medicine and Immunology Research Workshop
- ❖ 2023 NSFC-FDCT Frontier Discipline Forum
- ❖ 2023 Macao Forum of Chinese Medical Sciences
- ❖ 1st International Symposium on Chinese Medicine and Natural Products and 1st International Symposium on Pharmaceutical Sciences
- ❖ Inauguration of Traditional Medicine Innovation Alliance

2023 University of Macau - Tsinghua University Workshop on Traditional Chinese Medicine and Immunology Research



2023 Traditional Chinese Medicine and Immunology Research Workshop

From 17 to 24 December 2023, the University of Macau (UM) and Tsinghua University successfully convened a week-long "Traditional Chinese Medicine and Immunology Research Workshop." Led by Prof. Xin Chen, Director of the Institute of Chinese Medical Sciences (ICMS) at UM, alongside Deputy Director of Academic Affairs and Education Prof. Jiahong Lu and Prof. Chon-Kit Chou, 12 UM students engaged in a productive exchange with Tsinghua University faculty members and students, laying the groundwork for future collaboration.

On the inaugural day, the School of Medicine at Tsinghua University, represented by Prof. Xiaoyu Hu and Prof. Yan Shi, warmly welcomed UM students and faculty. The day began with introductions of both institutes, teaching standards, and research platforms, followed by a four-hour seminar on "Traditional Chinese Medicine and Immunology." This paved the way for deeper collaboration between the universities in these fields. Three UM professors shared their insights into regulating the immune and nervous systems using traditional Chinese medicine. Moreover, three UM professors served as judges for the doctoral course "Critical Thinking in Immunology," acquiring a comprehensive understanding of Tsinghua University's doctoral research training.

The following day, a delegation from ICMS visited the School of Pharmaceutical Sciences at Peking University. They engaged in in-depth discussions with the Dean of the School of Pharmaceutical Sciences, Prof. Min Ye, as well as two Vice Deans, Prof. Zhuo Huang and Prof. Yiguang Wang, and their team regarding research collaboration and the

joint cultivation of expertise in pharmacology. Subsequently, ICMS representatives visited Tsinghua University's School of Pharmaceutical Sciences to discuss future student exchange initiatives. Prof. Ligong Chen from Tsinghua expressed continuous support for academic exchanges and introduced a two-month Amgen Scholars Program for student summer exchanges.



ICMS Director Prof. CHEN led the delegation to visit the School of Pharmaceutical Sciences at Peking University



Visiting the School of Pharmaceutical Sciences at Tsinghua University and engaging in discussions

Over the seven-day research workshop, PhD students from both universities shared research progress and participated in lively discussions. The workshop also included featured courses such as "The Power of Vaccines", "Frontiers of Biomedical Forum", and "Introduction to Basic Medicine and Diseases". Additionally, UM students visited Schwarzman College, Tsinghua University History Museum, and school-level scientific research platforms. On the last day of the event, UM students visited Changping Laboratory and biotechnology companies such as SineuGene and China Immunotech, gaining deeper insights into cutting-edge technologies in life sciences and pharmacy fields, learning the experience of translating findings from basic research into promising clinical applications.

At the closing ceremony, ICMS student representatives, Yibo Chen and Hong U Fong, expressed gratitude for the warm hospitality from Tsinghua University. They were particularly impressed by Tsinghua's school-level research platforms and eagerly anticipated closer cooperation between the two universities in traditional Chinese medicine and immunology.

This collaborative initiative was guided by the Hong Kong, Macao, and Taiwan Office of Tsinghua University and hosted by the Department of Basic Medical Sciences, School of Medicine, Tsinghua University. The two-year preparation for the event, initiated in 2021, resulted in a successful collaboration under the theme "Traditional Chinese Medicine and Immunology." The project received funding from the "Ten Thousand Student Exchange Program" a student project of the 2023 Mainland and Hong Kong/Macau Student Exchange Program of the Ministry of Education.



Group photo at the closing ceremony of the workshop

2023 NSFC-FDCT Frontier Discipline Forum

In order to implement the central policy "One Country, Two Systems" of the Chinese government and promote the development of Macau's health industry, as well as strengthen cooperation and communication between mainland China and Macau scientists, the "2023 NSFC-FDCT Frontier Discipline Forum" jointly organized by the National Natural Science Foundation of China (NSFC) and Macao Science and Technology Development Fund (FDCT) was held from 5 December to 8 December in Harbin, Heilongjiang Province.

This forum focuses on the inheritance and development of traditional Chinese medicine (TCM). More than ten professors from UM and other institutions participated, led by Kuai Lam Ip, FDCT Administrative Committee member. Yongtao Zhang, NSFC Acting Director of the Bureau of International Cooperation and Director of the Hong Kong, Macau, and Taiwan Affairs Office, led

experts and scholars from Harbin Medical University, Heilongjiang University of Chinese Medicine, Institute of Medicinal Plant Development of the Chinese Academy of Medical Sciences, Academy of Military Medical Sciences, Shanghai University of Traditional Chinese Medicine, Guangzhou University of Chinese Medicine, Tianjin University of Traditional Chinese Medicine, and other mainland institutions to attend the forum.



Prof. Xiuping Chen from ICMS gave a presentation

Yongtao Zhang and Kuai Lam Ip delivered speeches expressing the support of NSFC and FDCT for promoting research cooperation in the field of TCM between mainland China and Macau. They encouraged the participating experts to exchange research progress and share achievements during the forum, and provide suggestions for the high-quality development of TCM. Academician Baofeng Yang from Harbin Medical University delivered a keynote speech on "Promoting the High-Quality Development of TCM through Interdisciplinary Integration." Following that ICMS director Xin Chen gave an invited talk on "Therapeutic Significance of Targeting TNFR2 with Small Molecules in Traditional Chinese Medicine." Professors Shaoping Li, Xiuping Chen, Jiahong Lu, Defang Ouyang, Ying Wang, and Ying Bian from ICMS also delivered presentations at the forum. In total, 27 experts from mainland China, Hong Kong, and Macau in the field of TCM gave presentations, covering various aspects such as new theories, strategies, and methods for the innovative development of TCM. The participating experts engaged in in-depth discussions and shared their opinions on the high-quality development of TCM. They agreed that focusing on the clinical effectiveness and safety of TCM and aiming for its

modernization, internationalization, as well as industrialization via multidisciplinary collaborative innovation are the core elements of high-quality TCM development. The participants unanimously agreed to formulate the "2023 Harbin Consensus on High-Quality Development of Traditional Chinese Medicine" and release it to the industry after the forum.

This forum was funded by NSFC and FDCT, with Heilongjiang University of Chinese Medicine as the host institution.



ICMS director Xin Chen gave an invited talk at the forum



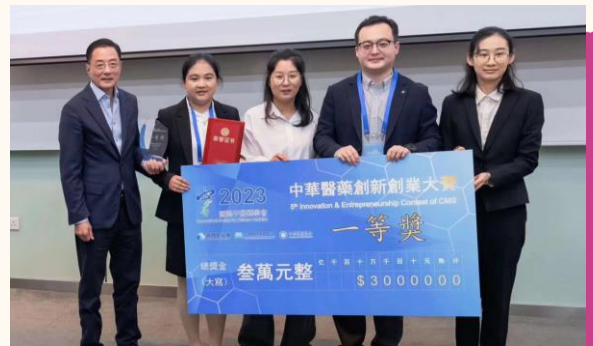
2023 Macao Forum of Chinese Medical Sciences

The “2023 Macao Forum of Chinese Medical Sciences” series of events were held from 3 December to 6 December 2023 at the University of Macau (UM). The forum was organized by the International Society for Chinese Medicine, co-organized by the Macao Centre for Research and Development in Chinese Medicine, Association of Chinese Medicine, and SCI journal *Chinese Medicine*, with sponsorship from the Macao Foundation.

Zhiliang Wu, president of the Macao Foundation, Iek Long Lo, director of the Health Bureau of Macao SAR, Peng Cheong Choi, director of the Pharmaceutical Supervision and Administration Bureau of Macao SAR, Weng Keong Che, president of the Administrative Committee of the Science and Technology Development Fund of Macao SAR, Yonghua Song, rector of UM, Hui Mo, director of the World Health Organization Collaborating Centre for Traditional Medicine presented speeches and congratulatory messages. Academicians, scholars, and young talents from both domestic and overseas delivered outstanding keynote speeches in the forum. Teams from more than ten renowned universities at home and abroad participated in the “5th Innovation & Entrepreneurship Contest of CMS”. The forum promoted the Chinese medicine industry in Macao and advance the inheritance, innovation, and globalization of Chinese medicine.



Prof. Yitao Wang, founding director of ICMS and director of the Macao Centre for Research and Development in Chinese Medicine delivered a speech: Inheriting innovation • R&D transformation • Empowering Macao • Going global



5th Innovation & Entrepreneurship Contest of CMS Awarding Ceremony



1st International Symposium on Chinese Medicine and Natural Products 1st International Symposium on Pharmaceutical Sciences

The Institute of Chinese Medical Sciences (ICMS) and the State Key Laboratory of Quality Research in Chinese Medicine (SKLQRCM) of UM jointly held the 1st International Symposium on Chinese Medicine and Natural Products and the 1st International Symposium on Pharmaceutical Sciences from 26 October to 28 October 2023.

More than 300 experts, researchers, and students from Australia, South Korea, Singapore, mainland China, Macao, and Hong Kong attended the symposium. Speaking at the event, Prof. Wei Ge, vice rector of UM, said that UM has attached great importance to the research and development of Chinese medicine and has made good progress in the industrialisation of Chinese medicine, adding that UM will continue to promote international cooperation in the field. The symposium featured a series of 31 talks on cutting-edge research and innovative technologies in Chinese medicine, natural products, and pharmaceutical sciences, covering topics such as novel technologies for ensuring the quality of traditional Chinese medicine, molecular targets for immunotherapy, progress in clinical research and drug regulation, frontiers in drug discovery, innovations in pharmaceutical products and drug delivery, and the Outstanding Scientific Publication Forum.



10 postgraduate students participated in the symposium were awarded the SLB Trainee Outstanding Research Award sponsored by the Society for Leukocyte Biology.



Prof. Shao Feng, member of the Chinese Academy of Sciences, was the keynote speaker of the symposium and gave a talk on his research on pyroptosis over the years.



1st International Symposium on Chinese Medicine and Natural Products
1st International Symposium on Pharmaceutical Sciences
University of Macau, Macau SAR, 2023

15th UM Scholar Research Forum

The 15th UM Scholar Research Forum entitled 'Building the First Line of Defense for the Safety of Chinese Medicines with Modern Technology', was held on 24 November 2023 at the University of Macau. Prof. Peng Li from ICMS, was the speaker. The talk was attended by a full house of audience, with many secondary students and teachers watching it online as well.

During the talk, Prof. Li gave a detailed explanation of the main factors affecting the safety of Chinese medicines and presented how modern technologies can be used to ensure the safety of Chinese medicines. Participants actively engaged in the Q&A session and some said that the talk enabled them to acquire a deeper understanding of the safety of Chinese medicines



Prof. Peng Li, deputy director (research and technology transfer) of ICMS gave a talk.

UM rector leads delegation to visit top universities in South Korea and signs cooperation agreements

Yonghua Song, rector of UM, led a delegation to visit several top universities in South Korea, such as Korea University, Ewha Womans University, Sungkyunkwan University, Kyung Hee University, Yonsei University, and Hanyang University, to expand the university's international network. Members of the UM delegation included Xin Chen, director of ICMS, Ruibing Wang, professor of ICMS and director of the Global Affairs Office, and Oi Lam Ung, programme director of ICMS.

During the visits, a number of cooperation agreements were signed and discussions were held to explore joint training of innovative talent with international competitiveness. Representatives of UM's ICMS also paid a visit to the College of Korean Medicine of Kyung Hee University to discuss research collaboration and organising academic conferences in the field of traditional medicine.



UM and Kyung Hee University signed a student exchange agreement

Inauguration of Traditional Medicine Innovation Alliance



The inauguration ceremony of the Traditional Medicine Innovation Alliance is held online

To improve the level of cooperation in traditional medicine innovation, the University of Macau (UM) took the initiative to establish the Traditional Medicine Innovation Alliance with top universities and research institutes in Singapore, Hong Kong, Malaysia, and South Korea. The inauguration ceremony and first board of directors meeting of the alliance was held on 10 October 2023.

level of cooperation between Asian universities and research institutes in traditional medicine innovation and the commercialisation of research results, and develop in-depth cooperation in the areas of resource sharing, research collaboration, talent cultivation, collaborative innovation, and social services.

Initiated by UM, the National University of Singapore, the Hong Kong Polytechnic University, the Sarawak Biodiversity Centre in Malaysia, and Seoul National University in South Korea, the alliance will bring together experts and institutes in traditional medicine in the region to create a new landscape for the traditional medicine industry in Asia. Speaking at the ceremony, Yonghua Song, rector of UM, said that the alliance will contribute to the Macao SAR's economic diversification and the high-quality development of the Chinese medicine industry in Macao. He also expressed hope that the alliance members will work together to improve the



Yonghua Song, rector of UM, and UM representatives

ICMS research projects receive grants from NSFC



The National Natural Science Foundation of China (NSFC) announced the result of grant applications for 2023. Dr. Ruibing Feng and Dr. Guodong Li, research assistant professors at ICMS received grants from the NSFC Young Scientists Fund.

Academic visits to ICMS

Delegation of National Health Commission

Haichao Lei, vice-minister and deputy secretary of the Leading Party Members' Group of the National Health Commission, led a delegation to visit ICMS and SKL-QRCM on 19 December 2023. The delegation was accompanied by UM Rector Prof. Yonghua Song. They were warmly welcomed by Prof. Peng Li, deputy director of ICMS, and Prof. Yuan-Jia Hu.

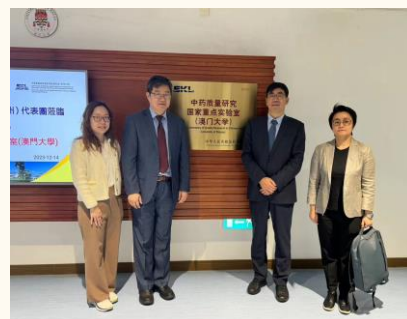


Delegation from National Development and Reform Commission

Director of the Department of Regional Opening-up at the National Development and Reform Commission (NDRC), Jianping Xu led a delegation with representatives from several central ministries to visit ICMS and SKLQRCM on 14 December 2023, accompanied by UM Rector Yonghua Song. They were warmly received by ICMS director and SKLQRCM director, Xin Chen and a team of principal investigators.

Delegation of Oxford Suzhou Centre for Advanced Research (OSCAR) University of Oxford

A delegation led by Prof. Zhanfeng Cui, founding director of Oxford Suzhou Centre for Advanced Research (OSCAR) University of Oxford, visited ICMS for collaborations on 14 December 2023. They were warmly received by ICMS director, Prof. Xin Chen and Dr. Wai San Cheang.



Delegation of CPPCC Anhui Provincial Committee

Liangzhi Tang, chairman of the Anhui Provincial Committee of the Chinese People's Political Consultative Conference (CPPCC), led a delegation to visit ICMS and SKLQRCM on 13 December 2023, accompanied by UM Rector Yonghua Song. They were warmly received by Xin Chen, director of ICMS and director of SKLQRCM and Shaoping Li, deputy director of SKLQRCM and director of Macao Centre for Testing of Chinese, University of Macau.

Delegation of Nanjing Medical University and Guangzhou University of Chinese Medicine

Zhibin Hu, president of Nanjing Medical University (NMU) led a delegation and Wenfeng Chen, Secretary of the Party Committee of Guangzhou University of Chinese Medicine (GZUCM) led a delegation visited ICMS on 13 December 2023. They were warmly received by ICMS director Xin Chen and a team of principal investigators. Xin Chen, director of UM's ICMS, and Feng Han, dean of NMU's School of Pharmacy, signed a memorandum of understanding (MOU) on educational and scientific cooperation.



Academic visits to ICMS

Delegation of Zhejiang University

A group of 20 teachers and students from Zhejiang University, including Prof. Xiangnan Zhang, Vice Dean of the School of Pharmacy, Prof. Sunliang Cui, Dean's Assistant and Director of the Institute of Drug Discovery and Design, Ms. Yingying Zhang, Director of the Party and Government Office of the School of Pharmacy, Ms. Lijuan Shen, Director of Undergraduate Teaching of the School of Pharmacy, and student representatives from the School of Pharmacy, visited ICMS on 25 November 2023.

Prof. Jiahong Lu, ICMS Deputy Director, Prof. Jinjian Lu, Assistant Director of Ph.D. Education Development, Prof. Bian Ying, Assistant Director of Medicinal Administration Education Development, Prof. Ligen Lin, Assistant Director of the Department of Pharmaceutical Sciences, and Prof. Carolina Ung, Deputy Director of Center for Pharmaceutical Regulatory Sciences, University of Macau warmly welcomed the delegation.

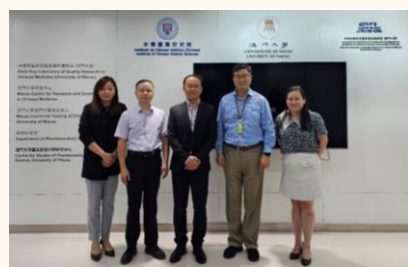


Delegation of Constructor University

Prof. Werner Nau, Interim Provost, Vice-President, and Head of Academic Operations, and Dr. Maja Feldt, Managing Director for University Programs and Processes, visited ICMS on 9 November 2023. They were warmly received by ICMS Director Xin Chen and a team of principal investigators.

Delegation of Western Sydney University's National Institute of Complementary Medicine (NICM)

Prof. Dennis Chang, Director of NICM Health Research Institute and Professor of Pharmacology Research at Western Sydney University, and Dr. Phoebe Zhou, International Engagement Coordinator of the NICM Health Research Institute, visited ICMS on 30 October 2023. They were warmly received by ICMS Director Xin Chen and a team of principal investigators.



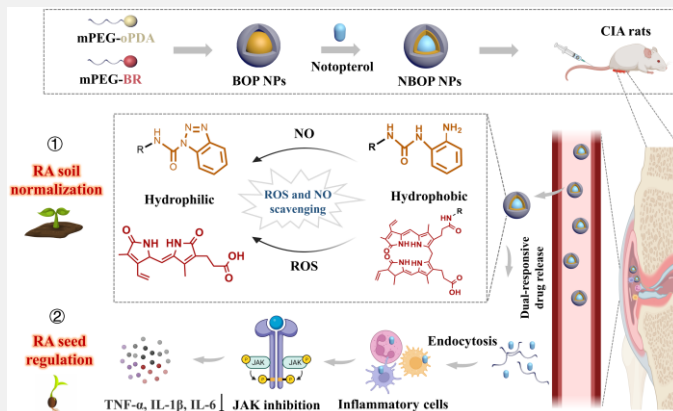
Delegation of Saint Louis University

Dr. Winston Chan, Saint Louis University trustee and chair of academic committee, and Mrs. Sheila Manion, Vice President for Development at Saint Louis University, visited ICMS on 27 October 2023. They were warmly received by ICMS director, Prof. Xin Chen and Dr. Wai San Cheang.

ICMS research highlights

Novel strategy of regulating “soil and seed” for rheumatoid arthritis therapy

Prof. Meiwan Chen and her team from ICMS have proposed a strategy of regulating rheumatoid arthritis-related soil (depleting reactive oxygen species, ROS and nitric oxide, NO) and seed (inhibiting JAK-STAT pathway of inflammatory cells) for effective rheumatoid arthritis (RA) therapy. Dually ROS and NO responsive nanoparticles were fabricated in this study by taking advantage of the efficient ROS depletion capacity of endogenous compound bilirubin (BR) and NO-scavenging compound molecule o-phenylenediamine (oPDA) to further encapsulate JAK inhibitor notopterol (Not). The simultaneous ROS and NO depletion combined with JAK-STAT pathway inhibition could not only promote M2 macrophage polarization to reduce further ROS and NO generation, but also decrease cytokines and chemokines to prevent immune cell recruitment, offering a reference to adjust RA soils and seeds for enhanced RA therapy. The relevant research has recently been published in *Acta Pharmaceutica Sinica B*.

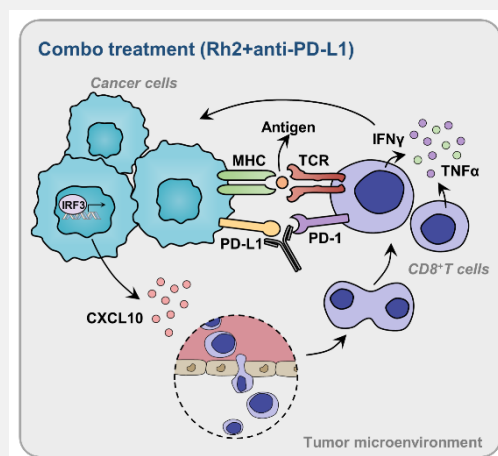


A schematic diagram showing the therapeutic mechanism based on regulating RA soil and seed for alleviating rheumatoid arthritis.

***Acta Pharmaceutica Sinica B*, 2023, 13: 5016-5029**

Ginsenoside Rh2 augmented anti-PD-L1 immunotherapy by reinvigorating CD8⁺ T cells via increasing intratumoral CXCL10

Prof. Jin-Jian Lu and his research team in collaboration with Prof. Mingqing Huang's team from Fujian University of Traditional Chinese Medicine recently published their latest study of Chinese medicine ginseng-derived ginsenoside Rh2 (Rh2) enhancing the anti-tumor effect of anti-PD-L1 antibody on the journal of *Pharmacological Research*. Immune checkpoint blockade towards PD-1/PD-L1 axis has emerged as a revolutionary cancer therapy approach. However, the clinical response rate is only ~20%. They identified a novel combination strategy that Rh2 markedly improved the anti-cancer efficacy of anti-PD-L1 antibody by further triggering the infiltration, proliferation and activation of CD8⁺ T cells in the tumor microenvironment. Mechanistically, combo treatment further increased the expression of CXCL10 through activating TBK1-IRF3 signaling pathway, explaining the increased infiltration of T cells. These findings shed a new light on the combination strategy to enhance anti-PD-L1 immunotherapy by using natural product Rh2.



A schematic diagram showing ginsenoside Rh2 in combination with anti-PD-L1 antibody increased the CD8⁺ T cells infiltration and activation via promoting CXCL10 secretion in the tumor microenvironment.

***Pharmacological Research*, 2023, 198:106988**

ICMS publications

October 2023

1. Guo Z, Wong KH, Li E, Zhou X, Jiang D, Gao J*, Chen M*. Co-delivery of dimeric camptothecin and chlorin e6 via polypeptide-based micelles for chemo-photodynamic synergistic therapy. *Chin Med*. 2023 Oct 13;18(1):133.
2. Mu R, Dong L, Wang C*. Carbohydrates as putative pattern recognition receptor agonists in vaccine development. *Trends Immunol*. 2023 Oct;44(10):845-857.
3. Xie B#, Zhao H#, Ding YF#, Wang Z, Gao C, Li S, Zhang K, Ip SW, Yu H, Wang R*. Supramolecularly Engineered Conjugate of Bacteria and Cell Membrane-Coated Magnetic Nanoparticles for Enhanced Ferroptosis and Immunotherapy of Tumors. *Adv Sci (Weinh)*. 2023 Oct 18:e2304407.
4. Zhuo FF, Li L, Liu TT, Liang XM, Yang Z, Zheng YZ, Luo QW, Lu JH, Liu D, Zeng KW*, Tu PF*. Lycorine promotes IDH1 acetylation to induce mitochondrial dynamics imbalance in colorectal cancer cells. *Cancer Lett*. 2023 Oct 1;573:216364.
5. Wang L#, Liu J#, Chen F#, Li G, Wang J, Chan DS, Wong CY, Wang W*, Leung CH*. A Switch-On Affinity-Based Iridium(III) Conjugate Probe for Imaging Mitochondrial Glutathione S-Transferase in Breast Cancer Cells. *Bioconjug Chem*. 2023 Oct 18;34(10):1727-1737.
6. Chou SM#, Yen YH#, Yuan F, Zhang SC*, Chong CM*. Neuronal Senescence in the Aged Brain. *Aging Dis*. 2023 Oct 1;14(5):1618-1632.
7. He MC#, Tian JQ#, He XM, Yang P, Lin TY, Zhang QW, He W*, Wei QS*. Mechanical properties of trabeculae and osteocyte morphology change significantly in different areas of the necrotic femoral head. *Front Cell Dev Biol*. 2023 Sep 26;11:1250070.
8. Ge P#, Han C#, Reyila A#, Liu D, Hong W, Liu J, Zhang J, Han X, Li X, Huang M, Fan S, Kaierdebieke A, Wu X, Huang X, Guo W, Liu S, Bian Y*. Risk of antiangiogenic adverse events in metastatic colorectal cancer patients receiving aflibercept in combination with chemotherapy: A meta-analysis. *Medicine (Baltimore)*. 2023 Sep 1;102(35):e34793.
9. Wen J#, Satyanarayanan SK#, Li A, Yan L, Zhao Z, Yuan Q, Su KP*, Su H*. Unraveling the impact of Omega-3 polyunsaturated fatty acids on blood-brain barrier (BBB) integrity and glymphatic function. *Brain Behav Immun*. 2023 Oct 31;115:335-355.
10. Zou H, Xue Y, Chen X, Lai Y, Yao D, Ung COL, Hu H*. Comparative analysis of disease modelling for health economic evaluations of systemic therapies in advanced hepatocellular carcinoma. *PLoS One*. 2023 Oct 5;18(10):e0292239.
11. Li Y, Yang J, Chau CI, Shi J, Chen X, Hu H, Ung COL*. Is there a role for traditional and complementary medicines in managing chronic fatigue? a systematic review of randomized controlled trials. *Front Pharmacol*. 2023 Oct 24;14:1266803.
12. Chen L#, Cheng Z#, Luo M, Wang T, Zhang L, Wei J, Wang Y, Li P*. Fluorescent noble metal nanoclusters for contaminants analysis in food matrix. *Crit Rev Food Sci Nutr*. 2023;63(19):3519-3537.
13. Yang RJ, Zou J, Liu JY, Dai JK, Wan JB*. Click chemistry-based enrichment strategy for tracing cellular fatty acid metabolism by LC-MS/MS. *J Pharm Anal*. 2023 Oct;13(10):1221-1231.
14. Engku Abd Rahman ENS, Irekeola AA, Shueb RH, Mat Lazim N, Mohamud R, Chen X, Ghazali L, Awang NMSH, Haron A, Chan YY*. Aberrant frequency of TNFR2-expressing CD4+ FoxP3+ regulatory T cells in nasopharyngeal carcinoma patients. *Cytokine*. 2023 Oct;170:156341.
15. Chen Z#, Chen Y#, Hao W, Shui M, Zhang J, Zhou H, Zhang C, Wang Y*, Wang S*. Oral Delivery of Transformable Bilirubin Self-Assembled System for Targeted Therapy of Colitis. *Adv Healthc Mater*. 2023 Oct;12(26):e2300946.
16. Chen J#, Lu P#, Liu J, Yang L, Li Y, Chen Y, Wang Y, Wan J*, Zhao Y*. 20(S)- Protopanaxadiol saponins isolated from *Panax notoginseng* target the binding of HMGB1 to TLR4 against inflammation in experimental ulcerative colitis. *Phytother Res*. 2023 Oct;37(10):4690-4705.

Co-first author

* Corresponding author



ICMS publications

November 2023

1. Yin H, Rosas R, Viel S, Giorgi M, Monnier V, Charles L, Siri D, Gigmes D, Nassar Y, Chevallier F, Bucher C*, Wang R*, Kermagoret A*, Bardelang D*. Internal Dynamics and Modular Peripheral Binding in Stimuli-Responsive 3:2 Host:Guest Complexes. *Angew Chem Int Ed Engl*. 2023 Nov 27:e202315985.
2. Wang D#, Qu S#, Zhang Z, Tan L, Chen X, Zhong HJ*, Chong CM*. Strategies targeting endoplasmic reticulum stress to improve Parkinson's disease. *Front Pharmacol*. 2023 Nov 10;14:1288894.
3. Huang MY, Chen YC, Lyu WY, He XY, Ye ZH, Huang CY, He XL, Chen X, Chen X, Zhang B, Kai G, Zhang X, Li T*, Huang M*, Lu JJ*. Ginsenoside Rh2 augmented anti-PD-L1 immunotherapy by reinvigorating CD8+ T cells via increasing intratumoral CXCL10. *Pharmacol Res*. 2023 Nov 19;198:106988.
4. Zhang XW, Zhu XX, Tang DS*, Lu JH*. Targeting autophagy in Alzheimer's disease: Animal models and mechanisms. *Zool Res*. 2023 Nov 18;44(6):1132-1145.
5. Sun S#, Zheng Z#, Wang J, Li F, He A, Lai K, Zhang S, Lu JH, Tian R, Tan CSH*. Improved in situ characterization of protein complex dynamics at scale with thermal proximity co-aggregation. *Nat Commun*. 2023 Nov 24;14(1):7697.
6. Yang X#, Nao SC#, Lin C#, Kong L, Wang J, Ko CN, Liu J*, Ma DL, Leung CH*, Wang W*. A cell-impermeable luminogenic probe for near-infrared imaging of prostate-specific membrane antigen in prostate cancer microenvironments. *Eur J Med Chem*. 2023 Nov 5;259:115659.
7. Ai N#, Wang D#, Qu S, Vong CT, Yuan M, Su H, Ge W*, Chong CM*. Azoramide prevents MPP+-induced dopaminergic neuronal death via upregulating ER chaperone BiP expression. *Free Radic Biol Med*. 2023 Nov 1;208:299-308.
8. Chang JP#, Tseng PT#, Zeng BS#, Chang CH, Su H, Chou PH, Su KP*. Safety of Supplementation of Omega-3 Polyunsaturated Fatty Acids: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Adv Nutr*. 2023 Nov;14(6):1326-1336.
9. Yang J#, Li Y#, Chau CI, Shi J, Chen X, Hu H, Ung COL*. Efficacy and safety of traditional Chinese medicine for cancer-related fatigue: a systematic literature review of randomized controlled trials. *Chin Med*. 2023 Nov 1;18(1):142.
10. Xue Y, Zou H, Ruan Z, Chen X, Lai Y, Yao D, Ung COL*, Hu H*. Pharmacoeconomic evaluation of anti-obesity drugs for chronic weight management: a systematic review of literature. *Front Endocrinol (Lausanne)*. 2023 Nov 6;14:1254398.
11. Ge Y#, Yao D#, Ung COL, Xue Y, Li M, Lin J, Hu H, Lai Y*. Digital Medical Information Services Delivered by Pharmaceutical Companies via WeChat: Qualitative Analytical Study. *J Med Internet Res*. 2023 Nov 17;25:e43812.
12. Li L#*, Yang L#, Yang L, He C, He Y, Chen L, Dong Q, Zhang H, Chen S, Li P*. Network pharmacology: a bright guiding light on the way to explore the personalized precise medication of traditional Chinese medicine. *Chin Med*. 2023 Nov 8;18(1):146.
13. Jiang M, Hua S, Zou L, Wang Y, Li P*. Comprehensive online two-dimensional liquid chromatography coupled to hybrid linear ion trap Orbitrap mass spectrometry with optimized dilution and modulation for analysis of Huangqi Guizhi Wuwu decoction. *Anal Bioanal Chem*. 2023 Nov;415(26):6399-6410.
14. Dai JK, Dan WJ, Cao YD, Gao JX, Wang JR, Wan JB*. Discovery of new quaternized norharmane dimers as potential anti-MRSA agents. *J Adv Res*. 2023 Nov 4:S2090-1232(23)00328-4.





ICMS publications


December 2023

1. Hua P#, Liang R#, Tu Y, Yin Y, Law MK, Chen M*. Reactive oxygen species and nitric oxide scavenging nanoparticles alleviating rheumatoid arthritis through adjusting the seeds and growing soils. *Acta Pharm Sin B*. 2023 Dec;13:5016-5029
2. Miao L#, Zhou C#, Zhang H, Cheong MS, Tan Y, Wang Y, Zhang X, Yu H, Cheang WS*. Portulaca oleracea L. (purslane) extract protects endothelial function by reducing endoplasmic reticulum stress and oxidative stress through AMPK activation in diabetic obese mice. *Antioxidants*. 2023 Dec;12(12):2132
3. Pan Z#, Yu CW#, Zhao C#, Shao M, Yang X, Liang X, Li H, Lu Y, Ye Q, Chern JW, Lu J, Zhou H*, Lee SM*. Antagonizing pathological α -synuclein-mediated neurodegeneration by J24335 via the activation of immunoproteasome. *Toxicol Appl Pharmacol*. 2023 Dec 1;480:116745.
4. Song Y#, Zhao X#, Qu H#, Su Y, He R, Chen L, Fang L, Li J, Zou Z, He J, Li Z, Xu Y, Chen X, Cheng H, Xu Y*, Wang Q*, Lai L*. Epigenetic Regulation of IL-23 by E3 Ligase FBXW7 in Dendritic Cells Is Critical for Psoriasis-like Inflammation. *J Immunol*. 2023 Dec 1;211(11):1701-1713.
5. Song M#, Luo HJ#, Li ZW, Qiu L, Zhao YX, He CW, Zhang XQ, Ye WC, Lin LG*, Zhang QW*. Limonoids from the roots of Melia azedarach and their anti-inflammatory activity. *Phytochemistry*. 2023 Dec;216:113869.
6. Qiu L, Feng R, Wu QS, Wan JB*, Zhang QW*. Total saponins from Panax japonicus attenuate acute alcoholic liver oxidative stress and hepatosteatosis by p62-related Nrf2 pathway and AMPK-ACC/PPAR α axis in vivo and in vitro. *J Ethnopharmacol*. 2023 Dec 5;317:116785.
7. Lin G#, Chau CI#, Hu H, Ung COL*. Pharmacist intervention for pediatric asthma: A systematic literature review and logic model. *Res Social Adm Pharm*. 2023 Dec;19(12):1487-1510.
8. Zhang X#, Hong L#, Zhu BJ#, Yuan Y*, Li SP*, Zhao J*. Atomic force microscopy based conformation and immunological activity of Lentinan injections. *Int J Biol Macromol*. 2023 Dec 31;253(Pt 3):126901.
9. Wu MY#, Ge YJ#, Wang EJ#, Liao QW, Ren ZY, Yu Y, Zhu G, Liu CP, Zhang MN, Su H, Shen HM, Chen Y, Wang L, Wang YT, Li M, Bian Z, Chai J, Ye RD*, Lu JH*. Enhancement of efferocytosis through biased FPR2 signaling attenuates intestinal inflammation. *EMBO Mol Med*. 2023 Dec 7;15(12).
10. Xie B, Zhao H, Ding YF, Wang Z, Gao C, Li S, Zhang K, Ip SW, Yu H, Wang R*. Supramolecularly Engineered Conjugate of Bacteria and Cell Membrane-Coated Magnetic Nanoparticles for Enhanced Ferroptosis and Immunotherapy of Tumors. *Adv Sci (Weinh)*. 2023 Dec;10(34).
11. Xu M, Zha H, Chen J, Lee SM, Wang Q*, Wang R*, Zheng Y*. "Ice and Fire" Supramolecular Cell-Conjugation Drug Delivery Platform for Deep Tumor Ablation and Boosted Antitumor Immunity. *Adv Mater*. 2023 Dec;35(51)
12. Feng W#, Teng Y#, Zhong Q, Zhang Y, Zhang J, Zhao P, Chen G, Wang C, Liang XJ*, Ou C*. Biomimetic Grapefruit-Derived Extracellular Vesicles for Safe and Targeted Delivery of Sodium Thiosulfate against Vascular Calcification. *ACS Nano*. 2023 Dec 26;17(24):24773-24789.
13. Tian XJ, Yin ZJ, Li ZJ, Wang ZZ, Xing Z, Liu CY, Wang LT, Wang CM, Zhang JF*, Dong L*. Regeneration of Thyroid Glands in the Spleen Restores Homeostasis in Thyroidectomy Mice. *Adv Sci (Weinh)*. 2023 Dec 7
14. Wu R#, Xiong R#, Li Y#, Chen J#, Yan R*. Gut microbiome, metabolome, host immunity associated with inflammatory bowel disease and intervention of fecal microbiota transplantation. *J Autoimmun*. 2023 Dec;141:103062.

 Address: N22-Research Building, ICMS, University of Macau
Avenida da Universidade, Taipa, Macau S.A.R.

 Email: icms.enquiry@um.edu.mo (ICMS)
sklqrcm@um.edu.mo (SKL-QRCM)

 Fax: +853 2884 1358

 Phone: +853 8822 4685

