跨域創新

10.30(五) — 11.01(日)
高雄醫學大學 國際學術研究大樓

天然藥物、中醫藥與自由基醫學的新視野

第41屆天然藥物研討會 | 第26屆台灣自由基學會學術研討會
2026臺灣傳統暨替代醫學協會學術研討會 |
國科會生科處藥學及中醫藥學學門成果發表會

Cross-Domain Innovation: New Horizons in Natural Products, Traditional Medicine, and Free Radical Medicine - Joint Symposium of the 41st SNP, 26th SFRR-Taiwan, and 2026 TATCM & Symposium on Pharmacy and Traditional Chinese Medicine

大會手冊



Organizers

- 高雄醫學大學 Kaohsiung Medical University
- 高雄醫學大學天然藥物研究所 Graduate Institute of Natural Products, Kaohsiung Medical University
- 高雄醫學大學藥學系 School of Pharmacy, Kaohsiung Medical University
- 臺灣天然藥物學會 The Natural Medicine Society of Taiwan
- 台灣自由基學會 Society for Free Radical Research Taiwan
- 臺灣傳統暨替代醫學協會 Taiwan Association for Traditional and Complementary Medicine
- 長庚科技大學藥物研發中心 Center for Drug Research and Development, Chang Gung University of Science and Technology
- NSTC 國家科學及技術委員會 National Science and Technology Council 藥學及中醫藥學學門 Division of Pharmacy and Traditional Chinese Medicine,Department of Life Sciences

Co-Organizers

- 衛生福利部國家中醫藥研究所 National Research Institute of Chinese Medicine, Ministry of Health and Welfare
- 財團法人高醫藥學文教基金會 The KMU Pharmacy Alumni Foundation for Culture and Education
- 丁丁藥局 TinTin Drugstore
- 高雄醫學大學新藥開發暨價創研究中心 Drug Development and Value Creation Research Center, Kaohsiung Medical University

Funding Support

- 衛生福利部中醫藥司 Department of Chinese Medicine and Pharmacy, Ministry of Health and Welfare
- 高雄市政府經濟發展局 Economic Development Bureau, Kaohsiung City Government

Co-badging

- International Society for Ethnopharmacology

勝 SHENG CHANG 昌
G.M.P.

SHENG CHANG



勝昌製藥

中藥，最安心的選擇





勝昌製藥創立於1946年，
集80年的製藥經驗，
嚴謹的品質管理為產品質量嚴格把關，
先進的製造設備與堅強的研發團隊，
製造出有效且精純的優質產品。

勝昌製藥廠股份有限公司
SHENG CHANG PHARMACEUTICAL CO., LTD.
公　司：臺北市中正區和平西路二段56號　電話：02-2301-1267
中壢廠：桃園市中壢區民族路六段436號　電話：03-490-9682
網　址：https://www.herb.com.tw

FastPrep®
樣本均質機 & 均質珠



FastPrep® –24 5G


Lysing Matrix Tubes

- 一次可處理 **24** 管樣本
- 觸控面板，操作簡單
- 三維震動，完整均質
- 超高轉速，快速均質
- 內建 **70+** 種均質 Protocol

搭配均質珠高效處理各式樣本


Roots Seeds Soil Tissue Waste-water Yeast Animals Bacteria Feces Food Hair Plant

Oxford Nanopore Official Distributor

Sequencing

Generate Ultra-Rich Data for Answers with Impact

MinION Mk1D

A powerful, palm-sized sequencer for anyone, anywhere

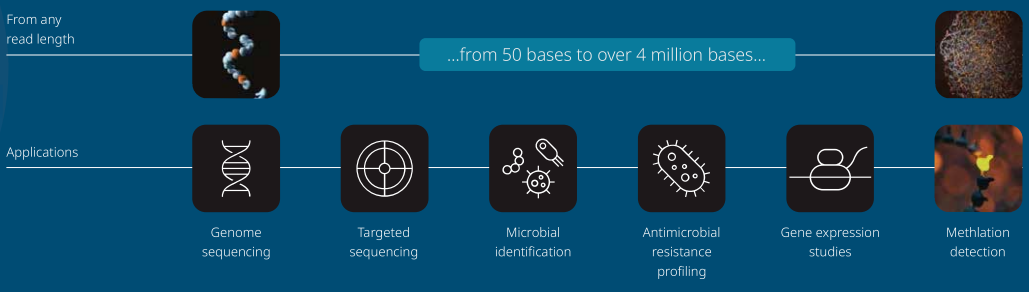


PromethION 2 Integrated

Flexible, on-demand high-output sequencing with two independent Flow Cells



Sequence native DNA and RNA of any length



騰達行 UNIMED

0800-211-819

Unimed 騰達行

www.unimed.com.tw

台北 02-2720-2215 新竹 03-6684-586 台中 04-2463-3591 嘉義 05-2844-162 台南 06-2890-665 高雄 07-3470-143 花蓮 03-8573-757

95%
高純度
EPA 魚油

Dynes

台灣製造
魚油原料領導品牌

ecpur® green technology.

獨家專利純化製程
最高純度食品級95% EPA
工廠符合ISO22000、HACCP
通過IFOS五星、GOED認證
通過SNQ國家品質機能保健認證
(國品字第P080155號)原料
各項指標通過SGS檢驗

✓ 重金屬 ✓ 微生物 ✓ 塑化劑 ✓ 過氧化價



Dynes
達諾生技股份有限公司

(08)762-2007 ｜08：00-17：00(Mon.-Fri.)
service@dynes-fishoil.com
90846屏東縣長治鄉德和村圓西二路18號1樓
www.dynes-fishoil.com

Beyond Fatigue, Beyond Cancer
Stand Strong with Renewed Energy.



PG2® Lyo. Injection
懷特血寶® 凍晶注射劑

Astragalus polysaccharides (APS) injection 500 mg

Cancer-related fatigue treatment

懷特生技新藥(股)公司
PhytoHealth Corporation

台北市松山區復興北路167號5樓之1 電話：02-27136621 免費諮詢專線：0800-535099

供醫療人員參考　使用前請詳閱仿單資訊、警語及注意事項

衛部藥製字第058837號　北市衛藥廣字第113100198號

BIOLIVE
天美國際健康股份有限公司
BIOLIVE INTERNATIONAL CO., LTD.

×

ABVC BIOPHARMA
ABVC Biopharma Inc

RiboN

覺得有點力不從心嗎？
想要重拾年輕活力，就從生命的根源著手！



植物萃取的天然力量、萬物根基的初始營養，

搭載獨家專利 STEMOTO 3.0 配方，
中鏈脂肪酸 X 綜合胺基酸 X 精純多醣體 X 人體必需微量元素

透過尖端萃取科技，研製成為純植物口服飲，
小分子胜肽、穩定好吸收！
結合中西方智慧，為現代人打造 ALL IN ONE 的全方位健康方案。

打拚事業的壯年、注重養身的銀髮族；
無論是生活壓力大、作息不規律，
還是想維持年輕活力的族群，
每日一瓶，溫和調養，維持自身的健康與活力..

RiboN 都能為您奠定健康基礎。

#IMIO

被日本譽為「國寶級」的珍貴舞茸，多國研究證實，
舞茸能促進新陳代謝；支持健康運作；滋補強身。

經臨床億萬級研究發表，
舞茸中的 MD Fraction 能幫助健康維持、多元調理生理機能。

高濃度精萃：完整保留舞茸精華有效濃度
快速吸收：滴劑好入口，適合全家人使用
雙向調節：維持身體最佳平衡狀態

IMIO 為操心疲憊、工作勞累、想要保持最佳狀態的族群
提供一般保養、重點防護及生理輔助。



天美國際健康股份有限公司　台北市中山區南京東路2段132號3樓　(02)2506-1886

MEET YOUR SCIENTIFIC DEMANDS

友大科技，協助您研發更快一步

天然物成分分析、功效驗證
一站式科研服務

質譜定性定量分析
各種檢體型態方法開發與定量研究

天然物純化鑑定
專業分離與結構確認，確保研究可靠

食品原料功效驗證
從成分到功效，提供完整科學佐證

HPLC定量分析，1500元/樣品
(標準品請自行提供)

MEET YOUR SCIENTIFIC DEMANDS

友大科技有限公司
Integrity Analysis Co. Ltd.
高雄市燕巢區安林六街29號
(07)616-1817
Ryanchung0817@gmail.com

掃描QR Code
立即了解
更多資訊

ud-ianalysis.com

SPONSORS

順天堂

勝昌 SHENG CHANG G.M.P.

明通製藥

Sinphar 杏輝醫藥集團 SINPHAR GROUP

丁丁藥局 TinTin Drugstore

TechMax TechMax Technical Co., Ltd 科邁斯集團

JBM 喬本生醫股份有限公司 Joben Bio-Medical Co., Ltd.

國立海洋生物博物館 NATIONAL MUSEUM OF MARINE BIOLOGY & AQUARIUM

意欣國際有限公司

PANCHUM com. 泛群科技有限公司 PANCHUM SCIENTIFIC CORP.

莊松榮 1873

WAI 智恆科儀有限公司 Wise Analysis Instruments

伯森生技

岑祥股份有限公司 TSENG HSIANG LIFE SCIENCE LTD.

WIDE 寬崎科技有限公司

勝騏科技 SUNCHEER TECHNOLOGY INC

ZEJU 曄屨有限公司 Taiwan Bio-Technology corporation

GRTI 群研科技有限公司 Group Research Tech. Inc.

ROCKER make filtration easy

KimForest 金萬林企業股份有限公司

MOLECULAR DEVICES

騰達行 UNIMED

Dynes 達諾生技股份有限公司

懷特生技新藥(股)公司 PhytoHealth Corporation

BIOLIVE 天美國際健康股份有限公司 BIOLIVE INTERNATIONAL CO., LTD.

EXCEL BIOMEDICAL 昶安生技

茗樟生物科技有限公司 MING CHANG BIO-TECH CO., LTD.

友 MEET YOUR SCIENTIFIC DEMANDS

JTCM

41st SNP | 26th SFRR-Taiwan
2026 TATCM | NSTC Pharm/TCM

跨域創新

天然藥物、中醫藥與自由基醫學的新視野

WELCOME LETTER

親愛的與會嘉賓與學術界的專家先進：

謹代表主辦單位高雄醫學大學，誠摯歡迎各位齊聚港都高雄，共同參與「第 41 屆天然藥物研討會」、「第 26 屆台灣自由基學會學術研討會」、「2026 年臺灣傳統暨替代醫學協會學術研討會」及「國科會生科處藥學及中醫藥學學門成果發表會」聯合學術研討會。

本次研討會以「跨域創新：天然藥物、中醫藥與自由基醫學的新視野」為主題，旨在匯聚天然藥物、自由基醫學、傳統暨輔助醫學及中醫藥學等多元領域的菁英與專家，藉由前瞻研究成果之發表、跨領域專題演講之交流，以及產官學多方對話之深化，促進基礎研究、臨床應用、轉譯醫學與產業創新之連結。期盼透過本次會議，進一步拓展天然藥物與中醫藥科學研究之國際視野，厚植我國生醫藥學研究之創新根基，並為精準健康、整合醫療與永續醫藥發展開創嶄新契機。

高雄醫學大學秉持學術卓越、社會關懷與促進人類健康福祉之使命，長期深耕醫藥衛生教育、生命科學研究與臨床醫療實踐。此次能承辦此重要聯合學術會議，是我們的榮幸，更是彰顯各界合作精神的重要象徵。期盼此次會議能成為思想交匯、智慧激盪之平台，讓各位專家先進的學術能量得以充分展現，共同推動健康照護領域的永續發展。相信在各位的積極參與下，本次大會必能凝聚共識、啟發創新，為未來的研究與應用擘劃宏遠藍圖，展現我國天然藥物與中醫藥科學蓬勃發展、兼容並蓄及邁向國際的堅實力量。

最後，謹向長期推動天然藥物、中醫藥科學、自由基研究及傳統暨輔助醫學發展之各位專家先進，致以由衷敬意及最高的敬意。期盼各位在會議期間踴躍交流、深入討論、相互啟迪，讓學術研究成果不僅止於知識傳遞，更能轉化為推動醫藥創新與守護全民健康之重要力量。

感謝各位撥冗與會，祝福大會圓滿成功，並祝各位貴賓、各位先進身體康泰、研途精進、萬事順遂！

高雄醫學大學天然藥物研究所 所長
顏嘉宏 **顏嘉宏 教授**

高雄醫學大學藥學系 系主任
張訓碩 **張訓碩 教授**

WELCOME LETTER

跨域創新 41st SNP | 26th SFRR-Taiwan 2026 TATCM | NSTC Pharm/TCM
天然藥物、中醫藥與自由基醫學的新視野

Dear distinguished guests, colleagues, and esteemed members of the academic community,

On behalf of Kaohsiung Medical University and the organizing committee, we warmly welcome you to Kaohsiung for this joint academic conference, which brings together the 41st Natural Products Symposium, the 26th Annual Meeting of the Taiwan Society for Free Radical Research, the 2026 Annual Meeting of the Taiwan Association for Traditional and Complementary Medicine, and the NSTC Symposium on Pharmacy and Traditional Chinese Medicine.

With the theme "Cross-Domain Innovation: New Horizons in Natural Products, Traditional Medicine, and Free Radical Medicine," this conference aims to bring together experts from natural products, free radical medicine, traditional and complementary medicine, and Chinese medicine. Through presentations of cutting-edge research, interdisciplinary lectures, and dialogue among academia, industry, and government, we hope to strengthen the connections among basic research, clinical application, translational medicine, and industrial innovation.

Kaohsiung Medical University is honored to host this important joint conference. We hope this meeting will serve as a platform for academic exchange, intellectual inspiration, and meaningful collaboration. With your active participation, we believe the conference will foster new ideas, build consensus, and further advance the development of natural products, Chinese medicine, and biomedical research in Taiwan and beyond.

We also extend our sincere respect and appreciation to all experts and colleagues who have long contributed to the advancement of natural products, Chinese medicine, free radical research, and traditional and complementary medicine. May this conference encourage active discussion, fruitful exchange, and new opportunities for future collaboration.

Thank you for joining us. We wish the conference great success, and wish all distinguished guests and participants good health, continued academic achievement, and every success.

Chia-Hung Yen

Professor Chia-Hung Yen
Director, Graduate Institute of Natural Products
Kaohsiung Medical University

Hsun-Shuo Chang

Professor Hsun-Shuo Chang
Chair, School of Pharmacy
Kaohsiung Medical University

41st SNP | 26th SFRR-Taiwan
2026 TATCM | NSTC Pharm/TCM

跨域創新

天然藥物、中醫藥與自由基醫學的新視野

WELCOME LETTER

敬愛的專家、學者及與會貴賓：

歡迎參加第 41 屆天然藥物研討會、第 26 屆台灣自由基學會年會暨 臺灣傳統暨替代醫學協會學術研討會及藥學與中醫藥學學門成果發表會。身為台灣天然藥物學會理事長，我誠摯歡迎各位來到美麗的高雄醫學大學。今年大會的主題為跨域創新：天然藥物、中醫藥與自由基醫學的新視野。在全球生物醫學快速發展的今日，單一學科的突破已不足以應對日益複雜的健康挑戰。本次研討會匯 聚了天然物化學、藥理學、傳統中醫藥以及自由基醫學等多元領域的頂尖專家，旨在打破學科藩籬，透過跨領域的深度交流，激盪出創新的火花。 我們特別邀請了來自加拿大、瑞典及紐西蘭等地的國際知名學者進行特邀演講，並安排了豐富的口頭報告與海報展示，全面呈現學界最前沿的研究成果。 這不僅是一個學術交流的平台，更是建立國際合作、促進跨域鏈結的重要契 機。感謝主辦與協辦單位、贊助廠商以及所有籌備同仁的辛勞付出，讓這場盛會得以在高雄順利舉行。衷心祝願各位在為期三天的議程中收穫豐碩，共同開創天然藥物與醫學研究的新未來！

台灣天然藥物學會 理事長

洪啓峯 特聘教授 敬邀



WELCOME LETTER

跨域創新 41st SNP | 26th SFRR-Taiwan 2026 TATCM | NSTC Pharm/TCM
天然藥物、中醫藥與自由基醫學的新視野

Dear Colleagues, Distinguished Guests, and Experts,

On behalf of the Natural Medicine Society of Taiwan (SCNM), it is my greatest pleasure to welcome you to the Joint Symposium of the 41st SNP, 26th SFRR-Taiwan, 2026 TATCM, and the Symposium on Pharmacy and Traditional Chinese Medicine. We are honored to host this landmark event at the beautiful Kaohsiung Medical University. The theme of this year' s symposium, "Cross-Domain Innovation: New Horizons in Natural Products, Traditional Medicine, and Free Radical Medicine," underscores the vital importance of interdisciplinary collaboration. In an era of rapid biomedical advancement, isolated breakthroughs are no longer sufficient to address complex health challenges. This conference converges leading experts in natural product chemistry, pharmacology, Traditional Chinese Medicine (TCM), and free radical research to break down disciplinary barriers and ignite innovative sparks through cross-disciplinary dialogue.

Our program features world-renowned keynote speakers from Canada, Sweden, and New Zealand, alongside a rich array of oral presentations and poster sessions showcasing the forefront of scientific research. This event serves not only as a dynamic platform for academic exchange but also as a prime opportunity to foster international partnerships and cross-domain connections. I would like to express my deepest gratitude to the organizing committee, co-organizers, sponsors, and all dedicated staff members whose hard work has made this grand event in Kaohsiung possible. I wish you all a highly productive, inspiring, and rewarding three-days.

Distinguished Professor Chi-Feng Hung
President, The Natural Medicine Society of Taiwan

41st SNP | 26th SFRR-Taiwan
2026 TATCM | NSTC Pharm/TCM
跨域創新
天然藥物、中醫藥與自由基醫學的新視野

WELCOME LETTER

台灣自由基學會

謹代表台灣自由基學會(Society for Free Radical Research–Taiwan, SFRR-Taiwan)，誠摯歡迎各位參加「第 41 屆天然藥物研討會 (SNP)」、「第 26 屆台灣自由基學會年會 (SFRR-Taiwan)」與「2026 臺灣傳統暨替代醫學協會學術研討會 (TATCM)」。本次會議將於 2026 年 10 月 30 日至 11 月 1 日在高雄醫學大學國際會議中心聯合舉辦。

SFRR-Taiwan 為亞洲自由基學會(Society for Free Radical Research-Asia, SFRR-Asia) 及國際自由基學會(Society for Free Radical Research-International, SFRRI)之會員學會。這些國際知名組織致力於推動自由基生物學與氧化還原科學的發展。SFRRI 透過旗下學術期刊，包括 Free Radical Biology and Medicine 與 Redox Biology，持續推進氧化還原科學，並大幅強化全球在氧化還原研究領域的合作與生物醫學創新。多年來，SFRR-Taiwan 積極促進氧化還原生物學、氧化壓力、老化、癌症、代謝疾病及轉譯醫學等領域的學術交流與跨領域研究。

本次為期三天的研討會，將提供一個國際交流平台，讓研究人員、臨床醫師、產業專家及年輕研究者分享氧化還原生物學、天然物、傳統草藥醫學及藥學科學的最新進展，並特別著重於氧化還原調控與氧化訊號在人類健康與疾病中的角色。透過主題演講、科學討論及壁報發表，本會議旨在促進生物醫學科學與治療創新領域的跨領域合作與轉譯研究。

我們誠摯感謝高雄醫學大學、籌備委員會、贊助單位、講者及所有與會者的慷慨支持與投入，使本次國際研討會得以順利舉辦。我們期待在高雄歡迎來自世界各地的同道與朋友，共同參與這場具啟發性且收穫豐碩的氧化還原生物醫學科學盛會。

此致

台灣自由基學會 (SFRR-Taiwan)

黃聰龍 理事長

黃聰龍

WELCOME LETTER

跨域創新 41st SNP | 26th SFRR-Taiwan 2026 TATCM | NSTC Pharm/TCM
天然藥物、中醫藥與自由基醫學的新視野

台灣自由基學會

Welcome Message from SFRR-Taiwan

On behalf of the Society for Free Radical Research–Taiwan (SFRR-Taiwan), it is our great pleasure to welcome you to the Joint Symposium of the 41st SNP, the 26th SFRR-Taiwan, and the 2026 TATCM, to be held at Kaohsiung Medical University, Taiwan, from October 30 to November 1, 2026.

SFRR-Taiwan is a member society of the Society for Free Radical Research-Asia (SFRR-Asia) and the Society for Free Radical Research-International (SFRR- International, SFRRI), internationally recognized organizations dedicated to advancing free radical biology and redox sciences. Over the years, SFRR-Taiwan has actively promoted academic exchange and interdisciplinary research in redox biology, oxidative stress, aging, cancer, metabolic diseases, and translational medicine.

SFRR-International and its affiliated societies have further advanced redox science through leading journals, including Free Radical Biology and Medicine and Redox Biology, which have significantly strengthened global collaboration and biomedical innovation in redox research.

This three-day symposium provides an international platform for researchers, clinicians, industry experts, and young investigators to share recent advances in redox biology, natural products, traditional herbal medicine, and pharmaceutical sciences, with emphasis on the roles of redox regulation and oxidative signaling in human health and disease. Through keynote lectures, scientific discussions, and poster presentations, the meeting aims to promote interdisciplinary collaboration and translational research in biomedical sciences and therapeutic innovation.

We sincerely appreciate the generous support and dedicated efforts of Kaohsiung Medical University, the organizing committees, sponsors, speakers, and all participants in making this international symposium possible, and we look forward to welcoming colleagues and friends from around the world to Kaohsiung for an inspiring and rewarding scientific gathering in redox biomedical sciences.

Sincerely,

Tsong-Long Hwang
President, Society for Free Radical Research–Taiwan (SFRR-Taiwan)



41st SNP | 26th SFRR-Taiwan
2026 TATCM | NSTC Pharm/TCM
跨域創新
天然藥物、中醫藥與自由基醫學的新視野

WELCOME LETTER

謹代表臺灣傳統暨替代醫學協會(Taiwan Association for Traditional and Complementary Medicine, TATCM)，誠摯邀請各位參加「第 41 屆天然藥物研討會 (SNP)」、「第 26 屆台灣自由基學會年會 (SFRR-Taiwan)」與「2026 臺灣傳統暨替代醫學協會學術研討會 (TATCM)」聯合研討會。本次會議將於 2026 年 10 月 30 日至 11 月 1 日在高雄醫學大學舉行。

TATCM 致力於推動傳統中醫藥與草藥醫學之研究、教育及國際合作，並且長期透過科學研究、實證實務及轉譯醫療應用，積極支持傳統醫學的現代化與全球發展。此外，TATCM 也透過支持國際知名期刊 Journal of Traditional and Complementary Medicine (JTCM)，促進國際學術交流。JTCM 期刊聚焦於傳統醫學、整合醫學、天然物及輔助醫療研究。

在為期三天的研討會中，來自不同科學與醫學背景的與會者將共同參與學術交流與合作討論，內容涵蓋傳統草藥醫學、天然物研究、氧化還原生物學及藥學科學。透過結合傳統醫學知識與現代生物醫學研究，本次會議期盼啟發轉譯創新、強化國際夥伴關係，並推進實證醫療與治療發現。

誠摯感謝高雄醫學大學、籌備委員會、講者、贊助單位及所有與會者的慷慨支持與投入，使本次國際研討會得以順利舉辦。我們期待在高雄歡迎來自世界各地的同道與朋友，共同參與傳統草藥醫學、天然物及整合生物醫學研究領域中深具意義的學術交流與合作。

臺灣傳統暨替代醫學協會
黃聰龍 理事長
黃聰龍

WELCOME LETTER

跨域創新 41st SNP | 26th SFRR-Taiwan 2026 TATCM | NSTC Pharm/TCM
天然藥物、中醫藥與自由基醫學的新視野

Welcome Message from TATCM

On behalf of the Taiwan Association for Traditional and Complementary Medicine (TATCM), we cordially invite you to participate in the Joint Symposium of the 41st SNP, the 26th SFRR-Taiwan, and the 2026 TATCM, to be held at Kaohsiung Medical University, Taiwan, from October 30 to November 1, 2026.

TATCM is committed to promoting research, education, and international collaboration in traditional Chinese medicine and herbal medicine. The association has actively supported the modernization and global advancement of traditional medicine through scientific research, evidence-based practice, and translational healthcare applications. In addition, TATCM has contributed to international academic exchange by supporting the Journal of Traditional and Complementary Medicine (JTCM), a globally recognized, peer-reviewed journal focusing on traditional medicine, integrative medicine, natural products, and complementary healthcare research.

Over the three-day symposium, participants from diverse scientific and medical backgrounds will engage in academic exchange and collaborative discussions spanning traditional herbal medicine, natural products research, redox biology, and pharmaceutical sciences. By integrating traditional medical knowledge with modern biomedical research, this meeting seeks to inspire translational innovation, strengthen international partnerships, and advance evidence-based healthcare and therapeutic discovery.

We sincerely appreciate the generous support and dedicated efforts of Kaohsiung Medical University, the organizing committees, speakers, sponsors, and all participants in making this international symposium possible. We look forward to welcoming colleagues and friends from around the world to Kaohsiung for meaningful academic exchange and collaboration in traditional herbal medicine, natural products, and integrative biomedical research.

Tsong-Long Hwang
President, Taiwan Association for Traditional and Complementary Medicine



41st SNP | 26th SFRR-Taiwan
2026 TATCM | NSTC Pharm/TCM
跨域創新
天然藥物、中醫藥與自由基醫學的新視野

WELCOME LETTER

NSTC 國家科學及技術委員會 National Science and Technology Council 藥學及中醫藥學學門

各位與會貴賓、學者專家及研究人員，大家好：

欣逢「跨域創新：天然藥物、中醫藥與自由基醫學的新視野－第 41 屆天然藥物研討會、第 26 屆台灣自由基學會學術研討會、2026 臺灣傳統暨替代醫學協會學術研討會暨國科會生科處藥學及中醫藥學學門成果發表會」隆重舉行，謹代表國科會生科處藥學及中醫藥學學門，向所有與會者致上最誠摯的歡迎與敬意。

國科會生科處藥學及中醫藥學學門長期致力於深化藥學與中醫藥學的學術研究與轉譯應用，並以推動創新與國際接軌為核心使命。學門發展方向強調結合基礎研究、臨床應用與產業需求，推動跨領域整合與轉譯醫學發展，建構兼具藥物科技與中醫藥特色之研究模式，全面提升臺灣在藥學及中醫藥領域之學術能量與國際競爭力。

本學門研究範疇廣泛，涵蓋新藥開發與製劑科學、藥學及中醫藥政策與臨床應用、中醫藥現代化與臨床實證，以及人工智慧、大數據與數位科技整合等重要方向。近年來，隨著精準醫療、智慧健康與整合醫學快速發展，藥學與中醫藥研究也正邁向更多元且跨域的創新應用，展現臺灣在全球健康科技發展中的重要潛力。

本次研討會結合天然藥物、中醫藥科學、自由基醫學、替代醫學及國科會學門成果發表等多項重要學術平台，不僅提供研究成果交流與學術對話之機會，更有助於促進跨校、跨領域及跨世代合作，激發更多創新研究與國際合作契機。同時，青年學者與學生的參與，也將成為推動學門永續發展與科研創新的重要力量。

特別感謝高雄醫學大學及所有籌辦團隊的用心規劃與辛勞付出，期待各位與會先進於此次會議中交流豐碩、收穫滿滿，共同開創天然藥物與中醫藥科學的新視野與新未來。

敬祝大會圓滿成功，與會先進交流豐碩、滿載而歸！

國科會生科處藥學及中醫藥學學門召集人
中國醫藥大學中醫學院院長
顏宏融 教授



WELCOME LETTER

跨域創新 41st SNP | 26th SFRR-Taiwan 2026 TATCM | NSTC Pharm/TCM
天然藥物、中醫藥與自由基醫學的新視野

NSTC 國家科學及技術委員會 National Science and Technology Council
Division of Pharmacy and Traditional Chinese Medicine, Department of Life Sciences

Distinguished guests, esteemed scholars, experts, and researchers,

It is my great pleasure to welcome you to the conference "Cross-Domain Innovation: New Horizons in Natural Products, Traditional Medicine, and Free Radical Medicine", held in conjunction with "41st Natural Product Symposium," the "26th Taiwan Society for Free Radical Research Academic Conference," the "2026 Taiwan Association for Traditional and Complementary Medicine Academic Conference," and the "Symposium on Pharmacy and Traditional Chinese Medicine, NSTC". On behalf of the Pharmacy and Traditional Chinese Medicine Discipline of the Department of Life Sciences, National Science and Technology Council, I extend my sincerest welcome and highest regards to all participants.

The Pharmacy and Traditional Chinese Medicine Discipline of the Department of Life Sciences, National Science and Technology Council, has long been committed to advancing academic research and translational applications in pharmacy and traditional Chinese medicine. With innovation and international engagement as its core missions, the Discipline emphasizes the integration of basic research, clinical application, and industry needs. It aims to promote interdisciplinary integration and the development of translational medicine, while establishing research models that incorporate both pharmaceutical technologies and the distinctive characteristics of traditional Chinese medicine. Through these efforts, the Discipline seeks to comprehensively enhance Taiwan's academic capacity and international competitiveness in the fields of pharmacy and traditional Chinese medicine.

The research scope of the Discipline is broad and diverse, encompassing key areas such as new drug development and formulation science, pharmaceutical and traditional Chinese medicine policy and clinical applications, modernization and clinical evidence of traditional Chinese medicine, as well as the integration of artificial intelligence, big data, and digital technologies. In recent years, with the rapid advancement of precision medicine, smart healthcare, and integrative medicine, research in pharmacy and traditional Chinese medicine has moved toward increasingly diverse and interdisciplinary innovative applications, demonstrating Taiwan's significant potential in the global development of health technologies.

This conference brings together several important academic platforms, including natural products, traditional Chinese medicine science, free radical medicine, complementary and alternative medicine, and the research achievement presentations of the National Science and Technology Council Discipline. It not only provides valuable opportunities for research exchange and academic dialogue, but also helps foster collaboration across institutions, disciplines, and generations, inspiring further innovative research and international cooperation. At the same time, the active participation of young scholars and students will serve as an important driving force for the sustainable development of the Discipline and for continued scientific innovation.

WELCOME LETTER

I would like to express my special appreciation to Kaohsiung Medical University and all members of the organizing teams for their thoughtful planning and dedicated efforts. I hope that all distinguished participants will enjoy fruitful exchanges and gain valuable insights from this conference, as we work together to open new horizons and shape a new future for natural products and traditional Chinese medicine sciences.

I wish the conference every success and all participants a rewarding and productive experience.

Sincerely,

Professor Hung-Rong Yen
Convener,
Discipline of Pharmacy and Traditional Chinese Medicine,
Department of Life Sciences,
National Science and Technology Council

Dean,
College of Chinese Medicine,
China Medical University



TABLE OF CONTENTS

跨域創新 41st SNP | 26th SFRR-Taiwan 2026 TATCM | NSTC Pharm/TCM
天然藥物、中醫藥與自由基醫學的新視野

- **Organizing Committee** 1
- **Committee** 2
- **Symposium Information** 3
- **Guidelines for Poster Presentation** 7
- **Guidelines for Oral Presentation Competition** 8
- **Symposium Agenda** 11
  - October 30th, 2026 (Friday) 11
  - October 31st, 2026 (Saturday) 13
  - November 1st, 2026 (Sunday) 17
- **Invited Speaker Introduction and Abstracts** 18
  - October 30th, 2026 (Friday) 16
  - October 31st, 2026 (Saturday) 35
- **List of Posters** 85

ORGANIZING COMMITTEE

◆ 主辦單位 Organizer

高雄醫學大學
Kaohsiung Medical University

高雄醫學大學
天然藥物研究所
Graduate Institute of Natural Products, Kaohsiung Medical University

高雄醫學大學藥學系
School of Pharmacy, Kaohsiung Medical University

臺灣天然藥物學會
The Natural Medicine Society of Taiwan

台灣自由基學會
Society for Free Radical Research Taiwan

臺灣傳統暨替代醫學協會
Taiwan Association for Traditional and Complementary Medicine

長庚科技大學藥物研發中心
Center for Drug Research and Development, Chang Gung University of Science and Technology

國家科學及技術委員會
藥學及中醫藥學學門
Division of Pharmacy and Traditional Chinese Medicine, Department of Life Sciences, National Science and Technology Council

◆ 協辦單位 Co-Organizer

衛生福利部
國家中醫藥研究所
National Research Institute of Chinese Medicine, Ministry of Health and Welfare

財團法人
高醫藥學文教基金會
The KMU Pharmacy Alumni Foundation for Culture and Education

丁丁藥局
TinTin Drugstore

高雄醫學大學新藥開發暨價創研究中心
Drug Development and Value Creation Research Center, Kaohsiung Medical University

◆ 補助單位 Funding Support

衛生福利部中醫藥司
Department of Chinese Medicine and Pharmacy, Ministry of Health and Welfare

高雄市政府經濟發展局
Economic Development Bureau, Kaohsiung City Government

◆ Co-badging

International Society for Ethnopharmacology

COMMITTEE

◆ 主任委員：

臺灣天然藥物學會理事長
洪啓峯

台灣自由基學會理事長、臺灣傳統暨替代醫學協會理事長
黃聰龍

◆ 委員：

臺灣天然藥物學會 名譽理事長
吳永昌、張芳榮、宋秉鈞

臺灣天然藥物學會 理監事
方嘉佑、廖志中、羅怡卿、顏宏融、李宗徽、王惠君、王士維、陳日榮、張訓碩、廖家慶、李威著、李美賢、莊武璋、郭賓崇、顧記華、吳志中、王靜瓊、鄭源斌、張光雄

台灣自由基學會 理監事
林琬琬、黃中洋、李安生、吳依璇、何鴻耀、陳柏任、黃文忠、鄭美玲、謝喜龍、樓迎統、顏秀娟、魏耀揮、程吉安、賴奎宏

臺灣傳統暨替代醫學協會 理監事
徐麗芬、沈立言、沈郁強、張恒鴻、潘敏雄、謝慶良、陳勁初、陳裕星、龔瑞林、郭曜豪、溫致群、林昭庚、蕭培文、黃慧琪

◆ **總幹事：**顏嘉宏、張訓碩、柯宏慧
◆ **秘書組：**柯麥可、胡皓竣、陳又瑩
◆ **學術組：**陳宜芳、曾惠如
◆ **會場組：**吳和澄
◆ **接待組：**謝侃言
◆ **總務組：**陳淑莉、萬子妤
◆ **壁報組：**林千如
◆ **各學會秘書：**徐宇柔、吳曉柔、張詩芸

SYMPOSIUM INFORMATION

跨域創新：天然藥物、中醫藥與自由基醫學的新視野
第 41 屆天然藥物研討會 | 第 26 屆台灣自由基學會學術研討會
2026 臺灣傳統暨替代醫學協會學術研討會
國科會生科處藥學及中醫藥學學門成果發表會

Cross-Domain Innovation: New Horizons in Natural Products, Traditional Medicine, and Free Radical Medicine
Joint Symposium of the 41st SNP, 26th SFRR-Taiwan, and 2026 TATCM & Symposium on Pharmacy and Traditional Chinese Medicine

◆ 會場資訊 Venue：

◇ 報到處 (Registration Desk)：
高雄醫學大學 國際學術研究大樓 國際會議中心 B2 大廳
(B2, KMU International Convention Center)

◇ 專題演講場地 (Lectures Venue)：
1. 高雄醫學大學 國際學術研究大樓 國際會議中心 B 廳
(Hall B, B2, International Convention Center, KMU)

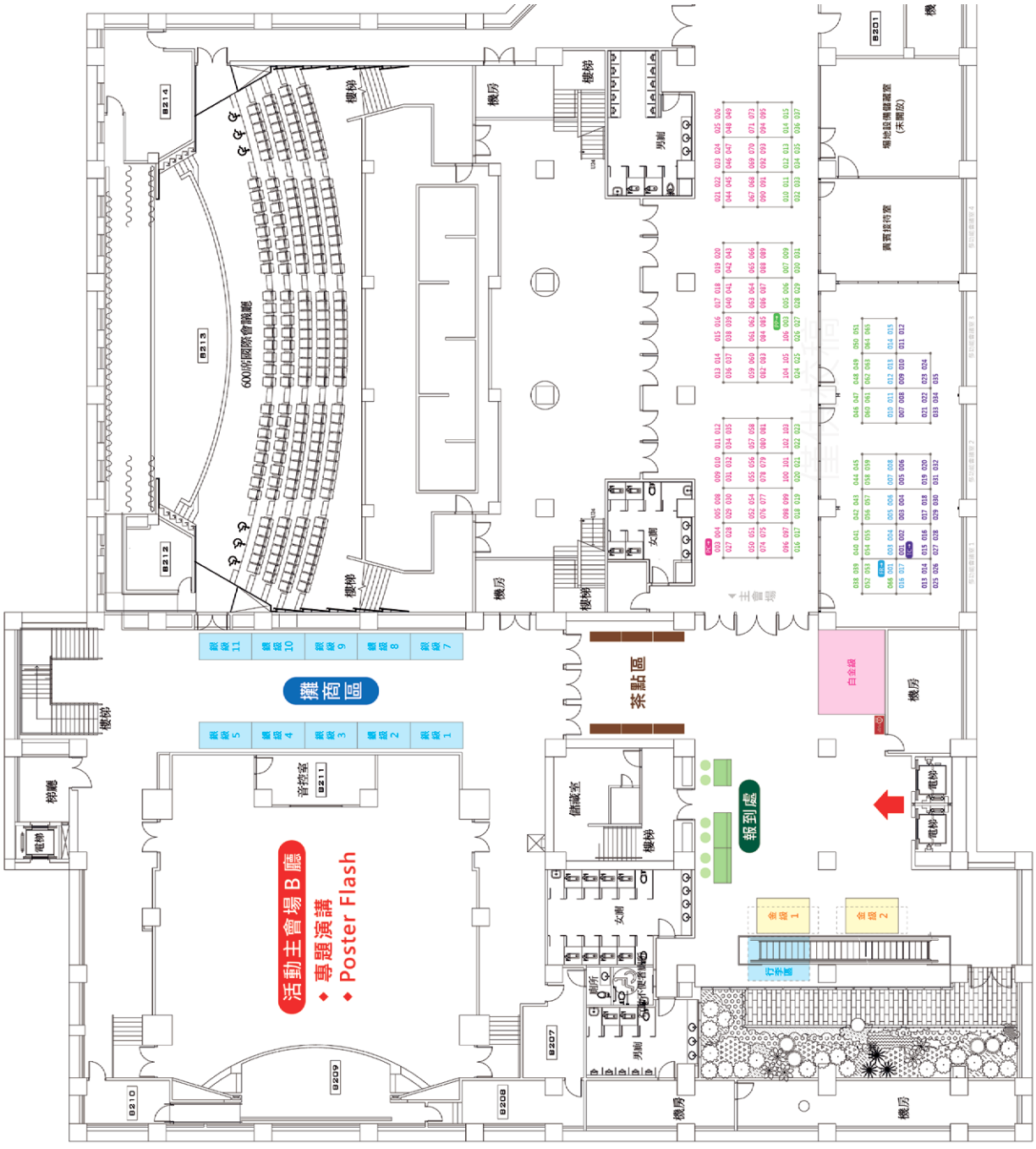
2. 高雄醫學大學 國際學術研究大樓 2 樓 IR201
(IR201, 2F, International Academic Research Building, KMU)

◇ Poster Flash 場地 (Poster Flash Venue)：
1. 高雄醫學大學 國際學術研究大樓 國際會議中心 B2 B 廳
(Hall B, B2, International Convention Center, KMU)

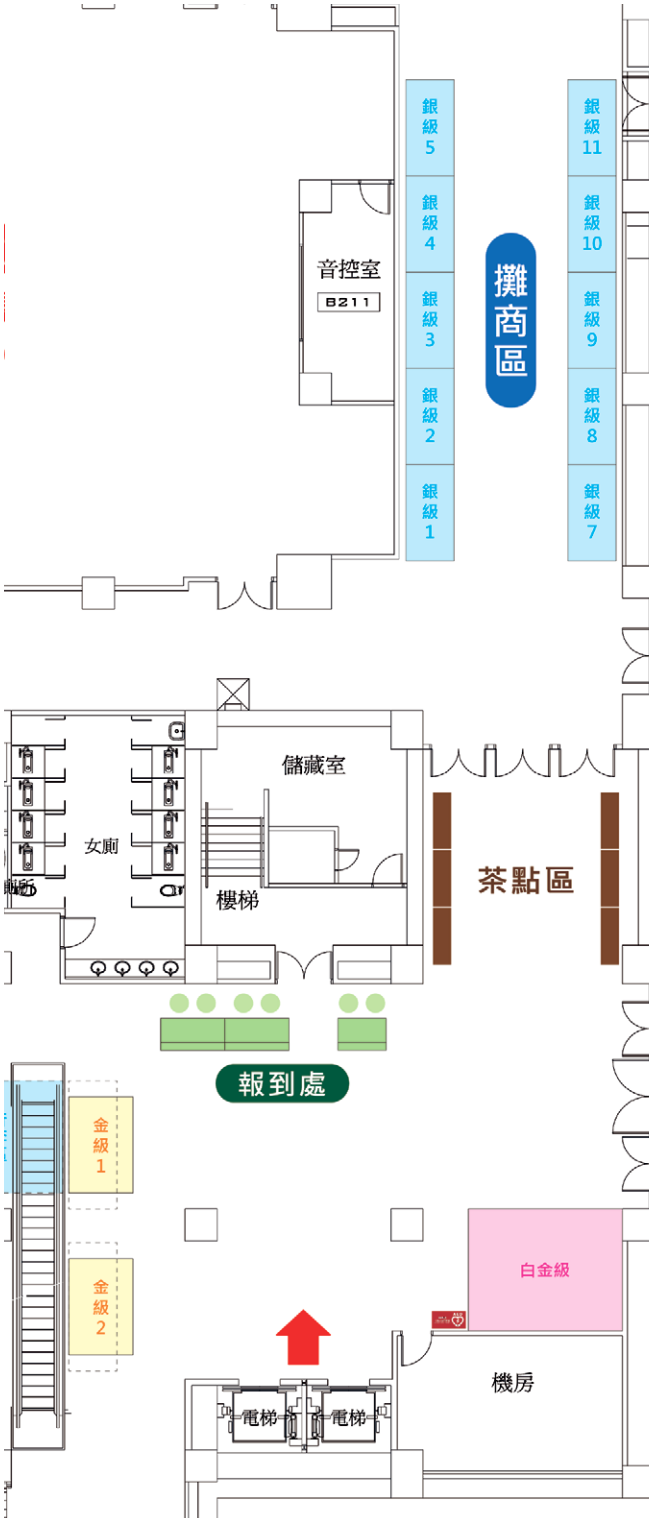
2. 高雄醫學大學 國際學術研究大樓 3 樓 IR301
(IR301, 3F, International Academic Research Building, KMU)

◇ 海報展示區 (Poster Presentation Area)：
高雄醫學大學 國際學術研究大樓 國際會議中心 B2 大廳
(B2, KMU International Convention Center)

SYMPOSIUM INFORMATION



SYMPOSIUM INFORMATION



白金級

國立海洋生物博物館

金級

1 金萬林企業股份有限公司
Molecular Devices (MD)

2 意欣國際有限公司

銀級

1 伯森生技

2 賸屨有限公司

3 寬崎科技有限公司

4 群研科技有限公司

5 衛生福利部國家中醫藥研究所

7 智恆科儀有限公司

8 洛科儀器股份有限公司

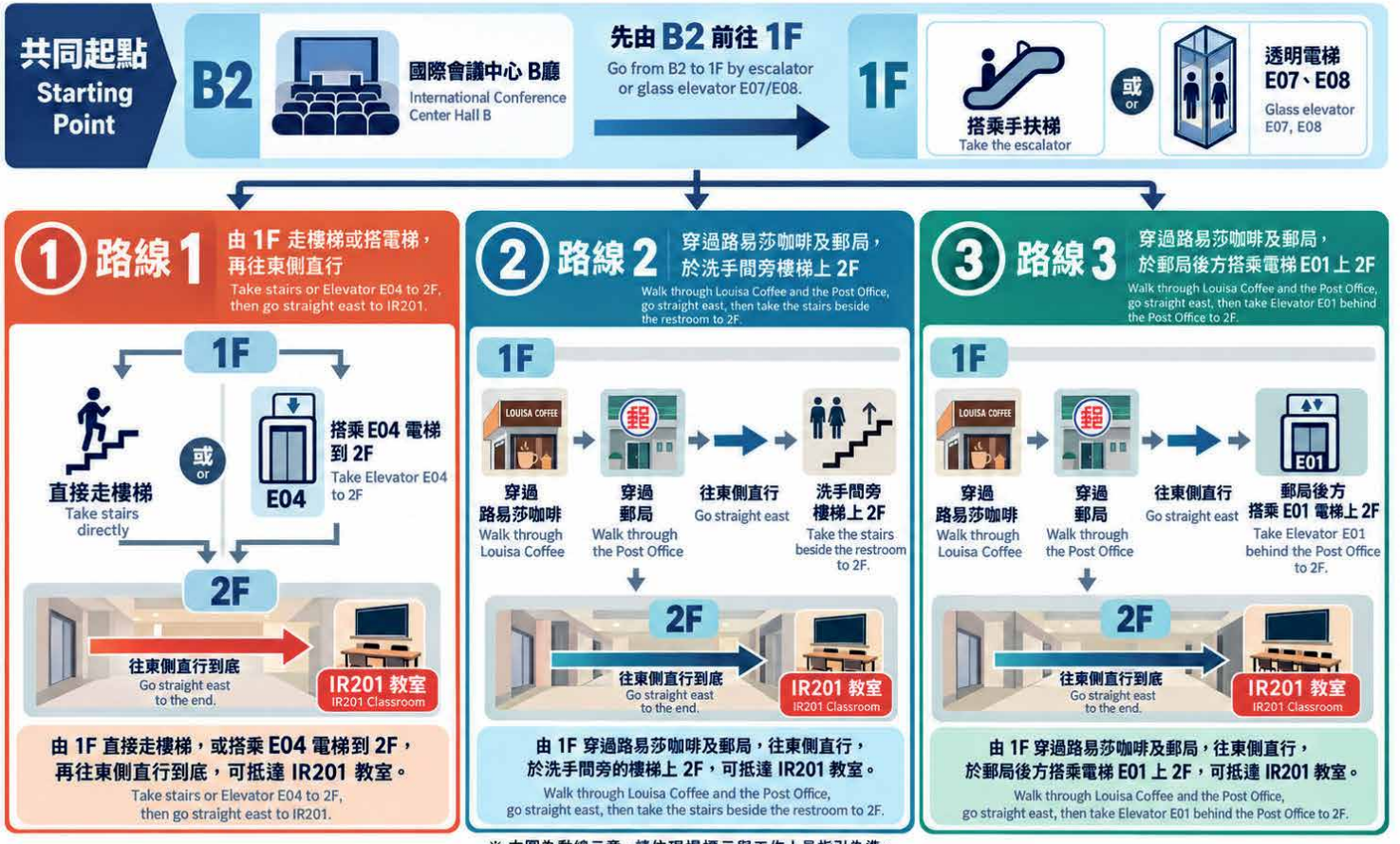
9 岑祥股份有限公司

10 勝騏科技
(勝博國際股份有限公司)

11 泛群科技有限公司

高醫國際研究大樓 B廳 → IR201教室 動線說明圖

Hall B to IR201 Route Guide



※ 本圖為動線示意，請依現場標示與工作人員指引為準。
Schematic route only. Please follow onsite signs and staff guidance.

跨域創新
天然藥物、中醫藥與自由基醫學的新視野
41st SNP | 26th SFRR-Taiwan 2026 TATCM | NSTC Pharm/TCM

GUIDELINES FOR ORAL PRESENTATION COMPETITION

◆ 口頭發表競賽須知：

1.具領獎資格者須具備下列任一學會之有效會員身分：
(1) 具有臺灣天然藥物學會 (SCNM) 有效會員身份，入會方式：
http://www.scnm.org.tw/TW/Member/ugC_MemberRegulation.asp
(2) 具有台灣自由基學會 (SFRR-Taiwan) 有效會員身份，入會方式：
http://www.sfrrt.org.tw/AboutUs02/ugC_Company.asp
(3) 具有臺灣傳統暨替代醫學協會 (TATCM) 有效會員身份，入會方式：
https://reurl.cc/LaAZ8x

2.Poster Flash / 壁報精要短講競賽須知：
本屆壁報競賽採兩階段評選方式進行，參賽者須全程參與，方符合完整參賽資格；此外，參賽者須具備學會有效會員身份始具獲獎資格，未具有效會員身份者仍可參與競賽，惟不得領取獎項。
(1) 第一階段：壁報論文展示評分
參賽者於指定壁報展示時段駐守於壁報前提供講解及進行交流討論。
評審委員於壁報展示時間進行現場實體評分，相關壁報展示時段請留意官方網站公告之 Poster Presentation 時間。
(2) 第二階段：Poster Flash / 壁報精要短講評分
競賽時間：2026 年 11 月 01 日 (日) 09:00 至 10:20。
演講時限：每位報告者限時 90 秒 (不含換場時間)。
發表規範：演講開始時，請清楚聲明您的「壁報號碼」。內容應聚焦於研究之關鍵發現，請避免致謝詞或與主題無關之報告內容。
(3)Poster Flash 簡報製作與繳交規範 (請於檔案上傳前留意以下細節)
投影片格式：請準備單一張投影片 (比例 16：9)，簡報語言為英文，並轉存為 PDF。
軟體相容性：現場硬體僅支援 Windows 系統，不支援 macOS 系統。請務必自行於不同設備預先測試，確保簡報及字體顯示正常。
視覺限制：投影片內請避免過度使用 Logo、商標或任何商業廣告資訊。

3.檔案上傳期限
請於 2026 年 10 月 19 日至 2026 年 10 月 23 日 23:59 前完成簡報 PDF 檔上傳。(活動當日恕不接受臨時抽換檔案，請務必於上傳前確認內容。)

4.評選與獎勵辦法
大會學術組將綜合「壁報論文展示」與「口頭發表競賽」之表現，評選出優秀發表人，並於閉幕式頒發獎項。

GUIDELINES FOR POSTER PRESENTATION

◆ 壁報論文須知：

1.Poster Session / 壁報論文展示：投稿者需自行印刷壁報至現場張貼，壁報尺寸為 90 cm x 120 cm（直式壁報）。

2.Poster Session / 壁報論文展示 + Poster Flash / 壁報精要短講：投稿者需自行印刷壁報至現場張貼，壁報尺寸為 90 cm x 120 cm（直式海報），並參加 Poster Flash。

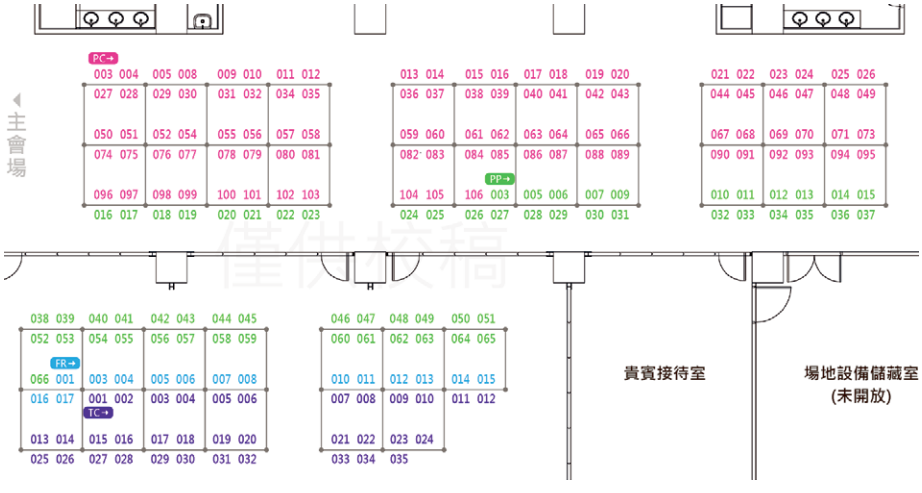
3. 請配合於在 10 月 31 日上午 10:00 前完成壁報設置，並於 11 月 01 日議程結束前拆除您的海報。

◆ Notice for poster presentation:

1.Poster Session: Presenters are responsible for printing and displaying their posters on site. The poster size is 90 cm x 120 cm (portrait orientation).

2.Poster Session + Poster Flash (Oral Competition): the poster printing and display requirements are the same as above. Presenters must follow the poster competition rules.

3.Please set up your poster before 10:00 a.m. on October 31, and tear down your poster before the end of the symposium on November 1.



GUIDELINES FOR ORAL PRESENTATION COMPETITION

組別/獎項	第一名 (NT$ 10,000)	第二名 (NT$ 6,000)	第三名 (NT$3,000)	佳作 (NT$1,000)
天然物化學組 (PC)	一名	一名	一名	若干名
天然物藥理組 (PP)	一名	一名	一名	若干名
自由基組 (FR)	一名	一名	一名	若干名
傳統中醫藥暨替代醫學組 (TC)	一名	一名	一名	若干名

◆ Notice for Poster Flash Competition:

1. To be eligible for awards, participants must hold valid membership in at least one of the following societies：
   (1) Hold valid membership in The Natural Medicine Society of Taiwan, please refer to the membership details at http://www.scnm.org.tw/TW/Member/ugC_MemberRegulation.asp.
   (2) Hold valid membership in the Society for Free Radical Research Taiwan, please refer to the membership details at http://www.sfrrt.org.tw/AboutUs02/ugC_Company.asp
   (3) Hold valid membership in the Taiwan Association for Traditional and Complementary Medicine, please refer to the membership details at https://reurl.cc/LaAZ8x
2. Poster Flash competition guidelines:
   The Poster Flash competition adopts a two-stage evaluation process, and participants must complete both stages. In addition, participants must hold a valid membership in the relevant academic society to be eligible for awards. Those without valid membership may still participate in the competition but will not be eligible to receive any awards.
   (1)Stage 1: poster session (onsite presentation)
   - Participants are required to remain at their posters during the poster session to provide explanations and engage in discussions. Judges will conduct on-site evaluations during the poster presentation period.

GUIDELINES FOR ORAL PRESENTATION COMPETITION

(2)Stage 2: Poster Flash presentation
The Poster Flash competition will be held from 09:00 to 10:20 on November 1, 2026 (Sunday).
- Date and Time: November 1, 2026 (Sunday), 09:00–10:20
- Duration: individual presenters will have a limited time of "90 seconds" for their presentation, excluding the transition time
- Requirements: presenters are required to clearly state their "poster number" at the beginning, focus on key findings, and avoid acknowledgments or unrelated content.

(3)Slide Preparation and Submission (Please review the following details before uploading your file):
Please prepare a single slide in 16:9 format, with the presentation in English, and convert it into PDF. As only Windows systems are supported onsite (macOS is not supported), presenters should test their files on different devices in advance and avoid excessive use of logos, trademarks, or commercial content.

3. File Upload Period:
Please submit the PDF file of your presentation slide from October 19 to October 23, 2026, by 23:59 (Taiwan time, UTC+8).

※ No file replacement will be accepted on the day of the event; please ensure that all content is finalized before uploading.

4.Evaluation and Awards:
Awards will be determined based on combined performance in Poster Session and Poster Flash, and presented during the closing ceremony.

Groups/Prizes	The First prize (NT$ 10,000)	The Second prize (NT$ 6,000)	The Third prize (NT$3,000)	Honorable mention (NT$1,000)
Natural Products Chemistry (PC)	1 awardee	1 awardee	1 awardee	several awardees
Natural Products Pharmacology (PP)	1 awardee	1 awardee	1 awardee	several awardees
Free Radical (FR)	1 awardee	1 awardee	1 awardee	several awardees
TCM and Complementary Medicine (TC)	1 awardee	1 awardee	1 awardee	several awardees

SYMPOSIUM AGENDA

日期：October 30th, 2026 (Friday)
地點：高雄醫學大學 , The first main venue: Conference Hall B, International Academic Research Building B2, Kaohsiung Medical University, Taiwan

TIME	PROGRAM	
12:00 – 13:30	Registration & Welcome Reception Venue: Conference Hall B, B2, International Academic Research Building Annual Meeting of the Society for Free Radical Research-Taiwan (SFRR-Taiwan) Venue: Room N532, 5F, First Teaching Building Annual Meeting of the Taiwan Association for Traditional and Complementary Medicine (TATCM) Venue: Room N532, 5F, First Teaching Building	
13:30 – 14:00	Opening and welcome remarks	**Prof. Tai-Horng Yang (楊台鴻教授)** • Director General, Department of Life Sciences, National Science and Technology Council (NSTC) **Prof. Hung-Rong Yen (顏宏融教授)** • Convener, Division of Pharmacy and Traditional Chinese Medicine, Department of Life Sciences, NSTC **Prof. Yi-Ching Wang (王憶卿教授)** • Co-Convener, Division of Pharmacy and Traditional Chinese Medicine, Department of Life Sciences, NSTC
Moderator: **Prof. Chi-Feng Hung (洪啓峯教授)**		
14:00 – 14:30	Strategic Development and Future Directions of the Division of Pharmacy and Traditional Chinese Medicine (國科會生科處藥學及中醫藥學學門推動規劃報告)	**Prof. Hung-Rong Yen (顏宏融教授)** • Convener, Division of Pharmacy and Traditional Chinese Medicine, Department of Life Sciences, National Science and Technology Council

SYMPOSIUM AGENDA

TIME	PROGRAM	
Moderator: **Prof. Yi-Ching Wang (王憶卿教授)**		
14:30 – 15:10	Exploring the Future of Extracellular Vesicle Research in Cancer Diagnosis and Therapy	**Assoc. Prof. Chi-An Cheng (程吉安老師)** • School of Pharmacy, College of Medicine, National Taiwan University
15:10 – 15:50	The application of nanomedicine for natural product delivery and targeting to treat inflammatory diseases	**Prof. Jia-You Fang (方嘉佑教授)** • Graduate Institute of Natural Products, School of Traditional Chinese Medicine, Chang Gung University
15:50 – 16:20	Coffee break	
Moderator: **Prof. Hung-Rong Yen (顏宏融教授)**		
16:20 – 17:00	Targeting Host Entry Receptors: Preclinical and Real-World Efficacy of Chiehyuan Herbal Solution (GB-2) Against SARS-CoV-2 Variants	**Prof. Ching-Yuan Wu (吳清源教授)** • School of Traditional Chinese Medicine, Chang Gung University
17:00 – 17:40	Drugs from Tank	**Prof. Ping-Jyun Sung (宋秉鈞教授)** • Deputy Director General, National Museum of Marine Biology and Aquarium
17:40 – 18:00	Break and transportation	
18:00 – 21:00	**Welcome Dinner (Invited)** **TAi urban resort - 9F Light Wedding (高雄承億酒店-9 樓萊特薇庭)** Address: 9F, No. 189, Linsen 4th Rd, Zhenxing Village, Cianjhen District, Kaohsiung City, 806 (高雄市前鎮區振興里林森四路 189 號 9 樓)	

SYMPOSIUM AGENDA

日期：October 31st, 2026 (Saturday)
地點：高雄醫學大學 , The first main venue: Conference Hall B, International Academic Research Building B2, Kaohsiung Medical University, Taiwan

TIME	PROGRAM	
08:10 – 09:00	Registration	
09:00 – 09:30	Opening and welcome remarks & Group photo	**Prof. Yeou-Lih Huang** **(黃友利副校長)** Vice President, Kaohsiung Medical University (KMU) **Prof. Yi-Chang Su** **(蘇奕彰所長)** • Director, National Research Institute of Chinese Medicine, Ministry of Health and Welfare **Prof. Hung-Rong Yen** **(顏宏融教授)** • Dean, College of Chinese Medicine, China Medical University • Convener, Division of Pharmacy and Traditional Chinese Medicine, Department of Life Sciences, National Science and Technology Council **Prof. Chi-Feng Hung** **(洪啓峯教授)** School of Medicine, Fu Jen Catholic University • President, The Natural Medicine Society of Taiwan **Prof. Tsong-Long Hwang** **(黃聰龍副校長)** • Vice President, Chang Gung University of Science and Technology • President, Society for Free Radical Research-Taiwan • President, Taiwan Association for Traditional and Complementary Medicine
Moderator: **Prof. Chia-Hung Yen (顏嘉宏教授)**		

SYMPOSIUM AGENDA

TIME	PROGRAM	
09:30 – 10:10	<Plenary talk-A> AI Approaches in Natural Products Research: Advancements in Discovery Technologies	**Prof. Roger Linington** • Department of Chemistry, Simon Fraser University, Canada
10:10 – 10:40	Coffee break	
Moderator: **Prof. Chih-Chuang Liaw (廖志中教授)**		
10:40 – 11:20	<Plenary talk-B> Microalgal drug development Downunder	**Assoc. Prof. Johan Svenson** • Cawthron Institute, Nelson, New Zealand
11:20 – 11:30	Conference Announcement	
11:30 – 12:30	Lunch / SCNM Annual meeting	
12:30 – 13:30	Poster Time: Presentation & Evaluation	
Moderator: **Prof. Tzong-Huei Lee (李宗徽教授)** and **Assist. Prof. Michal Korinek (柯麥可老師)**		
13:30 – 14:00	Fantastic RiPPs and Where to Find Them: How an Interaction-Induced Metabolite Unveiled a Hidden Class V Lanthipeptide Family	**Assoc. Research Fellow Yu-Liang Yang (楊玉良老師)** • Agricultural Biotechnology Research Center, Academia Sinica
14:00 – 14:30	Marine Fungi for the Development of Bioactive Natural Products	**Prof. Yuan-Bin Cheng (鄭源斌教授)** • Department of Marine Biotechnology and Resources, National Sun Yat-sen University
14:30 – 15:00	Climate risks and sustainability of phytopharmaceuticals: the Case of Epilobium species	**Prof. Olha Mykhailenko** • Department of Pharmaceutical Chemistry, National University of Pharmacy Kharkiv, Ukraine
15:00 – 15:30	Coffee break	
Moderator: **Prof. Jih-Hwa Guh (顧記華教授)** and **Prof. Hui-Chun Wang (王惠君教授)**		

SYMPOSIUM AGENDA

TIME	PROGRAM	
15:30 – 16:00	Extracellular Vesicles: Nature's Messengers Across Biological Kingdoms—from Communication to Translation	**Prof. Tang-Long Shen (沈湯龍教授)** • Department of Plant Pathology & Microbiology, National Taiwan University
16:00 – 16:30	Anti-Inflammatory and Anti-Aging Principles from Natural Sources	**Prof. Ping-Chung Kuo (郭賓崇教授)** • School of Pharmacy, College of Medicine, National Cheng Kung University
16:30 – 17:00	Bioactive Natural Products from Formosan Natural Resources: Lead Compounds for Drug Discovery	**Prof. Jih-Jung Chen (陳日榮教授)** • Department of Pharmacy, National Yang Ming Chiao Tung University
Moderator: **Prof. Fang-Rong Chang (張芳榮教授)**		
17:00 – 18:00	Special seminar of academic career reflection (吳永昌教授退休紀念演講)	**Prof. Yang-Chang Wu (吳永昌教授)** • Master's Program for Pharmaceutical Manufacture, China Medical University
18:00 – 18:30	Break and transportation	
18:30 – 21:00	**Conference Banquet** **THE LIN, Kaohsiung – 3F (高雄林皇宮-3 樓樂喜廳)** No. 99, Bo'ai 2nd Rd., Gushan Dist., Kaohsiung City, 804 (高雄市鼓山區博愛二路 99 號)	

SYMPOSIUM AGENDA

日期 : October 31st, 2026 (Saturday)
地點 : IR201, 2F, International Academic Research Building, Kaohsiung Medical University, Taiwan

TIME	PROGRAM	
Moderator: **Prof. Mei-Ling Cheng (鄭美玲教授)** and **Assoc. Prof. Kuei-Hung Lai (賴奎宏老師)**		
13:30 – 14:00	Deciphering the Biosynthetic Logic of Fungal Natural Products	**Assoc. Research Fellow Hsiao-Ching Lin (林曉青老師)** • Institute of Biological Chemistry, Academia Sinica
14:00 – 14:30	From Clinical Insights to Mechanistic Investigation: Unraveling the Vascular Toxicity of Clozapine	**Prof. Shih-Wei Wang (王士維教授)** • Institute of Biomedical Science, MacKay Medical University
14:30 – 15:00	Beyond Accuracy: AI Platforms for Reliable Drug Discovery	**Investigator Chun-Wei Tung (童俊維教授)** • Institute of Biotechnology and Pharmaceutical Research, National Health Research Institutes (NHRI)
15:00 – 15:30	Coffee break	
Moderator: **Prof. Hui-Chi Huang (黃慧琪教授)** and **Prof. Hen-Hong Chang (張恒鴻教授)**		
15:30 – 16:00	Investigating the antitumor and immunomodulatory mechanisms of steroidal saponins in bladder cancer	**Prof. Mei-Chuan Chen (陳美全教授)** Department of Pharmaceutical Sciences, Taipei Medical University
16:00 – 16:30	Beyond a Single Pathway: Exploring Natural Products with the Ocular Research Toolbox	**Assist. Prof. Fan-Li Lin (林凡立老師)** • Department of Pharmacology, College of Medicine, Kaohsiung Medical University
16:30 – 17:00	Thai Medicinal Plants: From Phytochemical Profiling to Functional Evaluation	**Assoc. Prof. Chaisak Chansriniyom** • Department of Pharmacognosy and Pharmaceutical Botany, Faculty of Pharmaceutical Sciences, Chulalongkorn University, Thailand

SYMPOSIUM AGENDA

日期：November 1st, 2026 (Sunday)
地點：高雄醫學大學 , The first main venue: Conference Hall B, International Academic Research Building B2, Kaohsiung Medical University, Taiwan

TIME	PROGRAM	
Moderator: **Assist. Prof. Hao-Chun Hu (胡皓竣老師)**		
09:00 – 10:20	**Flash talk of posters:** Natural Products Chemistry (PC)	
10:20 – 10:50	Coffee break	
10:50 – 11:20	Outstanding research award ceremony	
	Outstanding research award speech	**Awardee** To be announced on site
11:20 – 12:00	Awards & Closing ceremony	
12:00 – 15:00	Lunch & City tour	

日期 : November 1st, 2026 (Sunday)
地點 : IR301, 3F, International Academic Research Building, Kaohsiung Medical University, Taiwan

TIME	PROGRAM
Moderator: **Assist. Prof. Kan-Yen Hsieh (謝侃言老師)**	
09:00 – 10:20	**Flash talk of posters:** Natural Products Pharmacology (PP) Free Radical (FR) TCM and Complementary Medicine (TC)

INVITED SPEAKER

顏宏融 Hung-Rong Yen



【現職單位 (Current Affiliation)】
國科會生科處藥學及中醫藥學學門召集人
Convener of Division of Pharmacy and Traditional Chinese Medicine, Department of Life Sciences, NSTC
中國醫藥大學中醫學院院長
Dean of College of Chinese Medicine in China Medical University

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2026	許鴻源中醫藥學術獎（中藥學術研究類組）
2026	張步桃醫師傑出研究獎
2025	第21屆東洋醫學會「深耕東洋健康臺灣獎」
2024	TSAA台灣永續行動獎銅獎 (2024年起連續三年獲獎)
2024	國際民族藥理學會研究創新獎
2023	《康健》「2023年度好醫生」
2023	國際醫學針灸暨相關技術醫學會「科學獎」
2022	國家新創獎：「提升台灣本土中藥青黛質量應用於自體免疫調控」
2022	SNQ國家品質標章：「中西醫整合照護，全面守護過敏兒」特色醫療
2019	SNQ國家品質標章：「兒童生長發育，中西醫聯手把關」特色醫療 (連續三年認證通過)

【重要著作 (Selected Publications) 】

1. Liu CT, Yeh CC, Wu TC, Lin CH, Kuo YT, Iwakura Y, Day YJ, Drake C, Radojcic V, Song YC#, Wu HH#, Yen HR*#. Metabolic Reprogramming of T Cells by Dual UCP2 and IL-17 Blockade Enhances Immunity Against Pancreatic Cancer. Adv. Sci. 2026;13(16):e13020. (#Co-correspondence) (Selected as the Frontispiece)
2. Lin JR, Song YC, Chou YL, Chen YJ, Hsiao C, Li JP, Ho YJ, Liao WC, Yen HR*#, Liu CH#. Dasatinib boosts γδ T cell expansion and memory phenotypes with enhanced antitumor immunity. Cancer Immun. Immunother. 2026;75(3):91. (#Co-correspondence)
3. Yen HR, Liao WC, Chen CH, Su YA, Huang YW, Hsiao C, Chou YL, Chu YH, Shih PK, Liu CH. Targeting chondroitin sulfate suppresses macropinocytosis of breast cancer cells by modulating syndecan-1 expression. Mol. Oncol. 2024;18(10):2569-2585.

4. Liu CT, Yen JJ, Brown DA, Song YC, Chu MY, Hung YH, Tang YH, Wu PY#, Yen HR*#. Targeting Nrf2 with 3 H-1,2-dithiole-3-thione to moderate OXPHOS-driven oxidative stress attenuates IL-17A-induced psoriasis. Biomed. Pharmacother. 2023;159:114294. (#Co-correspondence)
5. Huang CY, Mayer PK, Wu MY, Liu DH, Wu PC, Yen HR*. The Effect of Tai Chi in Elderly Individuals with Sarcopenia and Frailty: A Systematic Review and Meta-analysis of Randomized Controlled Trials. Ageing Res. Rev. 2022; 82:101747.
6. Liu CH, Lin BS, Wu MY, Song YC, Ke TW, Chou YL, Liu CT, Lin CH, Radojcic V, Drake C, Yen HR*. Adoptive transfer of IL-4 reprogrammed Tc17 cells elicits anti-tumour immunity through functional plasticity. Immunology. 2022;166(3):310-326. (Selected as the Featured Cover)
7. Liu CT, Song YC, Wu TC, Shiung KC, Chen IH, Chang TT, Liang SJ#, Yen HR*#. Targeting glycolysis in Th2 cells by pterostilbene attenuates clinical severities in an asthmatic mouse model and IL-4 production in peripheral blood from asthmatic patients. Immunology. 2022;166(2):222-237. (#Co-correspondence) (Selected as the Featured Cover)
8. Song YC#, Liu CT, Lee HJ, Yen HR*#. Cordycepin prevents and ameliorates experimental autoimmune encephalomyelitis by inhibiting leukocyte infiltration and reducing neuroinflammation. Biochem. Pharmacol. 2022;197:114918. (#Co-correspondence)
9. Hseu YC, Vudhya Gowrisankar Y, Wang LW, Zhang YZ, Chen XZ, Huang PJ, Yen HR*#, Yang HL*#. The in vitro and in vivo depigmenting activity of pterostilbene through induction of autophagy in melanocytes and inhibition of UVA-irradiated α-MSH in keratinocytes via Nrf2-mediated antioxidant pathways. Redox Biol. 2021;44:102007. (#Co-correspondence)
10. Song YC, Huang HC, Chang CYY, Lee HJ, Liu CT, Lo HY, Ho TY, Lin WC, Yen HR*. A Potential Herbal Adjuvant Combined with A Peptide-based Vaccine Acts against HPV-related Tumors through Enhancing Effector and Memory T Cell Immune Responses. Front Immunol. 2020;11:62.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2021-present	College of Chinese Medicine, China Medical University, Taiwan.	Dean
2021-present	International Master Program in Acupuncture, College of Chinese Medicine, China Medical University, Taiwan.	Chair
2020-present	Integration of Chinese-Western Medicine, China Medical University Hospital, Taiwan.	Director
2019-present	School of Chinese Medicine, College of Chinese Medicine, China Medical University, Taiwan.	Professor
2007- 2010	Johns Hopkins University School of Medicine, Baltimore, MD, U.S.A.	Research Fellow
2004- 2010	Ph.D., Chang Gung University College of Medicine, Taoyuan, Taiwan.	Ph.D.
1990- 1997	China Medical University, Taichung, Taiwan. (dual licensure in Chinese medicine and Western medicine)	M.D.

Strategic Development and Future Directions of the Division of Pharmacy and Traditional Chinese Medicine (國科會生科處藥學及中醫藥學學門推動規劃報告)

Hung-Rong Yen[1, 2]

[1] Division of Pharmacy and Traditional Chinese Medicine, Department of Life Sciences, National Science and Technology Council, Taiwan
[2] School of Chinese Medicine, College of Chinese Medicine, China Medical University, Taichung, Taiwan

*E-mail: hungrongyen@mail.cmu.edu.tw

Abstract
The Division of Pharmacy and Traditional Chinese Medicine, Department of Life Sciences, National Science and Technology Council (NSTC), is committed to advancing research, innovation, and translational applications in pharmacy and traditional Chinese medicine (TCM). Its mission is to bridge basic science with clinical practice and industrial needs, while strengthening interdisciplinary collaboration, international engagement, and talent development.
The Division supports four major research domains: (1) drug discovery and pharmaceutical sciences, including small molecules, natural products, biologics, nucleic acid therapeutics, and drug delivery; (2) pharmacy and TCM policy and clinical applications, including clinical pharmacy, epidemiology, health economics, health policy, and integrative healthcare; (3) modernization and clinical applications of TCM, including acupuncture, Chinese herbal medicine, formula studies, and clinical specialties; and (4) technological innovation, particularly the application of artificial intelligence, digital health, and big data to precision medicine and smart healthcare.
Looking ahead, the Division will focus on strengthening transparent governance and peer review, accelerating translational innovation, promoting international collaboration, fostering interdisciplinary research, enhancing knowledge exchange, and supporting early-career investigators. Through these strategies, the Division aims to build a sustainable and synergistic research ecosystem for pharmacy and TCM, strengthening Taiwan's scientific competitiveness and contribution to global health and biomedical innovation.

Keywords: Pharmacy; Traditional Chinese Medicine; Life Science; National Science and Technology Council.

程吉安 Chi-An Cheng



【現職單位 (Current Affiliation)】
國立台灣大學 藥學系
Department of Pharmacy, National Taiwan University

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2026	Taiwan Outstanding Women in Science Award- Rising Star Award (第十九屆台灣傑出女科學家新秀獎)
2025	Ta-You Wu Memorial Award (114年度國科會吳大猷先生紀念獎)
2025	Moderna Taiwan mRNA Innovation Award (莫德納台灣mRNA前瞻新創獎)
2025	NTU Outstanding Scholar Award (臺大拔萃學者)
2025	台灣藥物基因體學會陳垣崇院士年輕學者獎
2025	Professor Chau-Jean Lee Biomedical Engineering Development
2025	“Dr. Yun MOU” Outstanding Young Scholar Award (臺灣奈米生醫學會牟昀優秀年輕學者獎)
2024	Pro. C.Y. Lee Foundation Young Investigator Award (李鎮源教授醫學研究青年學者獎)
2022	Emerging Young Scholar of 2030 Cross-Generation Young Scholars
2022	Yushan Young Scholar (administrative support) (教育部玉山青年學者行政費用補助)

【重要著作 (Selected Publications) 】

1. Li JF, Chen SW, Chu YS, Kuo ST, Hung YH, Yeh PY, Chen YA, Yu SP, Ko CJ, Cheng CA*. Surface or Luminal? Decoding Tumor Extracellular Vesicle Logic for Functional Insight and Therapeutic Reprogramming, Adv. Funct. Mater., 2025, 35, 51: e21108.
2. Hsu CW, Fang YC, Li JF, Cheng CA*. Decoding Complex Biological Milieus: SHINER’s Approach to Profiling and Functioning of Extracellular Vesicle Subpopulations, Small., 2025, 21, 2503638.
3. Cheng CA*. Before Translating Extracellular Vesicles into Personalized Diagnostics and

Therapeutics: What We Could Do, Mol. Pharmaceutics. 2024, 21, 2625–2636.
4. Cheng CA*, Hou KC, Hsu CW, Chiang LC. Ultrasensitive and High-Resolution Protein Spatially Decoding Framework for Tumor Extracellular Vesicles, Adv. Sci., 2024, 11, 2304926.
5. Cheng CA*, Chiang LC, Chu YS. Integrated Pipeline for Ultrasensitive Protein Detection in Cancer Nanomedicine, RSC Adv., 2023, 13, 14685–14697.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2026/8-	臺大藥學專業學院	國際長
	臺大國際三校農業生技與健康醫療碩士學位學程	合聘助理教授
	臺大醫學院藥物研究中心藥效及毒理評估組	組長
2025-	台灣自由基學會	秘書長
	中華民國癌症醫學會第23屆癌症基礎研究委員會	委員
	台灣藥學會第35屆藥物科學委員會	委員
	台灣藥學會第35屆國際事務委員會	委員
2020-2022	美國哈佛醫學院| 布萊根婦女醫院 |哈佛大學Wyss Institute	博士後研究員
2015-2020	美國加州大學洛杉磯分校 生物工程研究所	博士
2009-2011	國立臺灣大學 化學研究所	碩士
2005-2009	國立臺灣大學 化學系	學士

Exploring the Future of Extracellular Vesicle Research in Cancer Diagnosis and Therapy

Chi-An Cheng[1]

[1] School of Pharmacy, College of Medicine, National Taiwan University, Taipei, 10050 Taiwan

*E-mail: cacheng123@ntu.edu.tw

Abstract
Extracellular vesicle (EV) research is rapidly advancing from fundamental science to translational applications in EV-based personalized therapeutics and diagnostics. Yet, fundamental questions persist regarding EV biology and mechanisms, particularly concerning the heterogeneous interactions between EVs and cells. Recognizing the multilayered heterogeneity of EVs as both a challenge and an opportunity, in my presentation, I will highlight three exciting EV technological advancements developed by our multidisciplinary group. These newly developed technologies address technical gaps in dissecting the molecular contents of EV subsets, contributing to the evolution of EVs as next-generation liquid biopsies for diagnostics and providing better quality control for EV-based therapeutics. We believe these novel approaches could facilitate our understanding of diverse EV biology to advance EV-based personalized diagnostics and therapeutics.

Keywords: Extracellular vesicle, precision medicine, drug delivery

方嘉佑 Jia-You Fang



【現職單位 (Current Affiliation)】
特聘教授 , 長庚大學天然藥物研究所
Distinguished Professor, Graduate Institute of Natural Products, Chang Gung University

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2025	Taiwan Innotech Expo Gold medal (創新技術博覽會金牌獎)
2024	Outstanding Research Award for Academic Papers (天然藥物學會傑出研究獎)
2024	28th Distinguished Alumni (高雄醫學大學學術類傑出校友)
2023	33rd Wang Ming-Ning Award (王民寧獎)
2020	Outstanding Research Award for Academic Papers (天然藥物學會傑出研究獎)

【重要著作 (Selected Publications) 】

1. Chung YK, Lin CY, Wang YT, Chang YT, Alalaiwe A, Yu HP, Fang JY.* Extracellular vesicle-mimetic nanoplatforms for integrated vaccination and targeted antibiotic therapy against MRSA bacteremia: a wolf in sheep' s clothing. Biomater. Res., 2026, in press.
2. Fang JY, Lin CF, Chang YT, Alshetaili A, Wei SH, Yang SC. Topical acacia gum reshapes staphylococcal dysbiosis and inflammation in atopic dermatitis. npj Biofilms Microbomes, 2026, 12, 90.
3. Hsu CY, Liao CC, Lin ZC, Alalaiwe A, Hwang E, Lin TW, Fang JY.* Facile adipocyte uptake and liver/adipose tissue delivery of conjugated linoleic acid-loaded tocol nanocarriers for a synergistic anti-adipogenesis effect. J. Nanobiotechnol., 2024, 22, 50.
4. Lee WR, Chou WL, Lin ZC, Sung CT, Lin CY, Fang JY.* Laser-assisted nanocarrier delivery to achieve cutaneous siRNA targeting for attenuating psoriasiform dermatitis. J. Control. Release, 2022, 347, 590–606.
5. Lin ZC, Hwang TL, Huang TH, Tahara K, Trousil J, Fang JY.* Monovalent antibody-conjugated lipid-polymer nanohybrids for active targeting to desmoglein 3 of keratinocytes to attenuate psoriasiform inflammation. Theranostics, 2021, 11, 4567–4584.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2001-present	Graduate Institute of Natural Products, Chang Gung University	Associate Professor to Distinguished Professor
2015-present	Graduate Institute of Health Industrial Technology, Chang Gung University of Science and Technology	Adjunct Professor
2017-present	Department of Anesthesiology, Chang Gung Memorial Hospital	Adjunct Professor
2010-2015	College of Human Ecology, Chang Gung University of Science and Technology	Dean
2007-2010	Graduate Institute of Natural Products, Chang Gung University	Director

The application of nanomedicine for natural product delivery and targeting to treat inflammatory diseases

Jia-You Fang[1]

[1]Graduate Institute of Natural Products, Chang Gung University, Taoyuan, Taiwan

*E-mail: fajy@mail.cgu.edu.tw

Abstract
Natural compounds exhibit broad biological activities and strong market potential; however, their clinical and industrial translation is frequently limited by poor solubility, instability, low bioavailability, and insufficient tissue targeting. Nanomedicine provides an advanced delivery strategy to overcome these barriers by improving formulation stability, enhancing penetration efficiency, and enabling targeted biological interactions. This presentation highlights the role of nanocarrier engineering in transforming natural bioactives into functional therapeutic candidates with defined performance and reproducible quality. Emphasis will be placed on formulation innovation, bioinspired delivery design, and targeting strategies that enhance biological efficacy while maintaining safety profiles. Beyond proof-of-concept development, particular attention will be given to translational considerations, including scalability, manufacturing feasibility, regulatory positioning, and product-oriented development pathways. By integrating pharmaceutical formulation science with translational nanotechnology, nanomedicine serves as a bridge between natural compound discovery and clinically oriented product development. This presentation highlights our recent efforts to integrate natural compounds with rationally designed nanocarriers for different therapeutic applications. Collectively, these studies demonstrate how nanotechnology can enhance the pharmacological potential of natural compounds and provide multifunctional therapeutic strategies across metabolic, infectious, and inflammatory diseases. Such nanomedicine-based approaches may facilitate the translation of natural products from bioactive molecules into clinically relevant therapeutics.

Keywords: natural product; nanomedicine; nanocarrier; drug delivery; obesity; psoriasis

吳清源 Ching-Yuan Wu



【現職單位 (Current Affiliation)】
Professor, Department of Chinese Medicine, Chang Gung University, Taoyuan, Taiwan
Chief Director, Chiayi County Chinese Medical Doctors' Association, R.O.C. (Taiwan)
Executive Director, National Union of Chinese Medical Doctors' Association, R.O.C. (Taiwan)
Joint Appointment Scientist, Research Center for Chinese Herbal Medicine, College of Human Ecology, Chang Gung University of Science and Technology, Taoyuan, Taiwan
Co-Chairperson, Division of Pharmacy and Chinese Medicine, Department of Life Sciences, National Science and Technology Council, R.O.C. (Taiwan)
Drafter, Professional and Technical Examinations of Chinese Medicine Practitioners, Ministry of Examination, R.O.C.(Taiwan)

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2010	Fiscal year 2010 employee recognition award (outstanding scientific productivity), the department of molecular and cellular oncology, MD Anderson cancer center, Houston, USA
2017	2017 Excellent Academic Works of Traditional Chinese Medicine Award, National Union of Chinese Medical Doctors' Association, R.O.C. (Taiwan)
2018	2018 Excellent Academic Works of Traditional Chinese Medicine Award, National Union of Chinese Medical Doctors' Association, R.O.C. (Taiwan)
2019	The 16th National Innovation Award (2019), Research Center for Biotechnology and Medicine Policy, R.O.C. (Taiwan) for Ingeniously Herbal Nasal Irrigation
2020	The 17th National Innovation Award (2020), Research Center for Biotechnology and Medicine Policy, R.O.C. (Taiwan) for Ingeniously Herbal Nasal Irrigation

2021	The 18th National Innovation Award (2021), Research Center for Biotechnology and Medicine Policy, R.O.C. (Taiwan) for Ingeniously Herbal Nasal Irrigation
2021	The 18th National Innovation Award (2021), Research Center for Biotechnology and Medicine Policy, R.O.C. (Taiwan) for Chiehyuan herbal oral protection solution
2021	2021 Chinese Medicine Contribution Award, Presented by Taiwan President Tsai Ing-wen, National Union of Chinese Medical Doctors' Association, R.O.C. (Taiwan)
2022	The 19th National Innovation Award (2022), Research Center for Biotechnology and Medicine Policy, R.O.C. (Taiwan) for Chiehyuan herbal oral protection solution
2024	The 1st Hua Tuo Medical Contribution Award for Chinese Medicine Physicians (Academic Research Contribution Award) (2024), Presented by Taiwan President Tsai Ing-wen, National Union of Chinese Medical Doctors' Association, R.O.C. (Taiwan)
2025	Symbol of National Quality (2025), Research Center for Biotechnology and Medicine Policy, R.O.C. (Taiwan) for Building Oral Defense—Innovative Epidemic Prevention Strategy with Chiehyuan Herbal Oral Protection Solution (Category: Hospital / Specialized Medical Services, Chang Gung Memorial Hospital, Chiayi)

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
	School of Chinese Medicine, China Medical University,	Doctor of Medicine
	Graduate Institute of Clinical Medical Sciences, Medicine, Chang Gung University, Taiwan	Doctor of Medical Science

Targeting Host Entry Receptors: Preclinical and Real-World Efficacy of Chiehyuan Herbal Solution (GB-2) Against SARS-CoV-2 Variants

Ching-Yuan Wu
[1]Professor, Department of Chinese Medicine, Chang Gung University, Taoyuan, Taiwan
[2]Chief Director, Chiayi County Chinese Medical Doctors' Association, R.O.C. (Taiwan)
[3]Executive Director, National Union of Chinese Medical Doctors' Association, R.O.C. (Taiwan)
[4]Joint Appointment Scientist, Research Center for Chinese Herbal Medicine, College of Human Ecology, Chang Gung University of Science and Technology, Taoyuan, Taiwan
[5]Co-Chairperson, Division of Pharmacy and Chinese Medicine, Department of Life Sciences, National Science and Technology Council, R.O.C. (Taiwan)
[6]Drafter, Professional and Technical Examinations of Chinese Medicine Practitioners, Ministry of Examination, R.O.C.(Taiwan)

Abstract:
Rapid genetic evolution in SARS-CoV-2 has diminished the long-term protective efficacy of conventional spike-targeted vaccines against emerging Variants of Concern (VOCs). To overcome variant evasion, we investigated a host-directed entry-inhibition strategy targeting ACE2 and TMPRSS2 expression. Using a computational drug-discovery platform, we identified theaflavin and theaflavin 3-gallate from indigenous Taiwanese tea and select herbs as potent inhibitors of viral RNA polymerase, spike protein, and host receptor interactions. These compounds were formulated into Chiehyuan herbal oral protection solution (GB-2). In vitro assays using HepG2 and 293T cells demonstrated that GB-2 significantly downregulates ACE2 mRNA and protein levels alongside TMPRSS2 without cytotoxicity. In vivo animal models confirmed localized suppression of ACE2 and TMPRSS2 in pulmonary and renal tissues with no adverse hepatic or renal effects. Mechanistically, GB-2 disrupted ACE2–RBD binding, markedly attenuating host entry efficiency across multiple Omicron lineages, including EG.5.1, HV.1, BQ.1.1, XBB.1.5, and XBB.1.1.6. Translational human trials evaluating GB-2 as an oral rinse confirmed significant mucosal receptor downregulation with an excellent safety profile. In a real-world cohort of 239 healthcare workers at Chiayi Chang Gung Memorial Hospital, regular GB-2 use correlated with a 94.14% protective efficacy (225 remaining PCR-negative) over a one-year follow-up. Validated by multiple peer-reviewed publications and national innovation patents, GB-2 represents a scalable, safe, and non-invasive oral prophylactic that complements systemic vaccination to establish a multi-layered mucosal barrier against evolving SARS-CoV-2 variants.

宋秉鈞 Ping-Jyun Sung



【現職單位 (Current Affiliation)】
Deputy Director, National Museum of Marine Biology and Aquarium (NMMBA)
Prof. Department of Marine Biotechnology and Resources, National Sun Yat-sen University (NSYSU)
Prof. Institute of Marine Ecology and Conservation, National Sun Yat-sen University
Prof. Graduate Institute of Natural Products, Kaohsiung Medical University (KMU)
Prof. Department of Traditional Medicine, School of Medicine, Kaohsiung Medical University
Prof. Department of Biochemistry and Molecular Medicine, National Dong Hwa University (NDHU)
Prof. Ph.D. Program in Biotechnology and Pharmaceutical Research, Fu Jen Catholic University (FJU)

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2011	Distinguished Alumni Award, National Sun Yat-sen University
2011	Principal Investigator, National Research Program for Biopharmaceuticals
2016	National Innovation Award
2019	Outstanding Research Award, The Natural Medicine Society of Taiwan
2019	Future Technology Award, National Science and Technology Council

【重要著作 (Selected Publications) 】

1. Chuang YW, Ahmed AF, Chung HL, Liu YW, Chien SY, Lin YC, Liaw CC, Wu YJ, Weng JR, Pham QV, Su JH, Sheu JH, Sung PJ. Sarcoglaucone A, a novel sarsolenane-related diterpenoid from the soft coral Sarcophyton glaucum. RSC. Adv. 2026;16:9224–9232.
2. Huang CY, Peng BR, Liu YW, Chen YY, Su JH, Liaw CC, Chen JJ, Tseng CC, Wu YJ, Cheng YB, Tsou LK, Zhang MM, Wen ZH, Zheng LG, Sung, P.-J. Lendenfeldaranes W–Y, new 24-homoscalaranes from a marine sponge Lendenfeldia species. RSC. Adv. 2025;15:44877–44882.

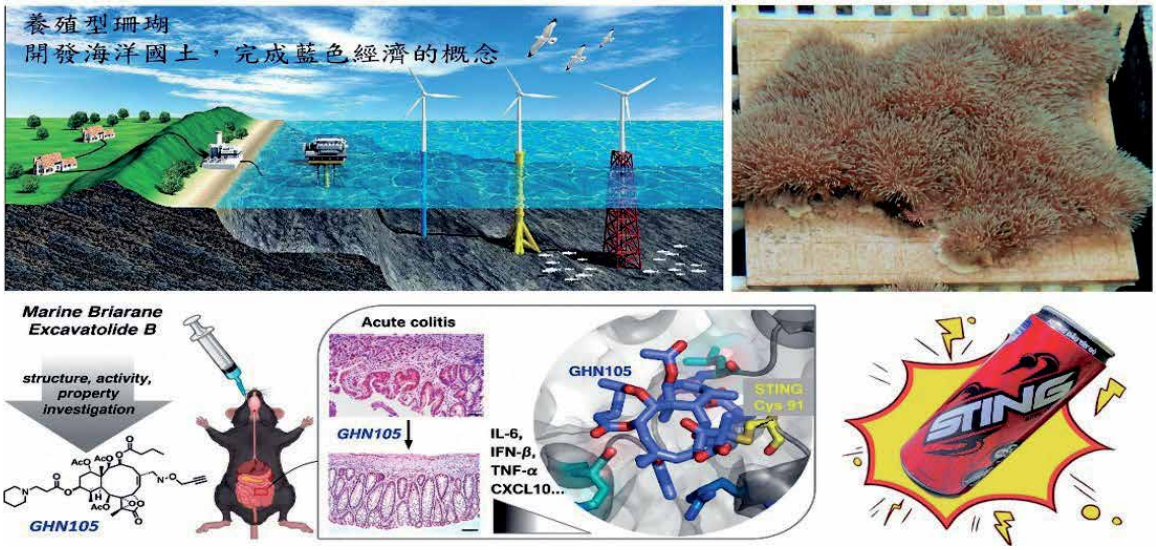
【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
1986-2000	Department of Marine Biotechnology and Resources, NSYSU	Bachelor, Master, and Ph. D.
2001-2002	Cancer Research Institute-Arizona State University	Postdoctoral
2002-2026	NMMBA	Assistant Research Fellow
		Associate Research Fellow
		Research Fellow
2005-2026	Department of Marine Biotechnology and Resources, NSYSU	Associate Prof. Prof.
2022-2025	The Natural Medicine Society of Taiwan	President

Drugs from Tank

Ping-Jyun Sung
[1]National Museum of Marine Biology & Aquarium, Pingtung 944401, Taiwan
[2]Department of Marine Biotechnology and Resources, National Sun Yat-sen University, Kaohsiung 804201, Taiwan
[3]Chinese Medicine Research and Development Center, China Medical University Hospital, Taichung 404394, Taiwan
[4]Graduate Institute of Natural Products, Kaohsiung Medical University, Kaohsiung 807378, Taiwan
E-mail: pjsung@nmmba.gov.tw

Abstract:
《本草綱目》卷八-珊瑚:氣味:甘平無毒,主治:去目中翳,消宿血,為末吹鼻止鼻衄,明目鎮心,止驚癇,點眼去飛絲。
In Compendium of Chinese Materia Medica (Bencao Gangmu), published by Li Shizhen in 1596, corals were described as "sweet, neutral, and non-toxic" and traditionally used for treating ocular disorders, epistaxis, and convulsive conditions. In recent decades, marine invertebrates have emerged as an important source of structurally diverse and biologically active natural products, several of which have been developed into clinically useful drugs for cancer, viral infections, pain, and hypercholesterolemia. However, the structural complexity of many marine natural products makes their chemical synthesis challenging and limits their large-scale production. Moreover, increasing environmental pressures and intensive harvesting of marine organisms highlight the need for sustainable ex situ cultivation strategies.
Taiwan possesses well-established aquaculture expertise, providing a strong foundation for the cultivation of marine invertebrates. In this study, we aimed to develop a high-density three-dimensional culture system for the octocoral Briareum stechei as a sustainable source of bioactive marine natural products. Particular attention was given to the production of excavatolide B (Exc-B), a briarane-type diterpene with reported anti-inflammatory activity. This approach may provide an effective strategy for obtaining bioactive natural products while reducing dependence on wild-collected coral resources.



Keywords: Octocoral, Briareum stechei, STING, Briarane

Roger Linington



【現職單位 (Current Affiliation)】
Simon Fraser University, Canada

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2026	Vice-chair for the 2026 Marine Natural Products Gordon Research Conference
2025	Clarivate Highly Cited Researcher
2024	Fellow of the Royal Society of Chemistry (UK)
2024	Canadian Society of Chemistry Biological and Medicinal Chemistry Lectureship Award
2020 - 2027	Tier I Canada Research Chair in Natural Products and High-Throughput Screening

【重要著作 (Selected Publications) 】

1. Linington RG*. An Assessment of Chemical Diversity in Microbial Natural Products. ACS Cent. Sci., 2025, 11, 1536 – 1545.
2. Poynton EF, van Santen JA, Pin M, Contreras MM, McMann E, Parra J, Showalter B, Zaroubi L, Duncan KR, Linington RG*. The Natural Products Atlas 3.0: Extending the Database of Microbially Derived Natural Products. Nucleic Acids Res., 2025, 53, D1, D691 – D699.
3. Paulo BS, Recchia MJ, Lee S, Fergusson CH, Romanowski SB, Hernandez A, Krull N, Liu DY, Cavanagh H, Bos A, Gray CA, Murphy BT, Linington RG*, Eustaquio AS*. Discovery of Megapolipeptins by Genome Mining of a Burkholderiales Bacteria Collection. Chem. Sci. 2024, 15, 16567-16581.
4. Liu DY, Phillips L, Wilson DM, Fulton KM, Twine SM, Wong A, Linington RG*, Collateral Sensitivity Profiling in Drug-Resistant Escherichia coli Identifies Natural Products Suppressing Cephalosporin Resistance. Nat. Commun., 2023, 14, 1976.
5. Morehouse NJ, Clark TN, McMann EJ, van Santen JA, Haeckl JFP, Gray CA, Linington RG*. Annotation of Natural Product Compound Families Using Molecular Networking Topology and Structural Similarity Fingerprinting. Nat. Commun., 2023, 308.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2015-present	Simon Fraser University, Canada	Professor
2007 - 2015	University of California Santa Cruz, USA	Assistant/ Associate Professor
2005 - 2007	University of California San Diego/ STRI, USA/ Panama	Postdoctoral Researcher
2004	University of British Columbia, Canada	Ph.D. Chemistry
1998	University of Leeds, UK	B.Sc. Chemistry

AI Approaches in Natural Products Research: Advancements in Discovery Technologies

Roger G. Linington[1]

[1]Department of Chemistry, Simon Fraser University, Canada

*E-mail: rliningt@sfu.ca

Abstract
Natural products research is being revolutionized by rapid advances in AI and ML-based technologies. These new approaches are influencing all areas of natural products science, from spectroscopic prediction and compound identification to predictions of the biological properties and molecular targets. This rise in AI development is being driven in large part by the creation and expansion of large, open-source databases of natural products data, including structures, mass spectrometry and nuclear magnetic resonance data, and biosynthetic genes.
In this presentation I will discuss approaches and challenges with developing high-quality open-source data repositories, and present examples of applications of these system-level datasets to natural products characterization and discovery.

Keywords: Chemoinformatics, Databases, Machine learning, Natural products

INVITED SPEAKER

Johan Svenson



【現職單位 (Current Affiliation)】
Cawthron Institute

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2023	Ph.D thesis reviewer, University of Queensland, Australia
2020	Ph.D thesis reviewer, University of Western Cape, South Africa
2019	Member of Ph.D. committee, Stockholm University, Sweden
2016	International HCERES expert evaluating the laboratory of Marine Chemistry at Université Bretagne Sud, France
2014	Marie Skłodowska-Curie fellow funded by the EU

【重要著作 (Selected Publications) 】

1. Siu C, Siew T, Li FF, Mros S, Cleary CSB, Ferguson SA, Cook GM, Cahill P, Brimble MA, Svenson J, Rennison D. Beyond the "2+ 2 Pharmacophore" Electronic and Hydrophobic Effects Control the Activity of Cationic Amphiphilic Antimicrobial 2,5-Diketopiperazines. J. Med. Chem., 2025, 68, 22484-22506.
2. Greenhough H, Waugh C, van Ginkel R, Bowater J, Kaur G, Oakly J, Plouviez M, Ingebrigtsen RA, Svenson J, Selwood AI. Mass Cultivation of the Dinoflagellate Alexandrium pacificum for Gonyautoxin-1,4 Production. Sci. Rep., 2025, 15, 7430.
3. Cahill PL, Moodie LWK, Hertzer C, Pinori E, Pavia H, Hellio C, Brimble MA, Svenson J.* Creating New Antifoulants Using the Tools and Tactics of Medicinal Chemistry. Acc. Chem. Res., 2024, 57, 399-412.
4. Berglin M, Cavanagh JP, Caous JS, Thakkar BS, Vasquez JM, Stensen W, Lyvén B, Svendsen JS, Svenson J.* Flexible and Biocompatible Antifouling Polyurethane Surfaces Incorporating Tethered Antimicrobial Peptides through Click Reactions. Macromol. Biosci., 2024, 24, 2300425.
5. Davis RA, Cervin G, Beattie KD, Rali T, Fauchon M, Hellio C, Bodin Åkerlund L, Pavia H, Svenson J.* Evaluation of Natural Resveratrol Multimers as Marine Antifoulants. Biofouling, 2023, 39, 775-784.

6. Craig AJ, Ermolovich Y, Cameron A, Rodler A, Wang H, Hawkes JA, Hubert M, Björkling F, Molchanova N, Brimble MA, Moodie LWK, Svenson J.* Antimicrobial Peptides Incorporating Halogenated Marine-Derived Amino Acid Substituents. ACS Med. Chem. Lett., 2023, 14, 802-809.
7. Cahill P, Grant TM, Rennison D, Champeau O, Boundy M, Passfield E, Berglin M, Brimble MA, Svenson J.* Nature-Inspired Peptide Antifouling Biocide: Coating Compatibility, Field Validation, and Environmental Stability. ACS Appl. Bio. Mater., 2023, 6, 2415-2425.
8. Svenson J*, Molchanova N, Schroeder CI. Antimicrobial Peptide Mimics for Clinical Use: Does Size Matter? Front. Immunol., 2022, 13, 915368.
9. Glasson CR, Kinley RD, de Nys R, King N, Adams SL, Packer MA, Svenson J*, Eason CT, Magnusson M. Benefits and Risks of Including the Bromoform Containing Seaweed Asparagopsis in Feed for the Reduction of Methane Production from Ruminants. Algal Res., 2022, 64, 102673.
10. Grant TM, Rennison D, Krause AL, Mros S, Ferguson SA, Cook GM, Cameron A, Arabshahi HJ, Brimble MA, Cahill P, Svenson J.* Stereochemical Effects on the Antimicrobial Properties of Tetrasubstituted 2,5-Diketopiperazines. ACS Med. Chem. Lett., 2022, 13, 632-640.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2022-present	Cawthron Institute, Nelson, New Zealand	Science Impact Manager
2020-2022	Algae & Bioactives, Cawthron Institute, Nelson, New Zealand	Group Manager
2019-present	Algal Research & Bioactives, Cawthron Institute, Nelson, New Zealand	Science Theme Champion and Leader
2017-present	Biomaterials Chemistry at the Linnaeus University,	Associate Professor Docent

Microalgal drug development Downunder

Johan Svenson[1]

[1]Cawthron Institute, Nelson, New Zealand
*E-mail: johan.svenson@cawthron.org.nz

Abstract
The talk will outline the research performed at the Cawthron Institute which is the largest and oldest independent research institute in New Zealand. With 300 staff focused only on marine and freshwater research there is significant critical mass for exciting marine aquatic innovation. I will present the research performed at the Cawthron to underpin the ongoing development of a world-first long-acting algae-based painkiller with the potential to replace opioids in pain management. The active ingredient is a marine algal toxin (Neosaxitoxin from Alexandrium pacificum) that is produced in photobioreactors and converted into the active pharmaceutical ingredient using semi-synthesis from a toxin precursor. The medication that can be manufactured using this compound has been shown to provide improved long-term pain relief for patients following many types of surgery and for treating severe local pain and it has gone through phase 1 trials successfully. The talk will further outline the current status and future visions of the emerging New Zealand algal toxin and bioactives space with focus on other novel applications such as treatment of cancer and others.

Keywords: Neosaxitoxin, photobioreactors, semi-synthesis, algal toxin

楊玉良 Yu-Liang Yang



【現職單位 (Current Affiliation)】
副研究員兼副主任
Associate Research Fellow & Deputy Director,
Agricultural Biotechnology Research Center,
Academia Sinica.

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2022	Outstanding Research Award, The Natural Medicine Society of Taiwan
2016	Ta-You Wu Memorial Award, Ministry of Science and Technology, Taiwan.
2014	Selected for The Analytical Scientist's 'Top 40 Under 40' researchers.
2012	Li Foundation Heritage Prize for "Excellence in Creativity".
2011~ present	Integrated multi-omics research on microbial natural products, imaging mass spectrometry, synthetic biology, and sustainable crop protection; >100 publications in leading international journals.

【重要著作 (Selected Publications) 】

1. Cho YT, et al., Yang YL*, Ariyawansa HA*. Integrating Genomics and Targeted Metabolite Profiling to Elucidate Disease-Suppression Mechanisms of Bacillus velezensis GFB08, Curr. Res. Microb. Sci. 2025;9:100503.
2. Chin WC, et al., Yang YL*. Bacterial Polyynes Uncovered: A Journey Through Their Bioactive Properties, Biosynthetic Mechanisms, and Sustainable Production Strategies. Nat. Prod. Rep. 2024;41:977–989. (Cover article)
3. Toopaang W, et al., Yang YL*, Amnuaykanjanasin A*. Microbial Polyketides and Their Roles in Insect Virulence: from Genomics to Biological Functions. Nat. Prod. Rep. 2022;39:2008–2029. (Cover article)
4. Lin CC, et al., Yang YL*. Integrated Omics Approach to Unveil Antifungal Bacterial Polyynes as Acetyl-CoA Acetyltransferase Inhibitors. Commun. Biol. 2022;5:454.
5. Ho YN, et al., Yang YL*. Specific Inactivation of an Anti-fungal Bacterial Siderophore by a Fungal Plant Pathogen. ISME J. 2021;15:1858–1861.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2011~ present	Agricultural Biotechnology Research Center, Academia Sinica	PI; Assistant RF (2011~2020); Associate RF (2020~);Deputy Director (2022-)
2009~2011	Skaggs School of Pharmacy & Pharmaceutical Sciences, UC San Diego	Postdoctoral Fellow / Staff Research Associate
2004~2008	Institute of Biological Chemistry, Academia Sinica	Postdoctoral Research Fellow
2000~2004	Kaohsiung Medical University	Ph.D., Pharm. Sci.

Fantastic RiPPs and Where to Find Them: How an Interaction-Induced Metabolite Unveiled a Hidden Class V Lanthipeptide Family

Yu-Liang Yang

Agricultural Biotechnology Research Center, Academia Sinica, Taiwan

*E-mail: ylyang@gate.sinica.edu.tw

Abstract
Microbial interactions can activate biosynthetic pathways that remain silent or weakly expressed under standard laboratory conditions. During confrontation assays between Streptomyces murinus CRREB63 and phytopathogenic fungi, imaging mass spectrometry revealed a characteristic ion at m/z 1628 specifically at the interaction interface. This metabolite was barely detectable in monoculture but was induced by diverse fungal challengers and subinhibitory gentamicin. Because the established antifungal activity of CRREB63 is primarily attributed to actinomycins and pentamycins, compound 1628 represents a distinct and previously uncharacterized response to microbial competition.
High-resolution tandem mass spectrometry indicated that 1628 is a highly modified peptide derived from the core sequence TIALSVATGLLTYKEGC, with structural features consistent with reductive processing of dehydrated Ser/Thr residues to Ala and Abu and the formation of AviMeCys. Genome mining linked the compound to a candidate biosynthetic gene cluster encoding a precursor peptide and maturation enzymes characteristic of class V lanthipeptide biosynthesis. The convergence of chemical and genomic evidence supports its assignment as a candidate AviMeCys-containing class V lanthipeptide and provides a working model for its biosynthesis.
A broader survey of 15,200 Streptomyces genomes identified 1,773 co-localized candidate clusters. Among 1,523 clusters passing precursor-based filtering, 266 sequence-defined chemotypes were recognized, revealing extensive and previously unrecognized precursor diversity. The CRREB63 peptide represents a distinctive short, single-cysteine chemotype within the minority 1-Cys class, which accounts for only 12.8% of the family.
Together, these findings reposition 1628 from an isolated interaction-induced metabolite to an entry point into an expansive, highly diversified, and largely uncharted class V lanthipeptide family. This work highlights the capacity of microbial confrontation to awaken cryptic RiPP biosynthesis and opens new opportunities to explore lanthipeptide evolution and natural-product chemical space.

Keywords: microbial interaction; class V lanthipeptide; AviMeCys; genome mining

INVITED SPEAKER

鄭源斌 Yuan-Bin Cheng



【現職單位 (Current Affiliation)】
國立中山大學海洋生物科技暨資源學系
Department of Marine Biotechnology and Resources, National Sun Yat-sen University

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2025	第二十二屆國家新創獎(徐麗芬老師團隊)
2022	國立中山大學與高雄醫學大學合作研究優秀獎
2020	台灣創新技術博覽會發明競賽金牌獎(黃聰龍老師團隊)
2018	吳大猷先生紀念獎(中醫藥領域)

【重要著作 (Selected Publications) 】

1. Chen YF, Chen SR, Chen Y, Teh CC, Ke TY, Lin YC, Cheng YB*. Photoprotective zoanthamine derivatives from the cultured zoantharian Zoanthus sansibaricus. Sci. Rep. 2026 May:20229.
2. Ke TY, Wang SW. Lin ZY, Ganesan G, Lai CT, Yen JY, Chu TH, Lin YC, Cheng YB*. Polyketide derivatives from the macroalga-associated fungus Penicillium sclerotiorum exhibiting anti-lymphangiogenic effect. J. Nat. Prod. 2025 Nov;88:2757.
3. Chen SR, Chang YC, Chen Y, Chen YF, Lin YC, Chiu Cc, Cheng YB*. Discovery of Zoanthamine Alkaloids from Zoanthus vietnamensis with Antioxidant and Neuroprotective Activities. J. Org. Chem. 2025 Apr;90:5019.
4. Ke TY, Wang SW, Chen SR, Huang DM, Lin YS, Hwang, TL, Sun WC, Cheng YB*. Alkaloids and polyacetylenes from Hippobroma longiflora with antiangiogenesis properties. J. Nat. Prod. 2023 Apr;86:719.
5. Chen SR, Wang SW, Lin YC, Yu CL, Yen JY, Chen YF,* Cheng YB*. Additional alkaloids from Zoanthus vietnamensis with neuroprotective and anti-angiogenic effects. Bioorg. Chem. 2021 Feb;109:104700.
6. Chang FR, Wang SW, Lee CY, Sheu JH, Chen SR, Cheng YB*. Aleuritin, a novel dinor-diterpenoid from the twigs of Aleurites moluccanus with an antilymphangiogenic effect. Org. Biomol. Chem. 2020 Oct;18:7892.
7. Chen SR, Wang SW, Sheu JH, Chang TH, Cheng YB*. Zoanthamine alkaloid derivatives from the zoantharian Zoanthus vietnamensis with anti-metastatic activity. J. Org. Chem. 2020 Oct;85:11553

8. Chen SR, Wang SW, Chang FR.* Cheng YB*. Anti-lymphangiogenic alkaloids from the zoanthid Zoanthus vietnamensis collected in Taiwan. J. Nat. Prod. 2019 Oct;82:2790.
9. Chang FR, Li PS, Huang Liu R, Hu HC, Hwang TL, Lee JC, Chen SL, Wu YC, Cheng YB*. Bioactive phenolic components from the twigs of Atalantia buxifolia. J. Nat. Prod. 2018 Jul;81:1534.
10. Cheng YB, Chien YT, Lee JC, Tseng CK, Wang HC, Lo IW, Wu YH, Wang SY, Wu YC,* Chang FR*. Limonoids from the Seeds of Swietenia macrophylla with Inhibitory Activity against Dengue Virus 2. J. Nat. Prod. 2014 Jul;77:2367.
11. Cheng YB, Jensen PR, Fenical W*. Cytotoxic and antimicrobial napyradiomycins from two marine-derived Streptomyces strains. Eur. J. Org. Chem. 2013 Apr:3751.
12. Cheng YB, Liao TC, Lo YW, Chen YC, Kuo YC, Chen SY, Chien CT, Hwang TL, Shen YC*. Nortriterpene lactones from the fruits of Schisandra arisanensis. J. Nat. Prod. 2010 Jun;73:1228.
13. Cheng YB, Liao TC, Lo YW, Chen YC, Kuo YC, Chen SY, Chien CT, Shen YC*. Arisandilactone A, a new triterpenoid from the fruits of Schisandra arisanensis. Org. Lett. 2010 Jan;12:1016.
14. Cheng YB, Shen YC,* Kuo YH, Khalil AT. Cembrane diterpenoids from the Taiwanese soft coral Sarcophyton stolidotum. J. Nat. Prod. 2008 Jun;71:1141.
15. Cheng YB, Jang JY, Khalil AT, Kuo YH, Shen YC*. Xenicane-type diterpenes with cytotoxicity from Xenia florida. J. Nat. Prod. 2006 Mar;69:675–678.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2020-	國立中山大學海資系	教授
2012~2020	高雄醫學大學天然藥物研究所	教授
2012	中研院農生中心	博士後研究員
2010~2011	CMBB, SIO, UCSD	博士後研究員
2008~2010	台大藥學系	博士後研究員

Marine Fungi for the Development of Bioactive Natural Products

Yuan-Bin Cheng[1], Shih-Wei Wang[2], Chun-Han Chang[1], Minhzi M. Chang[3]

[1]Department of Marine Biotechnology and Resources, National Sun Yat-sen University, Kaohsiung 80424, Taiwan
[2]Institute of Biomedical Sciences, MacKay Medical College, New Taipei City 25245, Taiwan
[3]Institute of Molecular and Genomic Medicine, National Health Research Institutes, Miaoli 35053, Taiwan

*E-mail: jmb@mail.nsysu.edu.tw

Abstract
Marine natural products are a vital source of modern pharmaceuticals. While sessile invertebrates have traditionally served as key materials, increasing environmental and conservation concerns have limited their accessibility. Consequently, marine microorganisms, particularly fungi, have become important alternative resources due to their diverse chemical structures and broad pharmacological activities. We prioritized the secondary metabolites and bioactivities for more than 1,000 marine fungi, and the selected fungi were cultured using the OSMAC (One Strain, Many Compounds) strategy. A series of new azaphilone and asteltoxin derivatives was isolated from the marine fungi Penicillium sclerotiorum and Aspergillus ochraceopetaliformis, respectively. In addition, the biosynthetic gene cluster of those fungi was analyzed to provide a deeper understanding of their production. Structural elucidation was achieved through spectroscopic techniques, including CD, IR, MS, UV, and comprehensive NMR analyses (COSY, HMBC, HSQC, NOESY), as well as X-ray crystallography and computational methods to determine absolute configurations. Bioactivity assays demonstrated that the isolated compounds possess anti-lymphangiogenic, anti-inflammatory, and anti-angiogenic activities. Structure–activity relationship analysis further highlighted key functional features influencing these effects. Our findings underscore the potential of marine fungal metabolites as promising candidates for new drug development.

Keywords: marine fungi, azaphilone, asteltoxin, anti-lymphangiogenesis, anti-inflammatory, anti-angiogenesis

Olha Mykhailenko



【現職單位 (Current Affiliation)】
Professor, National University of Pharmacy, Ukraine;
Honoured Associate Professor, UCL School of Pharmacy, UK;
Humboldt fellow, Kiel University, Germany.

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2025	Top-10 L'Oréal–UNESCO For Women in Science in Ukraine
2024	Georg Forster Research Fellowship for Experienced Researchers (Alexander von Humboldt Foundation, Germany)
2023	Cara (Council for At-Risk Academics) Fellowship (UCL School of Pharmacy, UK)
2021	President's Prize for Young Scientists of Ukraine

【重要著作 (Selected Publications) 】

1. Mykhailenko O, Jalil B, Uminska K, Ivanauskas L, Gudžinskas Z, Heinrich M. The effect of provenance and species on the chemical composition of Epilobium herbal tea. Pharma. Biol. 2026; 64(1): 783-806.
2. Yang N, Williams GR, Jalil B, Mykhailenko O. Electrospun nanofibers loaded with Lavandula angustifolia Mill. extract: A novel approach for a potential wound healing therapy. Macromol. Mater. Eng., 2026; 311:e00357-
3. Mykhailenko O, Jalil B, McGaw L. J, Echeverría J, Takubessi M, Heinrich M. Climate change and the sustainable use of medicinal plants: A call for 'new' research strategies. Front. Pharmacol., 2025; 15: 01–22.
4. Mykhailenko O. Rose (Rosa × damascena) Essential Oil. Botanical Adulterants Prevention Bulletin, June 2024, p. 1-20.
5. Mykhailenko O, Hsieh CF, El-Shazly M, Nikishin A, Kovalyov VN, Shynkarenko P, Ivanauskas L, Chen BH, Chang FR, Horng JT, Hwang TL, Georgiyants V, Korinek M. Anti-viral and anti-inflammatory isoflavonoids from Ukrainian Iris aphylla rhizomes: structure-activity relationship coupled with ChemGPS-NP analysis. Planta Med., 2023; 89(11): 1063-1073
6. Mykhailenko O, Gudžinskas Z, Kovalyov V, Desenko V, Ivanauskas L, Bezruk I, Georgiyants V. Effect of ecological factors on the accumulation of phenolic compounds in Iris species from Latvia, Lithuania and Ukraine. Phytochem. Anal. 2020; 31(1), 1-19.

7. Mykhailenko O, Kovalyov V, Goryacha O, Ivanauskas L, Georgiyants V. Biologically active compounds and pharmacological activities of species of the genus Crocus: A review. Phytochemistry, 2019; 162, 56-89.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2026-present	National University of Pharmacy (NUPh), Pharmaceutical Chemistry Department, Ukraine	Professor
2024–2026	Kiel University, Pharmaceutical Biology Department, Germany	Visiting academic
2023–present	UCL School of Pharmacy, Pharmaceutical and Biological Chemistry Department, Research Group 'Pharmacognosy and Phytotherapy', UK	Visiting academic
2020–2026	NUPh, Pharmaceutical Chemistry Department, Ukraine	Associate Professor
2018-2024	NUPh, Pharmaceutical Chemistry Department, Ukraine NUPh, Pharmacognosy Department, Ukraine	Postdoctoral Fellow
2012 – 2024	NUPh, Pharmaceutical Chemistry Department, Ukraine	DSc (Habilitation) Pharmaceutical chemistry & Pharmacognosy
2011–2020	NUPh, Botany Department, Ukraine	Assistant Professor
2008–2015	Specialist of the Postgraduate Studies Department; Head of Student Scientific Society, NUPh, Ukraine	PhD fellow
2008 – 2012	NUPh, Pharmacognosy Department, Ukraine	Ph.D.
2007–2011	NUPh, Pharmacognosy Department, Ukraine	Research Assistant
2007 – 2008	NUPh, Pharmacognosy Department, Ukraine	MSc in Pharmacy (honours)
2002 – 2007	National University of Pharmacy, Ukraine	BPharm (honours)

Climate risks and sustainability of phytopharmaceuticals: the Case of Epilobium species

Olha Mykhailenko [1,2,3*], Banaz Jalil[2], Kateryna Uminska[4], Michael Heinrich [1,5]

[1] National University of Pharmacy, Ukraine; [2] Pharmacognosy and Phytotherapy, UCL School of Pharmacy, London, United Kingdom; [3] Kiel University, Kiel, Germany; [4]Zhytomyr Basic Pharmaceutical Professional College, Zhytomyr, Ukraine; [5]Department of Pharmaceutical Sciences and Chinese Medicine Resources, Chinese Medicine Research Center, College of Chinese Medicine, China Medical University, Taichung, Taiwan.

*E-mail: o.mykhailenko@nuph.edu.ua

Abstract
Climate change is exerting an increasingly significant impact on the quality and availability of plant-based raw materials [1], as well as on the chemical composition of medicinal plants [2] used in the production of phytopharmaceutical preparations. Shifts in temperature regimes and precipitation patterns, phenological changes, soil degradation, and declining pollinator populations significantly influence the biosynthesis and accumulation of bioactive metabolites. These processes – coming on top of the regulatory problems in a sector where food supplements and herbal medical products compete – carry substantial risks to the pharmaceutical industry. They affect the sustainability and reliability of raw material supplies. Natural compounds or plant materials derived from wild sources are more vulnerable than those from cultivated sources, necessitating the development of optimised harvesting protocols tailored to changes in metabolite composition.
Utilising species of the genus Epilobium as a case study, this study proposes a comprehensive methodology for assessing sustainability and climate-related risks in the production of plant-derived medicines. Epilobium species serve as a source of phenolic compounds, such as the tannin oenothein B, flavonoids, and hydroxycinnamic acids, and exhibit antioxidant, anti-inflammatory, and cytotoxic activities [3]. Given that these raw materials are harvested from wild populations, uncontrolled harvesting, combined with exposure to environmental stressors, can negatively impact both ecosystem stability and the phytochemical quality and pharmacological activity of the harvested material.
The current research involves a comprehensive assessment of phenolic compound accumulation and the variability of chemical profiles in Epilobium species under the influence of ecological and climatic factors. The proposed approach integrates principles of ecological monitoring, phytochemical standardisation, raw material harvesting optimisation, and risk assessment, thereby contributing to the sustainability of phytopharmaceutical production.

Optimising harvesting timing and procurement strategies constitutes a key element of sustainable development management.
The presented concept can serve as a practical model for assessing climate vulnerability and enhancing the resilience of medicinal plant supply chains in the pharmaceutical sector.

Keywords: Climate change; phytopharmaceutical sustainability; Epilobium species; phenolic compounds; quality variability.

[1] Mykhailenko O, Jalil B, McGaw LJ, Echeverría J, Takubessi M, Heinrich M. Climate change and the sustainable use of medicinal plants: a call for "new" research strategies. Frontiers in Pharmacology, 2025; 15:1496792.
[2] Takubessi MI, Jalil B, Heinrich M. The impact of climate change on medicinal plants and natural products: A scoping review. Frontiers in Pharmacology, 2025;16:1697581.
[3] Mykhailenko O., Jalil B., Uminska K., Ivanauskas L., Gudzinskas Z., Heinrich M. The Phenology of Epilobium hirsutum: Assessing Marker Compound Variability of a Pharmaceutically Important Plant Remedy, Frontiers in pharmacology. 2025; 16:1602819.

沈湯龍 Tang-Long Shen



【現職單位 (Current Affiliation)】
Professor, Department of Plant Pathology and Microbiology, National Taiwan University
Associate Dean, College of Bioresources and Agriculture, National Taiwan University
Director, Global Innovation Joint-Degree Program on Agro-biomedicine (GIP-TRIAD), College of Medicine, National Taiwan University
Professor, Graduate Program of Genomics and Systems Biology, National Taiwan University
Professor, Institute of Biotechnology, National Taiwan University
Adjunct Professor in Graduate Institute of Biomedical Sciences, China Medical University
Adjunct Professor, School of Integrative and Global Majors (SIGMA), University of Tsukuba, Tsukuba, Japan

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2010	Blind Prevention Foundation Scholar Travel Award
2016	The 6th Breast Cancer Outstanding Research Award, Breast cancer prevention foundation
2019	第16屆國家新創獎 Development of a small molecule enhancement for erythropoiesis
2021	第18屆國家新創獎獲獎項目為「利用腸腦軸線概念開發改善睡眠之植萃原料Bugu-STM」
2023	Austrian Schweitzer International Foundation [World Medical Award]

【重要著作 (Selected Publications) 】

H-index:46 Citation >15,500 (As of 2026/8/01)

1. Shang-Min Chou, Wan-Jung Lai, Tzu-Wen Hong, Jui-Ya Lai, Sheng-Hong Tsai, Yen-Hsun Chen, Sz -Hsien Yu, Cheng-Hsiang Kao, Richard Chu, Shih-Torng Ding, Tsai-Kun Li and Tang-Long Shen* (2014) Synergistic property of Cordycepin in cultivated Cordyceps militaris-mediated apoptosis in human leukemia cells Phytomedicine 21 (12): 1516–1524
2. Yu-Ling Tai, Pei-Yu Chu, I-Rui Lai, Hui-Yuan Tseng, Jun-Yang Liou, Jun-Lin Guan, Tang-Long Shen* (2015) An EGFR/Src-dependent b4 Integrin/FAK complex contributes to the malignancy of breast cancer. Scientific Reports 5, 16408; doi: 10.1038/srep16408

3. Yen-Wen Wang, Tzu-Wen Hong, Yu-Ling Tai, …, Tsai-Kun Li, Shean-Shong Tzean and Tang-Long Shen* (2015) Evaluation of an epitypified Ophiocordyceps formosana (Cordyceps s.l.) for its pharmacological potential. Evidence-based complementary and alternative medicine Volume 2015, Article ID 189891
4. Bruno Costa-Silva, Nicole M. Aiello, Swarnima Singh, Haiying Zhang, Basant Kumar Thakur, Annette Becker, ..Gonçalo Rodrigues, Tang-Long Shen, K…Hector Peinado, Ben Stanger, Jacqueline Bromberg, and David Lyden (2015) Pancreatic cancer exosomes initiate pre-metastatic niche formation in the liver. Nature Cell Biol. 17(6):816-26.
5. Ayuko Hoshino*, Bruno Costa-Silva*, Tang-Long Shen*, Goncalo Rodrigues, Ayako Hashimoto, Milica Tesic Mark, Henrik Molina, S…. Jacqueline Bromberg, David Lyden (2015) Tumor exosome integrins determine organotropic metastasis. Nature 527(7578):329-35 (*co-first authors)
6. Yu-Ling Tai, Ko-Chien Chen, Jer-Tsong Hsieh, Tang-Long Shen* (2018) Exosomes in cancer development and clinical applications. Cancer Science 109(8):2364-2374. doi: 10.1111/cas.13697.
7. Tai YL, Chu PY, Lee BH, Chen KC, Yang CY, Kuo WH, Shen TL* (2019) Basics and applications of tumor-derived extracellular vesicles. J Biomed Sci. 26(1):35. doi: 10.1186/s12929-019-0533-x
8. Siou-Ru Shen, Wei-Jen Chen, Hui-Fang Chu, Shiuan-Huei Wu, Yu-Ru Wang, Tang-Long Shen* (2021) Amelioration of 5-fluorouracil-induced intestinal mucositis by Streptococcus thermophilus ST4 in a mouse model. PLOS One 16(7):e0253540. doi: 10.1371/journal.pone.0253540
9. Li-Chun Chang, Yi-Chiung Hsu, Han-Mo Chiu, Koji Ueda, Ming-Shiang Wu, Chiun-How Kao, and Tang-Long Shen (2021) Exploration of the Proteomic Landscape of Small Extracellular Vesicles in Serum as Biomarkers for Early Detection of Colorectal Neoplasia. Front Oncol. 2021; 11: 732743. doi: 10.3389/fonc.2021.732743
10. Chang, Li-Chun, Han-Mo Chiu, Ming-Shiang Wu, and Tang-Long Shen* (2022) The Role of Small Extracellular Vesicles in the Progression of Colorectal Cancer and Its Clinical Applications. International Journal of Molecular Sciences 23 (3): 1379. https://doi.org/10.3390/ijms23031379
11. Wei-Jen Chen, Yu-Shan Wei, Hsin-I. Lo, Hui-Fang Chu, Ming-Chung Tseng, Bao-Hong Lee, Tang-Long Shen* (2024) Liquid-state fermented Ganoderma lucidum GANO99 regulates gut microbiota and concomitantly modulates the behavioral deficits and neurohistopathological hallmarks of Alzheimer' s disease in a preclinical transgenic mouse model of Alzheimer' s disease. Journal of Food Biochemistry Article ID (5) 6676977
12. Chuang WY, Lin YC, Shrestha B, Jennifer J, Stadler M, Tzean SS, Wu S, Ko CC, Hsieh SY, Wu ML, Wang SC, Shen TL*, Ariyawansa HA* (2024). Phylogenetic diversity and morphological characterization of cordycipitaceous species in Taiwan. Studies in Mycology 109: 1–56. doi: 10.3114/sim.2024.109.01

13.Yasuhiro Shinkai, Yunjie Ding, Toru Matsui, George Devitt, Masahiro Akiyama, Tang-Long Shen, Motohiro Nishida, Tomoaki Ida, Takaaki Akaike, Sumeet Mahajan, Jon M Fukuto, Yasuteru Shigeta, Yoshito Kumagai (2025) Growth inhibitory factor/metallothionein-3 is a sulfane sulfur-binding protein eLife12:RP92120
14.Chang, L.-C., Shen, T.-L., and Ochiya, T. (2026) Novel Liquid Biopsy in Gastrointestinal Cancers. Journal of Gastroenterology and Hepatology, 41: 546–555. https://doi.org/10.1111/jgh.70219.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
06/18-07/24	Center for Biotechnology, National Taiwan University	Director
01/18-11/22	Taiwan Society for Extracellular Vesicles (TSEV)	Founding President
07/19-09/21	Center of Industry-Academia Cooperation, R&D office, National Taiwan University	Director
11/17-12/18	Hiroshima University, Hiroshima, Japan	Adjunct Professor
07/16-09/16	Institute of Statistical Sciences, Academia Sinica	Visiting scholar
08/12-07/13	Weill Medical College of Cornell University, New York, NY, USA	Visiting scholar
1997-2002	Cancer Cell Biology in the Department of Molecular Medicine, Cornell University, USA	PhD.
1987-1991	Plant Pathology in the Department of Plant Pathology and Entomology, National Taiwan University, Taiwan	BS

Extracellular Vesicles: Nature's Messengers Across Biological Kingdoms—from Communication to Translation

Tang-Long Shen
Department of Plant Pathology and Microbiology, National Taiwan University, Taipei, Taiwan
† Presenter: Tang-Long Shen
Corresponding author's e-mail: shentl@ntu.edu.tw

Abstract:
Natural products are traditionally studied as individual compounds or complex extracts. Extracellular vesicles (EVs) offer a complementary perspective: membrane-enclosed assemblies in which proteins, nucleic acids, lipids, and associated metabolites may collectively influence biological activity. EV preparations obtained from plants, microorganisms, medicinal fungi, and milk therefore provide an emerging interface between natural-product chemistry, interkingdom communication, and bioactive delivery.
Our research began with tumor-derived exosomes, investigating how vesicle-associated molecules influence recipient cells and distant tissue microenvironments during organotropic metastasis and pre-metastatic niche formation. This mechanistic framework has guided our exploration of natural-source EVs, with particular interest in how their molecular composition, cellular uptake, and interactions with host signaling pathways relate to biological function.
This presentation will examine the connections between EV-associated cargo and antioxidant, anti-inflammatory, immunomodulatory, and tissue-protective activities. Particular attention will be given to microbial and medicinal fungus-derived vesicles, alongside milk- and plant-derived preparations, and their potential to modulate epithelial barriers, cellular stress responses, and tissue repair.
A central question is whether an observed effect arises from vesicular cargo, surface-associated molecules, or co-isolated soluble constituents. Addressing this question requires rigorous purification, molecular profiling, appropriate functional controls, and perturbation-based validation. Comparisons with conventional extracts and isolated compounds are equally important for establishing whether vesicular organization provides advantages in stability, cellular delivery, or biological efficacy.
By connecting source composition, molecular mechanisms, and measurable functional outcomes, this presentation will outline opportunities and limitations for developing EV-based natural bioactives. Emphasis will be placed on reproducible efficacy, batch consistency, dose definition, and safety as foundations for translation into therapeutic research, functional foods, and other health-related applications.

Keywords: Extracellular vesicles; Natural bioactives; Molecular mechanisms

郭賓崇 Ping-Chung Kuo



【現職單位 (Current Affiliation)】
成功大學醫學院藥學系
School of Pharmacy, College of Medicine,
National Cheng Kung University (NCKU)

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2020	中華景康藥學基金會成大青年教師獎
2017	中華天然藥物學會優秀天然藥物學術論文獎
2005	科林科技論文獎『生物醫學科技獎博士獎』
1995	中華民國斐陶斐榮譽學會榮譽會員

【重要著作 (Selected Publications) 】

1. Thu TM, Khanh NK, Tuan NN*, and Kuo PC*. An authentication study of Vietnamese passion fruit juice using pulp, organic acids, and sugar-specific stable isotopes. Int. J. Food Prop., 2026, 29, 2647491.
2. Cheng KC, Wu CH, Li HZ, Hwang TL, Kuo PC* and Wu T S*. Anti-inflammatory constituents from Murraya paniculata var. omphalocarpa. Phytochem. Lett., 2026, 71, 104097.
3. Li HZ, Phan HN, Wu CH, Wu YH, Hwang TL, Yang ML, Wu TS*, and Kuo PC*. A feasible method of reducing carbon emission for processing traditional Chinese medicines. Nat. Prod. Commun., 2026, 21, 1934578X251412701.
4. Lu JY, Kuo PC, Li YC, Chen WY, Hsu WL, and Tsai CH*. Inhibitory effects of Raphanus sativus root extracts on MUC5AC gene expression in human airway epithelial cells. npj Sci. Food, 2025, 9, 181.
5. Cheng KC, Chan HH, Chiou WF, Wu CH, Li YC, Li HZ, Kuo PC*, and Wu TS*. Aphrodisiac principles and other constituents from the roots of Panax quinguefolium and Panax ginseng. ACS Omega, 2024, 9, 33239-33250.
6. Pripdeevech P, Khruengsai S, Li YC, Wang CH, Kuo PC* and Tzen JTC*. Characterization of teaghrelin-like compounds from tea cultivars in Thailand and in silico study of their bioactivity. Heterocycles, 2022, 104, 1131-1140.
7. Cheng KC, Chen CF, Hung CC, Lam SH, Hung HY, Li YC, Chen FA, Shieh PC, Kuo PC* and Wu TS*. Bioactive naphthoquinones and triterpenoids from the fruiting bodies of Taiwanofungus salmoneus. Bioorg. Chem., 2021, 112, 104939.

8. Kuo PC*, Li YC, Kusuma AM, Tzen JTC, Hwang TL, Ye GH, Yang ML, and Wang SY. Anti-inflammatory principles from the needles of Pinus taiwanensis Hayata and in silico studies of their potential anti-aging effects. Antioxidants, 2021, 10, 598.
9. Kuo PC, Tai SH, Hung CC, Hwang TL, Kuo LM, Lam SH, Cheng KC, Kuo DH, Hung HY,* and Wu TS.* Antiinflammatory triterpenoids from the fruiting bodies of Fomitopsis pinicola. Bioorg. Chem., 2021, 108, 104562.
10. Kuo PC*, Li YC, Yang ML, and Tzen JTC.*: A feasible UHPLC-MS/MS method for concurrent quantification of 10 bioactive principles in Aquilaria leaf tea by the multiple reaction monitoring analytical mode. Phytochem. Anal., 2020, 31, 583-593.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2021-	School of Pharmacy, NCKU	Professor
2017-2021	School of Pharmacy, NCKU	Associate Professor
2016-2017	School of Pharmacy, NCKU	Assistant Professor
2008-2016	Dept. of Biotechnology, National Formosa University (NFU)	Associate Professor
2004-2008	Dept. of Biotechnology, NFU	Assistant Professor

Anti-Inflammatory and Anti-Aging Principles from Natural Sources

Ping-Chung Kuo

School of Pharmacy, College of Medicine, National Cheng Kung University, Tainan, Taiwan

*E-mail: z10502016@ncku.edu.tw

Abstract
Inflammation is one of the significant self-defense mechanisms stimulated by bacteria, viruses, wounds, or other environmental factors. Neutrophils are important immune cells that primarily function in innate immunity. Upon invasion by microorganisms, acute inflammation is initiated, and reactive oxygen species (ROS) and lysosomal enzymes (e.g., elastase) are released from neutrophils to kill the invaders. If neutrophils persist beyond the acute inflammation phase, chronic inflammation may develop. In recent years, various human diseases have been shown to be associated with neutrophil overexpression. Therefore, new anti-inflammatory principles derived from various natural sources are worthwhile for further study in the treatment of several diseases.
Ghrelin is involved in various physiological and pathophysiological mechanisms in humans, including those related to aging. In addition, ghrelin may exhibit anti-inflammatory activity. Immune cell activation was limited by ghrelin treatment through the inhibition of NF-κB activation and subsequent MCP-1 secretion. Therefore, the anti-inflammatory ingredients were docked to assess their binding affinity to the ghrelin receptor, which plays a key role in regulating metabolism and has anti-aging effects. This report will introduce potential anti-inflammatory and anti-aging properties of Camellia sinensis, Pinus taiwanensis, and Juniperus formosana, and discuss their bioactivity.

Keywords: natural source; anti-inflammatory; ghrelin receptor; anti-aging

陳日榮 Jih-Jung Chen



【現職單位 (Current Affiliation)】
國立陽明交通大學 藥學系
Department of Pharmacy, National Yang Ming Chiao Tung University

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2024	ScholarGPS發布「全球前1%藥學領域頂尖科學家」
2023	高雄醫學大學藥學院傑出校友(學術類)
2023	中華天然藥物學會傑出研究獎
2021	榮獲國立陽明交通大學『延攬及留住特殊優秀人才彈性薪資』獎勵
2020	國立陽明大學藥物科學院「教學傑出教師」
2020	榮獲『陽明景康教師獎』獎勵
2020	榮獲美國史丹佛大學發布「全球前2%頂尖科學家榜單 (World's Top 2% Scientists 2020~2024)」
2019	榮獲國立陽明大學「學術卓越」獎勵
2019	榮獲國立陽明交通大學「特聘教授」獎勵
2017	國立陽明大學『資深優良教師』獎勵
2015	第11屆烏克蘭國際發明展『金牌獎』
2011	榮獲教育部「大專校院頂尖人才彈性薪資」獎勵

【重要著作 (Selected Publications) 】

1. Li SM, Lee YS, Huang KY, Chen JJ*. Bioactive extract and component from fruit spikes of Prunella vulgaris L. Induce apoptosis in non-small cell lung cancer: An integrative network pharmacology, molecular docking, and experimental validation approach. Ind Crops Prod 2026; 241: 122697.
2. Tsai CH, Guo YJ, Li SM, Chou HY, Chen JJ*. Multi-functional investigation via biological and computational insight into extracts and components from root of Polygonum multiflorum. Ind Crops Prod 2026; 247: 123490.
3. Lee YS, Li SM, Chen HJ, Chen JJ*. Comprehensive phytopharmacological profiling of Polygonum aviculare L.: Antioxidant, anti-inflammatory, and α -glucosidase inhibitory activities of bioactive constituents with molecular docking and in silico drug-likeness analysis. Antioxidants 2026; 15: 947.
4. Wu YJ, Li SM, Chen CL, Chen ZR, Chen JJ*. Anti-inflammatory activity of Pogostemon cablin: Bioactive components and their modulation of MAPK and NF- κ B signaling pathway. Bioorg Chem 2025; 161: 108516.

5. Li CW, Li SM, Chen JJ*. Isolation, characterization, and biological evaluation of bioactive components from the stem bark of Broussonetia papyrifera: Antioxidant properties and apoptosis induction in breast cancer cells. Bioorg Chem 2025; 161: 108778.
6. Liao YC, Yeh CC, Chueh YF, Huang MS, Wu JS, Wen YX, Chang YT, Lai YR, Chen JJ*, Chang TH*. Effects of the oxoaporphine alkaloid hernandonine on dengue virus. Evidence for its mechanisms of action. Phytomedicine 2024; 134: 155986.
7. Chao CC, Huang CL, Cheng JJ, Chiou CT, Lee IJ, Yang YC, Hsu TH, … Chen JJ*, Huang NK*. SRT1720 as an SIRT1 activator for alleviating paraquat-induced models of Parkinson' s disease. Redox Biol. 2022; 58: 102534.
8. Yang CY, Chen C, Lin CY, Chen YH, Lin CY, Chi CW, Chen YJ, Liu SC, Chang TK, Tang CH, Lai YW, Tsai HJ, Chen JJ*, Wang SW*. Garcimultiflorone K inhibits angiogenesis through Akt/eNOS- and mTOR-dependent pathways in human endothelial progenitor cells. Phytomedicine 2019; 64: 152911.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2026~	Journal of Food and Drug Analysis	Honorary Editor-in-Chief
2025~2028	J. Tradit. Complement. Med. (eJTCM)	Associate Editor-in-Chief
2025	Addition and Adjustment of Colleges, Departments, Graduate Institutes, and Degree Programs, Ministry of Education	Committee
2023~	Yushan Fellow Program, Ministry of Education	Committee
2023~	藥師國家考試「生藥學(含中藥學)」科目	召集人
2022~	Times Higher Education World University Rankings	Rankings Advisory Committee
2019~	Academia Sinica「R&D Achievements」& 「Renewal of Appointment of Assistant Research Fellow」	Committee
2019~	The Natural Medicine Society of Taiwan (10^{th} -12^{th})	Director
2019~	QS World University Rankings	Committee
2018~2025	Journal of Food and Drug Analysis	Associate Editor-in-Chief
2005~	NSTC Research Project	Initial/ Secondary Reviewer
1997	School of Pharmacy, Kaohsiung Medical University	Ph.D.

Bioactive Natural Products from Formosan Natural Resources: Lead Compounds for Drug Discovery

Jih-Jung Chen

Department of Pharmacy, School of Pharmaceutical Sciences, National Yang Ming Chiao Tung University

*E-mail: jjungchen@nycu.edu.tw

Abstract
Natural products, particularly bioactive molecules with potential as lead compounds, have attracted considerable attention in drug discovery, pharmaceutical development, and health promotion. Indeed, numerous therapeutic agents currently in clinical use have been derived directly from natural sources or developed based on structurally and pharmacologically inspired natural products.
Over the course of our research, our laboratory has isolated more than 1,500 natural compounds from a wide range of research materials, including Formosan plants, fungi, and traditional Chinese medicines. Among these compounds, more than 300 were previously unreported, and numerous others exhibited diverse biological activities, including anti-inflammatory, anti-tuberculosis, anticancer, antiplatelet, anti-angiogenic, antioxidant, anti-dengue virus, vasodilatory, hypoglycemic, anti-acetylcholinesterase, and anti-tyrosinase activities. Several of these bioactive compounds have demonstrated particularly promising potential as lead compounds for further drug discovery and development.
In this presentation, I am pleased to share some of these research findings and highlight our efforts in the discovery and characterization of bioactive natural products from Formosan natural resources. I hope that these findings will provide valuable insights into the potential of natural products as a rich source of lead compounds for future pharmaceutical development.

Keywords: bioactive natural products, lead compounds, natural resources.

吳永昌 Yang-Chang Wu



【現職單位 (Current Affiliation)】
*Chair Professor, Master Program of Pharmaceutical Manufacture, College of Pharmacy, China Medical University, Taiwan.
*Consultant, Research Center for Traditional Chinese Medicine, China Medical University Hospital, Taiwan.

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2023	台灣天然藥物學會 終生成就獎
2023	衛生福利部玉階獎 卓越貢獻獎
2022-present	台灣最佳化學科學家(前30名)
2022	私立教育事業協會全國傑出教師 弘道獎
2022	百靈佳殷格翰 生醫新創獨角獸獎
2021	生策會國家新創獎 學研新創精進續獎
2021	台灣國際發明得獎協會國際傑出發明家 最高生技大賞獎
2020-present	全球前2%傑出科學家
2020	生策會國家新創獎 學研新創獎
2020	科技部生命科學最具影響力 研究專書獎
2020	私立教育事業協會全國資深優良教師 至善獎
2017	科技部創新創業激勵計畫 創業傑出獎
2017	教育部 資深優良教師獎章
2015	生策會國家新創獎 學研新創獎
2012	嘉義輔仁中學 傑出校友
2012	生策會國家新創獎 學生團隊組獎
2011	嘉義縣鹿草鄉下潭國小 傑出校友
2010	永信李天德醫藥基金會 卓越醫藥科技獎
2009	國家科學委員會 傑出研究獎
2007	高雄醫學大學 研究傑出教師獎
2007	高雄醫學大學 研究類傑出校友
2007	中化王民寧先生紀念基金會 醫藥研究傑出貢獻獎
2006	高雄醫學大學 研究傑出教師獎
2001	中華民國傑出中藥神農獎 奉獻獎

【重要著作 (Selected Publications) 】

1. Shih YT, Chen PS, Wu CH, Tseng YT, Wu YC* and Lo YC*. Arecoline, a Major Alkaloid of the Areca Nut, Causes Neurotoxicity through Enhancement of Oxidative Stress and Suppression of the Antioxidant Protective System. Free Radic. Biol. and Med., 2010, 49, 1471-1479.
2. Yang JC, Lu MC, Lee CL, Chen GY, Lin YY, Chang FR * and Wu YC*. Selective Targeting of Breast Cancer Cells through ROS-mediated Mechanisms Potentiates the Lethality of Paclitaxel by a Novel Diterpene, Gelomulide K, Free Radic. Biol Med., 2011, 51, 641-657.
3. Chen HM, Chang FR, Hsieh YC, Cheng YJ, Hsieh KC, Tsai LM, Lin AS, Wu YC * and Yuan SS*. A Novel Synthetic Protoapigenone Analogue, WYC02-9, Induces DNA Damage and Apoptosis in DU145 Prostate Cancer Cells through Generation of Reactive Oxygen Species. Free Radic. Biol. Med., 2011, 50, 1151-1162.
4. Lu MC, El-Shazly M, Wu TY, Du YC, Chang TT, Chen CF, Hsu YM, Lai KH, Chiu CP, Chang FR * and Wu YC*. Recent Research and Development of Antrodia cinnamomea. Pharmacol. Ther., 2013, 139, 124-156.
5. Chiu CP, Liu SC, Tang CH, Chan Y, El-Shazly M, Lee CL, Du YC, Wu TY, Chang FR* and Wu YC *. Anti-inflammatory Cerebrosides from Cultivated Cordyceps militaris. J. Agric. Food Chem., 2016, 64, 1540-1548.
6. Cheng HM, Wu YC, Wang Q, Song M, Wu J, Chen D, Li K, Wadman E, Kao ST, Li TC, Leon F, Hayden K, Brodmerkel C and Huang CC *. Clinical Efficacy and IL-17 Targeting Mechanism of Indigo naturalis as A Topical Agent in Moderate Psoriasis. BMC Complement. Altern. Med., 2017, 17:439.
7. Chu PY, Pan YC, Hsu WY, Chuang DW, Yang JC, Chen GY, Jang YJ * and Wu YC*. Synthesis and anti-cancer biological evaluation of a novel protoapigenone analogue, WYC-241. RSC Med Chem., 2025, 16, 5364-5381.
8. Jang YJ*, Jhan YL, Chen GY, Hsu WY, Wang K, Lee CL, Yang YL and Wu YC*. Triflic Acid-Enabled Cascade Transformations of o-Quinone Acetates With 1,3-Dicarbonyls, Eur. J. Org. Chem., 2026, 29, e70391.
9. Yuan WC, Wu TY, Lee CL, Jang YJ* and Wu YC*. Astaxanthin in Traditional and Modern Medicine: Therapeutic Potential, Purification Technology, and Future Prospects. J.Tradit. Complement. Med., in press.
10. Wang K, Chen GY, Chu PY, Pan YC, Hsu WY, Dai YH, Yang YL, Jang YJ * and Wu YC*. In silico identification and biological evaluation of newly synthetic hinokiflavone derivatives targeting Aurora A for ovarian cancer therapy, Eur. J. Med. Chem., in press.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2025-迄今	高雄醫學大學藥學院	名譽教授
2024-迄今	中國醫藥大學製藥碩士學位學程	講座教授
2024-2025	中國醫藥大學中西醫結合研究所	合聘講座教授
2023-迄今	衛生福利部國家中醫藥研究所中醫藥研究諮議會	委員
2023-迄今	台灣牛樟芝產業協會	理事
2022-迄今	台灣評鑑協會產業學院專案審議委員會	委員
2019-迄今	中國醫藥大學附設醫院中醫藥研究中心	顧問
2019-迄今	工業技術研究院技轉法律中心審議委員會	委員
2019-迄今	高雄醫學大學天然藥物研究所	合聘教授
2019-2024	中國醫藥大學中西醫結合研究所	講座教授
2018-迄今	國際生物催化暨農業生物技術學會	監事
2018-迄今	臺灣傳統暨替代醫學協會	監事
2018-迄今	財團法人友友錦祿教育基金會	董事
2018-2021	衛生福利部中醫藥雜誌	編輯顧問
2018-2020	考試院公務人員高等考試暨普通考試	命題、閱卷委員
2017-2019	高雄醫學大學天然藥物研究所	講座教授
2017-2018	衛生福利部中華藥典編修諮議會	委員
2017-2018	高雄醫學大學天然藥物暨新藥開發研究中心	主任
2017-2018	財團法人台灣經濟研究院	顧問
2016-2018	國際生物催化暨農業生物技術學會	常務監事
2014-2022	台灣牛樟芝產業協會/牛樟芝國家標準技術委員會	常務理事/召集人
2014-2017	考選部醫事人員考試審議委員會	委員
2014-2017	中國醫藥大學中醫藥研究中心	主任
2014-2017	中國醫藥大學附設醫院中醫藥研究發展中心	主任
2014-2016	科技部生科司藥學暨中醫藥學門	召集人
2013-2017	中國醫藥大學藥學系	講座教授
2013-2015	國家新創獎評審委員會	委員
2013-2014	中國醫藥大學	副校長兼藥學院院長
2012-迄今	經濟部標準檢驗局食品國家標準技術委員會	委員
2012-2020	中華民國農科園區產學協會	常務理事
2012-2018	台灣藥學會	常務理事
2012-2017	中華民國南部科學園區產學協會	理事
2012-2013	中國醫藥大學中醫學系	講座教授
2012-2013	工業技術研究院兩岸中草藥工作小組教育合作分組	召集人
2010-迄今	中國醫藥大學附設醫院	顧問

2010-2020	財團法人高等教育評鑑中心基金會	評鑑委員
2010-2017	中國醫藥大學	副校長
2010-2015	美國藥典委員會東亞中草藥專家小組	委員
2010-2014	中國醫藥大學附設醫院天然藥物研究中心	主任
2010-2012	中國醫藥大學中西醫結合研究所	講座教授
2009-2010	高雄醫學大學天然藥物研究所	講座教授
2008-2022	經濟部工業局及技術處技術審查委員會	委員
2008-2010	台灣天然藥物學會	理事長
2006-2009	高雄醫學大學研究發展處	研發長
2002-2004	國家科學委員會生物處藥學暨中醫藥學門	召集人
1996-2010	衛生署中醫藥委員會	委員
1992-2009	高雄醫學大學天然藥物研究所	教授
1992-2006	高雄醫學大學天然藥物研究所	所長
1991-迄今	中山大學海洋生物科技暨資源學系	兼任教授
1990-2015	考試院考選部	典試委員
1990-1992	高雄醫學大學藥學系	教授
1989-1998	高雄醫學大學 註冊組/研教組/進修推廣部	主任
1987-1987	美國北卡羅萊納大學藥學院 博士後研究	博士後研究
1986-1990	高雄醫學大學藥學系	副教授
1986-1987	日本名城大學藥學部 博士後研究	博士後研究
1982-1986	高雄醫學大學藥學系	講師
1982-1986	高雄醫學大學醫學研究所(基礎醫學) 博士	博士
1979-1982	高雄醫學大學醫學研究所(基礎醫學) 碩士	碩士
1977-1982	高雄醫學大學藥學系	助教
1971-1975	高雄醫學大學 藥學系	學士

50 Years of Natural Medicinal Products Research

Yang-Chang Wu

*Chair Professor, Master Program of Pharmaceutical Manufacture, College of Pharmacy, China Medical University, Taiwan.
*Consultant, Research Center for Traditional Chinese Medicine, China Medical University Hospital, Taiwan.

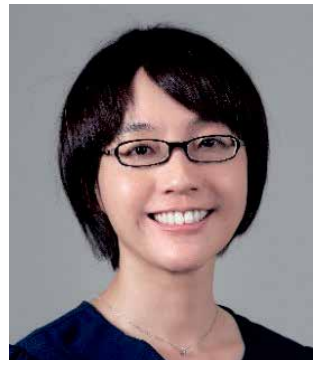
*E-mail: yachwu@mail.cmu.edu.tw

Abstract
My academic career has been dedicated to natural products and Chinese Herbal Medicine, with a particular focus on the research and development of Taiwan' s native medicinal plants. I firmly believe that natural medicines are the crystallization of human wisdom and nature' s bounty.
At the beginning, my research has focused on the isolation and structural elucidation of Annonace plant isoquinoline alkaloids, and later subsequently expanding to hit lead compounds via bioactivity-directed Fractionation and Isolation, such as Annonaceous acetogenins derived from Annonaceae species, withanolides derived from plants in the Solanaceae family, and active marine natural products obtained from soft corals which exhibited promising activities both in vitro and in vivo for drug development.
Over the past two decades, upholding a spirit of exploration and innovation, the research scope has expanded toward translational research focusing on health foods, the structural modification and optimization of lead compounds, and the total synthesis of novel drugs through the integration of computational methodologies, including molecular docking and virtual screening, to accelerate discovery and optimization processes as well as evidence-based translational research in traditional Chinese and herbal medicine. Notable highlights include leading international trials such as the "Janssen/Johnson & Johnson Clinical Trial of Indigo naturalis for the Treatment of Psoriasis" and the "Phase III Global Multi-Center Clinical Trial of Tasly Pharmaceutical Group Co., Ltd. Holding Group's Compound Danshen Dripping Pills for the Prevention and Treatment of Angina Pectoris" at China Medical University (CMU). At Kaohsiung Medical University (KMU), I also spearheaded preliminary domestic clinical trials investigating "San-Huang-Xie-Xin-Tang for Inhibiting Breast Cancer Metastasis," "Artichoke (a traditional German herbal medicine) for Asthma and Chronic Obstructive Pulmonary Disease (COPD)," and "Astaxanthin for the Prevention and Treatment of Alzheimer's Disease."

Keywords: Natural Medicinal Products; Chinese Herbal Medicine; Translational
Research; Functional Food; New Drug Development

INVITED SPEAKER

林曉青 Hsiao-Ching Lin



【現職單位 (Current Affiliation)】
中央研究院 生物化學研究所
Institute of Biological Chemistry,
Academia Sinica

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2025	Outstanding Research Award (National Science and Technology Council, NSTC)
2025	Young Chemist Award (Chemical Society Located in Taiwan, CSLT)
2024	Investigator Award, Academia Sinica (5-year grant: 2025-2029)
2024~2030	Cross-Generation Young Scholars Program– International Outstanding Young Scholar (National Science and Technology Council, NSTC) (4-year grant: 2024-2027)
2022	Tien Te Lee Biomedical Award, Tien Te Lee Biomedical Foundation, Taiwan
2022	Academia Sinica Early-Career Investigator Research Achievement Award
2020	Ta-You Wu Memorial Award, MoST, Taiwan
2020	Rising Star Award, Taiwan Outstanding Women in Science, L'ORÉAL-UNESCO Awards for Women in Science and Wu Chien-Shiung Education Foundation
2019	Career Development Award, Academia Sinica (5-year grant: 2020-2024)
2017	Distinguished Lectureship Award from the Chemical Society of Japan (CSJ) Asian International Symposium

【重要著作 (Selected Publications) 】

1. Chen TH, Huang KF, Chou TH, Tseng CC, Huang RJ, Ko TP, Liang SY, Chein RJ, Lin HC*. Dimerization-Dependent Trans-Domain Coupling Enables Intermediate Transfer in Fungal Haloacid Dehalogenase-Like Terpene Cyclases. J. Am. Chem. Soc. 2026, 148(21), 22120–22130
2. Wang, SY+, Chiu KW+, Lin KL+, Wei HY, Chen YR, Tu Z, Lin YT, Lin CH*, Chein, RJ*, Lin HC*. Epoxide Stereochemistry Controls Regioselective Ketoreduction in Epoxyquinoid Biosynthesis. J. Am. Chem. Soc. 2025, 147(32), 29582–29591.

3. Pham MT, Yang FL, Liu IC, Liang PH, Lin HC*. Non-Heme Iron Enzymes Catalyze Heterobicyclic and Spirocyclic Isoquinolone Core Formation in Piperazine Alkaloid Biosynthesis. Angew. Chem. Int. Ed. 2024, 63(20), e202401324.
4. Chen TH+, Chen CT+, Lee CF, Huang RJ, Chen KL, Lu YC, Liang SY, Pham MT, Rao YK, Wu SH, Chein RJ, Lin HC*. The Biosynthetic Gene Cluster of Mushroom-Derived Antrocin Encodes Two Dual-Functional Haloacid Dehalogenase-Like Terpene Cyclases. Angew. Chem. Int. Ed. 2023, 62(9), e202215566.
5. Pham MT, Chen SR, Liang SY, Cheng YB, Lin HC*. Biosynthesis of Piperazine-Derived Diazabicyclic Alkaloids Involves a Nonribosomal Peptide Synthetase and Subsequent Tailoring by a Multifunctional Cytochrome P450 Enzyme. Org. Lett. 2022, 24(22), 4064–4069.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2020~ Present	Institute of Biological Chemistry, Academia Sinica	Associate Research Fellow
2021~ Present	National Taiwan University (IBS & School of Pharmacy)	Adjunct Associate Professor
2015~2020	Institute of Biological Chemistry, Academia Sinica	Assistant Research Fellow
2011~2015	National Taiwan University / UCLA	Postdoctoral Researcher
2006~2011	School of Pharmacy, National Taiwan University	Ph.D.
2004~2006	School of Pharmacy, National Taiwan University	M.S.
2000~2004	School of Pharmacy, Taipei Medical University	B.S.

Deciphering the Biosynthetic Logic of Fungal Natural Products

Hsiao-Ching Lin[1]

[1]Institute of Biological Chemistry, Academia Sinica

*E-mail: hsiaoching@gate.sinica.edu.tw

Abstract
Natural products (NPs) have played an important role in chemistry development and drug discovery. Their diverse scaffolds and semisynthetic derivatives provide new chemical entities with a variety of biological and pharmacological activities. The availability of genome sequences in recent years has expedited the identification of genes and enzymes involved in secondary metabolite biosynthesis. Enzymatic cyclizations are crucial transformations in NP biosynthesis, converting acyclic precursors into cyclized products, thus enhancing structural rigidity and biological activity. Some of the most significant structural alterations in NP biosynthesis occur via cascade reactions and oxidative cyclization. Recently, we have uncovered Nature' s strategies for creating new intramolecular bonds through cascade and redox chemistry in enzymatic cyclizations in fungal terpenoid and alkaloid biosynthetic pathways. These works not only provide critical new insights into the biosynthesis of fungal NPs, but also open up opportunities for expanding significant chemical space through cyclization for complexity generation using enzymatic approaches.

Keywords: natural products, biosynthesis, biocatalysts

王士維 Shih-Wei Wang

【現職單位 (Current Affiliation)】
馬偕醫學大學生物醫學研究所
Graduate Institute of Biomedical Sciences,
MacKay Medical University



【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2025	第22屆國家新創獎-學研新創獎 Academic and Research Innovation Award, The 22nd National Innovation Award
2021	高雄醫學大學藥學院第十屆學術類傑出校友 The 10th Distinguished Alumnus (Academic Category), College of Pharmacy, Kaohsiung Medical University
2019	科技部優秀年輕學者研究計畫 Excellent Young Scholar Research Grant, MOST
2017	中華天然藥物學會優秀學術論文獎 Excellent Academic Paper Award, The Society of Chinese Natural Medicine
2016	科技部大專生研究計畫研究創作獎指導教授 Advisor for College Student Research Creativity Award, MOST

【重要著作 (Selected Publications) 】

1. Chen C#, Kao YS, Tang CH, Yu CL#, Huang KY, Yen JY, Lin CY, Huang CC, Cho DY, Chou MC, Wu YC*, Weng SL*, Wang SW*. Clozapine impairs angiogenic function and cellular bioenergetics in primary human endothelial progenitor cells and zebrafish: involvement of aryl hydrocarbon receptor signaling. Arch Toxicol, 2026 (In press)
2. Lai CT, Hsieh YH, Wang YH, Chang KF, Sun WC, Yu CL, Lee TH, Wang SW*, Lin CL*. Trichodermin, an endophytic fungal sesquiterpene, suppresses colorectal cancer cell migration and invasion by targeting the PKC-ERK-Sp1-CTSV axis. Phytomedicine, 2025, 145: e157063.
3. Yu CL#, Huang KY, Chen JJ, Lai CT#, Chen GW, Huang CC, Yeh YH, Lee CH, Lee JJ, Huang DM*, Wang SW*. Hernandonine-mediated autophagic cell death in hepatocellular carcinoma: Interplay of p53 and YAP signaling pathways. Free Radic Biol Med, 2024, 222:456-466.

4. Sun WC, Lin CL, Lee TH, Chang CH, Ong AZ, Yeh YH, Yu CL, Chen GW, Hsieh YH*, Wang SW*. Critical role of heme oxygenase-1 in chaetoglobosin A by triggering reactive oxygen species mediated mitochondrial apoptosis in colorectal cancer. Free Radic Biol Med, 2023, 208: 833-845.
5. Tai HC#, Wang SW#, Swain S, Lin LW, Tsai HC, Liu SC, Wu HC, Guo JH, Liu CL, Lai YW, Lin TH*, Yang SF*, Tang CH*. Melatonin suppresses the metastatic potential of osteoblastic prostate cancers by inhibiting integrin α 2 β 1 expression. J Pineal Res, 2022, 72: e12793.
6. Chen SS#, Tang CH#, Chie MJ, Tsai CH, Fong YC, Lu YC, Chen WC, Lai CT, Wei CY, Tai HC, Chou WY, Wang SW*. Resistin facilitates VEGF-A-dependent angiogenesis by inhibiting miR-16-5p in human chondrosarcoma cells. Cell Death Dis, 2019, 10: e31.
7. Chien MH, Lee TH, Lee WJ, Yeh YH, Li TK, Wang PC, Chen JJ, Chow JM, Lin YW, Hsiao M, Wang SW*, Hua KT*. Trichodermin induces c-Jun N-terminal kinase-dependent apoptosis caused by mitotic arrest and DNA damage in human p53-mutated pancreatic cancer cells and xenografts. Cancer Lett, 2017, 388: 249-261.
8. Chang FR, Wu CC, Chen BH, Hwang TL, Wang SW, Purnomo KA, Tsai YH. MACA EXTRACT AND USE THEREOF. US patent: US 2022/0387536 A1.
9. Yeh HI, Wang SW, Chung CH, Hsieh PW. AURANTIAMIDE DIPEPTIDE DERIVATIVES FOR TREATMENT OR PREVENTION OF ANGIOGENESIS-RELATED DISEASES. US patent: US 9,872,882 B2.
10. Chang HS, Chen IS, Peng CJ, Wang SW, Tang CH. METHODS FOR TREATING ANGIOGENESIS RELATED DISORDER. US patent: US 10,561,637 B2.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2025~ Present	Graduate Institute of Biomedical Sciences, College of Medicine, MacKay Medical University	Professor and Chair
2021~2024	Institute of Biomedical Sciences, MacKay Medical College	Professor and Chair,
2019~2020	Department of Medicine, MacKay Medical College	Professor
2019~ Present	Graduate Institute of Natural Products, College of Pharmacy, Kaohsiung Medical University	Joint Appointment Professor
2002~2007	Institute of Pharmacology, College of Medicine, National Taiwan University	Ph.D.

From Clinical Insights to Mechanistic Investigation: Unraveling the Vascular Toxicity of Clozapine

Chi Chen[1], Chih-Hsin Tang[2], Chen-Lin Yu[3], Shih-Wei Wang[4,5*]

[1]Department of Addiction Sciences, Taipei City Psychiatric Center, Taipei City Hospital, Taipei, Taiwan.
[2]Department of Pharmacology, School of Medicine, China Medical University, Taichung, Taiwan.
[3]Department of Medical Research, Hsinchu MacKay Memorial Hospital, Hsinchu City, Taiwan.
[4]Graduate Institute of Biomedical Sciences, College of Medicine, MacKay Medical University, New Taipei City, Taiwan.
[5]School of Pharmacy, College of Pharmacy, Kaohsiung Medical University, Kaohsiung, Taiwan.

*E-mail: shihwei@mmu.edu.tw

Abstract
Clozapine is indispensable for treatment-resistant schizophrenia, but its effects on endothelial repair and their potential relevance to coronary artery disease (CAD) remain insufficiently characterized. We combined a propensity score-matched nationwide cohort of 28,802 patients with experiments in primary human endothelial progenitor cells (EPCs) and zebrafish embryos. Clozapine use was associated with a higher incidence of coronary artery disease during up to 12 years of follow-up. In human EPCs, clozapine suppressed cell proliferation, migration and tube formation as well as cellular respiration and glycolysis. In silico docking predicted a potential interaction with the aryl hydrocarbon receptor (AHR) ligand-binding pocket. Clozapine increased CYP1A1 mRNA expression and reduced AHR protein level. The AHR antagonist CH-223191 partially restored cell growth and shifted extracellular acidification toward control levels, supporting involvement of AHR signaling. Clozapine also triggered autophagy, while 3-methyladenine intensified growth inhibition, consistent with a potentially compensatory autophagy-associated response. Consistent with ligand-driven proteasomal clearance of AHR, proteasome inhibition amplified clozapine-induced growth suppression. Alongside AHR-dependent signaling, clozapine downregulated survival signaling cascades, including the Akt/mTOR, ERK, p38, and NF- κ B pathways. In Tg(fli1:EGFP) zebrafish embryos, clozapine disrupted intersegmental and sub-intestinal vessel patterning and increased mortality. These findings identify AHR-associated metabolic and angiogenic dysfunction as a plausible vascular effect of clozapine.

While further studies are required to determine its contribution to the clinical association and its relevance to chronic therapeutic exposure, our study provides a mechanistic basis for clozapine-related CAD risk.

Keywords: Clozapine, Angiogenesis, Endothelial Dysfunction, Coronary Artery Disease, Aryl Hydrocarbon Receptor

童俊維 Chun-Wei Tung



【現職單位 (Current Affiliation)】
國家衛生研究院生技與藥物研究所
Institute of Biotechnology and
Pharmaceutical Research,
National Health Research Institutes

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2025	Top Scholar by ScholarGPS
2023	Outstanding Alumni (by Department of Life Sciences, National Cheng Kung University, Tainan, Taiwan)

【重要著作 (Selected Publications) 】

1. Lin R. and Tung CW*. Advancing ADMET Prediction via Biological Readacross-Inspired Multitask Learning, Lecture Notes in Artificial Intelligence, 2026, 109-119.
2. Huang WC and Tung CW*. Multitask learning and transfer learning approaches in target-based chemical toxicity modeling: GPCRs as an example, Chapter in Cheminformatic Modelling and Data Gap Filling for a Green and Sustainable Environment (Kunal Roy, Arkaprava Banerjee, eds.), Elsevier, 2026, 815-835.
3. Kan HL, Chiu YW, and Tung CW*. Metaclassifiers and multitask learning for predicting toxicity endpoints with complex mechanism, Chapter in Machine Learning and Artificial Intelligence in Toxicology and Environmental Health (Zhoumeng Lin, Wei-Chun Chou, eds.), Academic Press, 2025, 153-171.
4. Tung CW*, Wang CC, Lin RH and Wang SS. Multitask Learning for Six-Pack Toxicity Prediction, Annals of Computer Science and Information Systems, 2025, 44, 93-97.
5. Kan HL, Wang SS and Tung CW*. ZFinfer: A Novel Chemical-Phenotype Inference System for Zebrafish for Filling Data Gaps in Environmental Pollutant Research, Ecotoxicology and Environmental Safety, 2025, 302, 118682.
6. Huang WC, Hsieh HP and Tung CW*. Integrating Machine Learning and Protein-Ligand Interaction Profiling for the Discovery of METTL3 Inhibitors, Sci Rep., 2025, 15, 36789.

7. Lin RH, Lin P, Wang CC and Tung CW*. A Novel Multitask Learning Algorithm for Tasks with Distinct Chemical Space: Zebrafish Toxicity Prediction as an Example, Journal of Cheminformatics, 2024, 16(1), 91.
8. Huang WC, Lin WT, Hung MS, Lee JC and Tung CW*. Decrypting orphan GPCR drug discovery via multitask learning, Journal of Cheminformatics, 2024, 16(1), 10.
9. Chiu YW, Tung CW * and Wang CC*. Multitask learning for predicting pulmonary absorption of chemicals, Food and Chemical Toxicology, 2024, 185, 114453.

【學經歷 (Education & Professional Experience)

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2019~2021	Graduate Institute of Data Science, Taipei Medical University	Associate Professor, Professor
2011~2019	School of Pharmacy, Kaohsiung Medical University	Assistant/ Associate Professor
2012	Center for Bioinformatics, National Center for Toxicological Research (NCTR), FDA, USA	Visiting scholar
2008~2009	Institute for Computer Science, University Tübingen, Germany	Visiting scholar
2005~2010	Institute of Bioinformatics, National Chiao Tung University	Ph.D.
2001~ 2005	Department of Biology, National Cheng Kung University	B.S.

Beyond Accuracy: AI Platforms for Reliable Drug Discovery

Chun-Wei Tung[1]

[1]Institute of Biotechnology and Pharmaceutical Research, National Health Research Institutes, Taiwan

*E-mail: dr.cwtung@gmail.com

Abstract
Artificial intelligence has become an indispensable foundation in drug discovery, transforming workflows from target identification to compound optimization. While predictive accuracy is often highlighted, the reliability of these predictions is less transparent—particularly for structurally complex molecules such as natural products, which frequently fall outside conventional model boundaries. In addition, data scarcity can undermine model robustness.
In this talk, we will first introduce the concept of applicability domain, a critical framework for determining whether AI predictions are trustworthy and relevant. Applicability domain analysis not only clarifies the limits of model reliability but also provides practical guidance for applying AI tools to novel or complex chemical spaces.
Building on this foundation, we will present our AI platforms. First, a GPCR-focused model that leverages multi-task learning to expand chemical space and enhance predictive accuracy, while incorporating applicability domain analysis to strengthen cross-target learning and even enable predictions for orphan GPCRs. Second, we showcase vADMET (virtual ADMET), our ADMET prediction tool equipped with built-in applicability domain analysis, allowing researchers to assess whether predictions are valid for challenging compounds.
By integrating generative design, receptor profiling, and reliability-aware ADMET prediction, our platforms move drug discovery beyond accuracy toward confidence and transparency, offering practical solutions for navigating complex and underexplored chemical spaces.

Keywords: Applicability domain, generative drug design, multitask learning

陳美全 Mei-Chuan Chen



【現職單位 (Current Affiliation)】
臺北醫學大學藥學系
School of Pharmacy, Taipei Medical University

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2026	Guest Editor (Discover Oncology)
2024	臺北醫學大學系級教學優良教師
2021~ Present	Reviewer Board Member (Cancers)
2017~ Present	Active Member of American Association for Cancer Research (AACR)

【重要著作 (Selected Publications) 】

1. Hsieh TH, Kuo HP, Pan CH, Lin YC, Lin BJ, Chen MC*, Chen CH*. A cyclin D1-CDK4/6-E2F dependency represents an acquired vulnerability in cisplatin-resistant bladder cancer. Biol Direct. 2026 Apr 27;21(1):99.
2. Bui Nguyen BT, Bui HM, Liaw CC, Huynh QT, Chao CH, Tran DH, Lo IW, Vo TH, Koeberle A, Koeberle SC, Chen MC*, Lin YC*. NMR-Guided Discovery of Luvunga D: A Novel Propellane-Type Limonoid from Luvunga scandens That Functions as a Non-Classical Ferroptosis Inhibitor. Antioxidants (Basel). 2026 Mar 23;15(3):402.
3. Bui Nguyen BT, Shen YC, Liaw CC, Chao CH, Tran Huynh QD, Tran DH, Vo TH, Vo QT, Nguyen HH, Lo IW, Huang HC, Chen MC*, Lin YC*. Discovery of Enantiomeric Monoterpene-Coumarins with Neuroprotective Activities from the Rhizomes of Luvunga scandens. J Nat Prod. 2026 Jan 23;89(1):281-293.
4. Tang DW, Chen IC, Chou PY, Lai MJ, Liu ZY, Tsai KK, Cheng LH, Zhao JX, Cho EC, Chang HH, Lin TE, Hsu KC, Chen MC*, Liou JP*. HSP90/LSD1 dual inhibitors against prostate cancer as well as patient-derived colorectal organoids. Eur J Med Chem. 2024 Nov 15:278:116801.
5. Hsu HL, Lin BJ, Lin YC, Tu CH, Nguyen NL, Wang CC, Chen MC*, Chen CH*. Cucurbitacin E Exerts Anti-Proliferative Activity via Promoting p62-Dependent Apoptosis in Human Non-Small-Cell Lung Cancer A549 Cells. Curr Issues Mol Biol. 2023 Oct 7;45(10):8138-8151.

6. Chang CH, Lin BJ, Chen CH, Nguyen NL, Hsieh TH, Su JH, Chen MC*. Stellettin B Induces Cell Death in Bladder Cancer Via Activating the Autophagy/DAPK2/Apoptosis Signaling Cascade. Mar Drugs. 2023 Jan 21;21(2):73.
7. Ojha R, Chen IC, Hsieh CM, Nepali K, Lai RW, Hsu KC, Lin TE, Pan SL, Chen MC *, Liou JP*. Installation of Pargyline, a LSD1 Inhibitor, in the HDAC Inhibitory Template Culminated in the Identification of a Tractable Antiprostate Cancer Agent. J Med Chem. 2021 Dec 23;64(24):17824-17845.
8. Mehndiratta S*, Chen MC*, Chao YH, Lee CH, Liou JP, Lai MJ, Lee HY. Effect of 3-subsitution of quinolinehydroxamic acids on selectivity of histone deacetylase isoforms. J Enzyme Inhib Med Chem. 2021 Dec;36(1):74-84. (* Equal contribution)
9. Nguyen NL, Vo TH, Lin YC, Liaw CC, Lu MK, Cheng JJ, Chen MC*, Kuo YH*. Arenarosides A-G, Polyhydroxylated Oleanane-Type Saponins from Polycarpaea arenaria and their Cytotoxic and Antiangiogenic Activities. J Nat Prod. 2021 Feb 26;84(2):259-267.
10. Wu WC, Liu YM, Liao YH, Hsu KC, Lien ST, Chen IC, Lai MJ, Li YH, Pan SL, Chen MC *, Liou JP*. Fluoropyrimidin-2,4-dihydroxy-5-isopropylbenzamides as antitumor agents against CRC and NSCLC cancer cells. Eur J Med Chem. 2020 Oct 1:203:112540.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2025~ Present	臺北醫學大學藥學系	主任
2024~2025	臺北醫學大學藥學系/藥物科學學科	主任
2023~ Present	臺北醫學大學藥學系/藥物科學學科	教授
2021~2023	臺北醫學大學藥學系/藥物科學學科	副教授
2018~2021	臺北醫學大學/中草藥臨床藥物研發博士學位學程	副教授
2014~2018	臺北醫學大學/中草藥臨床藥物研發博士學位學程	助理教授
2013~2014	臺北醫學大學藥學院	博士後研究員
2012~2013	台灣大學藥理所	博士後研究員
2006~2012	台灣大學藥理所	博士
1999~2003	臺北醫學大學藥學系	學士

Investigating the antitumor and immunomodulatory mechanisms of steroidal saponins in bladder cancer

Ling-Ling Yeh[1], Chun-Hsu Pan[1], Chun-Han Chen[2], Mei-Chuan Chen[1*]

[1]School of Pharmacy, College of Pharmacy, Taipei Medical University, Taipei, Taiwan
[2]Department of Pharmacology, School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan

*E-mail: mcchen1250@tmu.edu.tw

Abstract
Bladder cancer (BC) is the most common malignancy of urinary tract with a significant clinical challenge due to its diverse genetic alterations, high recurrence rates, and limited treatment options. While recent advances, including immune checkpoint inhibitors, targeted therapies, and antibody-drug conjugates, have improved outcomes for some patients, response rates remain low, and adverse events are common. Therefore, the development of novel therapeutic strategies is urgently needed. Using a Jurkat-Raji PD-1/PD-L1 assay, we screened approximately 550 natural compounds and identified steroidal saponins, including dioscin, as promising immunomodulatory candidates. In this study, we investigated the anticancer effects of dioscin in BC. Dioscin reduced viability in BC cells and cisplatin-resistant N/P(14) cells with relatively low cytotoxicity toward normal cells. It induced sub-G1 accumulation, caspase-3/8/9 activation, and PARP cleavage, indicating caspase-dependent apoptosis. Dioscin also increased LC3B-II and p62 expression, enhanced p62 puncta formation and LC3 fluorescence, while chloroquine-mediated lysosomal inhibition further increased apoptosis. In Jurkat-hPD-1 T cells, dioscin elevated intracellular calcium, activated NFAT, and reduced PD-1 expression through lysosomal degradation. Moreover, dioscin suppressed tumor growth in an MB49 syngeneic mouse model and increased activated NK cells in tumors. These findings indicate that dioscin exerts anticancer effects through apoptosis induction, autophagy-related modulation, and immune regulation, supporting its potential as a therapeutic candidate for bladder cancer.

Keywords: saponin, bladder cancer, autophagy, apoptosis

林凡立 Fan-Li Lin



【現職單位 (Current Affiliation)】
高雄醫學大學 醫學系 藥理學科
Department of Pharmacology,
School of Medicine,
Kaohsiung Medical University

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2024	第三屆蔡瑞芳眼科學術發展基金專案論文甄選
2020	臺灣青年人才計畫獎 (中國)
2017	105年度 杜聰明博士研究生論文獎

【重要著作 (Selected Publications) 】

Publications:

1. Chuang YF, Lin FL*. Oxygen-Induced Retinopathy in the Rat: An Animal Model to Study the Proliferative Retinal Vascular Pathology. Methods Mol Biol. 2023;2678:27-36.
2. Wang JH1, Lin FL*,1, Chen J, Zhu L, Chuang YF, Tu L, Ma C, Ling D, Hewitt AW, Tseng CL, Shah MH, Bui BV, van Wijngaarden P, Dusting GJ, Wang PY, Liu GS. TAK1 blockade as a therapy for retinal neovascularization. Pharmacol Res. 2023 Jan;187:106617.
3. Lin FL*, Cheng YW, Chen LH, Ho JD, Yen JL, Wang MH, Lee TH, Hsiao G. Retinal protection by fungal product theissenolactone B in a sodium iodate-induced AMD model through targeting retinal pigment epithelial matrix metalloproteinase-9 and microglia activity. Biomed Pharmacother. 2023 Feb;158:114138.
4. Wang JH1, Tseng CL1, Lin FL*, Chen J, Hsieh EH, Lama S, Chuang YF, Kumar S, Zhu L, McGuinness MB, Hernandez J, Tu L, Wang PY, Liu GS. Topical application of TAK1 inhibitor encapsulated by gelatin particle alleviates corneal neovascularization. Theranostics. 2022 Jan 1;12(2):657-674.

Patents:

1. Tseng CL, Cheng YW, Wu YY, Hsieh EH, Liang JH, Lin FL*. (2024). 自組裝之奈米粒子及其用於抗眼部血管新生之用途 . Taiwan Patent (I848332).
2. Tseng CL, Cheng YW, Wu YY, Hsieh EH, Liang JH, Lin FL*. (2022). Self-Assembled Nanoparticle and Use Thereof for Anti-Angiogenesis in the Eye. U.S. Patent (US 12,508,294 B2).

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2023~ present	Department of Pharmacology, School of Medicine, College of Medicine, Kaohsiung Medical University, Taiwan	Assistant Professor
2021~2023	Graduate Institute of Medical Sciences, College of Medicine, Taipei Medical University, Taiwan	Post-Doctoral Fellow
2019~2021	Molecular Ophthalmology Laboratory, Menzies Institute for Medical Research, University of Tasmania, Australia	Visiting Scholar
2019~2021	Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China	Post-Doctoral Fellow
2018~2019	Department of Pharmacy, National Yang Ming Chiao Tung University, Taiwan	Post-Doctoral Fellow

Beyond a Single Pathway: Exploring Natural Products with the Ocular Research Toolbox

Fan-Li Lin[1]

[1] Department of Pharmacology, School of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan

*E-mail: fllin@kmu.edu.tw

Abstract
Retinal diseases such as neovascular age-related macular degeneration, diabetic retinopathy, glaucoma, or retinal degenerative disease remain major causes of visual impairment. Although current treatments have improved clinical outcomes, limitations including incomplete responses, inadequate drug bioavailability, repeated intraocular injections, and persistent inflammatory and neurodegenerative processes remain. These challenges highlight the need for new therapeutic strategies.
Natural products are rich sources of bioactive compounds with potential anti-inflammatory, antioxidant, and tissue-protective activities. Our previous studies have explored natural-product-derived compounds in experimental models of ocular inflammation, glaucoma-associated retinal injury, retinal pigment epithelial dysfunction, and retinal degeneration, with particular emphasis on modulation of inflammatory signaling, glial activation, as well as extracellular matrix remodeling and neuroprotective capability. To strengthen mechanistic and translational evaluation, our research has progressively incorporated additional ophthalmic and analytical approaches, including ocular drug-delivery systems, regulatable gene therapy, and multi-omics tools, which have provided a broader view of drug action beyond predefined signaling pathways.
This presentation will highlight selected examples from our ocular pharmacology studies and illustrate how integrating molecular biology, functional ophthalmic assessment, drug-delivery technologies, gene-based approaches, and bioinformatics can help bridge natural-product discovery, mechanistic understanding, and translational validation.

Keywords: Natural products; Ocular pharmacology; Retinal inflammation; Drug delivery; Bioinformatics

Chaisak Chansriniyom



【現職單位 (Current Affiliation)】
Associate Professor of Department of Pharmacognosy and Pharmaceutical Botany, Faculty of Pharmaceutical Sciences, Chulalongkorn University, Bangkok, Thailand

【重大事蹟 (Major Achievements)】

年度 Year	在學術、技術或專業領域之具體貢獻及獲獎紀錄 Major contributions and awards
2012	Cerebos Award (Cerebos Foundation, Thailand) – a prestigious research grant and award program in Thailand
2018	New Southbound, Ministry of Education, R.O.C.

【重要著作 (Selected Publications) 】

1. Woramongkolchai N, Chaotham C, Suriya U, Khine HEE, Poungcho P, Ariyachet C, Yen CH, Chansriniyom C*. Anti-Adipogenic Effects of N-methylatalaphylline in 3T3-L1 cells through modulation of metabolic and mitogenic signaling pathways. Int. J Mol. Sci. 2026 Apr;27:3914.
2. Nukulkit S, Nalinratana N, Aree T, Suriya U, Suttisri R, Nuengchamnong N, Chang HS, Chansriniyom C*. Maeruines A – E, elusive indole alkaloids from stems of Maerua siamensis and their inhibitory effects on cyclooxygenases and HT-29 colorectal cancer cell proliferation. Phytochemistry. 2025 Jan;229:114291.
3. Mingmuang J, Bunwatcharaphansakun P, Suriya U, Pipatrattanaseree W, Andriyas T, Tansawat R, Chansriniyom C*, De-Eknamkul W. Identification of pancreatin inhibitors from Thai medicinal Piper plants for antidiabetic and anti-obesity activities using high-performance thin-layer chromatography-bioautographic assay. J Chromatogr. A. 2024 Nov;1736:465358.
4. Pichetkun V, Khine HEE, Srifa S, Nukulkit S, Nuengchamnong N, Hansapaiboon S, Saenmuangchin R, Chaotham C, Chansriniyom C*. Diverse effects of a Cyperus rotundus extract on glucose uptake in myotubes and adipocytes and its suppression on adipocyte maturation. Sci. Rep. 2024 Apr;14(1):9018.
5. Nalinratana N, Suriya U, Laprasert C, Wisidsri N, Poldorn P, Rungrotmongkol T, Limpanasitthikul W, Wu HC, Chang HS, Chansriniyom C*. In vitro and in silico studies of 7",8"-buddlenol D anti-inflammatory lignans from Carallia brachiata as p38 MAP kinase inhibitors. Sci. Rep. 2023 Mar;13:3558.

6. Nukulkit S, Jantimaporn A, Poldorn P, Khongkow M, Rungrotmongkol T, Chang HS, Suttisri R, Chansriniyom C*. Eight Indole Alkaloids from the Roots of Maerua siamensis and Their Nitric Oxide Inhibitory Effects. Molecules. 2022 Nov;27:7558.
7. Chansriniyom C, Nooin R, Nuengchamnong N, Wongwanakul R, Petpiroon N, Srinuanchai W, Chantarasuwan B, Pitchakarn P, Temviriyanukul P, Nuchuchua O. Tandem mass spectrometry of aqueous extract from Ficus dubia sap and its cell-based assessments for use as a skin antioxidant. Sci. Rep. 2021 Aug;11:16899.
8. Chansriniyom C, Bunwatcharaphansakun P, Eaknai W, Nalinratana N, Ratanawong A, Khongkow M, Luechapudiporn R. A synergistic combination of Phyllanthus emblica and Alpinia galanga against H2O2-induced oxidative stress and lipid peroxidation in human ECV304 cells. J Funct. Foods. 2018 Apr;43:44-54.

【學經歷 (Education & Professional Experience)】

服務期間 (Period)	單位 (Organization)	職稱 (Position)
2024-present	Department of Pharmacognosy and Pharmaceutical Botany	Head
2023-present	Department of Pharmacognosy and Pharmaceutical Botany	Assoc. Prof.
2018-2023	Department of Pharmacognosy and Pharmaceutical Botany	Assist. Prof.
2016-2018	Department of Pharmacognosy and Pharmaceutical Botany, Faculty of Pharmaceutical Science, Chulalongkorn University	Lecturer
2009-2016	Laboratory of Nano-cosmeceutical, National Nanotechnology Center, National Science and Technology Development Agency (NSTDA), Pathum Thani, Thailand	Researcher
2005-2009	Faculty of Pharmaceutical Sciences, Chulalongkorn University, Thailand	Doctor of Philosophy (Pharmacognosy)
2000-2004	Faculty of Pharmaceutical Sciences Chulalongkorn University, Thailand	Bachelor of Science in Pharmacy (First Class Honours)

Thai Medicinal Plants: From Phytochemical Profiling to Functional Evaluation

Chaisak Chansriniyom[1,2]

[1]Department of Pharmacognosy and Pharmaceutical Botany, Faculty of Pharmaceutical Sciences, Chulalongkorn University, Bangkok, 10330, Thailand
[2]Center of Excellence in Natural Products and Nanoparticles (NP2), Chulalongkorn University, Bangkok, 10330, Thailand

*E-mail: chaisak.ch@chula.ac.th

Abstract
Thai medicinal plants represent a rich source of bioactive compounds with considerable potential for the prevention and management of non-communicable diseases. This presentation highlights an integrated research strategy that combines advanced phytochemical profiling with mechanistic functional evaluation to identify bioactive constituents and elucidate their biological activities. Three representative case studies illustrate this integrated research approach. The first focuses on Piper species, in which HPTLC-bioautography was employed to identify pancreatic lipase inhibitors, including caffeic acid and myricetin, with potential applications in the management of obesity and diabetes. The second highlights Gymnema inodorum, in which comprehensive LC-ESI-MS/QTOF-MS profiling identified the triterpene saponin GIA1 as a bioactive constituent that delays postprandial hyperglycemia by inhibiting α -glucosidase and SGLT1-mediated intestinal glucose absorption. In addition, flavonoids from G. inodorum, including quercetin and kaempferol, exhibit vasculoprotective effects against oxidative stress in HUVEC models. The third case study investigates the prenylated acridone alkaloid N-methylatalaphylline isolated from Glycosmis parva, which demonstrates promising anti-adipogenic activity by modulating the AKT, MAPK, and AMPK-ACC signaling pathways to suppress lipid accumulation. Collectively, these studies demonstrate how integrating phytochemical profiling with functional evaluation provides a robust scientific framework for validating Thai medicinal plants and supporting their development as evidence-based health-promoting agents.

Keywords: Piper, Gymnema inodorum, Glycosmis parva

List of Posters

天然物化學組 Natural Products Chemistry (PC)

Poster No.	Name	Abstract Title
PC-001	VIPULKUMAR PRAHLADBHAI PATEL	Development of Curcumin Integrated Chitosan Sponge for Improved Wound Healing and Hemostatic Applications
PC-003	TZU-HUAN HUNG	Auto-PIS: An Automated LC–MS/MS Workflow for Annotation of Flavonoids and Hydrolyzable Tannins in Plant Metabolomics
PC-004	SHIOU-LING LI	Novel Seven-Membered Ring Triterpenoids and Structurally Diverse Bioactive Constituents from Camellia formosensis
PC-005	TIAN-SHUNG WU	Constituents from the stems and roots of Pericampylus formosanus
PC-006	GANESH NEVASE	BOTANICAL BLESSINGS: HOW CRYPTOLEPIS BUCHANANI ENHANCES COMMUNITY WELL-BEING WITH NOVEL APPROACH
PC-007	PRASAD BALASAHEB CHANDE	Development and Characterization of Crosslinked Poly(4-hydroxybutyrate)–Konjac Glucomannan Scaffolds for Tissue Regeneration
PC-008	CHIH WEI CHU	Evaluation of Bioactive Compound Release and Antioxidant Potential of a Cassia Seed–Barley Composite Substrate Fermented by Multiple Lactic Acid Bacteria
PC-009	PATRICK M. DELA CRUZ	BIOACTIVITY-GUIDED METABOLOMICS REVEALS POTENTIAL MULTI-TARGET BIOACTIVE COMPOUNDS FROM PHILIPPINE MEDICINAL PLANTS
PC-010	KUAN-HUNG LIN	A rapid method for the quality identification of Taiwanese folk herbal medicine Paederia foetida Linn. (Chinese fevervine)
PC-011	HAO-ZE LI	Anti-inflammatory principles and other chemical constituents from Cuscuta campestris
PC-012	SHIH-YUN HUANG	Isolation and Structural Characterization of Natural Products from Cattleya Orchids and Their Adipocyte Browning Activity

List of Posters

Poster No.	Name	Abstract Title
PC-013	NING-SHIAN HSU	A feasible quality analytical method of the traditional Chinese medicine Zanthoxylum bungeanum Maxim. (red Sichuan pepper)
PC-014	YU CHI HUNG	Structure and Biological Activity Analysis of Exopolysaccharides from Aeromonas hydrophila ATCC-7966
PC-015	CHIA-WEI KUO	Galactose-Rich Padina australis polysaccharide represents the significant antioxidant activity
PC-016	THONG CAO	Triterpenoids from Ludwigia octovalvis: complete NMR assignment, MS/MS fragmentation pathway and preventive effect against peptic ulcers
PC-017	WEI-JIA LIN	Chemical components and Their Anti-inflammatory Activities from the stem of Ficus formosana
PC-018	YUE LING LI	Multi-Pathway and Bioinformatics-Supported Regulation of Macrophage Inflammation and Anti-Tumor Potential by Ganoderma lucidum Polysaccharide (WSG)
PC-019	YA LING HOU	Integrated Evaluation of the Biocontrol Potential of Streptomyces spp. against Fusarium Wilt of Banana caused by Fusarium oxysporum f. sp. cubense
PC-020	HSIN-WEI WANG	A molecular networking-guided strategy for identifying anti-osteoporotic sterols from the soft coral Sclerophytum humesi
PC-021	THIYAGARAJAN RAVIRAJ	Phytochemical and Computational Characterization of Anti-Inflammatory and Anti-Allergy Metabolites from Bischofia javanica Blume
PC-022	TING-YU HSIEH	Discovering Biocatalysts to Enhance the Diversity of Conjugated Polyynes
PC-023	YAO RONG LEE	Computational Exploration of Marine Briarane Diterpenoids for Potential Anti-Inflammatory Activity via Keap1

List of Posters

Poster No.	Name	Abstract Title
PC-024	ZHI FENG LIAO	Chemical constituents from the Tinomiscium petiolare Hook. f. & Thomson
PC-025	PHUONG VU LUU	Xeniaphyllane-Type Diterpenoids from the Soft Coral Sclerophytum humesi: Resolving Absolute Configurations and Multi-Target Inhibitory Potential
PC-026	JIE-LIN DONG	Biosynthetic engineering of Massilin C-based polyynes to enhance manufacturability and bioactivity
PC-027	YU-SYUAN LEE	Chemical Constituents from the Stems of Broussonetia papyrifera (L.) Vent.
PC-028	YUN TING ZENG	Lobocrassoids A–C, new cembrane-related diterpenoids from the octocoral Lobophytum crassum (von Marenzeller, 1886)
PC-029	YUE-WEN CHUANG	Sarcoglaucone A: Structural Characterization of a New Sarsolenane-Related Diterpenoid from the Soft Coral Sarcophyton glaucum
PC-030	ANHAM ABBASI	Mapping Evidence on Dendrobium Floral Genomics, Transcriptomics, Specialized Metabolism, and Associated Microbiomes: A Scoping Review
PC-031	YI AN LIN	Structural features and biological activities of a fucose-enriched sulfated polysaccharide from Ganoderma lucidum
PC-032	MAO-XUAN HONG	Molecular Networking-Guided Discovery of Chlorinated Secondary Metabolites from the Marine-Derived Fungus Phoma sp. NTOU6154.
PC-034	YU-CHIA CHANG	Comparing Molecular Relationships and Chemical Profiles among Lobophytum Soft Coral Specimens
PC-035	BAO-HONG SHI	Effects of Different Extraction Techniques on the Properties, Wound Healing, and Calcium Ion-Induced Gelation of Pectin from Lemon Peels and Jelly Fig Shells
PC-036	JUN-WEI HUANG	Anticancer Effects of Lendenfeldia sp. Extract Involving Tubulin, HDAC, and Topoisomerase II Modulation

List of Posters

Poster No.	Name	Abstract Title
PC-037	CHUEN-HSU FU	Preparation and Yield Study of Extracts from Antrodia cinnamomea Fruiting Bodies Using Industrial Pharmacy Combined with ESG Principles
PC-038	CHIH-LI CHEN	Comprehensive Analysis of Phytochemicals and Nutrients of Solid-State Cultured Armillaria mellea (Codename: AM) in the ABF Germplasm Bank
PC-039	HSIEN-HUNG CHANG	Phytochemical Biomass Production Study of the Multi-target Triterpenoid Dehydrosulphurenic Acid from Antrodia salmonea in the ABF Germplasm Bank
PC-040	ALDRICK VERANO	Metabolomic Profiling and Antimycobacterial Activity of Wrightia antidysenterica Leaf Extracts
PC-041	YU-CHI LIN	New Benzylresorcinol and Benzylstilbene Derivatives from the Fruits of Orchid Galeola nudifolia Lour. with Anti-Neuroinflammatory Activity
PC-042	HUNG-TSE HUANG	Isolation and Structural Elucidation of Triterpenoids from the Fruiting Bodies of Antrodia salmonea
PC-043	YU-CHI LIN	Discovery of Enantiomeric Monoterpene-Coumarins with Neuroprotective Activities from the Rhizomes of Luvunga scandens
PC-044	TING WEI LIAO	Integrative Metabolomic Profiling and Functional Screening of Traditional Chinese Medicines for Cardiovascular Applications
PC-045	WEI-CHIUNG CHI	Isolation and Bioactivity Screening of Endophytic Fungi from the Medicinal Plant Breynia fruticosa
PC-046	LI-GUO ZHENG	Studies on Cembrane Diterpenoids from the Wild-Type Soft Coral Lobophytum crassum
PC-047	SHIH-WEI HUANG	Evaluation of the Antifungal and Termiticidal Potential of Streptomyces sp. D3 for Wood Protection

List of Posters

Poster No.	Name	Abstract Title
PC-048	YAN-TING LU	Isolation and Identification of Chemical Constituents from Calyces of Mesosphaerum suaveolens and Evaluation of Their Antioxidant and α-Glucosidase Inhibitory Activities
PC-049	SEOYEONG JANG	Antioxidative potentials and metabolomic analysis of Brassica oleracea
PC-050	YU-PU JUANG	Dereplication of natural products in Limulus polyphemus eggs using software-assisted approach
PC-051	RACHEL JOSEPHINE CAHYA	Chemical Diversity and Biological Activities of Indo-Pacific Acanthaster Species
PC-052	EUN YEONG JEONG	Identification and Validation of Antioxidative Constituents from Brassica oleracea Using Network Pharmacology Analysis and Nrf2/HO-1 Signaling Pathway
PC-053	JIUN-JIE WANG	Isolation and Bioactivity Screening of Endophytic Fungi from the Medicinal Plant Breynia fruticosa
PC-054	ANDREA GU	Bioactivity-Coupled Molecular Networking-Guided Discovery of Bioactive Metabolites from the Stem of Osmanthus heterophyllus
PC-055	YU-HSUAN CHEN	Development and Optimization of a Thin-Layer Chromatographic Method for the Quality Control of Elephantopus scaber (Dingshuwu) Based on Sesquiterpene Lactone Markers
PC-056	ZIH-FANG HUANG	Exploring JamD-mediated terminal halogenation of the bacterial conjugated polyynes
PC-057	TZU-YI KE	Chemical investigation and anti-inflammatory evaluation of unique azaphilones from the algicolous fungus Penicillium sclerotiorum
PC-058	MUHAMMAD ALI	Anti-angiogenic Indole alkaloids from the Marine-derived fungus Aspergillus fumigatus MF-0322
PC-059	WEI-CHENG YUAN	The structural characterization of a sulphated galactan polysaccharide purified from red microalga Sarcodia suiae
PC-060	MATTHANA CHANTAKOT	Investigation of the Effects of Saponified Sacha Inchi Oil on Melanogenesis

List of Posters

Poster No.	Name	Abstract Title
PC-061	XIN-YI CHEN	Photoprotective Activities and Skin Permeation of Major Bioactive Constituents from the Roots of Glycyrrhiza uralensis
PC-062	TING-WEI KUO	Investigation of the Antioxidant, Anti-inflammatory, and Cell Migration-Promoting Activities and Molecular Mechanisms of Lonicera japonica Extract and Its Isolated Compounds
PC-063	HUI-CHI HUANG	Investigation of secondary metabolites and anti-inflammatory constituents from Kaki Calyx
PC-064	YU-ROU PAN	A New Sterol and Anti-inflammatory Constituents from the Soft Coral Lobophytum durum
PC-065	HAO-YUNG WANG	Antibiotic-induced production and structural characterization of a RiPP from Streptomyces murinus
PC-066	CHENG-EN XIE	Chemical Investigation of the Marine-Derived Fungus Aspergillus ochraceopetaliformis
PC-067	QUOC DUNG TRAN HUYNH	Unveiling Brasiliamides Biosynthesis in Aspergillus thermomutatus
PC-068	YUN-TI CHAO	Molecular Networking-Guided Exploration of Secondary Metabolites from Aspergillus niger STS07 Fermented with Dioscorea pseudojaponica and Their Effects on Lymphatic Endothelial Cells
PC-069	BERTOKA FAJAR SP NEGARA	Isolation of Secondary Metabolites from Various Fungi with Anti-Angiogenic Activity
PC-070	KAI-WEI LIN	Annotation and identification of alkamides from fruits of the endemic Taiwan species Zanthoxylum pistaciiflorum Hayata with the aid of high-performance liquid chromatography–tandem mass spectrometry validated by isolation and database-driven approach
PC-071	RU-YING YANG	Enhancing Massilin C Biosynthesis through Strategic Reorganization of Biosynthetic Genes
PC-072	XUE-ROU WANG	Isolation and Bioactivity Screening of Endophytic Fungi from the Medicinal Plant Breynia fruticosa

List of Posters

Poster No.	Name	Abstract Title
PC-073	SHANG-YI TU	Interaction of the Marine Sponge-Derived Anticancer Compound 12α-Acetoxy-22-hydroxy-24-methyl-24-oxoscalar-16-en-25-al with the Androgen Receptor
PC-074	ANEETTA LIBIYA JOB	Prenylated Indole Alkaloids and Dimeric Xanthone–Chromanones from Marine-derived fungus Aspergillus aculeatinus
PC-075	JONATHAN VIEHOEVER	Functional Characterization of a Haloacid-Dehalogenase-Like Terpene Cyclase from Aspergillus niger
PC-076	YU-CHUN LIN	Discovery of new hybrids from Syzygium simile with anti-lipid droplet accumulation and anti-inflammatory activities
PC-077	WEN-YU SU	Bidirectional Chemical Signaling Between Orchid Seeds and Mycorrhizal Fungi During Germination
PC-078	YI-HSUAN YANG	Discovery and Characterization of New Aspochalasins from Zoanthid-derived Fungus Aspergillus frequens
PC-079	PECK JING FOO	Chemical constituents from Lindera megaphylla stem and their bioactivities
PC-080	STEFAN KOSTURKO	Beyond Conventional Chromatography: Exploring the Potential of UHPSFC for Analysis of Quaternary Isoquinoline Alkaloids
PC-081	TZU-CHEN CHIU	Bioactivity-guided isolation of metabolites from the endophytic fungus Phoma sp. ST 16
PC-082	ANNA BEATRIZ R. MAYOR	Elucidating the Biosynthesis of the Bioactive Furofurandione Avenaciolide from Neosartorya fischeri
PC-083	YI-HSUAN YUEH	Secondary metabolites and anti-inflammatory activity from the leaves of Eugenia uniflora
PC-084	KAREEM ISAAC DANIELS	Repurposing Sterol Methyl Groups: Biosynthesis of Ascosteroside A
PC-085	THI BE LY NGO	Molecular Networking Guided Chemical Investigation of Chengiodendron marginatum Roots Coupled with Anti-Inflammatory Screening

List of Posters

Poster No.	Name	Abstract Title
PC-086	WEI-RU HSIEH	Mass spectrometry-guided discovery of anti-inflammatory constituents from Syzygium tripinnatum
PC-087	JU-HSIN CHENG	Bioactive constituents from Lithocarpus hancei roots with anti- metastatic potential against colorectal cancer
PC-088	CHIN-FENG WAN	GC-MS Analysis of the Composition of the Essential Oil from Sweet orange (Citrus sinensis) and potential therapeutic effects in Alzhermer's disease (AD)
PC-089	CHEN-HSUAN HUANG	Isolation of anti-inflammatory secondary metabolites from Clausena lansium guided by bioactivity-based molecular networking
PC-090	PORSUK PHLALOP	Bioassay-Guided Chemical Investigation of Phanera sirindhorniae Leaves Assisted by Molecular Networking
PC-091	TSAI YUN PENG	Molecular Networking-Guided Investigation of Stilbenoids and Other Secondary Metabolites from the Bark of Shorea megistophylla
PC-092	CHENG-CHUNG TSENG	Elucidation of the Biosynthetic Pathway of Fungal Furo[2,3-b]furanone-Containing Drimane-Type Sesquiterpene–Amino Acid Hybrid Natural Products
PC-093	NATHANAEL CHRISTEVAN	Development and Optimization of a Computational Workflow for Bioactive Feature Prioritization and Identification in Natural Product Discovery
PC-094	SHU-RONG CHEN	Molecular Basis of Azetidine Ring Formation by the Fe(II)/α-KG-Dependent Dioxygenase OkaE in Okaramines Biosynthesis
PC-095	CHINTHAKA ADHIKARI	Total synthesis of the (2S,3R)-Δ7,8 Vitroprocine A isomer and its application in antibiotic assays and biosynthetic enzyme studies
PC-096	QUOC VU PHAM	New Scalarane-Type Sesterterpenoids from the Marine Sponge Lendenfeldia sp. and Their Inhibitory Effects on HepG2 Cell Viability

List of Posters

Poster No.	Name	Abstract Title
PC-097	BAI-WEI PENG	Polyketide-Derived Antimicrobial Metabolites from Epicoccum sorghinum: Effects of Fermentation Conditions and Non-Thermal Atmospheric Pressure Plasma (NTAPP)
PC-098	SZU-YIN YU	Isolation and Characterization of Bioactive Metabolites from Uvaria micrantha with Anti-Inflammatory and Osteogenic Activities
PC-099	PING-HSIEN WU	Study and Application of the Secondary Metabolites Resource of Crown-of-Thorns Starfish in South Penghu Marine National Park
PC-100	OREJOLA, J. J.	Characterization of Compounds from Blumea balsamifera (L.) DC. (Sambong) Leaves Involved in the Modulation of Calcium Oxalate Formation in Artificial Urine
PC-101	JOTA, ALDRIN JOSEPH P.	Isolation and Identification of an Antibacterial Compound in Sea Grapes (Caulerpa chemnitzia (Esper) J.V.Lamouroux)
PC-102	MINH HIEN NGUYEN	Integrating in vitro bioassays and in silico screening to identify natural Nrf2 activators
PC-103	YU CHIEH SUN	Exploring the Antifouling Potential of Natural Compounds Using the Striped Barnacle (Amphibalanus amphitrite)
PC-104	CHIA-HAO CHANG	Chemical constituents from a fungal strain Cercospora beticola Km3725 derived from Colpomenia sinuosa
PC-105	SU-JUNG HSU	Elgonene O and Other Secondary Metabolites from the Marine Alga-Associated Fungus Koorchaloma bambusae SC1014 and Their Neuroprotective Activities
PC-106	PATTIYA TAMMASORN	Development and Comparative Evaluation of Chrysin-Loaded Nanoparticles and Nanoemulsions for Enhanced Aqueous Solubility and Skin Delivery

List of Posters

天然物藥理組 Natural Products Pharmacology (PP)

Poster No.	Name	Abstract Title
PP-001	SHARAV A DESAI	Yohimbine Induces Selective Concentration-Dependent Cytotoxicity in A549 Non-Small Cell Lung Carcinoma Cells with HDAC1 as a Computationally Nominated Putative Target
PP-002	GOWTHAM MANIKATH	Phytochemical Characterization and Antihyperglycemic Potential of Premna latifolia and Premna herbacea: Isolation, Standardization and In Vivo Evaluation
PP-003	KUOPING SHEN	Therapeutic Potential of Pre-germinated Brown Rice and γ-Oryzanol in Accelerating Wound Repair in Diabetic Rats
PP-004	DNYANESHWARI	Preparation and Evaluation of Herbal Cough Syrup from Extract of Euphorbia neriifolia
PP-005	DANG KHOA NGUYEN	Isolation of Phytochemicals and Exploration of the Anti-Inflammatory Mechanism of Dolichandrone spathacea against Chronic Bronchitis via Network Pharmacology, Molecular Docking, and Experimental Validation
PP-006	YOHAN SEO	Investigating ANO1 Inhibition as a Therapeutic Strategy for NSCLC and Prostate Cancer
PP-007	WEICHUNG CHIOU	CX ameliorates metabolic dysfunction-associated steatotic liver disease by modulating AMPK activation, lipidome, and gut microbiota
PP-008	PALANIVELMURUGAN MOHANASUNDARAM	Wound Healing Activity of Topical Herbal Ointment Containing Azadirachta indica Flower Extract: In vitro and in vivo Studies
PP-009	HAI NGUYEN DANG	Network Pharmacology and Molecular Docking Reveal the Multi-Target Mechanism of Homalomena occulta against Rheumatoid Arthritis
PP-010	MEI-LANG KUNG	The potential of phytochemical naringenin in inducing DNA damage and inhibiting autophagy as a cancer chemoprevention strategy for melanoma

List of Posters

Poster No.	Name	Abstract Title
PP-011	SURAKRIT SUKSAKUL	Metabolomics and Functional Analyses Reveal the Mitoprotective Effects of Sea Holly (Acanthus ebracteatus Vahl.) in a Yeast Model of Mitochondrial Dysfunction
PP-012	PEI YU LAI	Inhibitory Effects of Coix Extract (CS3) on LPS-Induced Oxidative Stress and Its Promotion of Wound Healing in Keratinocytes
PP-013	HAO-HAN PANG	Natural Herbal Combination Compound-Loading Nanodrug for Brain Tumor Synergetic Therapy
PP-014	CONG-PHI NGUYEN	Optimization of Extraction Conditions and Evaluation of Bioactive Phytochemicals from Rhus chinensis Mill.
PP-015	KIM-NGAN LE	Integrating Network Pharmacology and Molecular Docking to Explore the Antihypertensive Mechanism of Citrus hystrix
PP-016	HOANG-HAN DO	Optimization of Controlled Release Microspheres Containing Vitexin and Isovitexin through Experimental Design and Evaluation of Their Hypoglycemic Effects
PP-017	YI-RUI CHEN	Designing a Reproducible Natural-Product Literature Search Engine: From Lexical Recall to Context Refinement
PP-018	JIE YU LIU	Anticancer property of native Taiwan fern plant aqueous extract AC118-RLS
PP-019	YAN-JU TSAI	Stellettin B: A Marine-Derived Inhibitor of TGF-β Signaling
PP-020	HSIN YEH	Ganoderma microsporum immunomodulatory protein enhances the antitumor activity of EGFR-TKIs in non-small cell lung cancer cells through FBXL14-dependent Slug destabilization
PP-021	NGUYEN CAO SANG PHAN	Antrodia cinnamomea sulfated polysaccharide attenuates the TGFβR/CD44-mediated AKT-dependent RUNX2 and ZEB1 axes, suppressing EGFR-mutant lung adenocarcinoma cells

List of Posters

Poster No.	Name	Abstract Title
PP-022	CHING-WEN CHANG	Mangiferin ameliorates insulin resistance and restores β-cell function in HFD/STZ-induced diabetic rats
PP-023	LI JOU HUANG	Transcriptomic analysis and functional characterization of natural marine sesterterpenoids in anti-CRPC activity — a crucial role of proapoptotic NOXA
PP-024	JIA SIN LIU	A Syzygium simile-derived natural product exerts dual regulation of adipogenesis and lipid metabolism in 3T3-L1 adipocytes
PP-025	HORNG-HUEY KO	1,3-Diphenylpropanoids isolated from the stems of Broussonetia monoica downregulate melanogenesis
PP-026	PING CHEN	Metabolic Regulation of PD-1 Expression by CD070 in T Cells.
PP-027	CHI-YEN HSIEH	CD004-Reprogrammed Tc17 Cells Enhance Anti-Tumor Activity and Synergize with Cisplatin
PP-028	CHUN-HAN CHANG	Marine-derived norzoanthamine and *Atalantia ceylanica*-derived LC03 improve stress resistance and extend lifespan in Caenorhabditis elegans
PP-029	CHUN-HAN CHANG	Marine fungal metabolites improve oxidative stress resistance in Caenorhabditis elegans
PP-030	CHUN-HAN CHANG	Marine natural compounds ameliorate Parkinson's disease-related phenotypes in a Caenorhabditis elegans
PP-031	CHUN HUI YEH	Grapefruit-Statin Interactions: A Focused Narrative Review of Human Studies for Community Pharmacy Counseling
PP-032	YI-CHEN YEH	HMTA from Ardisia virens: A Potential Therapeutic Agent Against NSCLC
PP-033	BIN-NAN WU	An innovative HDAC6 inhibitor G-02025 on neuropathic pain by targeting the HDAC6/SIRT3 neuroinflammatory pathway

List of Posters

Poster No.	Name	Abstract Title
PP-034	CHIEN-JU LIN	The in vitro anticancer effects of altersolanol A on glioma cells
PP-035	SZU-HSIANG TSAI	Sarcophytol A from Aquacultured Sarcophyton sp.: Multi-Target Anticancer Potential and RBL2-Associated Cell-Cycle Regulation in Hematological Malignancy Cells
PP-036	YI-HSIEN HSIEH	Nimbolide induces oxidative stress-mediated autophagic cell death by targeting FAM83E expression in human glioblastoma cells
PP-037	CHUEH-TAN CHEN	Context-Dependent Regulation of Retinal Pigment Epithelial Migration and Remodeling by Fucoidan
PP-038	WEI-LAN YEH	Imperatorin attenuates oxidative stress and lung fibrogenesis
PP-039	CHIN-MU HSU	Development of Inhibitory Strategies Targeting Drug-Resistant Genes and Cancer Stem Cells in Carfilzomib-Resistant Multiple Myeloma
PP-040	YAN NING CHEN	Oxidative stress and MAPK signaling mediate LYK01's antiproliferative, G2/M-arresting, DNA-damaging, and proapoptotic effects on oral cancer cells
PP-041	YA-TING CHUANG	Cryptocaryone causes ROS- and MAPK-dependent growth inhibition and apoptosis in triple-negative breast cancer cells and suppresses tumor growth in a mouse xenograft
PP-042	MIN-YU LEE	The ginger-derived molecule HMPM provokes apoptosis and DNA strand damage in triple-negative breast cancer cells
PP-043	MARIAM NASIR	Bioassay-Guided Fractionation and Chemical Profiling of TCU-E519-1 with Osteoprotective Potential
PP-044	SHIU WEN HUANG	Natural Product Compound MC Suppresses Tumor Lung Metastasis through depressing Angiogenesis and Lymphangiogenesis
PP-045	WEN PING JIANG	Antler Gelatin-Derived Carbon Nanodots Attenuate Nitric Oxide Accumulation in LPS-Stimulated Macrophages

List of Posters

Poster No.	Name	Abstract Title
PP-046	ER-CHIAO CHANG	Anti-Inflammatory Effects of Fungal Diketopiperazine Homomorphins in TNF-α/IFN-γ–Stimulated Human Keratinocytes
PP-047	YU-PING HUANG	Xanthohumol Alleviates Atopic Dermatitis by Modulating Anti-Inflammatory Pathways in HaCaT Cells and MC903-Induced Mouse Models
PP-048	SHIH-CHENG LIN	Evaluation of the Anti-cancer Activity of Chaetoglobosin A from Chaetomium globosum Km1226: An In Vitro Study
PP-049	CHING-YI LU	Anti-diabetic, anti-depressive and gut microbiota modulation effects of galactomannan from Trigonella foenum-graecum
PP-050	KAI-WEI LIN	A major alkamide derivative from the fruits of the endemic Taiwanese species Zanthoxylum pistaciiflorum attenuates lipopolysaccharide-induced inflammatory responses in RAW 264.7 macrophages
PP-051	KARTIKO ARIF PURNOMO	From Bench to Bedside: Translational Development of Natural Product-Derived Vesicles
PP-052	YAN-CHENG SHEN	Anti-ocular inflammatory Effects of Compound DC and Its Protective Potential against Experimental Retinal Injuries
PP-053	CHANG-YAN JIANG	Investigating the Mechanisms Underlying the Anti-microglial and Neuroprotective Effects of Arthrinone in Retinal Injury and Visual Pathway Dysfunction
PP-054	EN-CHI CHANG	Evaluation of the Anti-inflammatory Effects of Spilanthes acmella on MSU-Induced Inflammation in Silico and in Vitro
PP-055	LILO SYAREL ARMATISIA DARMAWAN	Pharmacological Evaluation of CFLE10 Anti-Steatotic Activity in Reducing Lipid Droplet Accumulation through ATGL-mediated Lipid Mobilization in PNPLA3-I148M Liver Cell Model

List of Posters

Poster No.	Name	Abstract Title
PP-056	MU YA CHANG	Identification of an Edible Plant Extract That Induces ROS-Dependent Oxeiptosis Through the KEAP1/PGAM5/AIFM1 Axis in Multiple Myeloma Cells
PP-057	YU-LI LIN	Theaflavin-3,3'-digallate Exerts Broad-Spectrum Antiviral Activity against Enteroviruses by Directly Inactivating Virions and Disrupting Capsid–Receptor Interactions
PP-058	PEY YI CHU	Biological Activities of Low-Polarity Extracts of Sarcodia suae
PP-059	DWIGHT DENZEL M. DOLLANO	Network Pharmacology and Molecular Docking Analysis of Indigenous Legume Phytochemicals against Pro-inflammatory Targets in Chronic Kidney Disease
PP-060	HUSSANA HAMID	Applications of thin-layer chromatography-direct bioautography assay in isolation and identification of herbal antimicrobial compounds
PP-061	YONG-SYUAN CHEN	Thonningianin A inhibits the metastasis of renal cell carcinoma and sunitinib-resistant cells via the HMGCS1-mediated ER stress and autophagy axis.
PP-062	CHIN HUI CHUANG	Immunoregulatory mechanisms of botanical root extract GA and its therapeutic potential in sepsis and atopic dermatitis
PP-063	CHU-LIANG LIN	Oxyresveratrol Attenuates Sleep Deprivation-Induced Depression-Like Behaviors by Modulating ROS-Mediated NLRP3 Inflammasome Activation and BDNF Signaling
PP-064	SAO MAI	Optimization of extraction parameters of targeted flavonoids from Lactuca indica L. and evaluation of its in vitro anti-inflammatory activity
PP-065	YI-HSIEN HSIEH	Timosaponin AIII suppresses nasopharyngeal carcinoma metastasis by disrupting LMP1-driven Midkine signaling
PP-066	ANNA	Evaluation of the analgesic and acute anti- inflammatory activity of Lactuca indica L. extract in experimental animals

List of Posters

自由基組 Free Radical (FR)

Poster No.	Name	Abstract Title
FR-001	PO HSIANG LIAO	Rosavin Preconditioning Enhances the Neuroprotective Potential of Mesenchymal Stem Cell-Derived Exosomes in a 6-OHDA-Induced Parkinson's Disease Model
FR-002	SAEE RASKAR	Exploring the Antioxidant Potential of Opuntia ficus-indica Peel: A Natural Approach to Free Radical Medicine
FR-003	CHENG-PEI CHUNG	Evaluation of anti-dysmenorrheal activity and isolation of potentially active triterpenoids from the native fern Lycopodium serratum var. longipetiolatum Spring.
FR-004	SHENG-CHIEH TSAI	Bletilla formosana exerts mitochondrial dysfunction and mitophagy-associated apoptosis in colorectal cancer
FR-005	YEN JU LEE	Sinularin Induces HDAC6-Selective Tubulin Acetylation, ROS Generation, and Mitotic Arrest in Prostate Cancer Cells: A Transcriptomic Analysis
FR-006	WAN TING HUANG	Neutrophil-Targeted Nanocarriers Co-Delivering Synthetic Isoflavones and Anti-Inflammatory Peptides for the Treatment of Psoriasis
FR-007	TZU PENG CHENG	Momordin Ic Inhibits FPR1-Mediated Neutrophil Activation: Pharmacological and Structure–Activity Insights
FR-008	SHU-YEN FANG	Paphiopedilol B Suppresses Neutrophil Activation and Ameliorates Experimental Acute Respiratory Distress Syndrome
FR-009	KAYALVIZHI SAMUVEL MUTHIAH	Engineering pancreatic cancer cell–derived exosomes to deliver iron-based therapeutics and induce ferroptosis in pancreatic tumors
FR-010	YI-HSUAN WU	MiR-210-5p promotes arteriosclerosis risk through influencing the CTRP3 and ABCA1 pathways

List of Posters

Poster No.	Name	Abstract Title
FR-011	HUNG-I LEE	Extracellular Vesicle Subpopulations with Enhanced Spheroid Penetration in Pancreatic Ductal Adenocarcinoma
FR-012	CRISSHELLA HANA	Development of neutrophil-targeted Clofoctol-loaded PLGA nanoparticles for immunomodulation in sepsis
FR-013	HUI-CHING TSENG	Exogenous mitochondrial supplementation as a therapeutic strategy against H_2O_2-induced oxidative injury in MDCK cells
FR-014	SIN-YI LEE	Pharmacological proteasome activators relieve mutant huntingtin-induced cytotoxicity by attenuating oxidative stress.
FR-015	ANTHONY C. TOCAYON	Screening of Free Radical Scavenging Activity of Seed Extracts of Cajanus cajan (J.) Huth, Lablab purpureus (L.) Sweet, and Phaseolus lunatus L. using DPPH Assay
FR-016	YU HAN HUANG	Research on Cosmetic Active Ingredients Derived from Litchi chinensis Agricultural Waste
FR-017	CHIA-YING YU	Physicochemical properties of naringenin nanoparticles formulation and their biological activity in cosmetics

List of Posters

傳統中醫藥暨替代醫學組 TCM and Complementary Medicine (TC)

Poster No.	Name	Abstract Title
TC-001	YUH CHIANG SHEN	NRICM301 Confers Superior Neuroprotection and Motor Recovery in an MPTP-Induced Parkinson's Disease Mouse Model: Behavioral and Cross-Platform Multi-Omics Evidence
TC-002	YUEN-SING LEE	Network Pharmacology-Guided Elucidation of the Anti-Inflammatory Mechanisms of Perilla frutescens: Luteolin Attenuates TNF-α and IL-6 Expression via the Akt Pathway
TC-003	CHANG-CHANG CHEN	Nitrogen-Dependent Regulation of Growth, Secondary Metabolism, and Rosmarinic Acid Biosynthesis in Prunella vulgaris L.
TC-004	YU-CHI TSAI	Bioassay-Guided Fractionation of Allii Macrostemonis Bulbus (Xiebai) Extracts and Their Promotive Effects on Keratinocyte Migration
TC-005	KUMAM PINKY CHANU	Quercetin and Myricetin as Dual-Active Constituents of Antidiabetic Roselle Extract: DPP-4 Inhibition and Enteroendocrine Hormone Secretion
TC-006	WEI-JYUN HUA	Integrating real-world prescription, network pharmacology, and human transcriptomics to characterize Ji-Sheng-Shen-Qi-Wan for benign prostatic hyperplasia
TC-007	CHING-YI YANG	Topical Chinese Herbal Medicine for Atopic Dermatitis: Recent Clinical Evidence on Efficacy and Safety
TC-008	YI-JEN WANG	Eco-Innovative Herbal Foot Bath for Enhanced Therapeutic Efficacy and Carbon Reduction
TC-009	CHING-HU CHUNG	Utilization of Traditional Chinese Medicine Across Disease Categories in Taiwan: A Descriptive Analysis of National Health Insurance Data
TC-010	LIH-GEENG CHEN	Development of a Thin-Layer Chromatography Method to Identify a Concentrated Chinese Medicine of Qing-Fei-Tang

List of Posters

Poster No.	Name	Abstract Title
TC-011	ZIH-RONG JHENG	Safety Reporting and Assessment of Chinese Herbal Formulas for Liver Cirrhosis: A Review of Randomized Controlled Trials
TC-012	NGOC-PHUOC NGO	Authentication of Commercial Polygoni Multiflori Caulis (Ye-Jiao-Teng) in Taiwanese Market Using a PCR-RFLP Assay Reveals Widespread Adulteration by Pleuropterus angulatus
TC-013	ZHI-HU LIN	Wound-healing effects of Jinchuang ointment in Hansen's disease: suppression of macrophage inflammation and promotion of skin cell migration
TC-014	THE ANH NGUYEN	Herbal Acupoint Injection as a Complementary Therapy: Neuroprotective Effects of Ginkgo Compound Extract in Experimental Autoimmune Encephalomyelitis
TC-015	PHAN NGUYEN DUC DUONG	Herbal Medicine for Sjögren's Disease: A Scoping Review of Preclinical Evidence
TC-016	HSIN-JU YU	Quantitative Dendritic Morphology as a Screening Platform for Natural Products and Traditional Chinese Medicine
TC-017	YU-JUNG LIN	Baihe Extract Attenuates PM2.5-Induced Airway Inflammation and Mucus Hypersecretion in BEAS-2B Cells
TC-018	YI-CHENG PAN	Sarcodia suae Polysaccharides Modulate Macrophage Polarization toward an M1-like Phenotype
TC-019	YU CHENG LAI	Anti-cancer effect of Guizhi-Fuling Wan on urothelial carcinoma via macrophages
TC-020	YI-MING CHEN	The Usefulness of Botanical Supplement Ganwei for Metabolic Dysfunction-Associated Steatotic Liver Disease: A Randomized, Placebo-Controlled Trial
TC-021	WEN-YU HSIEH	Divergent Peripheral Metabolic and Cerebral Amyloid Imaging Responses to a GLP-1 Receptor Agonist in a Preclinical Study

List of Posters

Poster No.	Name	Abstract Title
TC-022	YU-LI CHEN	Anti-inflammatory Effects and Mechanisms of CWTZ Ethanolic Extract and Its Active Constituent in Human Neutrophils
TC-023	KAI LI CHUANG	Tung-Yi Fang Inhibits HER2-Low Breast Cancer Cell Growth and Modulates the Macrophage Proteome
TC-024	CHENG TSAI-YING HU	Genetic-Level Comparison and Identification of Two Distinct Agarwood Varieties
TC-025	SHIN RU LEE	Exploiting Pulsatilla chinensis–Driven Histone H3 Cleavage for NF1-Associated Cancer Therapy
TC-026	CHIN-FENG WAN	Mass Spectrometry-Based Profiling and Anti-Non-Small Cell Lung Cancer Potential of Plant Essential Oil-Derived Sesquiterpenes
TC-027	JESSICA MARCHELINE	Characteristics of Herb-Induced Liver Injury Reported Through the Taiwan Adverse Drug Reaction Reporting System for Herbal Medicine from 2001 to 2025
TC-028	CHIA-CHING LIAW	Morphological Identification and Chemical Analysis for Quality Assessment of Abri Mollis Herba
TC-029	CHIA-CHING LIAW	HPLC Fingerprinting and Aloin Quantification of Commercial Aloe in Taiwan
TC-030	CHIA-CHING LIAW	Comparative Analysis of Commercial Gleditsiae Fructus and Gleditsiae Fructus Abnormalis by Morphological Identification, TLC/HPLC Analysis
TC-031	CHIA-CHING LIAW	Investigation of the Commercial Hoveniae Semen by Microscopic Morphology, TLC and HPLC Analysis
TC-032	KAREEMAH AUMA	Isolation of Root Constituents and Comparative Profiling in Stems of Kleinhovia hospita L. to Assess Substitution Potential

List of Posters

Poster No.	Name	Abstract Title
TC-033	EN-CHI CHANG	Effects of Drying Conditions on the Physicochemical Characteristics and Bioactive Compounds of Ginger
TC-034	LING-HSUAN HO	Evaluating the Protective Effects of a Traditional Chinese Medicine Against Combined Polystyrene Microplastic and DEHP Exposure in a Drosophila Model
TC-035	WEN XUAN PAN	Anti-Dengue Bioactive Constituents from the Traditional Chinese Medicinal Plant Cremastra appendiculata

植萃煉金室

國內、外純天然植物精油批發、代工萃取

獨創大型負壓蒸氣蒸餾系統









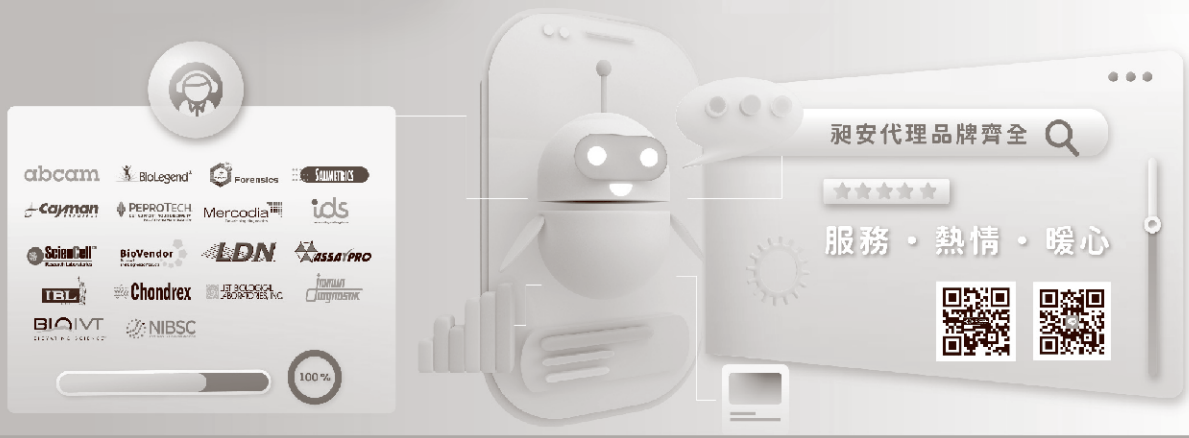




粉絲專頁

茗樟生物科技有限公司
MING CHANG BIO-TECH CO., LTD.
統編. 79994093
特定工廠字號. S0800189

南投縣名間鄉中正村員集路151-12號之1
TEL. 049-2730937 FAX. 049-2737059
Email. marchese.com.tw@gmail.com
https://www.marchese.com.tw



progress happens together

abcam

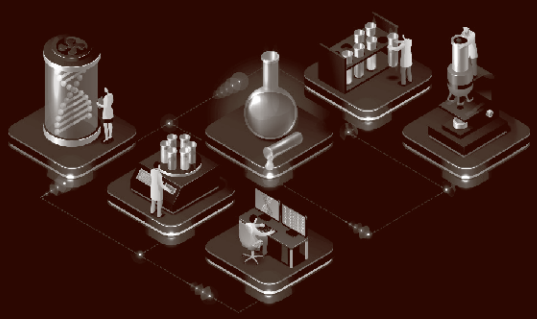
一級/二級抗體 | ELISA kit | 生物活性蛋白 | 細胞功能分析 | 抗體標定試劑 | 基因剔除細胞株 | 客製化產品

BioLegend®

BioLegend's class-leading products and service now power Revvity's Cell Analysis portfolio.

免疫螢光抗體　多因子分析試　單細胞蛋白組

細胞治療 Cell-Vive™ GMP 試劑



revvity



Cayman CHEMICAL

ELISA . Chemicals . Toxins

Cayman Chemical 致力於生化藥品合成與純化、抗氧化試劑及各種酵素活性分析套組之研發與生產，
目前有 ISO / IEC 17025:2005 和 ISO Guice 34:2009 雙重認證，為氧化壓力檢測產品的領導先驅。

順天堂



漢方便利藥

不含制酸劑



消脹氣

止嗝酸

健脾胃

降胃酸逆流

平息消化不良消脹氣

脾胃濕氣重容易造成脹氣胃酸多。傳承名醫張步桃經驗，
經典方劑獨特炮製，除濕健脾胃，消脹助消化效果快。

順天堂藥廠股份有限公司“順天堂”張步桃腸胃散(平胃散) 衛部成製字第016391號 中市衛中藥廣字第1150300004號

明通 漢胃散 顆粒

榮獲國家品質標章

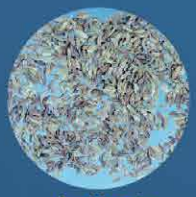
純生藥提煉

《不含西藥成份》



溫胃順氣 鎮痙止痛 調和氣血

外銷日本不一樣的漢方胃腸藥


小茴香


延胡索


芍藥


甘草


牡蠣


砂仁


桂皮


高良薑

〖適應症〗

胃悶、胃部不快感、食慾不振、腹部膨脹感、胃酸過多、噁心。

衛署成製字第004665號
中市衛中藥廣字第1080310032號

明通化學製藥股份有限公司 研發製造 | 總經銷：治痛單股份有限公司 | 消費者服務電話：0800-426-009

杏輝醫藥集團
SINPHAR GROUP

趁年輕 存老本
蓉憶記 別忘記



國家衛福部認證
有效延緩衰老

AIE2®

沙漠珍寶 管花肉蓯蓉
杏輝獨家專利成分 20年研發結晶

來自GAP&歐盟
有機種植基地



多篇科學研究
刊登國際學術期刊



榮獲
世界多國功效認證

要活力 先活芯

杏輝活芯 一起常保年輕的心

國家認證 抗疲勞健康食品



一盒有感

杏輝最新型QH配方

ECNS®-QH 加B1

維持心臟正常功能





百年歷史・信譽卓著

- 西元1873年創立莊松榮藥行。
- 西元1974年建立燕巢廠。
- 西元1987年成為台灣地區第一家通過GMP的中藥廠。
- 西元1999年成立里港分廠，設備及配置完全比照cGMP規範設計。
- 西元2002年里港分廠通過成為GMP藥廠。
- 西元2008年成為經濟部國貿局認證的"台灣百年企業"之一。
- 西元2009年燕巢廠及里港分廠獲USFDA查核通過Dietary Supplement GMP。
- 西元2012年里港實驗室通過TAF核可為ISO17025標準實驗室。
- 西元2013年成為台灣第一家中藥廠通過德國政府PIC/S GMP查核。
- 西元2014年入圍經濟部第3屆中堅企業。
- 西元2017年「N.K.有益甘」榮獲健康食品小綠人標章。
- 西元2021年取得臺灣清冠一號(CovRelief)國內臨時授權。
- 西元2021年莊松榮臺灣清冠一號取得新加坡藥證。
- 西元2022年莊松榮臺灣清冠一號取得泰國藥證。
- 西元2023年響應節能減碳政策，設置太陽能光電裝置。
- 西元2023年領先通過第一階段及第二階段確效。
- 西元2023年獲得衛福部頒發玉階獎。
- 西元2026年里港新建廠房 。





一百多年來「莊松榮」代表的就是高效中藥

GMP優良藥廠 網址:www.csz.com.tw

莊松榮製藥廠股份有限公司

總公司：高雄市燕巢區深水里臥牛巷29-1號
里港分廠：屏東縣里港鄉三鄧村三和路119-95號

CHUANG SONG ZONG PHARMACEUTICAL CO.,LTD. 高雄市服務處：07-725-5600　台中市服務處：04-2263-7781　台北市服務處：02-2546-0199

JBM 喬本生醫
品質製作

X

高雄醫學大學
技術移轉

傳統草本植物
現代醫學 / 新進生物科技
的合作

從自然中找力量，以科技護健康！

嚴選天然草本
珍貴植物精華
傳承千年智慧

先進生物科技
超臨界萃取技術
高質量低汙染

品質嚴格把關
TAF實驗室品管
確保產品安全

守護您的健康
天然X科技X創新
打造全方位照護





JBM 喬本生醫股份有限公司
地址：屏東縣長治鄉德和村神農東路9號
電話：(08)7620778 傳真：(08)7628017