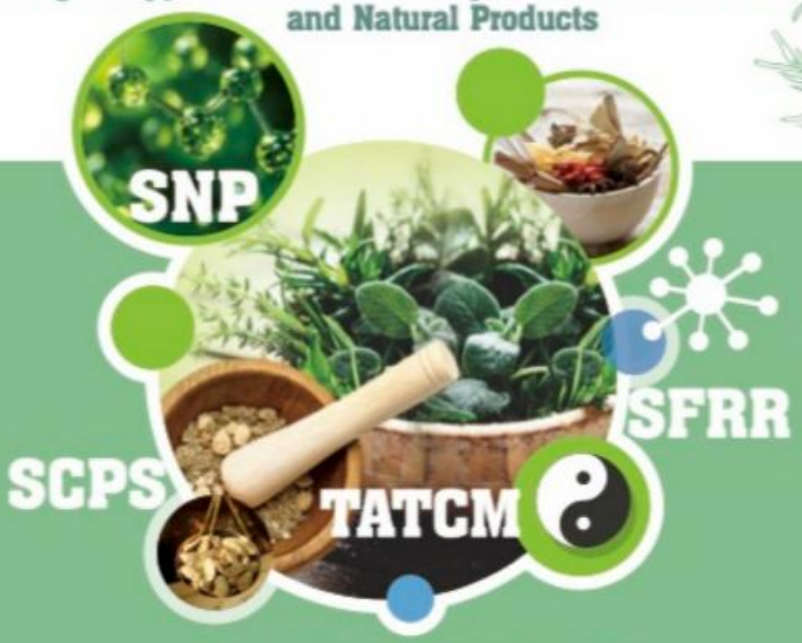
2025 繼往開來

ADVANCING TRADITION and INNOVATION

中醫藥與天然藥物的挑戰×機遇與未來

Challenges, Opportunities, and Prospects in Chinese Medicine and Natural Products



2025.10.24-26

大會手冊

CONFERENCE BOOK

Organizers

College of Chinese Medicine, China Medical University
Chinese Medicine Research Center, China Medical University
Center for Drug Research and Development, Chang Gung University of Science and Technology
The Natural Medicine Society of Taiwan
Society for Free Radical Research-Taiwan
Taiwan Association for Traditional and Complementary Medicine
The Society of Chinese Pharmaceutical Sciences of Taiwan
National Science and Technology Council

Co-organizers

Ministry of Health and Welfare
National Research Institute of Chinese Medicine
National Health Research Institutes

Co-badging

Society for Medicinal Plant and Natural Product Research (GA)
International Society for Ethnopharmacology (ISE)

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From tradition to innovation: Plant Chemical Diversity Group in Ukraine

Olha Mykhailenko,*[,1,2,3] Michal Korinek,[4] Victoria Hurina,[1] Tetyana Serhiienko,[1] Valeria Yavorska,[1] Anastasia Volkova,[1] Victoriya Georgiyants[1]

[1] Pharmacognosy and Phytotherapy Group, UCL School of Pharmacy, London, United Kingdom
[2] National University of Pharmacy, Kharkiv, Ukraine
[3] Department of Pharmaceutical Biology, Kiel University, Kiel, Germany;
[4] Graduate Institute of Natural Products, College of Pharmacy, Kaohsiung Medical University, Kaohsiung, Taiwan
[5] Chinese Medicine Research Center, College of Chinese Medicine, China Medical University, Taichung, Taiwan
* E-mail: o.mykhailenko@nuph.edu.ua

Abstract

Plant biodiversity is the basis of pharmaceuticals and traditional medicine. Systems such as Chinese and Ukrainian rely heavily on natural compounds and their pharmacological potential. The flora of Ukraine includes almost 6,000 species of vascular plants and only about 200 are officially used in medicine. Climate change, declining yields and deteriorating quality of raw materials pose increasing challenges to ensuring the supply and effectiveness of herbal remedies. Environmental factors affect plant growth, secondary metabolite profile, and alter the therapeutic potential. The scientific team "Plant Chemical Diversity Group" (National University of Pharmacy, Ukraine) conducts interdisciplinary research at the interface of pharmaceuticals, chemistry, pharmacology, and agroecology. The team investigates how environmental factors influence the chemical composition of plants and identifies optimal regions for cultivating medicinal crops. For instance, *Lavandula angustifolia*, *Thymus vulgaris*, and *Rosa damascena* thrive in the temperate continental climate of the Carpathian Mountains. Other traditionally Crimean species, such as *Ruta graveolens*, *Hyssopus officinalis*, *Marrubium vulgare* have migrated in the last decade to the steppe and forest-steppe zones. *Phacelia tanacetifolia* shows yield variations under drought, while *Crocus sativus* is successfully cultivated both in southern Kherson and north-western Volyn. Additionally, invasive species such as *Parthenocissus quinquefolia* and *Lespedeza bicolor* are being investigated to assess their bioactive potential and ecological risks for the country. Understanding metabolite dynamics and biodiversity adaptation is essential for phytotherapy today. These are factors that ensure sustainable use of resources, preservation of local nature, and at the same time ensuring the production of herbal medicines.

Keywords: Ukrainian plants; Cultivation; Climate change; Sustainability