Good Practice in Traditional Chinese Medicine Research Association

中医药规范研究学会

January-February 2024 Newsletter

Editor-in-chief
Clara Bik-San Lau
(claralau@cuhk.edu.hk)

Deputy Editor
Simon Ming Yuen Lee
(simon-my.lee@polyu.edu.hk)

Section Editor
-Chinese Materia Medica
Ping Guo
(s193231@hkbu.edu.hk)

Executive Editor
Jess Kit Ieng Kuok
(kuokkitieng@gmail.com)

CONTENTS

New members of GP-TCM RA (January-February 2024)

Ordinary Members

Luda Feng	Beijing University of Chinese Medicine, China
Nga-Yi Tsang	Hong Kong Baptist University, Hong Kong SAR, China
Huihai Yang	Hong Kong Polytechnic University, Hong Kong SAR, China

Current Corporate Members

Dalian Fusheng Natural Medicine Development Co. Ltd., China	大连富生天然药物开发有限公司 DALIAN FUSHENG NATURAL MEDICINE DEVELOPEMENT CO., LTD
Hutchison Whampoa Guangzhou Baiyunshan Chinese Medicine Co. Ltd., China	广州白云山和记黄埔中药有限公司
Infinitus (China) Company Ltd., China	INFINITUS 无限极
PuraPharm International (H.K.) Ltd., Hong Kong SAR, China	PuraPharm
Shanghai Hutchison Pharmaceuticals, China	Shanghai Hutchison Pharmaceuticals 上海和黄药业

Current Institutional Members

Chengdu University of Traditional Chinese Medicine, China	
China Medical University, Taichung, Taiwan (Department of Chinese Pharmaceutical Sciences and Chinese Medicine Resources)	
Heilongjiang University of Chinese Medicine, China	
Hong Kong Baptist University, Hong Kong SAR, China (School of Chinese Medicine)	香港浸會大學 HONG KONG BAPTIST UNIVERSITY
Institute of Chinese Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China	
Shaanxi University of Technology	
Zhejiang Chinese Medical University, China (School of Pharmaceutical Sciences)	
Zhengzhou University of Industrial Technology, China	

The International Standard of Artermisia argyi leaf (ISO 20759: 2023) was recently published by the International Organization for Standardization (ISO)

Mugwort leaf is the dried leaf of the Artemisia argyi Lévl.et Vent. (Asteraceae), which is an important traditional Chinese medicine and a raw material for moxibustion products such as moxa stick and moxa used in world-renowned moxibustion therapies. Mugwort leaf and moxibustion therapy are widely used in China, Japan, South Korea, Southeast Asia, and Europe and America. However, its plant sources are complex in the world, and Japan and South Korea also use the same family and genus of plants, including leaves of Artemisia princeps Pampanini or Artemisia montana Pampanini. There are often counterfeit and inferior products in the market, which seriously affects the efficacy and quality safety of medicinal mugwort leaf and moxibustion therapy, and also has a great impact on the international trade of high-quality Artemisia argyi leaf and its products in China.

Professor Dingrong WAN and his team from the School of Pharmacy of South-Central Minzu University have begun to study the international standard of Artemisia argyi leaf since 2013. In May 2015, his new project was approved by the International Organization for Standardization (ISO). After several years of systematic research, the international standard (ISO 20759:2017, Traditional Chinese medicine — Artemisia argyi leaf) was published by ISO in December 2017, becoming one of the international standards first established for the detection of traditional Chinese medicine. In recent years, this standard has played an important role in promoting the quality control and international trade of mugwort leaf and its products in China, and promoting the development of the mugwort industry. After revision, the second edition of this international standard was published by ISO in December 2023.

Dr. Dingrong WAN, professor of School of Pharmacy, South-Central Minzu University, China. He is also the vice president and secretary of Hubei Committee of Daodi Chinese Medicine Standardization, and the vice president of Scientific Brach of China Medical Association of Minorities. He has published more than 190 papers. He also obtained three Second Prizes of Science and Technology of Hubei Province, and two First Prizes of Science and Technology of China Medical Association of Minorities.

News and photo adapted from link below:
https://mp.weixin.qq.com/s/JdffsJcLhOxGEwSEIFLh9g

The International Standard of Artermisia argly leaf (ISO 20759: 2023) was recently published by the International Organization for Standardization (ISO)

艾叶国际标准第二版（ISO 20759:2023）最近由国际标准化组织（ISO）出版发布。

艾叶（菊科艾 Artermisia argyi Lévl.et Vant. 的干燥叶）是一种重要中药，更是全球著名艾灸疗法中所用艾条、艾绒等灸疗制品的原材料。艾叶及艾灸疗法在中日韩和东南亚地区应用极为普遍，欧美等地也有广泛应用。然而，全球艾叶植物来源复杂，日、韩又使用同科属植物魁蒿叶与山地蒿叶，市场上时有伪劣品出现，严重影响了药用艾叶和艾灸疗法的疗效与质量安全，也对我国优质艾叶及其产品的国际贸易形成很大冲击。

中南民族大学药学院万定荣教授与其团队于 2013 年起着手艾叶国际标准研究，2015 年 5 月获国际标准化组织（ISO）立项。经过几年的系统研究，该项国际标准《中药—艾叶》（ISO 20759:2017; Traditional Chinese medicine — Artermisia argyi leaf）于 2017 年 12 月由 ISO 出版发布，成为由中国在国际上率先制定的中药材检测方面的国际标准之一。几年来，该标准在推动我国艾叶及其产品的质量控制与国内外贸易，助推艾产业发展方面，发挥了重要作用。

ISO 20759:2023
Traditional Chinese medicine
Artemisia argyi leaf

Abstract

This document specifies the minimum requirements and test methods of *Artemisia argyi* leaf for medicinal use. It is suitable for identification and quality control of this herbal medicine.

General information

Status : Published
Publication date : 2023-12
Stage : International Standard published [60.60]

Edition : 2
Number of pages : 15

Technical Committee :
ISO/TC 249
ICS : 11.120.10

News and photo adapted from link below:
https://mp.weixin.qq.com/s/JdffsJcLhOxGEwSEIFLh9g
https://www.iso.org/standard/87216.html?browse=tc

ii Scientific Breakthrough: Professor Li Min's team develops novel drug delivery system for Gouteng compound for Alzheimer's disease treatment

香港浸會大學 HONG KONG BAPTIST UNIVERSITY School of 中醫藥學院 Chinese Medicine NEWS

Home / News and Events / News

Scientific Breakthrough: Professor Li Min' s team develops novel drug delivery system for Gouteng compound for Alzheimer's disease treatment

12 December 2023

A research team led by Professor Li Min, Associate Dean (Teaching and Learning) of Chinese Medicine, and Dr. Ashok lyaswamy, Research Assistant Professor of the Teaching and Research Division, has developed a novel drug delivery system for Alzheimer's disease (AD). The research findings have been published in the international academic journal Nature-Signal Transduction and Targeted Therapy.

Professor Li Min, Associate Dean (Teaching and Learning) of Chinese Medicine (left), and Dr Ashok lyaswamy, Research Assistant Professor of the Teaching and Research Division at the School of Chinese Medicine at HKBU (right), have developed a novel drug delivery system for Gouteng compound for Alzheimer's disease treatment.

News and photo adapted from link below:
https://scm.hkbu.edu.hk/en/news-and-events/news/2023/1212-Scientific-Breakthrough-Professor-Li-Min.html

iii Scientific Breakthrough: Professor Jia Wei's team reveals new mechanism for multiple myeloma drug resistance through nitrogen cycling gut microbiota and host metabolism interaction

香港浸會大學 HONG KONG BAPTIST UNIVERSITY School of 中醫藥學院 Chinese Medicine

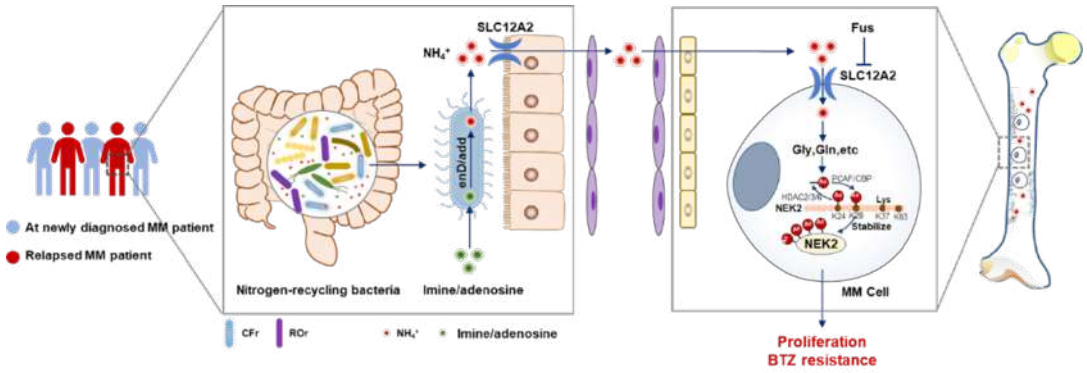
NEWS

Home / News and Events / News

Scientific Breakthrough: Professor Jia Wei's team reveals new mechanism for multiple myeloma drug resistance through nitrogen cycling gut microbiota and host metabolism interaction

9 January 2024

Multiple Myeloma is a type of blood cancer caused by the malignant transformation of plasma cells within the body. According to figures from the Hospital Authority's Hong Kong Cancer Registry, there were 367 new patients in 2021, with over 70% of the new cases being elderly individuals aged 65 or above, and nearly 55% being male. In recent years, the global incidence of Multiple Myeloma has been on the rise, and with the aging population in Mainland China, the incidence rate continues to climb.



This study is the first to discover a new mechanism by which nitrogen-cycling gut microbiota and host metabolism interaction induces drug resistance in Multiple Myeloma through ammonia.

The research was selected by the China Hematology Development Conference as one of the "Top Ten Advancements in Chinese Hematology Research for the Year 2023."

News and photo adapted from link below:
https://scm.hkbu.edu.hk/en/news-and-events/news/2024/0109-Scientific-Breakthrough.html

Back to content page

iv Hong Kong's first botanical drug developed by CDD granted US orphan drug designation for treating myofibrillar myopathy

香港浸會大學 HONG KONG BAPTIST UNIVERSITY School of 中醫藥學院 Chinese Medicine NEWS

Home / News and Events / News

Hong Kong's first botanical drug developed by CDD granted US orphan drug designation for treating myofibrillar myopathy

11 January 2024

A research team led by Professor Bian Zhaoxiang, Associate Vice-President (Chinese Medicine Development) and Director of the Centre for Chinese Herbal Medicine Drug Development (CDD) at HKBU, has developed a new drug named "CDD-2107" for the treatment of the rare disease, myofibrillar myopathy. This drug, derived from the Chinese herbal medicine, Chaenomelis Fructus, has been granted orphan drug (a drug used for treating rare disease) designation by the US Food and Drug Administration (FDA), making it the first botanical drug in Hong Kong to receive this qualification.

Professor Bian Zhaoxiang (2nd right), Dr. Lin Chengyuan (2nd left), Dr. Hou Mengyang (1st right), and Mr. Duan Zhigang (1st left)

News and photo adapted from link below:
https://scm.hkbu.edu.hk/en/news-and-events/news/2024/0111-Prof-Bian.html

V New book by School of Chinese Medicine, Hong Kong Baptist University

香港浸會大學 HONG KONG BAPTIST UNIVERSITY School of 中醫藥學院 Chinese Medicine NEWS

Home / News and Events / News

New book by staff

16 February 2024

International Standard Practice Record

Development and Interpretation of 6 International Standards of Chinese Medicine Coding and Formulae Coding System

Editors-in-Chief: Professor Liao Liping, Professor of Jiangxi University of Chinese Medicine; Professor Lyu Aiping, Vice-President (Research and Development) cum Dean of Graduate School and Acting Dean of Chinese Medicine, Hong Kong Baptist University; Professor Zeng Qingming, Chief Physician and Former Head of Shenzhen Luohu Hospital of Traditional Chinese Medicine

ISBN:9787502651633

Developing international standards for Chinese medicines is a complex and meticulous task but of profound impact, paving the way for broader global understanding, acceptance, and application. The International Standard Practice Record illustrates the entire development process of the six international standards of Chinese medicines, and the application of the "ISO/IEC guidelines" throughout the process. By weaving together theoretical understanding and practical applications, the book is of significant value for academics and professionals who are dedicated to the teaching and learning, scientific research and development of national and international standards. The book also aims to promote the culture of traditional Chinese medicine in order to enhance the well-being of people all over the world.

News and photo adapted from link below:
https://scm.hkbu.edu.hk/en/news-and-events/news/2024/0216-new-book-by-staff.html

vi Nat Commun – Multi-omicsresearch by Chengdu University of Traditional Chinese Medicine accelerate anti-coronavirus drug discovery

Nat Commun | 成都中医药大学等单位多组学研究加速广谱抗冠状病毒药物发现

椰子 iNature 2024-02-21 00:01 浙江

iNature

2024 年 2 月 20 日，成都中医药大学陈士林院士团队，北京化工大学童贻刚教授团队及合作者在 Nature Communications 杂志上发表了题为“Cepharanthine analogs mining and genomes of Stephania accelerate anti-coronavirus drug discovery”的研究性论文，成都中医药大学冷梁副教授为该文章第一作者。通过对千金藤属三种植物的基因组高质量组装、千金藤属植物中苄基异喹啉生物碱的生物合成途径推测、千金藤素等苄基异喹啉生物碱的广谱抗冠状病毒活性解析，系统研究了千金藤素天然生物合成途径中系列代谢产物的广谱抗冠状病毒活性，为加速广谱抗冠状病毒药物开发提供了坚实基础。

自 21 世纪以来，由 SARS-CoV-1（在 2002 年 11 月至 2003 年 7 月期间 SARS-CoV 感染病例全球总计 8098 例，病死率约为 9.6%）、MERS-CoV（2015 年至 2022 年 5 月，全球 MERS-CoV 感染病例总计 2591 例，相关死亡病例总计 894 例，病死率高达 34.5%）和 SARS-CoV-2 导致的三次冠状病毒疫情给人类社会造成了难以估量的影响。随着交通工具更加高效便捷、人类与野生动物接触更加频繁，未来还可能会出现新的导致人类严重疾病的冠状病毒疫情，开发广谱抗冠状病毒药物意义重大。自 2020 年 3 月北京化工大学童贻刚团队首次发现千金藤素具有抗新冠病毒活性以来，千金藤素等苄基异喹啉生物碱的抗冠状病毒机制解析、千金藤属植物的全基因组高质量组装、苄基异喹啉生物碱在千金藤属植物中的生物合成途径解析一直受到广泛关注。

图一 . 云南地不容（左）和地不容（右）的块茎照片

News and photo adapted from link below:
https://mp.weixin.qq.com/s/JAK-Ox48EN7XgnverKFMKQ

i

The global distribution of plants used by humans

Journal: *Science*
Detail:
DOI:10.1126/science.adg8028
Pironon et al., Science 383, 293–297 (2024) 19 January 2024
https://www.science.org/doi/10.1126/science.adg8028

RESEARCH

BIOGEOGRAPHY

The global distribution of plants used by humans

S. Pironon[1,2]†‡*, I. Ondo[1,2]‡, M. Diazgranados[1,3], R. Allkin[1], A. C. Baquero[2], R. Cámara-Leret[4], C. Canteiro[1], Z. Dennehy-Carr[1,5], R. Govaerts[1], S. Hargreaves[1], A. J. Hudson[6,7], R. Lemmens[8], W. Milliken[6], M. Nesbitt[1,9,10], K. Patmore[1], G. Schmelzer[8], R. M. Turner[1], T. R. van Andel[8,11], T. Ulian[6,12], A. Antonelli[1,13,14]§, K. J. Willis[1,14]§

Plants sustain human life. Understanding geographic patterns of the diversity of species used by people is thus essential for the sustainable management of plant resources. Here, we investigate the global distribution of 35,687 utilized plant species spanning 10 use categories (e.g., food, medicine, material). Our findings indicate general concordance between utilized and total plant diversity, supporting the potential for simultaneously conserving species diversity and its contributions to people. Although Indigenous lands across Mesoamerica, the Horn of Africa, and Southern Asia harbor a disproportionate diversity of utilized plants, the incidence of protected areas is negatively correlated with utilized species richness. Finding mechanisms to preserve areas containing concentrations of utilized plants and traditional knowledge must become a priority for the implementation of the Kunming-Montreal Global Biodiversity Framework.

Biodiversity provides essential goods and services that sustain human life and well-being (e.g., food, medicines, materials, fuel) (*1*, *2*). The balance between humanity's needs and the protection of the natural environment is nevertheless fragile, as increased consumption of resources, global trade, land- and sea-use change, and socio-economic inequalities are having a marked influence on biodiversity (*3*, *4*). To minimize biodiversity loss, conservation biologists have focused on identifying and prioritizing regions of high species richness, endemism, and threat (*5*). The "biodiversity hotspot" concept (*6*) assumes that species diversity is spatially congruent with the contributions that it provides to people and therefore, protecting areas with the largest concentrations of threatened species will also protect humanity indirectly (*5*). Moreover, as biodiversity is most concentrated where human cultural diversity is highest, it is assumed that high biocultural diversity is associated with high concentrations of species used by humans (*7*). Yet, these assumptions lack empirical support, leading to growing calls for better integration of human–nature interactions into conservation planning and implementation (*3*, *8*–*10*), as highlighted by the recently adopted Kunming-Montreal Global Biodiversity Framework (GBF) and the 2022 assessment report on the sustainable use of wild species of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (*2*).

Plants are essential structuring components of ecosystems and human livelihoods (*9*, *11*). Although the geography of terrestrial plant diversity has been extensively investigated globally (*6*, *12*, *13*), our understanding of the distribution of ecosystem services and societal benefits provided by plants is incipient, despite the importance of this information for decision-makers and local stakeholders in supporting the sustainable development agenda (*14*, *15*). Recent modeling efforts have been dedicated to the global distribution of nature's contributions to people, including water quality, crop pollination, and carbon stocks (*16*, *17*). However, the extent to which these contributions relate to species diversity remains largely unknown, hampering progress toward a more sustainable management of biodiversity. Assessing the global diversity and distribution of plant species used by people is thus critical to better understand, manage, and preserve both the intrinsic and instrumental values of biodiversity (*18*).

The global distribution of utilized plant species richness and endemism

Most plant species can potentially be useful to people, but only a fraction of plant diversity is currently known to be used. Here we consider utilized plants as vascular terrestrial species for which material and nonmaterial benefits to humans have been reported and made publicly accessible (*19*, *20*). By extracting information from 12 databases containing plant uses (table S1) (*21*), we identified 35,687 util… species and assembled >11 million geor… enced occurrence records to map their global distribution (i.e., native and introduced ranges) (figs. S1 and S2) (*19*). We built species distribution models for each utilized species and stacked the resulting maps to assess the global distribution of their potential richness (figs. S3 to S6) (*19*). We find the highest concentrations of utilized plant species in the tropics (Fig. 1), but several temperate areas also contain high native (e.g., China, the Himalayas; fig. S7) and introduced richness (e.g., Western Europe, Eastern USA; Fig. 1). Despite large discrepancies in the sampling of species geographic records (fig. S1) (*22*), these results match our estimates using coarser but more complete independent distribution data from the World Checklist of Vascular Plants (WCVP) (*23*) (fig. S8), which provides additional support for our predictions.

Distribution patterns in species richness do not systematically match those of other biodiversity indices considered important for conservation such as rarity or threat (*5*, *6*). Therefore, we also estimated the distribution of utilized plant species richness weighted by each species' range size (i.e., weighted endemism) to identify areas with high concentrations of rare and potentially irreplaceable species. We find that many areas with high richness of utilized plant species also exhibit high endemism (e.g., Mesoamerica, Gulf of Guinea, Southern Africa, the Himalayas, Southeast Asia; Fig. 1 and fig. S8). Other areas also to emerge as exceptional centers of endemic utilized plant species include California, Macaronesia, Madagascar, the Eastern Mediterranean, the Western Ghats, Sri Lanka, Eastern Australia, and the Pacific islands. Conversely, concentrations of endemic utilized species are relatively low across temperate areas. This confirms that the high species richness observed in some temperate regions is due to a high concentration of well-surveyed, widely distributed, and often-introduced plant species of economic importance (*22*, *24*). Overall, the distribution of utilized plant endemicity mirrors patterns observed across all vascular plants, with higher endemism in areas with insularity and high topographic and environmental heterogeneity (*25*, *26*).

The latitudinal distribution of utilized plant species and their different uses

To refine our understanding of the geographic patterns underpinning the diversity of utilized plant species, we disaggregated plant-use reports into 10 use categories, adapted from the Economic Botany Data Collection Standards: human food (including beverages and additives), vertebrate food (forage and fodder), invertebrate food (e.g., plants feeding honey bees or silkworms), materials (e.g., wood, fiber), fuels (e.g.,

[1]Royal Botanic Gardens, Kew, Richmond, Surrey, UK. [2]UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), Cambridge, UK. [3]International Plant Science Center, New York Botanical Garden, New York, NY, USA. [4]Department of Systematic and Evolutionary Botany, University of Zurich, Switzerland. [5]Herbarium, School of Biological Sciences, University of Reading, Whiteknights, UK. [6]Royal Botanic Gardens, Kew, Wakehurst, Ardingly, UK. [7]Botanic Gardens Conservation International, Richmond, UK. [8]Wageningen University and Research, Wageningen, Netherlands. [9]Department of Geography, Royal Holloway, University of London, Egham, UK. [10]Institute of Archaeology, University College London, London, UK. [11]Naturalis Biodiversity Center, Leiden, Netherlands. [12]Department of Life Sciences and Systems Biology, University of Turin, Turin, Italy. [13]Gothenburg Global Biodiversity Centre, Department of Biological and Environmental Sciences, University of Gothenburg, Gothenburg, Sweden. [14]Department of Biology, University of Oxford, Oxford, UK.
***Corresponding author. Email: s.pironon@kew.org**
†Present address: School of Biological and Behavioural Sciences, Queen Mary University of London, London, UK.
‡These authors contributed equally to this work.
§These authors contributed equally to this work.

ii

The contemporary nexus of medicines security and bioprospecting: a future perspective for prioritizing the patient

Journal: *Natural Products and Bioprospecting*
Detail:
DOI: https://doi.org/10.1007/s13659-024-00431-5
Cordell Natural Products and Bioprospecting (2024) 14:11
https://link.springer.com/article/10.1007/s13659-024-00431-5

Cordell *Natural Products and Bioprospecting* (2024) 14:11
https://doi.org/10.1007/s13659-024-00431-5

Natural Products and Bioprospecting

REVIEW Open Access

The contemporary nexus of medicines security and bioprospecting: a future perspective for prioritizing the patient

Geoffrey A. Cordell[1,2*]

Abstract

Reacting to the challenges presented by the evolving nexus of environmental change, defossilization, and diversified natural product bioprospecting is vitally important for advancing global healthcare and placing patient benefit as the most important consideration. This overview emphasizes the importance of natural and synthetic medicines security and proposes areas for global research action to enhance the quality, safety, and effectiveness of sustainable natural medicines. Following a discussion of some contemporary factors influencing natural products, a rethinking of the paradigms in natural products research is presented in the interwoven contexts of the Fourth and Fifth Industrial Revolutions and based on the optimization of the valuable assets of Earth. Following COP28, bioprospecting is necessary to seek new classes of bioactive metabolites and enzymes for chemoenzymatic synthesis. Focus is placed on those performance and practice modifications which, in a sustainable manner, establish the patient, and the maintenance of their prophylactic and treatment needs, as the priority. Forty initiatives for natural products in healthcare are offered for the patient and the practitioner promoting global action to address issues of sustainability, environmental change, defossilization, quality control, product consistency, and neglected diseases to assure that quality natural medicinal agents will be accessible for future generations.

Keywords Medicines security, Traditional medicine, Optimizing resources, Sustainability, Defossilization, Action initiatives

*Correspondence:
Geoffrey A. Cordell
pharmacog@gmail.com
Full list of author information is available at the end of the article

iii

No Incidence of Liver Cancer Was Observed in A Retrospective Study of Patients with Aristolochic Acid Nephropathy

Journal: *Chinese Journal of Integrative Medicine*
Detail:
DOI: http://dx.doi.org/10.1007/s11655-023-3560-0
Chin J Integr Med 2024 Feb;30(2):99-106
https://link.springer.com/article/10.1007/s11655-023-3560-0

Chinese Journal of Integrative Medicine
Available online at link.springer.com/journal/11655
Journal homepage: www.cjim.cn/zxyjhen/zxyjhen/ch/index.aspx
E-mail: cjim_en@cjim.cn

Original Article

No Incidence of Liver Cancer Was Observed in A Retrospective Study of Patients with Aristolochic Acid Nephropathy*

SU Tao[1], FANG Zhi-e[2,3,4], GUO Yu-ming[5], WANG Chun-yu[3,4,6], WANG Jia-bo[3,4], JI Dong[2], BAI Zhao-fang[3,4,7], YANG Li[1], and XIAO Xiao-he[3,4,7]

ABSTRACT **Objective:** To assess the risk of aristolochic acid (AA)-associated cancer in patients with AA nephropathy (AAN). **Methods:** A retrospective study was conducted on patients diagnosed with AAN at Peking University First Hospital from January 1997 to December 2014. Long-term surveillance and follow-up data were analyzed to investigate the influence of different factors on the prevalence of cancer. The primary endpoint was the incidence of liver cancer, and the secondary endpoint was the incidence of urinary cancer during 1 year after taking AA-containing medication to 2014. **Results:** A total of 337 patients diagnosed with AAN were included in this study. From the initiation of taking AA to the termination of follow-up, 39 patients were diagnosed with cancer. No cases of liver cancer were observed throughout the entire follow-up period, with urinary cancer being the predominant type (34/39, 87.17%). Logistic regression analysis showed that age, follow-up period, and diabetes were potential risk factors, however, the dosage of the drug was not significantly associated with urinary cancer. **Conclusions:** No cases of liver cancer were observed at the end of follow-up. However, a high prevalence of urinary cancer was observed in AAN patients. Establishing a direct causality between AA and HCC is challenging.

KEYWORDS aristolochic acid, hepatocellular carcinoma, urinary cancer, drug safety, retrospective study

Aristolochic acid (AA), a series of compounds mainly derived from plants of *Aristolochia* and *Asarum*, have been identified as the cause of end-stage renal disease (ESRD); the first report for use of *Aristolochia Fangchi* for weight loss in Belgian women.[1] Several studies have shown that AA can induce not only ESRD but also urinary cancer, including upper tract urothelial carcinoma (UTUC) and bladder cancer.[2,3] Moreover, AA has been listed as a class Ⅰ carcinogen by the International Agency for Research on Cancer.[4] The sale and use of AA-containing products have been banned or restricted in most countries. Aristolactam, the main metabolite of AA, can covalently form adducts with DNA (AA-DNA adducts), which can lead to the mutation of oncogene or tumor suppressor genes and contribute to the occurrence of urinary cancer.[5] In addition, studies have found that AA-DNA adducts are irreversible and difficult to metabolize and degrade, leading to their long-term accumulation and persistence in patients, which may result in malignancy.[6,7] Previous studies have also demonstrated that AA can contribute to the occurrence of urinary cancer in patients with AA nephropathy (AAN).[8,9] Furthermore, AA has been shown to induce precancerous gastric cancer in rodent models.[10,11]

In 2017, researchers first proposed that AA and its derivatives are important risk factors for liver cancer throughout the Asian countries.[12] Subsequent epidemiological studies have also indicated that traceable amounts of AA might be associated with the risk of hepatocellular carcinoma (HCC) among HBV/HCV patients.[13,14] In 2019, an article published in *Hepatology*

*Supported by National Key Technology R&D Program (No. 2018ZX09101002-001-002), Innovation Team and Talents Cultivation Program of National Administration of Traditional Chinese Medicine (No. ZYYCXTD-C-202005), the Science and Technology Project Affiliated to the Education Department of Chongqing Municipality (No. KJQN202215119)
1. Renal Division, Department of Medicine, Peking University First Hospital, Beijing (100034), China; 2. Department of Pharmacy, Chongqing Hospital of Traditional Chinese Medicine, Chongqing (400021), China; 3. Department of Hepatology, Fifth Medical Center of Chinese PLA General Hospital, Beijing (100039), China; 4. China Military Institute of Chinese Materia, Fifth Medical Center of Chinese PLA General Hospital, Beijing (100039), China; 5. Phase Ⅰ Clinical Trials Unit, Department of Medicine for Infectious Diseases, Fifth Medical Center of Chinese PLA General Hospital, Beijing (100039), China; 6. Department of Pharmacy, Affiliated Hospital of Shandong University of Traditional Chinese Medicine, Jinan (250000), China; 7. National Key Laboratory of Kidney Diseases, Beijing (100039), China
Correspondence to: Prof. XIAO Xiao-he, E-mail: pharmacy_302@126.com
DOI: https://doi.org/10.1007/s11655-023-3560-0

Commentary by Dr. Qihe Xu, King's College London (Member of the Board of Directors, GP-TCM RA)

I think the authors did a great job in testing an important hypothesis: If aristolochic acids (AAs) cause or increase the risk of hepatocellular carcinoma (HCC), those patients with an established history of AA ingestion bad enough to cause AA nephropathy should show an increased risk of developing HCC. They retrospectively followed 222 patients diagnosed with AA nephropathy for up to >20 years (All patients started consuming AA-containing herbal products before they were banned on August 5, 2004). Their results do not support the hypothesis: No liver cancer was observed, while 15.3% (34 cases) of patients were diagnosed with urinary tract cancer and 0.45% (5 cases) were diagnosed with other cancers during the follow-up.

Indeed, this cohort study supports AA exposure increases the risk of upper urinary tract cancer, but not HCCs. Given the lack of specificity of the A: T > T: A nucleotide substitution as a marker of AA exposure, such mutations observed in HCC patients cannot be regarded as evidence of AA exposure. This cohort study indicates that the hunt for the true causes of the "AA-associated" indel and doublet base signatures and other signatures of HCCs identified by the Chinese Liver Cancer Atlas (Chen L, et al. Nature. 2024 Feb 14. doi: 10.1038/s41586-024-07054-3) should continue.

Of note, AAs and their analogues do have the potential to damage various tissues, including the liver. In zebrafish embryos, AAs induce inflammation-mediated heart failure. In dogs, AA I can induce premalignant alterations in liver. In rats, AAs exhibit significant toxicity to both the liver and kidneys and induce mutation of the H-Ras proto-oncogene in the stomach... Nonetheless, it is clear that AAs induce nephrotoxicity and cancers of the urinary tract, and that exposure to AAs from all sources should be avoided, whether or not they are major culprits of HCCs: https://journals.lww.com/wtcm/fulltext/2019/05030/taming_the_fire_of_nephrotoxic_botanicals.3.aspx

iv

Cepharanthine analogs mining and genomes of Stephania accelerate anti-coronavirus drug discovery

Journal: *Nature Communications*
Detail:
DOI: https://doi.org/10.1038/s41467-024-45690-5
Nature Communications | (2024) 15:1537
https://www.nature.com/articles/s41467-024-45690-5

nature communications

Article https://doi.org/10.1038/s41467-024-45690-5

Cepharanthine analogs mining and genomes of *Stephania* accelerate anti-coronavirus drug discovery

Received: 9 April 2023

Accepted: 1 February 2024

Published online: 20 February 2024

Check for updates

Liang Leng[1,10], Zhichao Xu[2,10], Bixia Hong[3,10], Binbin Zhao[4,10], Ya Tian[2], Can Wang[1], Lulu Yang[1], Zhongmei Zou[5], Lingyu Li[5], Ke Liu[3], Wanjun Peng[4], Jiangning Liu[4], Zhoujie An[2], Yalin Wang[2], Baozhong Duan[6], Zhigang Hu[7], Chuan Zheng[8], Sanyin Zhang[1], Xiaodong Li[9], Maochen Li[3], Zhaoyu Liu[1], Zenghao Bi[1], Tianxing He[1], Baimei Liu[1], Huahao Fan[3] ✉, Chi Song[1] ✉, Yigang Tong[3] ✉ & Shilin Chen[1] ✉

Cepharanthine is a secondary metabolite isolated from *Stephania*. It has been reported that it has anti-conronaviruses activities including severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). Here, we assemble three *Stephania* genomes (*S. japonica*, *S. yunnanensis*, and *S. cepharantha*), propose the cepharanthine biosynthetic pathway, and assess the antiviral potential of compounds involved in the pathway. Among the three genomes, *S. japonica* has a near telomere-to-telomere assembly with one remaining gap, and *S. cepharantha* and *S. yunnanensis* have chromosome-level assemblies. Following by biosynthetic gene mining and metabolomics analysis, we identify seven cepharanthine analogs that have broad-spectrum anti-coronavirus activities, including SARS-CoV-2, Guangxi pangolin-CoV (GX_P2V), swine acute diarrhoea syndrome coronavirus (SADS-CoV), and porcine epidemic diarrhea virus (PEDV). We also show that two other genera, *Nelumbo* and *Thalictrum*, can produce cepharanthine analogs, and thus have the potential for antiviral compound discovery. Results generated from this study could accelerate broad-spectrum anti-coronavirus drug discovery.

The 21st century's first two decades have seen three remarkable coronavirus outbreaks: the severe acute respiratory syndrome coronavirus (SARS-CoV), the Middle East respiratory syndrome coronavirus (MERS-CoV), and the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Anti-coronavirus drugs, especially broad-spectrum anti-coronavirus drugs, are urgently needed; however, drug discovery for this purpose is complicated by constantly emerging SARS-CoV-2 variants and other potential human health-threatening coronaviruses[1–3]. The conventional route to drug discovery, which involves significant time and capital investment, struggles to meet the

[1]Institute of Herbgenomics, Chengdu University of Traditional Chinese Medicine, Chengdu 611137, China. [2]College of Life Science, Northeast Forestry University, Harbin 150040, China. [3]College of Life Science and Technology, Beijing University of Chemical Technology, Beijing 100029, China. [4]NHC Key Laboratory of Human Disease Comparative Medicine, Institute of Laboratory Animal Science, Chinese Academy of Medical Sciences and Comparative Medicine Center, Peking Union Medical College, Beijing 100730, China. [5]Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing 100193, China. [6]College of Pharmaceutical Science, Dali University, Dali 671000, China. [7]College of Pharmacy, Hubei University of Chinese Medicine, Wuhan 430065, China. [8]Hospital of Chengdu University of Traditional Chinese Medicine, Chengdu 610072, China. [9]Wuhan Botanical Garden, Chinese Academy of Sciences, Wuhan 430074, China. [10]These authors contributed equally: Liang Leng, Zhichao Xu, Bixia Hong, Binbin Zhao. ✉e-mail: fanhuahao.1987@163.com; songchi@cdutcm.edu.cn; tongyigang@mail.buct.edu.cn; slchen@cdutcm.edu.cn

V

A selection of recently published papers in Frontiers in Pharmacology

frontiers **Journal: *Frontiers in Pharmacology***

Targeting ferroptosis unveils a new era for traditional Chinese medicine: a scientific metrology study

Detail: https://www.frontiersin.org/journals/pharmacology/articles/10.3389/fphar.2024.1366852/full

The efficacy and safety of Chinese herbal medicine for mild cognitive impairment: a systematic review and meta-analysis of randomized placebo-controlled trials

Detail: https://www.frontiersin.org/journals/pharmacology/articles/10.3389/fphar.2024.1341074/full

Tonghua Liyan granules in the treatment of Laryngopharyngeal reflux disease with stagnation of phlegm and qi syndrome: a randomized, double-blind, placebo-controlled study

Detail: https://www.frontiersin.org/journals/pharmacology/articles/10.3389/fphar.2024.1275740/full

2024
Apr.14

2nd Conference (2024) Wildlife Protection in Traditional Chinese Medicine

Date: 14/04/2024

Location:
New York College of Traditional Chinese Medicine, New York, USA
(online session simultaneously)

Organizers:
Wildlife Protection in Traditional Chinese Medicine

Registration and details:
https://www.wildlifeprotectionintcm.com

2024
May
16-18

'Belt and Road' International Symposium on Traditional Chinese Medicine and Natural Medicine

Date: 16-18/05/2024

Location: Nanjing, China

Organizers:
-State Key Laboratory of Natural Medicines, China Pharmaceutical University
-Consortium of 'Belt and Road' and Portuguese Speaking Countries for Natural Medicine Innovation (Macau)

Registration and details: *to be provided soon*.

2024
May

Seminar on China, Portugal and Macau Whole Health Cooperation and Opportunities

Date: 05/2024

Location: Hengqin, China and Macau SAR

Organizers:
- Chinese Pharmacological Society (CNPHARS)
- Macau Pharmacology Association (MPA)
- Consortium of 'Belt and Road' and Portuguese Speaking Countries for Natural Medicine Innovation (Macau)

Registration and details: *to be provided soon*.

2024
May
23-25

Bridging the Two Worlds: Engaging Traditional Chinese Medicine in Modern Health Care

Date: 23-25/05/2024

Location:
The Hong Kong Polytechnic University, Hong Kong SAR, China

Organizers:
The Society for Acupuncture Research
Research Centre for Chinese Medicine Innovation (RCMI), Hong Kong Polytechnic University

THE SOCIETY FOR ACUPUNCTURE RESEARCH

SAR/ RCMI PolyU International Research Conference: May 23-25, 2024, the Hong Kong Polytechnic University, Hong Kong SAR, China

Call for Abstracts

Bridging the Two Worlds: Engaging Traditional Chinese Medicine

in Modern Health Care

2024 May 30-31

Tetranational Congress Phytotherapy 2024 'Herbal products for human and animal healthcare'

Date: 30-31/ 05/2024

Location:
Academy Building, Utrecht University, Utrecht, The Netherlands

Organizers:
- -Nederlandse vereniging Fytotherapie (NVF)
- -Schweizerische Medizinische Gesellschaft für Phytotherapie- SSPM (SMGP-SSPM)
- -Österreichische Gesellschaft Für Phytotherapie (OGPHYT)
- -Gesellschaft für Phytotherapie (GPT)

SMGP SSPM Schweizerische Medizinische Gesellschaft für Phytotherapie Société Suisse de Phytothérapie médicale

ÖGPHYT

Nederlandse vereniging Fytotherapie

GPT

Registration and details:
https://phytotherapy2024.com

i

Journal: *Frontiers in Pharmacology*

Topic	**Traditional Medicines and Natural Products for Gut-X Axis: Pharmacology, Toxicology and Microbiology in the Context of Drug Discovery and Herbal Medicine Use - Volume II**
Deadline	Manuscript Submission Deadline 14 March 2024
Details	https://www.frontiersin.org/research-topics/59578/traditional-medicines-and-natural-products-for-gut-x-axis-pharmacology-toxicology-and-microbiology-in-the-context-of-drug-discovery-and-herbal-medicine-use---volume-ii
Editor(s)	**Yi Wu** Nanjing Agricultural University, Nanjing, China **Na Sun** University of Houston, Houston, United States **Xiaoxiao Yang** Hefei University of Technology, Hefei, China

ii

Journal: *Frontiers in Pharmacology*

Topic	**Restoring Barrier Function and Immunity: What Roles Can Traditional Medicines Play?**
Deadline	Manuscript Submission Deadline 01 May 2024
Details	https://www.frontiersin.org/research-topics/57580/restoring-barrier-function-and-immunity-what-roles-can-traditional-medicines-play
Editor(s)	**Gang Chen** Shenyang Pharmaceutical University, Shenyang, China **Xuezheng Li** Yanbian University Hospital, Yanji, China **Jing Wu** Greater Baltimore Medical Center, Baltimore, United States **Ning Li** Shenyang Pharmaceutical University, Shenyang, China

iii

Journal: *Frontiers in Pharmacology*

Topic	**Traditional Processing Methods in Ethnopharmacology: Enhancing Therapeutic Effects and Unveiling Mechanisms of Action**
Deadline	Manuscript Submission Deadline 03 May 2024
Details	https://www.frontiersin.org/research-topics/60726/traditional-processing-methods-in-ethnopharmacology-enhancing-therapeutic-effects-and-unveiling-mechanisms-of-action
Editor(s)	**Lingyun Zhong** Jiangxi University of Traditional Chinese Medicine, Nanchang, China **Qianfeng Gong** Jiangxi University of Traditional Chinese Medicine, Nanchang, China **José Carlos Tavares Carvalho** Universidade Federal do Amapá, Macapá, Brazil **Bey Hing Goh** Sunway Biofunctional Molecules Discovery Centre (SBDMC), School of Medical and Life Sciences, Sunway University, Bandar Sunway, Malaysia

iv

Journal: *Frontiers in Pharmacology*

Topic	**Emerging Trends in the Quality Check of Herbal Medicines, Supplements and 'Botanicals'**
Deadline	Manuscript Submission Deadline 13 May 2024
Details	https://www.frontiersin.org/research-topics/60991/emerging-trends-in-the-quality-check-of-herbal-medicines-supplements-and-botanicalsii
Editor(s)	**Alessandra Durazzo** Research Centre for Food and Nutrition, Council for Agricultural Research and Economics, Rome, Italy **Daniel Dias Rufino Arcanjo** Departamento de Biofísica e Fisiologia, Universidade Federal do Piauí, Teresina, Brazil **Massimo Lucarini** Research Centre for Food and Nutrition, Council for Agricultural Research and Economics, Rome, Italy

v Journal: *Frontiers in Pharmacology* frontiers

Topic	**Real-World Evidence of Natural Products, Herbal Medicines, and Traditional Medicine Treatments Volume II**
Deadline	Manuscript Submission Deadline 30 May 2024
Details	https://www.frontiersin.org/research-topics/61054/real-world-evidence-of-natural-products-herbal-medicines-and-traditional-medicine-treatments-volume-ii
Editor(s)	**Liyun He** Institute of Basic Research in Clinical Medicine, China Academy of Chinese Medical Sciences, Beijing, China **Yi Guo** Tianjin University of Traditional Chinese Medicine, Tianjin, China **Yi Wang** China Academy of Chinese Medical Sciences, Beijing, China **Yiming Li** Swiss TCM University, Bad Zurzach, Switzerland **Xuezhong Zhou** School of Computer and Information Technology, Beijing Jiaotong University, Beijing, China

vi Journal: *Frontiers in Pharmacology*

Topic	**Plant Metabolites in Drug Discovery: The Prism Perspective between Plant Phylogeny, Chemical Composition, and Medicinal Efficacy, Volume III**
Deadline	Manuscript Summary Submission Deadline 17 April 2024 Manuscript Submission Deadline 29 August 2024
Details	https://www.frontiersin.org/research-topics/62190/plant-metabolites-in-drug-discovery-the-prism-perspective-between-plant-phylogeny-chemical-composition-and-medicinal-efficacy-volume-iii
Editor(s)	**Da-Cheng Hao** Dalian Jiaotong University, China **Richard Spjut** World Botanical Associates, Inc. Bakersfield, CA, United States **Chunnian He** Institute of Medicinal Plant Development, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China

vii Journal: *Frontiers in Pharmacology*

Topic	**Efficacy and Mechanism of Herbal Medicines and Their Functional Compounds in Preventing and Treating Cardiovascular Diseases and Cardiovascular Disease Risk Factors - Volume II**
Deadline	Manuscript Summary Submission Deadline 13 March 2024 Manuscript Submission Deadline 01 July 2024
Details	https://www.frontiersin.org/research-topics/62106/efficacy-and-mechanism-of-herbal-medicines-and-their-functional-compounds-in-preventing-and-treating-cardiovascular-diseases-and-cardiovascular-disease-risk-factors---volume-ii
Editor(s)	**Qing Yong He** Guang'anmen Hospital, China Academy of Chinese Medical Sciences, Beijing, China **Yu-Qing Zhang** McMaster University, Hamilton, Canada **Chen Huei Leo** Singapore University of Technology and Design, Singapore **Jian Zhang** Tianjin Medical University, Tianjin, China **Kuo Gao** Beijing University of Chinese Medicine, Beijing, China **Zhongfeng Li** Capital Normal University, Beijing, China

viii Journal: *Frontiers in Pharmacology* frontiers

Topic	**Restoring Barrier Function and Immunity: What Roles Can Traditional Medicines Play?**
Deadline	Manuscript Submission Deadline 01 May 2024
Details	https://www.frontiersin.org/research-topics/57580/restoring-barrier-function-and-immunity-what-roles-can-traditional-medicines-play
Editor(s)	**Gang Chen** Shenyang Pharmaceutical University, Shenyang, China **Xuezheng Li** Yanbian University Hospital, Yanji, China **Jing Wu** Greater Baltimore Medical Center, Baltimore, United States **Ning Li** Shenyang Pharmaceutical University, Shenyang, China

ix Journal: *Frontiers in Pharmacology* frontiers

Topic	**Real-World Evidence of Natural Products, Herbal Medicines, and Traditional Medicine Treatments Volume II**
Deadline	Manuscript Submission Deadline 30 May 2024
Details	https://www.frontiersin.org/research-topics/61054/real-world-evidence-of-natural-products-herbal-medicines-and-traditional-medicine-treatments-volume-ii
Editor(s)	**Liyun He** Institute of Basic Research in Clinical Medicine, China Academy of Chinese Medical Sciences, Beijing, China **Yi Guo** Tianjin University of Traditional Chinese Medicine, Tianjin, China **Yi Wang** China Academy of Chinese Medical Sciences, Beijing, China **Yiming Li** Swiss TCM University, Bad Zurzach, Switzerland **Xuezhong Zhou** School of Computer and Information Technology, Beijing Jiaotong University, Beijing, China

Visiting scholar and Master of Medicine program in Hubei University of Medicine (HBUM)

Welcome to join Prof. Xuanbin WANG's lab

About HBUM

Hubei University of Medicine, located at Shiyan in central China, is a medical school committed to nurturing healthcare professionals, integrating medicine with the disciplines of science, engineering and administration. Founded in 1965, the University has more than 120,000 alumni around the world. The university offers a wide range of programs across 18 schools covering more than 40 major areas of study. It has 1,027 full-time faculty, of whom 862 are master supervisors, 380 hold senior titles, and 215 hold doctoral degrees. It has an enrollment of 16,878 full-time undergraduate students. 1,665 postgraduate students, and 460 international students. It has the largest number of medical undergraduates in Hubei Province, and ranks Top 1 in undergraduate medical education among Hubei provincial-level universities.

The 6 affiliated hospitals are all Class A Tertiary Hospitals (the highest rating in China), with over 15,000 beds, 10 million out-patients, 0.5 million in-patients annually. Clinical Medicine is the top 3‰ in the global ESI ranking, while Pharmacology and Toxicology is the top 1%. The University has established close ties with over 30 universities and research institutions abroad in over 10 countries and regions, with program of student exchange, visiting scholars, expert lecturing, etc.

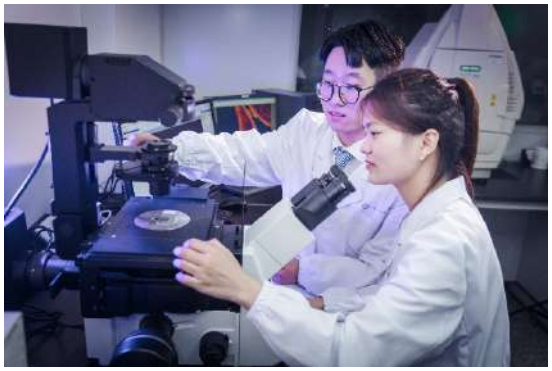
Hubei University of Medicine offers visiting research assistant (RA) and Master of Medicine (MM) programs for international students. A successful MM thesis should represent the result of the candidate's research which displays some originality and which demonstrates a sound understanding in the field of study and the appropriate research methods, and worthy of publication.

Back to content page

About Prof. Xuanbin WANG's lab

Prof. Xuanbin WANG's lab, founded in 2007, focuses on Chinese medicines/natural products against diseases, especially cancers. He is also interested in Wudang Taoist folk medicine. Now, he has been granted more than 50 fundings from nation, province and university. He published 152 papers and wrote 12 books including 5 text books, such as Pharmacology of Chinese medicines (Chinese version and English version), Clinical Pharmacology (English version), Pharmacology (Chinese version), and Toxicology of Chinese Medicines (Chinese version).

To push the internationalization and modernization of Chinese medicine as well as Wudang folk medicine, Prof. Wang's group collaborate with experts from Germany, British, Belgium, Netherlands, Russia, Korea, Japan, Span, and Austria.



Scholarship and allowance

1,000 CNY per month allowance will be provided to RAs and MMs in Prof. WANG's group. RAs have priority opportunity to apply for MM as well as scholarship in the university.

Admission requirement

Bachelor's degree of Medicine, Surgery, Pharmacy, Pharmacology, Traditional Chinese medicine, and related disciplines. Chinese Language Proficiency Test: HSK3.

Research fields

Including but not limit in Pharmacy, Pharmacology, Chinese medicines and Wudang Taoist folk medicine.

Enquiries

School of International Education, HBUM
Address: 30 South Renmin Road, Shiyan, Hubei Province, China.
Website: https://www.hbmu.edu.cn

Tel/Fax: +86-719-8895160
Email: admission@hbmu.edu.cn

Early Career Corner

Postgraduate Opportunities

Opportunities in Europe

Germany

https://academicpositions.com/ad/cologne-graduate-school-ageing-research-cga/2022/12-fully-funded-phd-positions/181690?utm_source=facebook&utm_medium=cpc&utm_campaign=scm-cga-092022+med-hi

https://www.humboldt-foundation.de/en/apply/sponsorship-programmes/humboldt-research-fellowship

https://www.daad.de/en/study-and-research-in-germany/

Postgraduate Opportunities

Opportunities around the world

Gratz - Austria

https://agristok.net/2022/09/03/phd-fully-funded-position-in-plant-molecular-biology-at-university-of-graz-in-austria/

Denmark

https://www.dtu.dk/om-dtu/job-og-karriere/ledige-stillinger/job?id=d2e2591d-1d14-43ff-8557-6e6ce0fc3a58

Postgraduate Opportunities

Opportunities around the world

Ireland

Irish Research Council
https://research.ie/funding/

Scientists wanting to go into business – fully Undergraduate/ Postgraduate/ PhD graduate degrees in Management – Basic degree multi centre with significant funding

– VERY INTERESTING PROGRAMME

https://www.spjain.ae

Freely Accessible Learning Material

Interesting articles

Studying abroad

like

https://www.science.org/content/article/doing-research-abroad-felt-lonely-heres-how-i-made-friends?utm_campaign=SciMag&utm_source=Social&utm_medium=LinkedIn

Freely Accessible Learning Material

Online learning Platforms

Fantastic resource. Courses from all disciplines. Free to study. Accreditation available at a cost.

Well worth exploring

- https://www.edx.org/
- https://englishforuniversity.com/resources/
- https://owl.purdue.edu/

Webinar- How To Avoid Plagiarism?

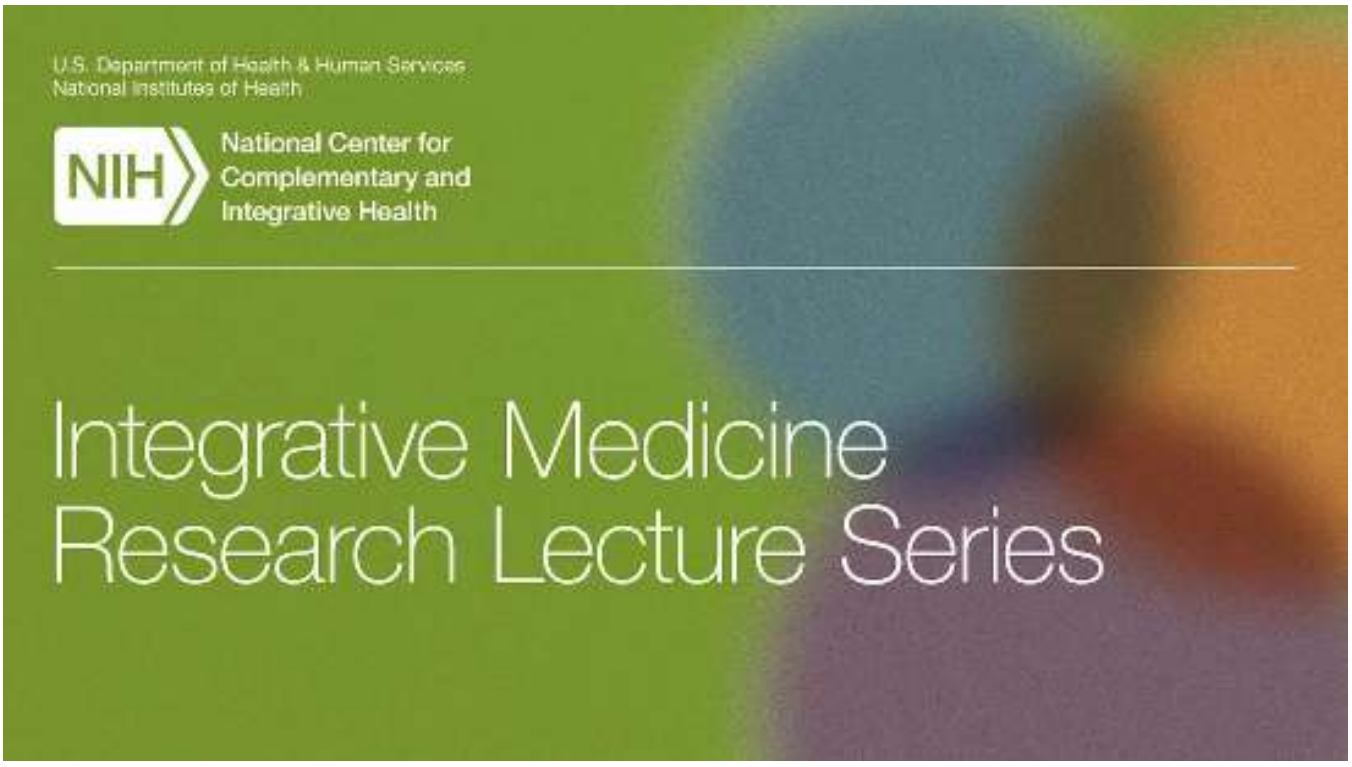
Webinar to give information re plagiarism

- https://www.youtube.com/watch?v=sHhGY4c61v4
- https://www.youtube.com/watch?v=33R43YF9DzI

Freely Accessible Learning Material

Free Lecture series

https://www.nccih.nih.gov/news/events/imlectures?nav=li



Great Selection of Webinars - From the Sustainable Herbs Programme

Botanical Supply Sustainability in the Time of COVID

- https://vimeo.com/457513678

Plants, People & Culture: The Science of Ethnobotany

- https://vimeo.com/460565477

The Business Case for Sustainability

- https://vimeo.com/465447452

Cross-cultural Understanding of Local Herbal Knowledge and Chinese traditional Daodi Materia Medica

- https://vimeo.com/668389245

Sourcing Botanicals and Quality Control: A Conversation with Michael Heinrich and Anthony Booker

- https://vimeo.com/642467580

Introducing the WildCheck Report: Assessing Risk & Opportunities of Trade in Wild Plant Ingredients

- https://vimeo.com/704246800

Certifications as a Path to Sustainability? A Conversation about the Opportunities and Limits of Certification

- https://vimeo.com/540314958

AND MANY MORE

https://vimeo.com/457513678

Buchi Mini series of webinars – covering Drug Discovery Using Natural Resources

The speaker: Prof. Dr. Elfahmi

There is a separate registration requirement for each webinar.

https://cloud.infohub.buchi.com/drug-discovery/with-prof-elfahmi?utm_source=email1&utm_medium=email&Id=00Q3X00001MfiqzUAB&id_mc=34316261&utm_campaign=gl-2022-webinars-mini-webinars-with-prof-elfami&cloudpage_id=4865&cloudpage_id2=&cloudpage_id3=

Episode 1: Drug Discovery and Development Workflow

Discover four essential steps in drug discovery and development: literature review & preliminary screening, biology development, physiochemical & pharmaceutical development. Gain a process overview for the isolation of active compounds from plants using bioactivity-guided fractionation.

Episode 2: Concentration of Natural Products

Explore the workflow for processing of natural compounds: sampling & crushing, extraction & concentration; fractionation & purification; structure identification and product packaging. Learn about extract/fraction concentration through solvent removal by rotary evaporation. Find challenges and solutions to efficiency, foaming, bumping, plus optimization tips for temperature difference, pressure values, flask size, rotation speed and condenser loading.

Episode 3: Purification Techniques for Natural Products

Learn fundamentals and protocols for relevant methods, including liquid-liquid fractionation (phase separation), winterization, microporous resin chromatography, flash and vacuum liquid chromatography, radial chromatography, crystallization, preparative column chromatography. See it in action with a case study on the purification of asiaticoside & madecassoside from *Centella asiatica.*

Episode 4: Past, Present and Future of Herbal Medicines

Gain a comprehensive overview of the history of plant use in drugs and pharmacy, including milestones in the development of herbal medicines. See current global use, benefits and challenges facing alternative or traditional medicine. Look into the future of herbal medicine development with predictions on how this branch will develop.

International Conferences

Conference information

Lots of interesting and relevant conferences to be found at these links.

Traditional medicine Conferences in 2024

- https://waset.org/traditional-medicine-conferences

Phytochemistry Conferences

- https://waset.org/phytochemistry-conferences

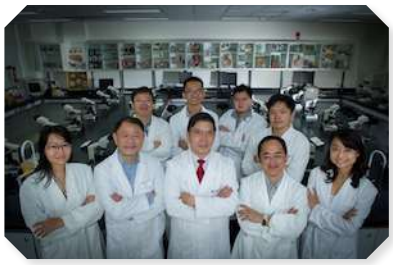
Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

China Scholarship Council (CSC) – Trinity College Dublin Joint Scholarship Programme

Details: https://www.tcd.ie/study/international/scholarships/postgraduate/csc/

香港浸會大學 HONG KONG BAPTIST UNIVERSITY
School of 中醫藥學院 Chinese Medicine

i



Doctor of Philosophy (PhD) in Biomedical Sciences/ Chinese Medicine/ Translational Medicine/ Pharmacy in Chinese Medicine

School of Chinese Medicine, Hong Kong Baptist University

Details: https://scm.hkbu.edu.hk/en/education/research-postgraduate.html

香港中文大學中醫學院
School of Chinese Medicine
The Chinese University of Hong Kong

ii

PhD in Chinese Medicine

School of Chinese Medicine ,

The Chinese University of Hong Kong

Details: http://www.scm.cuhk.edu.hk/en-gb/programs/research-master-doctoral-program/phd-in-chinese-medicine

澳門大學 UNIVERSIDADE DE MACAU UNIVERSITY OF MACAU
SKL QRCM-UM 中藥質量研究國家重點實驗室（澳門大學） Laboratório de Referência do Estado para Investigação de Qualidade em Medicina Chinesa (Universidade de Macau) State Key Laboratory of Quality Research in Chinese Medicine (University of Macau)
中華醫藥研究院 Instituto de Ciências Médicas Chinesas Institute of Chinese Medical Sciences

iii

Doctor of Philosophy in Biomedical Sciences

Institute of Chinese Medical Sciences, University of Macau

Details: https://sklqrcm.um.edu.mo/ycmdbs/

HKU Med LKS Faculty of Medicine The University of Hong Kong 香港大學李嘉誠醫學院
中醫藥學院

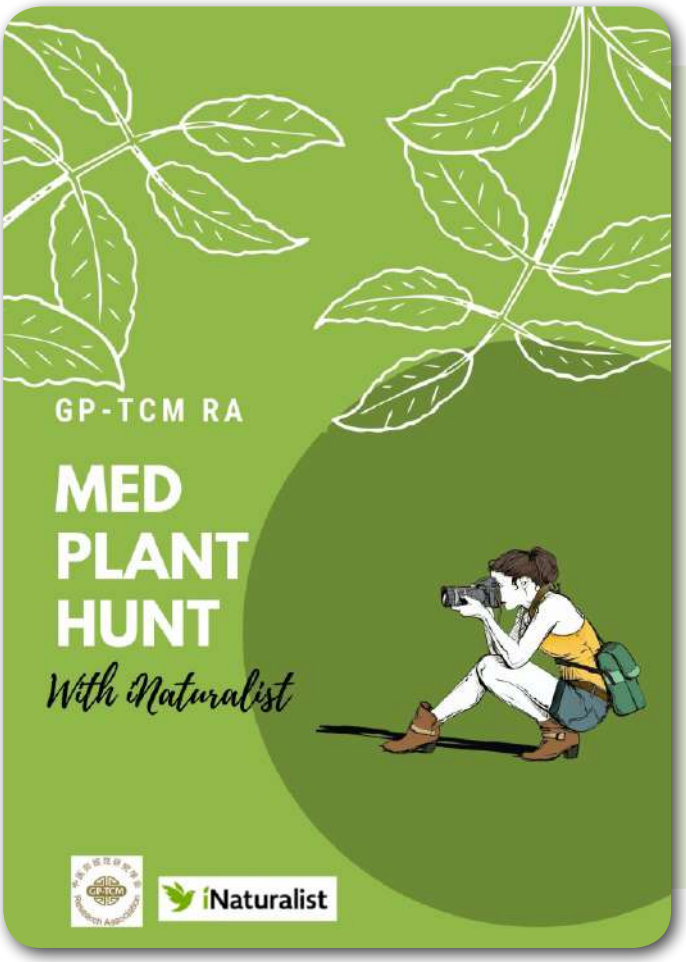
iv

PhD in Chinese Medicine

School of Chinese Medicine, The University of Hong Kong

Details: https://scm.hku.hk/Views/Programme/English-MPhilPhD.html

Med Plant Hunt with iNaturalist



In order to promote conservation of wildlife, especially wild medicinal plant and TCM herbs, and their environment, a challenge on **"Med Plant Hunt"** is launched.

The aim of challenge is to encourage our members to identify and recognize the morphological features of living wild medicinal plant in nature.

Eligibility:

Med Plant Hunt is free and open to all GP-TCM RA members.

Entries must abide by the guidelines below.

Rules & Guidelines:

iNaturalist is a nature app to help you identify the animals and plants around you and provide a platform to connect you and experts to share about nature. Users can record and share their observations and the findings can enrich scientific data repositories like the Global Biodiversity Information Facility.

Create your own account and share your wild medicinal plant observation to mobile iNaturalist app or iNaturalist website.

How to enter:

1. Complete the registration form with iNaturalist user ID.
2. Make the observation of living wild medicinal plant around you with iNaturalist app/website.
3. With the submitted iNaturalist ID, your observation for entry will be automatically recorded and results will be announced in the coming issue of the newsletter.

How to join

For inquiries about Med Plant Hunt, please send email to
gptcm_medplanthunt@outlook.com

Registration form

How to upload

Med Plant Hunt with iNaturalist

Prizes:

- **Adventurous Observer: The highest number of observed species**
- **TCM Photographer: Best photo shoot**
- **Lucky Observer: Observe rare species**

The selected entries will be published on the next issue of the newsletter. An electronic certificate and **a complementary gift** (e.g. water bottle ideal for outdoor activities, sponsored by Macau Pharmacology Association) will be given.

澳門藥理協會

MED PLANT HUNT
With iNaturalist

Med Plant Hunt Registration Form

Name: Email:

Affiliation: Country or region:

iNaturalist account information
User name:
User email:

(Please send the form to gptcm_medplanthunt@outlook.com for registration)

Online registration | How to join | Registration form | How to upload

Back to content page

Fortune's drynaria (*Drynaria fortunei*, Polypodiaceae, 槲蕨 , left) and rock-ginger fern (*Pseudodrynaria coronans*, Polypodiaceae, 崖姜 , right)

Official in Chinese pharmacopoeia, the dried rhizome of Fortune's drynaria (*Drynaria fortunei*) is known as the Chinese medicinal *gusuibu* (drynariae rhizoma). It is a bitter and warm Chinese medicinal that tonifies the kidney, strengthens the bones, heals injuries, and relieves pain (oral and/or topical administration). As its Chinese medicinal name implies (*gusuibu* is literally translated as "mender of shattered bones"), it is indicated for knocks, falls, fractures, contusions, and sprains. It is also indicated for lower back pain, weak knees, tinnitus, hearing loss, and loose teeth associated with kidney deficiency. The mashed fresh rhizome can be applied topically for the treatment of alopecia, vitiligo, and warts. Topical administration of drynariae rhizoma tincture is helpful for these skin problems as well.

Not listed in Chinese pharmacopoeia, the dried rhizome of rock-ginger fern (pseudodrynariae coronantis rhizoma) is known as the Chinese medicinal *dasuibu* (meaning "larger mender of shattered bones"). Its rhizome is thicker in size, and is customarily used as a substitute of drynariae rhizoma in the Lingnan region. Attention should be paid that *Drynaria fortunei* is now treated as a synonym of *Drynaria roosii*, and *Pseudodrynaria coronans* a synonym of *Drynaria coronans* according to https://www.iplant.cn/.

槲蕨

本来弱小又横生
纸叶常闻抱树行
骨碎之时寻好药
谁人知晓是何名

崖姜

生来为蕨署名崖
伟岸人疑有误差
树木石砂常缠绕
强筋壮骨效尤佳

The above colour photographs, English texts and Chinese poems are contributed by Prof **Hubiao Chen** (Hong Kong), Dr **Ping Guo** (Hong Kong) and Prof **Jiqing Liu** (Shenzhen), respectively. This column is advised by Prof **Zhongzhen Zhao** (Hong Kong).

Just click here to enjoy the video: https://uofmacau-my.sharepoint.com/:v:/g/personal/yc37514_um_edu_mo/EatxI7r2v8pCqq-1PrkCNg0B7HvC3PaFqPxWmtuZH0Bbig?nav=eyJyZWZlcnJhbEluZm8iOnsicmVmZXJyYWxBcHAiOiJPbmVEcml2ZUZvckJ1c2luZXNzIiwicmVmZXJyYWxBcHBQbGF0Zm9ybSI6IldlYiIsInJlZmVycmFsTW9kZSI6InZpZXciLCJyZWZlcnJhbFZpZXciOiJNeUZpbGVzTGlua0NvcHkifX0&e=F796yM

Fortune's drynaria (*Drynaria fortunei*, Polypodiaceae, 槲蕨 , left) and rock-ginger fern (*Pseudodrynaria coronans*, Polypodiaceae, 崖姜 , right)

The January-February 2024 Newsletter of GP-TCM Research Association

Just click here to enjoy the video: https://uofmacau-my.sharepoint.com/:v:/g/personal/yc37514_um_edu_mo/EatxI7r2v8pCqq-1PrkCNg0B7HvC3PaFqPxWmtuZH0Bbig?nav=eyJyZWZlcnJhbEluZm8iOnsicmVmZXJyYWxBcHAiOiJPbmVEcmI2ZUZvckJ1c2luZXNzIiwicmVmZXJyYWxBcHBQbGF0Zm9ybSI6IldlYiIsInJlZmVycmFsTW9kZSI6InZpZXciLCJyZWZlcnJhbFZpZXciOiJNeUZpbGVzTGlua0NvcHkifX0&e=F796yM