

# **CGCM 18th Annual Meeting**

## **Regional Report**

### **Taiwan Chapter**

Local Chapter Coordinator: Prof. Hen-Hong Chang (張恒鴻)

Secretary General: Prof. Yuan-Shiun Chang (張永勳)

**2019/08/08**

# CGCM in Taiwan

Local Chapter Coordinators (23)

1. Institutional Members (18)

2. Industrial Affiliate Members (5)

Select the city where



財團法人醫藥品查驗中心  
Center for Drug Evaluation, Taiwan



# ***Board of Directors***



## **Chairman**

Prof. Yung-chi Cheng  
Henry Bronson Professor of  
Pharmacology,  
Yale University School of Medicine

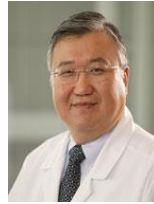


## **Vice Chairman**

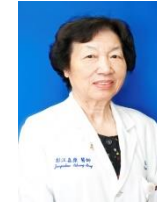
### **Chairman, CGCM Taiwan Chapter**

Prof. Hen-Hong Chang  
China Medical University

## **Advisory Board**



Prof. Yun Yen  
Taipei Medical University



Prof. Jacqueline Whang-Peng  
Superintendent  
Taipei Cancer Center,  
Taipei Medical University

## **Council Members**



Prof. Ning-Sun Yang  
Distinguished Research Fellow and Professor  
Agricultural Biotechnology Research Center,  
Academia Sinica, Taiwan

## **Secretary General**



Prof. Yuan-Shiun Chang  
China Medical University





# Department of Chinese Medicine and Pharmacy, MOHW



- The combined treatment model between western medicine (WM) and traditional Chinese medicine (TCM) stroke, cancer, infertility, long-term care, and drug abuse etc.
- TCM physicians clinical training.



- Creation of Drug Herb Interaction Database
- TCM Adverse Drug Reactions Reporting System

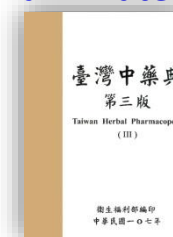
ADR site



**Strengthening of  
TCM professional  
competency and  
continuous medical  
education**

**Improving TCM  
product quality &  
safety management**

- Established THP (Taiwan Herbal Pharmacopoeia) 3<sup>rd</sup> Editing Committee
- Publication of 3<sup>rd</sup> Edition THP in 2018
  - New adapted 55 single herb monographs and 2 concentrated preparations
- Regulatory limitation of abnormal substances in TCM raw materials and products



**Integration  
of TCM-WM in both  
healthcare and  
evidence-based  
research.**

**TCM international  
interactions &  
promotion of  
industry innovation  
and research**

- Continuously publishing JTCM
- 2017 Global Health Forum in Taiwan
- International exchanges with New Southbound Policy countries

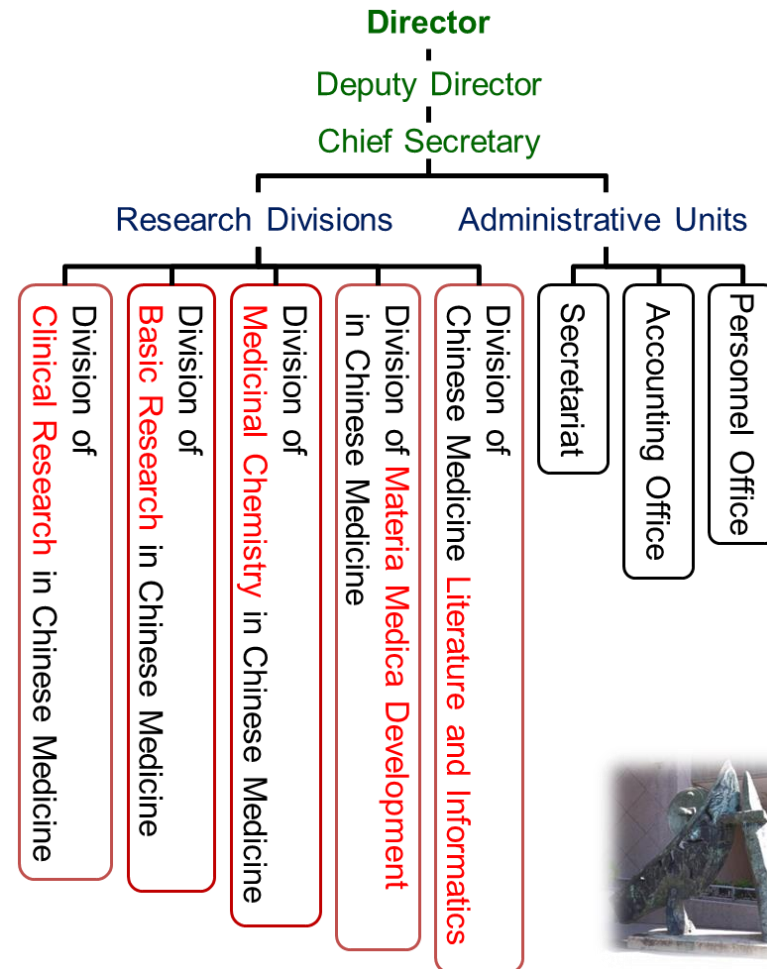


# National Research Institute of Chinese Medicine, NRICM

## History



## Organization



## Research Emphases:

### 1. Mission-oriented top-down research

1. Quality Control, TCM pharmacopeia
2. Evidence-Based Clinical Research
3. Drug-TCM Interaction and Safety

### 2. Basic science research

1. Diseases Prevention and Treatment
2. Chemical Analysis and Total Synthesis
3. Drug Metabolism and Toxicology

### 3. Compile and publish Chinese medical literatures

1. Study of TCM Literatures
2. Book editing and publication
3. Running a journal: Journal of Chinese Medicine





# R&D of phytomedicines for cancer therapy and immuno-modulation

Agricultural Biotechnology Research Center  
Academia Sinica, Taipei



## Highlights of Research Achievements in 2018-2019



Lie-Fen Shyur

1. Received 永信李天德卓越醫藥科技獎
2. Didan Cao 地膽草 derived compound sensitizes cisplatin for inhibiting **melanoma** metastasis (*Phytomedicine*; US patent)
3. Zhaohe Cao 昭和草-based botanical drug inhibits triple negative **breast cancer** (*Journal of Experimental and Clinical Cancer Research*; Patent pending)



Wen-Chin Yang

1. Patents and technology transfers of feed-in phytonics and drug for animal health (*Scientific Rep.*; eJTCM)
2. Patents and technology transfers of *Bidens pilosa* 大花咸豐草-based formulation for **diabetes**.
3. Innovative Award, Taiwan Innotech Expo 2018



Pei-Wen Hsiao

1. Identified a new pathway as a innovative therapeutic target for metastatic prostate cancer (*FASEB J*)
2. Technology licensing of *Wedelia chinensis* 黃花蜜菜 extract technology for use in treating **prostatic diseases**



Yu-Ling Lin

1. Plant derived immune modulator for cancer therapy (US and EPO patent pending)
2. *Taxus x media* 曼地亞紅豆杉 leaves derived biflavonoid inhibits **inflammation** and regulates immune cell migration
3. Improvement of chemical and protein drugs delivery by **nanoparticle** (*J Nanobiotech*; *Int J Nanomed*; *Molecules*)



Yu-Chuan Liang

1. Research and development of medicinal herb-based phytonics for **animal health** (*Scientific Rep.*; eCAM, etc.)
2. Simultaneous detection of multiple pathogens by multiplex PCR coupled with DNA biochip hybridization." (*Laboratory animals*)





臺灣大學

食品科技研究所 食療實驗室

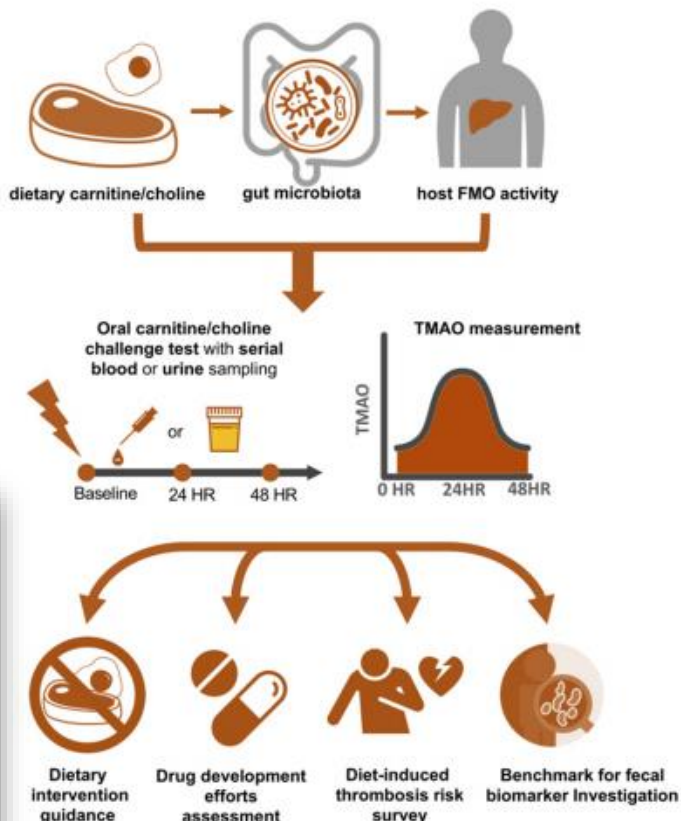
Lab of Dietary Therapy, Institute of Food Science & Technology, National Taiwan University

## Microbiota Studies

Prof. Lee-Yan Sheen

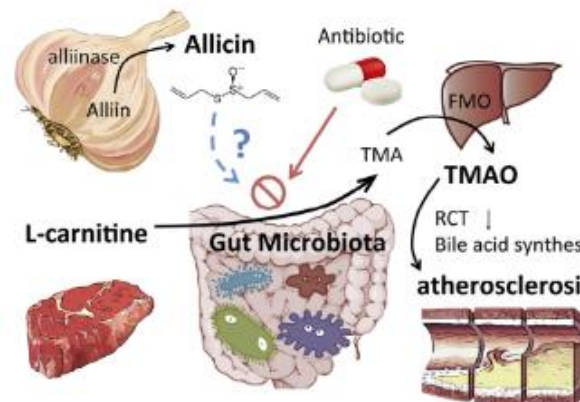


## Identification of TMAO-producer phenotype and **host-diet-gut dysbiosis** by **carnitine** challenge test in human and germ-free mice



(Wu et al., Gut, 2018)

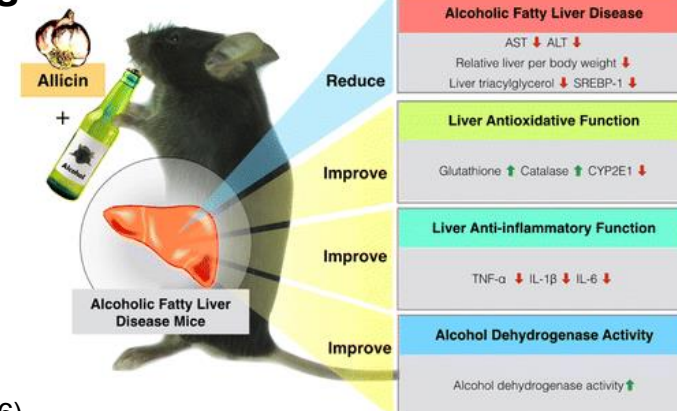
## Dietary **allicin** reduces transformation of L-carnitine to TMAO through impact on **gut microbiota**



(Wu et al., Journal of Functional Foods, 2015)



## Diet Supplementation with Allicin Protects against Alcoholic **Fatty Liver** Disease in Mice by Improving Anti-inflammation and Antioxidative Functions



(Panyod, S., J. Agric. Food Chem., 2016)





臺北醫學大學  
TAIPEI MEDICAL UNIVERSITY

● School of Pharmacy

● Graduate Institute of Pharmacognosy

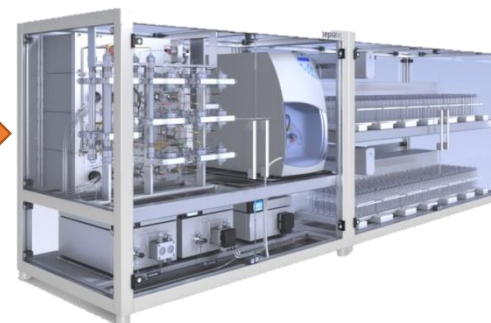
● Ph.D. Program in Clinical Drug Development of Herbal Medicine

Research areas	Clinical Chinese herbal medicine translational research and development							
	Basic research				Translational research		Clinical research	
	Natural products	Organic synthesis	Pharmacology and toxicology	Molecular biology	Chinese herbal medicine resource	Biotechnology	Clinical research and trial	Pharmacokinetic
Faculty	Lee, Ching-Kuo	Huang, Wei-Jan	Wu, Chieh-His Liang, Wen-Li	Chen, Mei-Chuan	Wang, Ching-Chiung Lee, Mei-Hsien Hou, Wen-Chi	Chuang, Kuo-Hsiang Lin, Ruo-Kai	Dai, Cheng-Jie	Lee, Chia-Jung

## ➤ Goals

- To develop new botanical drugs
- To establish the natural products resources library
- To establish the e-learning system of Traditional Chinese Medicine

Purchased the new equipment



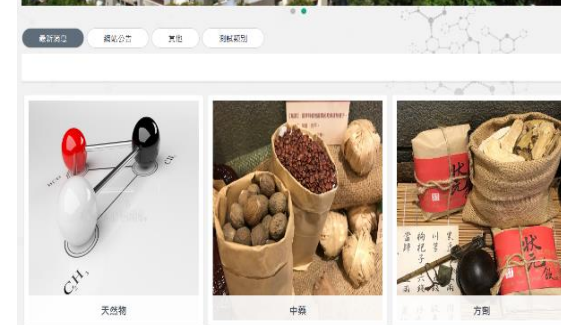
With the **Sepbox 2D-2000** benchtop system up to establish the natural products resources library.

<http://tmu.pharm.dev.com.tw/>



## ➤ Publication

01/01/2018~06/30/2019	SCI	IF>5	Patent
School of Pharmacy	37	7	1.USE OF URARIA IN PROMOTING OSTEOGENESIS OR PROVIDING NEUROPROTECTION 2.METHOD OF HIGH-THROUGHPUT SORTING OF HIGH EXPRESSION CELL AND CELLS SORTED THEREFROM
Graduate Institute of Pharmacognosy	13	3	
Ph.D. Program in Clinical Drug Development of Herbal Medicine	9	0	



<http://ocw2.tmu.edu.tw>



# National Yang-Ming University

## Department of Life Sciences and Institute of Genome Sciences

Activators of the C1SD2 longevity gene from “The Classic of Herbal Medicine” (神農本草經)

- Promote longevity & healthy aging
- Ameliorate age-related diseases, e.g. skin aging, fatty liver, Alzheimer's disease

## Anti-aging drug development



## Faculty of Pharmacy



## Institute of Traditional Medicine



**Shu-ling Fu, Professor & Director**

Anticancer natural products and herbs,  
Anti-aging natural products and herbs



**Tung-Hu Tsai, Professor**

Pharmacokinetics, Pharmaceutical analysis,  
Nano formulations



**Chung-Hua Hsu, Professor**

TCM clinical trials in cancer and addiction,  
TCM theory, Herbal medicine



**Fang-Pey Chen, Associate Professor**

Acupuncture, TCM theory, Clinical trials  
Analysis of National Health Insurance Dataset



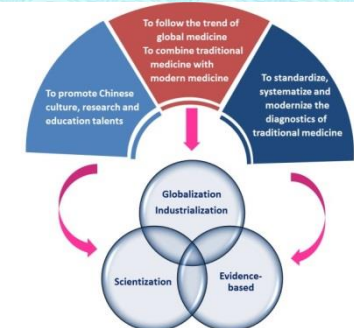
**Keng-Li Lan, Associated Professor**

Drug formulation, Targeted cancer therapy,  
Cancer immunotherapy



**Tung-Yi Lin, Assistant Professor**

The functions and mechanisms of herbal medicine  
suppressed cancer progression and metastasis

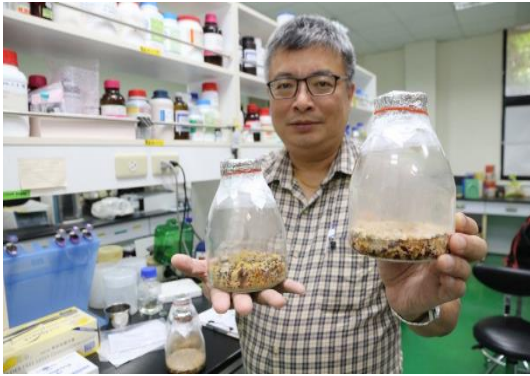


# National Chung Hsing University

## College of Agriculture and Natural Resources

### Laboratory of Metabolomics and Phytomedicine Development

### Laboratory of Nutraceuticals and Food Chemistry



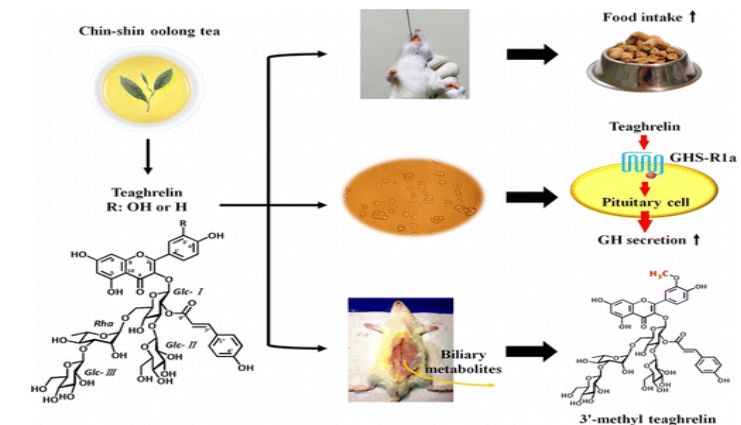
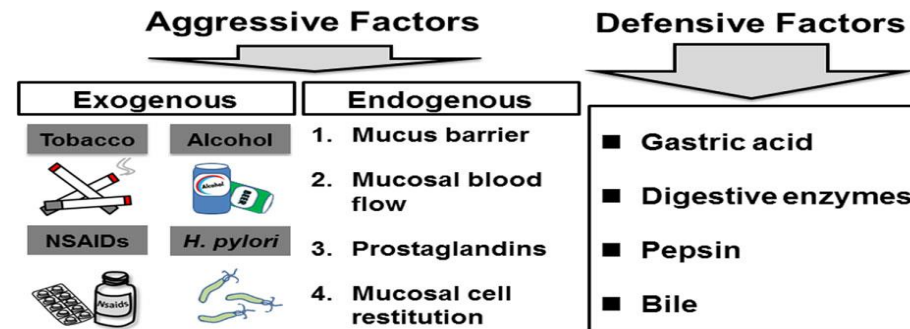
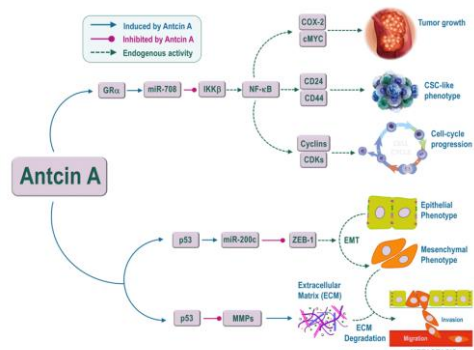
Dr. Sheng Yang Wang  
Distinguished Professor



Dr. Gow-Chin Yen  
Chair Professor



Dr. Jason T. Z. Tzen  
Chair Professor



Bioactivity Investigation of *Antrocin A*  
*cinnamomoun*

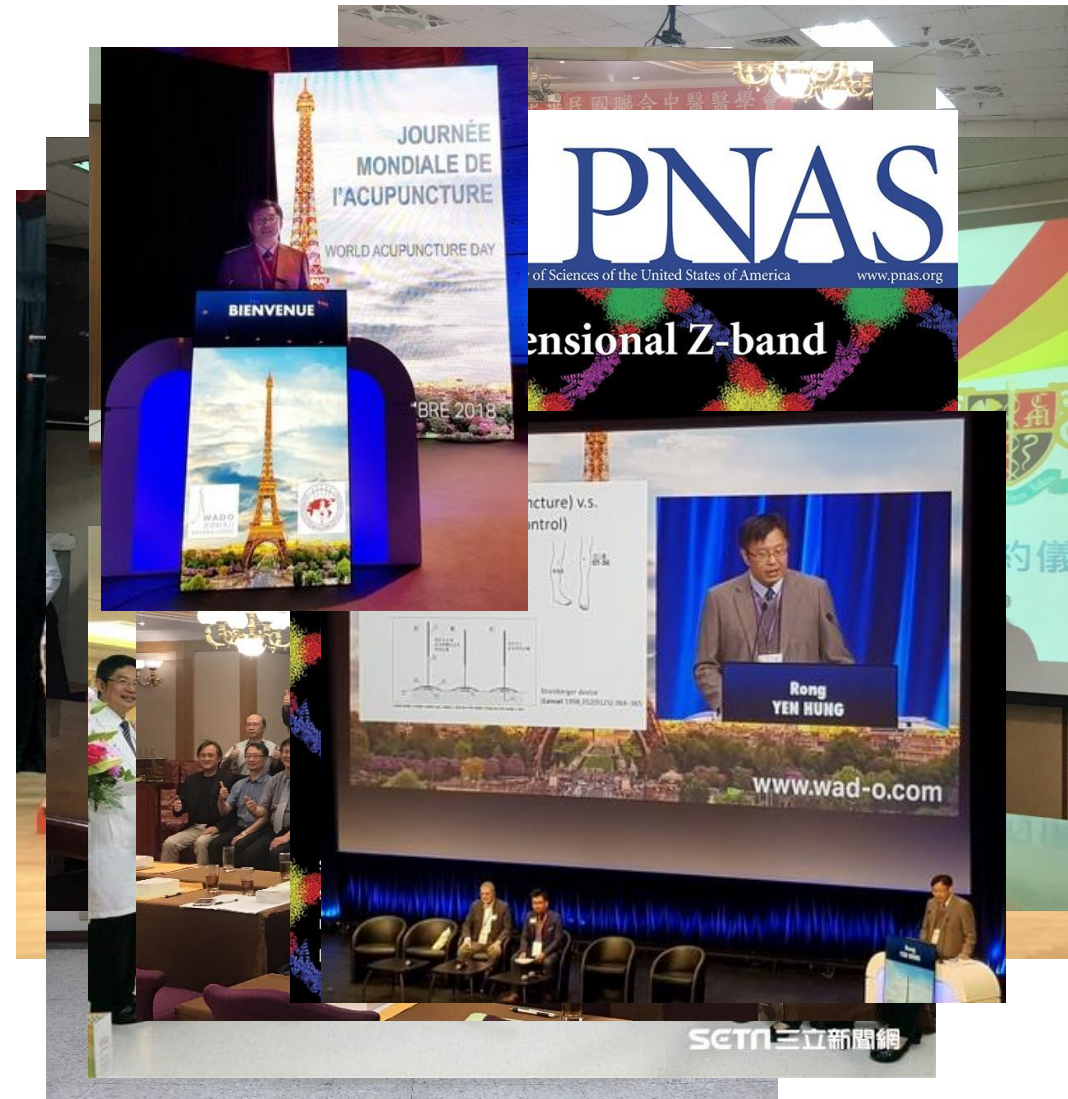


# China Medical University, Taiwan

CMU and CMUH

Chinese Medicine Research Center

1. **Prof. Mien-Chie Hung**, Genetic Oncologist, Academician, Academia Sinica (Taiwan), become the current President of CMU.
2. **Prof. Mao-Feng Sun** accepted the appointment of Chairman of The Union of Chinese Medical Association, Taiwan.
3. **Prof. Yi-Hung Chen**: Electrically stimulating PC6 (Neiguan) acupoint of mice induce orexin from the hypothalamus to inhibit pain responses. Published by Proceedings of the National Academy of Sciences of the United States of America, PNAS.
4. **Prof. Hung-Rong Yen** was invited as the VIP speaker by UNESCO at 2018 World Acupuncture Day: "Acupuncture for the treatment of fibromyalgia: a big data-bench-bedside study in Taiwan".
5. CMU established the Secretariat Office, **C**ouncil of **U**niversities and **C**olleges of **C**hinese **M**edicine in **T**aiwan, and held the first council meeting in 2019.
6. CMU actively promotes the internationalization of Chinese medicine in higher education, and established the Secretariat Office of the **G**lobal **U**niversity **N**etwork of **T**raditional **M**edicine, joining the 11th GUNTM in HKBU.
7. CMU/Hospital approve MOU on Clinical Cooperation in TCM with **M**acK**ay** Memorial Hospital, and **C**hang **H**ua Hospital, Ministry of Health and Welfare.
8. China Medical University approve MOU with Duke-**NUS** Medical School, Singapore.





# Kaohsiung Medical University, Taiwan

Research Center for Natural Products and Drug Development



**Taiwan Database of Extracts and Compounds (TDEC)** is a new concept for sharing the informative connection between natural products' providers and researchers. The platform and database are aimed at the sample's **collection, structural physical and chemical properties, biological activities, and point-to-point link**. Welcome to visit this platform <https://tdec.kmu.edu.tw>

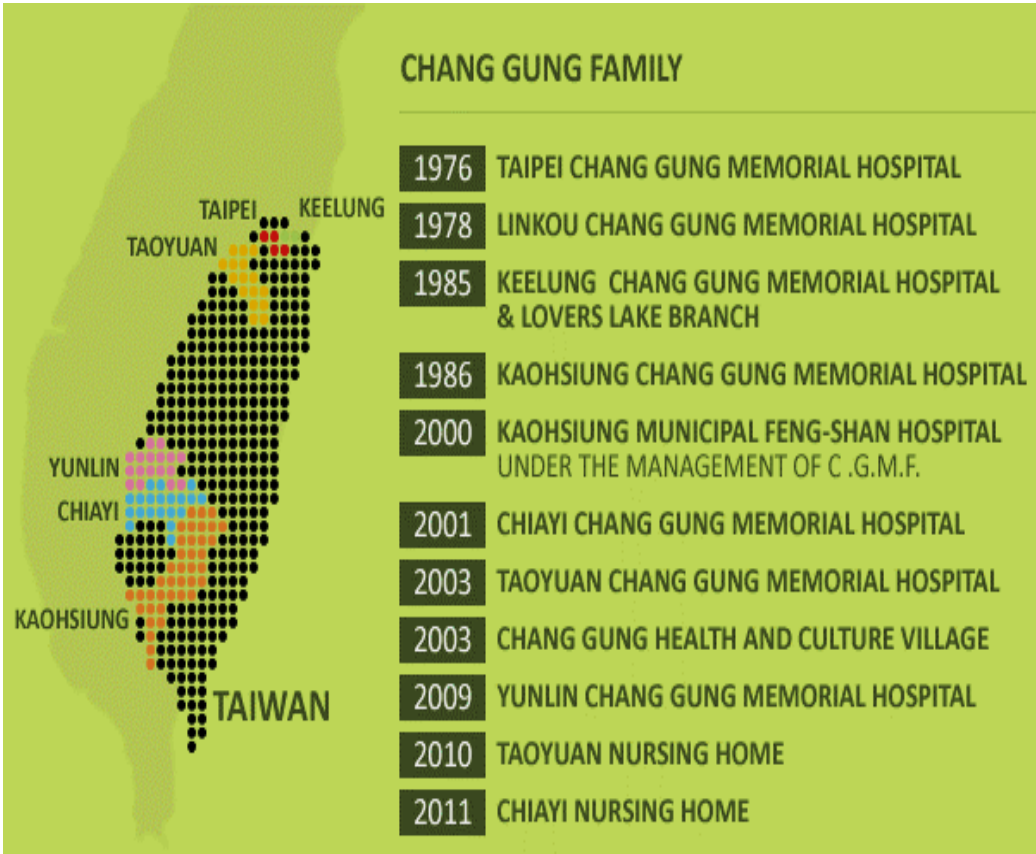
Chair Professor  
Yang-Chang Wu



## Mission objectives

1. To combine Kaohsiung Medical University with the Kaohsiung Medical University Hospital and the basic clinical medicine, reaching to a new milestone in the translational medical research.
2. To explore the active fractions and pharmacological mechanism of action for active compounds obtained from Chinese Herbal Medicines.
3. Toxicology and animal model validation and other preclinical studies.
4. The investigation and development of active components (HPLC fingerprint) from Formosan Chinese Herbal Medicines.
5. To connect basic research and drug development, promote the application of clinical treatments and accelerate further research.
6. The integration and management of Taiwan's pure compounds and extracts database.

# Center for Traditional Chinese Medicine, Chang Gung Memorial Hospital, Taiwan



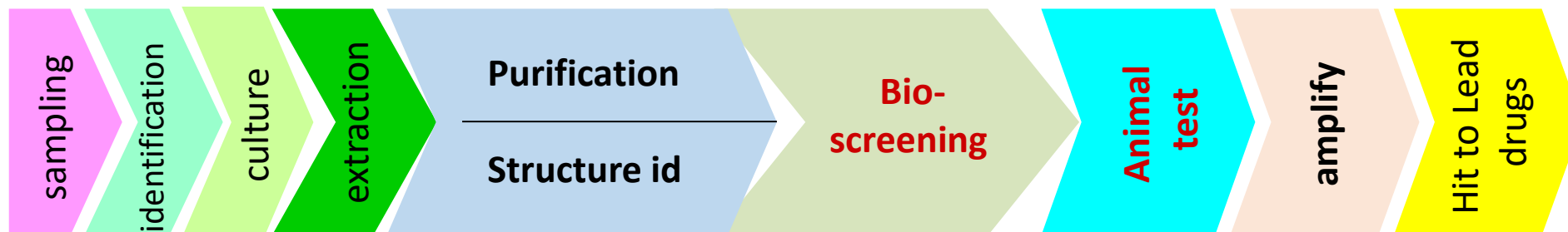
No	Authors	Article	Journal	Volume	No	Pages	Date of Publication
1	Lin PY, Chu CH, Chang FY, Huang YW, Tsai HJ, Yao TC	Trends and prescription patterns of traditional Chinese medicine use among subjects with allergic diseases: A nationwide population-based study	World Allergy Organization Journal	12	2	100001	Feb. 2019
2	Lin YH, Luck H, Khan S, Schneeberger PHH, Tsai S, et al	Aryl hydrocarbon receptor agonist indigo protects against obesity-related insulin resistance through modulation of intestinal and metabolic tissue immunity	International Journal of Obesity	10		1038	April 3, 2019 (online)
3	Chen YS, Liu HM, Lee TY	Ursodeoxycholic Acid Regulates Hepatic Energy Homeostasis and white Adipose Tissue Macrophages Polarization in Leptin-Deficiency Obese Mice	Cells	8	3	253	March 16, 2019
4	Cheng SC, Wu YH, Huang WC, Pang JH, Huang TH, Cheng CY	Anti-inflammatory property of quercetin through downregulation of ICAM-1 and MMP-9 in TNF-α-activated retinal pigment epithelial cells	Cytokine	116		48-60	April , 2019
5	Chen HY, Pan HC, Chen YC, Chen YC, Lin YH, Yang SH, Chang JL, Wu HT	Traditional Chinese medicine use is associated with lower end-stage renal disease an dmortality rates among patients with diabetic nephropathy: a population-based cohort study	BMC Complementary and Alternative Medicine	19		81	April 3, 2019
6	Lin CC, Yang CC, Chen YW, Hsiao LD, Yang CM	Arachidonic acid induces ARE/Nrf2-dependent heme oxygenase-1 transcription in rat brain astrocytes	Molecular Neurobiology	55	4	3328-3343	April 2018
7	Yang CC, Lin CC, Hsiao LD, Yang CM	Galangin Inhibits Thrombin-Induced MMP-9 Expression in SK-N-SH Cells via Protein Kinase-Dependent NF-κB Phosphorylation	International Journal of Molecular Sciences	19		4084	Dec. 17, 2018







# National Museum of Marine Biology and Aquarium-NMMBA

Prof. Sung : Drugs from the tank-Bioactive Marine Natural Products from the Cultured-type **Marine Invertebrates**







Seaweed



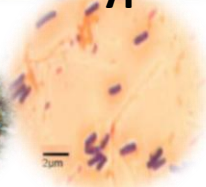
coral




plants



sponge




microbiology




Wild-type


NMR



In vitro Screening

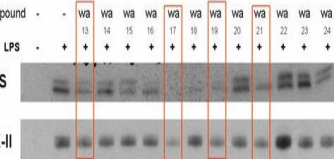
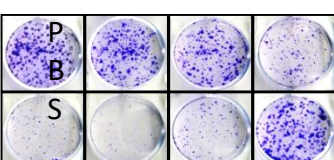


Animal diseases model

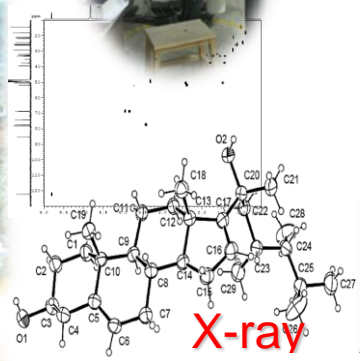





Anti-inflammation  
Anti-neuroinflammation  
neuroprotection  
Anti-cancer

Compound	13	14	15	16	17	18	19	20	21	22	23	24
LPS	-	+	+	+	+	+	+	+	+	+	+	+

X-ray







**Sinphar TianLi** is a certified pharmaceutical GMP, ISO 14001 and GMP botanical extraction factory, a subsidiary of Taiwan public listing company Sinphar Pharmaceuticals, established in 2001 located in Hangzhou China.



GAP & Organic farm

Fully Integrated Botanical Program Efficacy was

proved by science evidence

International patents

Partner with Global Corporations



## Innovative Functional Ingredients

### **Memoregain®**

(*Cistanche tubulosa* extracts)

Prevent and treatment dementia, anti-aging & reduce neurodegeneration

### **Protygold®**

(*Walnut oligopeptide*)

Maintain brain health, improve learning & memory, remove ROS

### **Lipucan®**

(*Poria cocos* triterpene)

Promote protein absorption, enhance muscle gene expression & Increase muscle strength

## About Sun Ten

Establish in:1946, over 70 years.

Products Portfolio : Traditional Chinese Herbal Extracts, Quality Medicinal Chinese Herbs, Over the Counter Products, ODM & OEM service.

Global Distribution : More than 20 countries, including the United States, Canada, Japan, Malaysia, Singapore, Australia, New Zealand, Switzerland, Germany, United Kingdom, Ireland, Sweden, Macau, Indonesia, etc.

## Manufacturing Excellence

Sun Ten is a leading manufacturer of traditional Chinese herbal extracts, producing dosage forms of powder, granule, tablet, capsule, honey pills and so on.

## Testing Standard



## Quality Warranty with Advanced Facility



## RD/QC certificate



## APP



# 3i Plant Factory Group (3i Herbal Plant Factory)



Production no pesticides, no heavy metals Chinese herbal medicine

無農藥、無重金屬  
藥用植物

Industrial-scale production of high-quality Chinese herbal medicine

產業量化規模生產  
高質量藥用植物

**Our Goals**  
企業使命

Promote market development of Chinese herbal medicine  
促進藥用植物市場發展

Promote development of Chinese herbal medicine internationally  
促進中草藥全球化市場的流通



The world's first mass-produced  
*Anoectochilus*, *Dendrobium* and *Antrodia cinnamomea* plant factory



# HAPPY FATHER'S DAY!!

CGCM, TAIWAN CHAPTER

