16 th CGCM

Polychemical Activities and Mechanism Studies I (Cancer, Immunomodulation and Inflammation)

Session I : 2017-08-19 (9:30-12:00)

8a. Polychemical Activities and Mechanism Study I (Cancer, Immunomodulation and Inflammation)		Name of Institute
Chairman	Yao-Haur KUO (NRICM)	National Research Institute of Chinese Medicine
Co-Chairman	Ming-Ching KAO (CMU)	China Medical University
Panelist	Jer-Yiing HOUNG (ISU)	I-Shou University
	Fulan Guan (Yale)	Yale University

12 poster were selected for oral presentation from 23 posters as the following 4 slides.

Posters and Selected Oral Presentation. (A)

Ref No.	No. in abstract book	Title	Institute	Region	Speaker /Corresponding Author	Oral presentation from selected posters
16	275	Functional magnetic nanoparticles targeted screening snow lotus anti-inflammatory ingredients	Hong Kong Baptist University	Hong Kong	Tao YI	
17	276	Preparation–dependent structural diversity and medical potential of ginseng pectins in the treatment of diabetes mellitus	Hong Kong Baptist University	Hong Kong	Tao YI	
27	277	Chemical components and antioxidant potential in Smilacis Glabrae Rhizoma as affected by sulphur-fumigation processing		Macau	Zhifeng ZHANG	
32	278	The Anti-Atherosclerotic Effect of Naringin Is Associated with Reduced Expressions of Cell Adhesion Molecules and Chemokines through NF-κB Pathway	China Medical University	Taichung	Sheng-Teng HUANG	Oral presentation
39	279	Effects of Xiaoqinglong decoction combined with Xiangsha-liujunzi decoction on airway hyperresponsiveness and cytokine levels in murine model of allergic asthma	Chang Gung Memorial Hospital	Taoyuan	Ting-I KAO	
66	280	Polyphyllin I suppresses human osteosarcoma growth by inactivation of Wnt/β-catenin pathway in vitro and in vivo	Spine Institute	Shanghai	Yan-ping YANG	Oral presentation

Posters and Selected Oral Presentation. (B)

Ref No.	No. in abstract book	Title	Institute	Region	Speaker /Corresponding Author	Oral presentation from selected posters
87	281	Effect of Ganoderma tsugae extract on HER2-overexpressing gastric cancer	China Medical University	Taichung	Ming-Ching KAO	
127	282	Bulnesia sarmientoi extract triggers necroptosis of lung cancer cells via TNF-a production and RIP1 expression	I-Shou University	Kaohsiung	Jer-Yiing HOUNG	Oral presentation
136	283	Research on inhibiton of Jiawei Foshou San invasion and metastasis in endometriosis	Southwest University	Chong Qing	PanHong Li /Yi CHEN	Oral presentation
164	284	Promoting activity of estrogenic Chinese herbal medicines in breast cancer growth — a paradoxical perception?	The Chinese University of Hong Kong	Hong Kong	Grace Yue /Clara Bik-San LAU	Oral presentation
166	285	Antimicrobial metabolites from Ginkgo biloba endophytic fungus Sclerostagonospora opuntiae.	Shenyang Pharmaceutical University	Shenyang	Yi-Xuan ZHANG	
178	286	Jianpiyifei II, a herbal formula, attenuated chronic obstructive pulmonary disease via NF-κB signaling	Guangdong Provincial Hospital	Guangdong	Lin LIN	

Posters and Selected Oral Presentation. (C)

Ref No.	No. in abstract book	Title	Institute	Region	Speaker /Corresponding Author	Oral presentation from selected posters
198	287	Anti-inflammatory Saponins from Momordica cochinchinensis.	National Research Institute of Chinese Medicine	Taipei	Yao-Haur KUO	
211	288	Spatholobi Caulis extracts promote angiogenesis in HUVECs in vitro and in zebrafish embryos in vivo via up-regulation of VEGFRs	Longhua Hospital affiliated to Shanghai University of Traditional Chinese Medicine	Shanghai	Jing-Yi TANG	
224	289	Pien Tze Huang reduces inflammatory cell infiltration and myelin damage in rats with experimental autoimmune encephalomyelitis	Hong Kong Baptist University	Hong Kong	Xiao-juan HE	
225	290	The anti-inflammatory activities of natural compounds from Formosan plants	National Yang-Ming University	Taipei	Yi Hsuan Chen /Maan Yuh Anya LIN	Oral presentation
275	291	Majority of Chinese Medicine Herbs "Qing Re Yao" Have Multiple Mechanisms of Anti-inflammatory Activity	Yale University	Connecticut	Fulan Guan /Yung-Chi CHENG	Oral presentation
276	292	Combination of YIV906(PHY906) and anti-PD1	Yale University	Connecticut	Wing Lam /Yung-Chi CHENG	Oral

Posters and Selected Oral Presentation. (D)

Ref No.	No. in abstract book	Title	Institute	Region	Speaker /Corresponding Author	Oral presentation from selected posters
292	293	Effects of Radiotherapy for Nasopharyngeal Carcinoma on Ischemic Stroke TCM Syndrome-A retrospective study on the basis of hospitals in the southern cities in China	Shunde hospital Affiliated Hospital of Guangzhou University of TCM	Guangdong	Wei-yu DENG	
306	294	XIAOPI formula prevents breast cancer via TAMS/CXCL-1 signaling, a network pharmacology approach	Guangdong Provincial Hospital of Chinese Medicine	Guangdong	Zhi-yu WANG	Oral presentation
311	295	Induction of apoptosis of AML cells by Z-ligustilide through epigenetic activation of Nur77 and NOR-1	Southwest University	Chongqing	Yi Yang /Hong-yi QI	Oral presentation
312	296	Z-Ligustilide inhibits proliferation and induced differentiation in human acute myeloid leukemia cells	Southwest University	Chongqing	Guojun Dou /Hong-yi QI	Oral presentation
322	297	Mangiferin indcue lupus nephritis autoimmune tolerance by upregulating CD4+FoxP3 Tregs	Guangdong Provincial Hospital of Chinese Medicine	Guangdong	Chun-Ling Liang /Zhen-hua DAI	Oral presentation

Session of Polychemical Activities and Mechanism Studies I (Cancer, Immunomodulation and Inflammation)

12 oral presentation topics and highlighted conclusions were listed as following 12 slides

Majority of Chinese Herbs “Qing Re Yao” Have Multiple Mechanisms of Anti-inflammatory Activity

Fulan Guan, Wing Lam, Rong Hu, Yun Kyung Kim, Hua Han and Yung-Chi Cheng*

Department of Pharmacology, Yale University School of Medicine

1. **Most herbs in the class of “Qing Re Yao” have anti-inflammation activities mediated through different mechanisms. This category of “heat” of TCM is likely associated with inflammation**
2. **Several “Qing Re Yao” herbs exhibited inhibitory effects on the IL-6 induced stat3 mediated transcription and the INFγ induced GAS mediated transcription but they had different impacts on stat3 and GAS downstream target genes.**
3. **Although different herbs could inhibit the same signal transduction pathways, their impact on the downstream mRNA were not affected equally by those herbs**

Combination of PHY906(YIV906) and anti-PD1 for the treatment of liver cancer

Wing Lam[1], Zaoli Jiang[1], Xie han[2], Fulan Guan[1],
Shwu-Huey Liu[1, 3], Lieping Chen[2] and Yung-Chi Cheng[1]*

Yale University School of Medicine

YIV906 and anti-PD1 (Nivolumab) combination had an stronger anti-tumor effect than anti-PD1 alone.

Biostatical analysis, based on the mRNA expression of M1 and M2-like macrophage signature genes, suggest the tumor microenvironment is favorable for M1 status following YIV906 plus anti-PD1 treatment.

Genes related to M1-like macrophages and T cell activation were up-regulated in the tumor tissues following YIV906 plus anti-PD1 treatment.

A network pharmacology-based validation of TAMS/CXCL-1 as key mediator of XIAOPI formula preventing breast cancer development and metastasis

王志宇 (ZhiYu Wang)

广东省中医药科学院 广州中医药大学第二附属医院

- CXCL-1 was the key target of XIAOPI formula. It was found to promote breast cancer metastasis via NF-kB/SOX4 signaling pathway.
- This study provide novel light in CXCL-1-based therapeutic strategy for mammary malignancies.

Promoting activity of estrogenic Chinese herbal medicines in breast cancer growth — a paradoxical perception?

Grace Gar-Lee Yue, Clara Bik-San Lau

Institute of Chinese Medicine, The Chinese University of Hong Kong

黃芪 (AM)

Astragalus membranaceus (Fisch.) Bge

菟絲子 (CC)

Cuscuta chinensis Lam.

山藥 (DO)

Dioscorea opposita Thunb.

淫羊藿 (EB)

Epimedium brevicornum Maxim.

甘草 (GU)

Glycyrrhiza uralensis Fisch.

川芎 (LC)

Ligusticum chuanxiong Hort.

補骨脂 (PC)

Psoralea corylifolia L.

人參 (PG)

Panax ginseng C. A. Mey.

葛根 (PL)

Pueraria lobata (Willd.) Ohwi

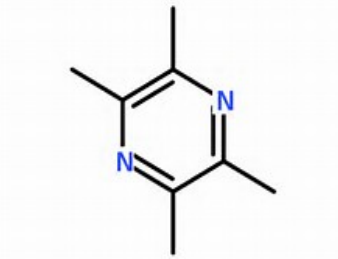
- There were differential effects of selected estrogenic Chinese herbal medicines on viability and proliferation of breast cancer cells; however, the potential promoting effect was not observed in both mouse/human breast tumor-bearing mice.

Inhibition of Jiawei Foshou San on invasion and metastasis in endometriosis

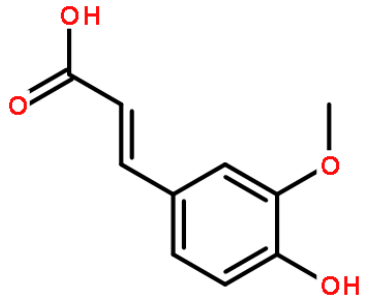
Yi Chen

College of Pharmaceutical Sciences, Southwest University

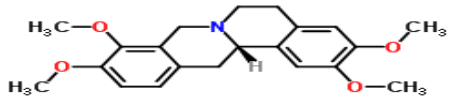
The JWFSS can inhibit the growth of ectopic endometrium, modify structure of ectopic endometrial. The mechanism may be related to the inhibition of invasion and metastasis. It provides foundation of JWFSS in EMS.



ligustrazine



ferulic acid



tetrahydropalmatine

Bulnesia sarmientoi (玉檀木) extract triggers necroptosis of lung cancer cells via TNF-α production and RIPs expression

Jer-Yiing Houng (洪哲穎)

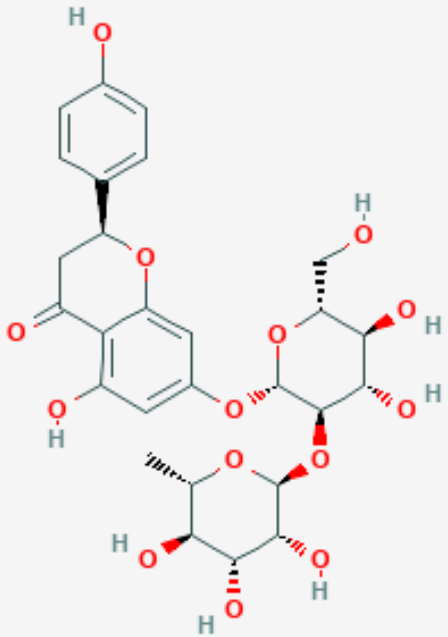
Department of Nutrition, I-Shou University (义守大学), Kaohsiung

1. **BSE inhibited significantly on the proliferation of lung cancer cells, but it exhibited relatively low cytotoxicity on MRC-5 normal cells.**

2. **BSE triggered the death of lung cancer cells via the necroptosis pathway.**

The Anti-Atherosclerotic Effect of Naringin Is Associated with Reduced Expressions of Cell Adhesion Molecules and Chemokines through NF-κB Pathway

Sheng-Teng Huang
China Medical University



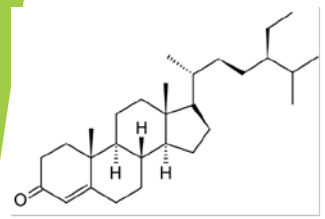
Naringin

- **Naringin inhibited the expressions of TNF-α-induced adhesion molecules and chemokines to decrease the adhesion of THP-1 to TNF-α-stimulated human umbilical vein endothelial cells (HUVECs) through blocking the NF-κB translocation and phosphorylation of NF-κB and IκB signaling pathway.**
- **These findings may provide atheoretical basis of the clinical application of naringin for atherosclerosis diseases.**

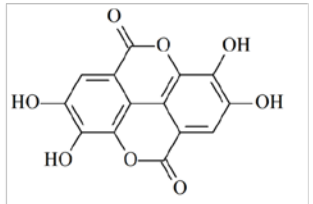
The anti-inflammatory activities of natural compounds from Formosan plants

Wei Chung Zhao (趙緯忠), Yi Hsuan Chen (陳乙萱), Te-Jung Kung (龔得榕), Jih-Jung Chen (陳日榮), Anya Maan-Yuh Lin* (林滿玉)

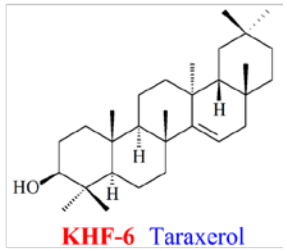
Institute of Pharmacology, Faculty of Pharmacy, National Yang-Ming University



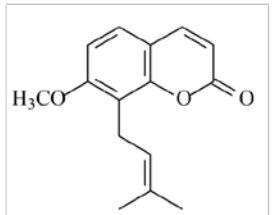
KHF-1 β-sitostenone



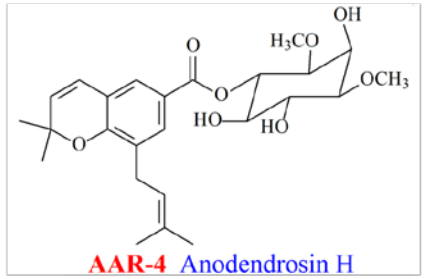
KHF-2 Ellagic acid



KHF-6 Taraxerol



CM-6 Osthol



AAR-4 Anodendrosin H

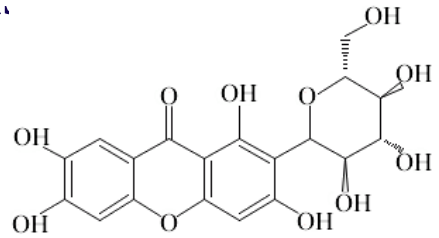
- KHF-2 was most significant in attenuating LPS-induced elevation in COX-II, iNOS, activated caspase 1 and IL-1β. KHF-2 elevated HO-1 in the treated primary cultured astrocytes and attenuated Fe(2+)-induced lipid peroxidation of brain homogenates.
- KHF-2 may be anti-inflammatory via anti-oxidative activity and promoting the formation of HO-1. KHF-2 may be translationally useful in inhibiting neuroinflammation in stroke and other CNS neurodegenerative diseases.

Mangiferin ameliorates autoimmune lupus nephritis by upregulating CD4+Foxp3+ Tregs

Chun-ling Liang, Feifei Qiu, Huazhen Liu, Zhenhua Dai

Section of Immunology, Guangdong Provincial Hospital of Chinese Medicine

- MG improves renal function and ameliorate lupus nephritis.
- MG promotes the generation of CD4+Foxp3+ Tregs *in vivo* and *in vitro*.
- MG treatment may be a good alternative to the traditional immunosuppressive drugs in the treatment of lupus nephritis



Mangiferin

Polyphyllin I (PPI) suppresses human osteosarcoma growth by inactivation of Wnt/β-catenin signaling *in vitro and in vivo*

Yanping Yang

Longhua Hospital, Shanghai University of TCM

- **inhibits osteosarcoma growth *in vitro* and *in vivo***
- **induces cell apoptosis, cell cycle arrest**
- **inhibits invasion and migration**
- **targets Wnt/β-catenin signaling pathway**
- **can serve a novel therapeutic option for OS patients**

西南大学
Southwest University

Z-Ligustilide inhibited proliferation and induced differentiation in human acute myeloid leukemia cells

Guojun Dou, Hongyi Qi *

College of Pharmaceutical Sciences, Southwest University, 2 Tiansheng Road, Beibei District, Chongqing 400716, China
Correspondence: hongyiqi@swu.edu.cn

Z-Ligustilide (Z-LIG) is a major component in Rhizoma Chuanxiong, which has been traditionally used as a health food supplement for the prevention of cerebrovascular disease in China. In the present study, we evaluate the antitumor effects of Z-LIG in human myeloid leukemia lineages.

Z-Ligustilide inhibited proliferation and induced differentiation in human acute myeloid leukemia cells and significantly prolonged leukemia-bearing mice survival.

Induction of apoptosis of AML cells by Z-ligustilide through epigenetic activation of Nur77 and Nor-1

Yi Yang, Hongyi Qi *

College of Pharmaceutical Sciences, Southwest University, 2 Tiansheng Road, Beibei District, Chongqing 400716, China
Correspondence: hongyiqi@swu.edu.cn

Z-ligustilide-induced apoptosis of AML cells may be correlated with Nur77 mediated death receptor pathway and the mitochondria localization of Nur77 and subsequent Bcl-2 conformational change.

Epigenetics of Nur77 and Nor-1 by Z-ligustilide induced apoptosis in AML cells.