



## Graphical Abstracts/Fitoterapia 119 (2017) e1-e9

### Highly oxygenated lanostane-type triterpenoids and their bioactivity from the fruiting body of *Ganoderma gibbosum*

Fitoterapia 119 (2017) pp. 1–7

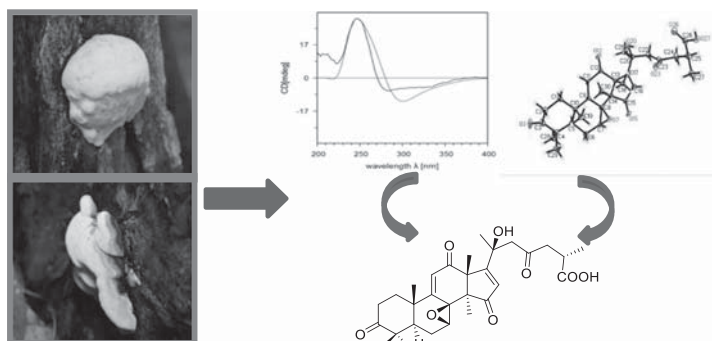
De-Bing Pu<sup>a,d,1</sup>, Xi Zheng<sup>b,1</sup>, Jun-Bo Gao<sup>a,d</sup>, Xing-Jie Zhang<sup>c</sup>, Yan Qi<sup>b</sup>, Xiao-Si Li<sup>b</sup>, Yong-Mei Wang<sup>a,d</sup>, Xiao-Nian Li<sup>a</sup>, Xiao-Li Li<sup>c,\*</sup>, Chun-Ping Wan<sup>b,\*</sup>, Wei-Lie Xiao<sup>a,c,\*</sup>

<sup>a</sup>State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650201, PR China

<sup>b</sup>Central Laboratory, The No. 1 Affiliated Hospital of Yunnan University of Traditional Chinese Medicine, Kunming 650021, PR China

<sup>c</sup>Key Laboratory of Medicinal Chemistry for Natural Resource, Ministry of Education, School of Chemical Science and Technology, and State Key Laboratory for Conservation and Utilization of Bio-Resources in Yunnan, Yunnan University, Kunming 650091, PR China

<sup>d</sup>University of Chinese Academy of Sciences, Beijing 100049, PR China



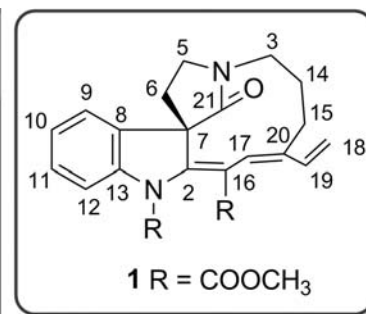
### Three novel indole alkaloids from *Kopsia officinalis*

Fitoterapia 119 (2017) pp. 8–11

Zhi-Wei Wang<sup>a,\*,1</sup>, Xiao-Jian Shi<sup>b,1</sup>, Yan Mu<sup>a</sup>, Lei Fang<sup>a</sup>, Yue Chen<sup>a</sup>, Yun-Liang Lin<sup>a</sup>

<sup>a</sup>Shandong Key Laboratory of TCM Quality Control Technology, Shandong Analysis and Test Center, Shandong Academy of Sciences, 19 Keyuan Street, Jinan, Shandong 250014, China

<sup>b</sup>Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Haik Road 501, Shanghai 201203, China



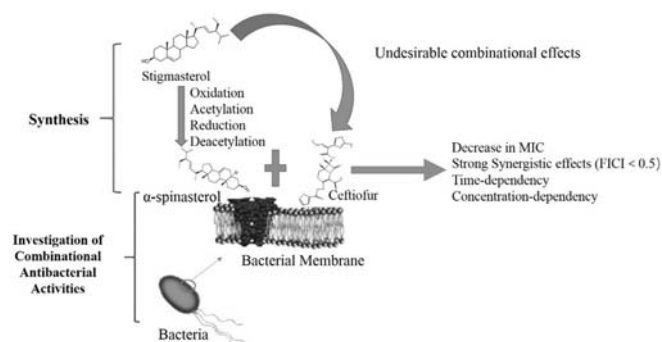
### A novel method for synthesis of $\alpha$ -spinasterol and its antibacterial activities in combination with ceftiofur

Fitoterapia 119 (2017) pp. 12–19

Xiaomin Yang<sup>a</sup>, Jianyu Zhou<sup>a</sup>, Tao Wang<sup>b</sup>, Ling Zhao<sup>a</sup>, Gang Ye<sup>a</sup>, Fei Shi<sup>a</sup>, Yinglun Li<sup>b,\*</sup>, Huaqiao Tang<sup>a</sup>, Qi Dong<sup>a</sup>, Xuerong Zhou<sup>a</sup>, Min Xu<sup>a</sup>, Qian Rong<sup>a</sup>, Helin Chen<sup>a</sup>, Xiaoyu Yang<sup>a</sup>, Yu Cai<sup>a</sup>

<sup>a</sup>Department of Pharmacy, College of Veterinary Medicine, Sichuan Agricultural University, Chengdu, Sichuan 611130, China

<sup>b</sup>Chengdu Institute of Biology, Chinese Academy of Sciences, Chengdu 610041, China

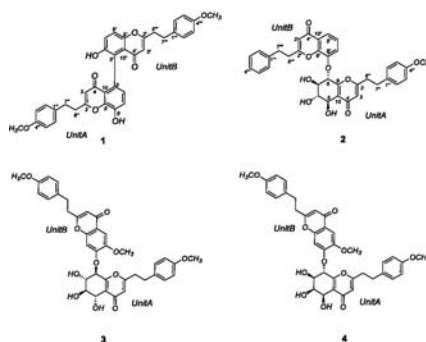


### Four new bi-2-(2-phenylethyl)chromone derivatives of agarwood from *Aquilaria crassna*

Yang Yang<sup>a</sup>, Wen-Li Mei<sup>b</sup>, Fan-Dong Kong<sup>b</sup>,  
Hui-Qin Chen<sup>b</sup>, Wei Li<sup>b</sup>, Zhi-Bao Chen<sup>b,\*</sup>,  
Hao-Fu Dai<sup>b,\*</sup>

<sup>a</sup>College of Life Science and Technology, Heilongjiang Bayi Agricultural University, Daqing 163319, China

<sup>b</sup>Key Laboratory of Biology and Genetic Resources of Tropical Crops, Ministry of Agriculture, Institute of Tropical Bioscience and Biotechnology, Chinese Academy of Tropical Agricultural Sciences, Haikou 571101, China



### Inhibition of human CYP3A4 and CYP3A5 enzymes by gomisin C and gomisin G, two lignan analogs derived from *Schisandra chinensis*

Jin Zhao<sup>a</sup>, Tao Sun<sup>b</sup>, Jing-Jing Wu<sup>c,d</sup>,  
Yun-Feng Cao<sup>c,d,e</sup>, Zhong-Ze Fang<sup>d,f</sup>, Hong-Zhi Sun<sup>d</sup>,  
Zhi-Tu Zhu<sup>d</sup>, Kun Yang<sup>f</sup>, Yong-Zhe Liu<sup>f</sup>,  
Frank J. Gonzalez<sup>g</sup>, Jun Yin<sup>a,\*</sup>

<sup>a</sup>School of Traditional Chinese Medicine, Shenyang Pharmaceutical University, Shenyang 110016, China

<sup>b</sup>Department of Breast Medicine, Liaoning Cancer Hospital & Institute, Shenyang 110042, China

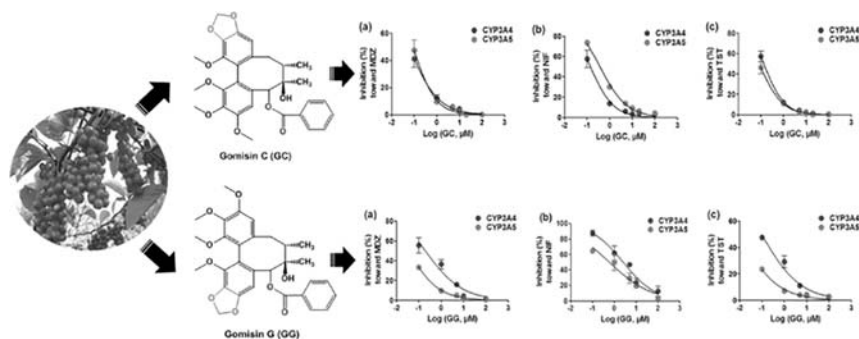
<sup>c</sup>Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian 116023, China.

<sup>d</sup>Key Laboratory of Liaoning Tumor Clinical Metabolomics (KLLTCM), Jinzhou, Liaoning, China.

<sup>e</sup>Key Laboratory of Contraceptives and Devices Research (NPFPC), Shanghai Engineer and Technology Research Center of Reproductive Health Drug and Devices, Shanghai Institute of Planned Parenthood Research, Shanghai, China

<sup>f</sup>Department of Toxicology, School of Public Health, Tianjin Medical University, 22 Qixiangtai Road, Heping District, Tianjin 300070, China

<sup>g</sup>Laboratory of Metabolism, Center for Cancer Research, National Institutes of Health, Building 37, Room 3106, Bethesda, MD 20892, USA



### A new cineol derivative, polyphenols and nortriterpenoids from Saharan myrtle tea (*Myrtus nivellei*): Isolation, structure determination, quantitative determination and antioxidant activity

Amira Mansour<sup>a</sup>, Rita Celano<sup>b</sup>, Teresa Mencherini<sup>b</sup>, Patrizia Picerno<sup>b</sup>, Anna Lisa Piccinelli<sup>b</sup>, Yazid Foudil-Cherif<sup>a</sup>, Dezső Csupor<sup>c</sup>, Ghania Rahili<sup>d,e</sup>, Nassima Yah<sup>e</sup>, Seyed Mohammad Nabavi<sup>f</sup>, Rita Patrizia Aquino<sup>b</sup>, Luca Rastrelli<sup>b,g</sup>

<sup>a</sup>USTHB, University of Sciences and Technology Houari Boumediene, Faculty of Chemistry, BP 32 El-Alia, Bab-Ezzouar, 16111, Algiers, Algeria

<sup>b</sup>Dipartimento di Farmacia, University of Salerno, Via Giovanni Paolo II, 132 84084 Fisciano, SA, Italy

<sup>c</sup>University of Szeged, Faculty of Pharmacy, Department of Pharmacognosy, 6720 Szeged, Eötvös u. 6, Magyarország, Hungary

<sup>d</sup>INRF National Institute of Forest Research, BP 37 Bainem, Algeria

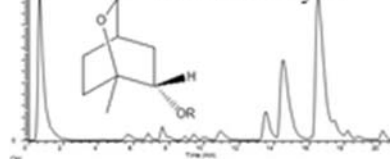
<sup>e</sup>USTHB, University of Sciences and Technology Houari Boumediene, Faculty of Biological Sciences, BP 32 El-Alia, Bab-Ezzouar, 16111, Algiers, Algeria

<sup>f</sup>Applied Biotechnology Research Center, Baqiyatallah University of Medical Sciences, P.O. Box 19395-5487, Tehran, Iran

*Myrtus nivellei* leaves  
decoction and  
infusion



UHPLC-ESI-HRMS profile  
and NMR analysis



myricetin derivatives content  
and antioxidant activity

### Scubatines A–F, new cytotoxic neo-clerodane diterpenoids from *Scutellaria barbata* D. Don

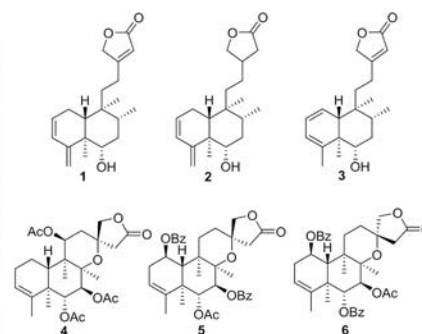
Qing-Qing Yuan<sup>a,b</sup>, Wei-Bin Song<sup>a</sup>, Wen-Qiong Wang<sup>a</sup>, Li-Jiang Xuan<sup>a,\*</sup>

<sup>a</sup>State Key Laboratory of Drug Research, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, 501 Haik Road, Shanghai 201203, PR China

<sup>b</sup>University of Chinese Academy of Sciences, No.19A Yuquan Road, Beijing 100049, PR China



*Scutellaria barbata* D. Don



### Neolignans and serratane triterpenoids with inhibitory effects on xanthine oxidase from *Palhinhaea cernua*

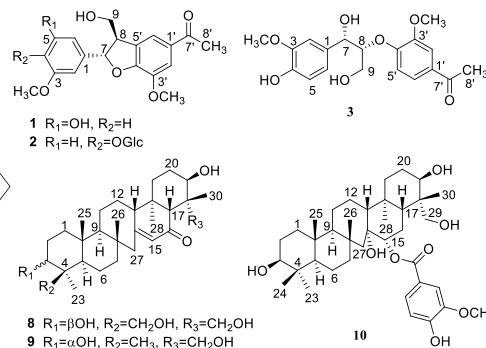
Jing Li<sup>a,b</sup>, Ping-Sheng Xu<sup>a</sup>, Lei-Hong Tan<sup>b</sup>, Zhen-Xing Zou<sup>a,b</sup>, Yi-Kun Wang<sup>b</sup>, Hong-Ping Long<sup>b</sup>, Gan Zhou<sup>a</sup>, Guang Li<sup>b</sup>, Kang-Ping Xu<sup>b,\*</sup>, Gui-Shan Tan<sup>a,b,\*</sup>

<sup>a</sup>Xiangya Hospital of Central South University, Changsha 410008, PR China

<sup>b</sup>Xiangya School of Pharmaceutical Sciences, Central South University, Changsha 410013, PR China



*Palhinhaea cernua*

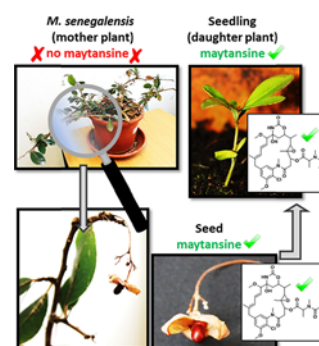


### Spatial profiling of maytansine during the germination process of *Maytenus senegalensis* seeds

Fitoterapia 119 (2017) pp. 51–56

Dennis Eckelmann, Souvik Kusari\*, Michael Spiteller\*

Institute of Environmental Research (INFU), Department of Chemistry and Chemical Biology, Chair of Environmental Chemistry and Analytical Chemistry, TU Dortmund, Otto-Hahn-Straße 6, 44221 Dortmund, Germany

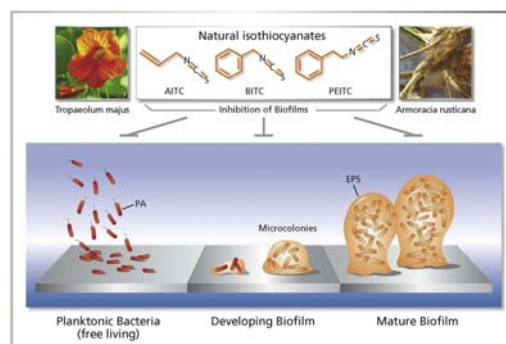


### Natural isothiocyanates express antimicrobial activity against developing and mature biofilms of *Pseudomonas aeruginosa*

Fitoterapia 119 (2017) pp. 57–63

Stefan J. Kaiser<sup>1</sup>, Nico T. Mutters<sup>1</sup>, Brigitte Blessing, Frank Günther\*

Heidelberg University Hospital, Department of Infectious Diseases, Germany



### Prenylated flavonoids from the stems and roots of *Tripterygium wilfordii*

Fitoterapia 119 (2017) pp. 64–68

Yang Chen<sup>a</sup>, Jianping Zhao<sup>b</sup>, Yixing Qiu<sup>a</sup>, Hanwen Yuan<sup>a</sup>, Shabana I. Khan<sup>b</sup>, Nusrat Hussain<sup>a,c</sup>, M. Iqbal Choudhary<sup>c</sup>, Feng Zeng<sup>d</sup>, De-An Guo<sup>d</sup>, Ikhlas A. Khan<sup>b</sup>, Wei Wang<sup>a,\*</sup>

<sup>a</sup>TCM and Ethnomedicine Innovation & Development Laboratory, Sino-Pakistan TCM and Ethnomedicine Research Center, School of Pharmacy, Hunan University of Chinese Medicine, Changsha 410208, PR China

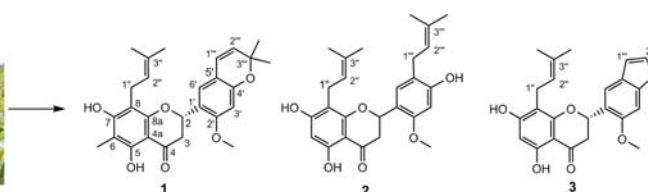
<sup>b</sup>National Center for Natural Products Research, Research Institute of Pharmaceutical Sciences, University of Mississippi, University, MS 38677, United States

<sup>c</sup>H.E.J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Karachi 75270, Pakistan

<sup>d</sup>Shanghai Research Center for Modernization of Traditional Chinese Medicine, National Engineering Laboratory for TCM Standardization Technology, Shanghai Medica, CAS, Shanghai 201203, China



*Tripterygium wilfordii*



### New ursane-type triterpenoids from *Clerodendranthus spicatus*

*Fitoterapia* 119 (2017) pp. 69–74

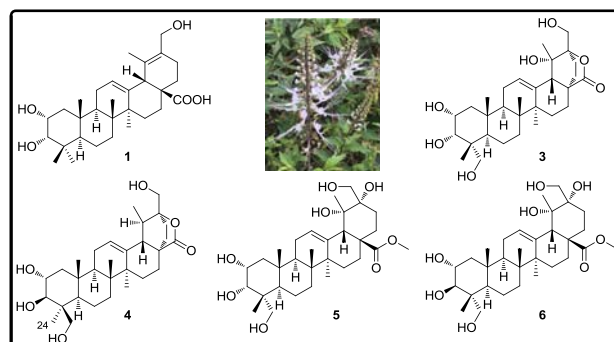
Yong Luo<sup>a,b,1</sup>, Li-Zhi Cheng<sup>b,c,1</sup>, Qi Luo<sup>b,d,1</sup>, Yong-Ming Yan<sup>b</sup>, Shu-Mei Wang<sup>c</sup>,  
Qin Sun<sup>a,\*</sup>, Yong-Xian Cheng<sup>b,\*</sup>

<sup>a</sup>Southwest Medical University, Luzhou 646000, PR China

<sup>b</sup>State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming  
Institute of Botany, Chinese Academy of Sciences, Kunming 650201, PR China

<sup>c</sup>Guangdong Pharmaceutical University, Guangzhou 5100069, PR China

<sup>d</sup>University of Chinese Academy of Sciences, Yuquan Road 19, Beijing 100049, PR China



### Six new sesquiterpenoids from *Nardostachys chinensis* Batal

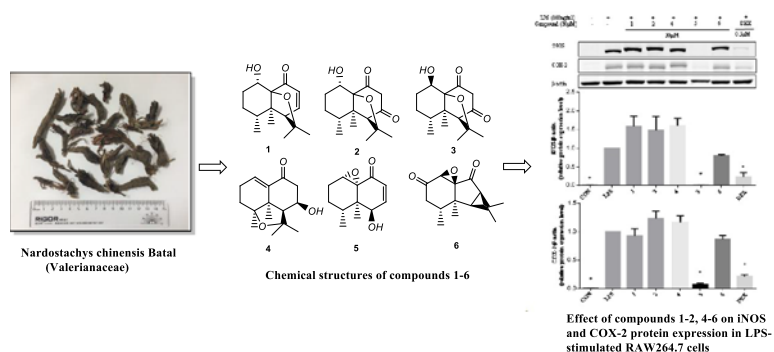
*Fitoterapia* 119 (2017) pp. 75–82

Xiu-yu Shen<sup>a</sup>, Yang Yu<sup>b</sup>, Guo-dong Chen<sup>b</sup>, Hua Zhou<sup>c</sup>,  
Jin-fang Luo<sup>c</sup>, Yi-han Zuo<sup>c</sup>, Xin-sheng Yao<sup>a,b,\*</sup>, Yi Dai<sup>b,\*</sup>

<sup>a</sup>College of Traditional Chinese Materia Medica, Shenyang  
Pharmaceutical University, Shenyang 110016, People's Republic of  
China

<sup>b</sup>Institute of Traditional Chinese Medicine and Natural Products,  
College of Pharmacy, Jinan University, Guangzhou 510632, People's  
Republic of China

<sup>c</sup>Key Laboratory of Quality Research in Chinese Medicine, Macau  
University of Science and Technology, Macau 999078, People's  
Republic of China



### New amides from seeds of *Silybum marianum* with potential antioxidant and antidiabetic activities

*Fitoterapia* 119 (2017) pp. 83–89

Ning-bo Qin<sup>a,b</sup>, Cui-cui Jia<sup>a,b</sup>, Jun Xu<sup>a,b</sup>, Da-hong Li<sup>a,b</sup>, Fan-xing Xu<sup>c</sup>, Jiao Bai<sup>a,b</sup>, Zhan-lin Li<sup>a,b,\*</sup>,  
Hui-ming Hua<sup>a,b,\*</sup>

<sup>a</sup>Key Laboratory of Structure-Based Drug Design & Discovery, Ministry of Education, Shenyang Pharmaceutical  
University, Shenyang 110016, Liaoning, People's Republic of China

<sup>b</sup>School of Traditional Chinese Materia Medica, Shenyang Pharmaceutical University, Shenyang 110016, Liaoning,  
People's Republic of China

<sup>c</sup>Wuya College of Innovation, Shenyang Pharmaceutical University, Shenyang 110016, Liaoning, People's Republic of  
China



### Chlorajaponols A–F, sesquiterpenoids from *Chloranthus japonicus* and their *in vitro* anti-inflammatory and anti-tumor activities

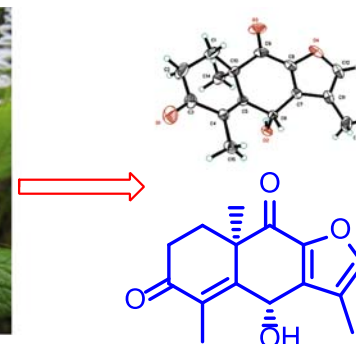
Fitoterapia 119 (2017) pp. 90–99

Zhi-Guo Zhuo<sup>a,1</sup>, Guo-Zhen Wu<sup>a,1</sup>, Xin Fang<sup>a</sup>, Xin-Hui Tian<sup>a</sup>, Hong-Yuan Dong<sup>a</sup>, Xi-Ke Xu<sup>a</sup>, Hui-Liang Li<sup>a</sup>, Ning Xie<sup>c</sup>, Wei-Dong Zhang<sup>a,b,\*</sup>, Yun-Heng Shen<sup>a,\*</sup>

<sup>a</sup>Department of Phytochemistry, School of Pharmacy, Second Military Medical University, Shanghai 200433, PR China

<sup>b</sup>Shanghai Institute of Pharmaceutical Industry, Shanghai 200433, PR China

<sup>c</sup>State Key Laboratory of Innovative Natural Medicine and TCM Injections, PR China



### Chemical constituents from the whole plants of *Pilea cavaleriei* Levl subsp. *cavaleriei*

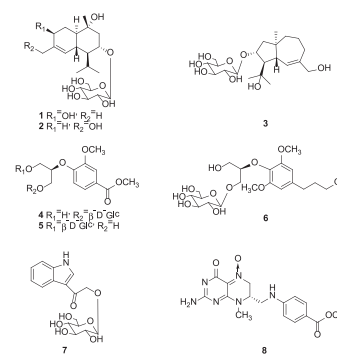
Fitoterapia 119 (2017) pp. 100–107

Yong Zhou<sup>a,b</sup>, Ling-Yu Li<sup>c</sup>, Heng-Chun Ren<sup>a</sup>, Ri-Dong Qin<sup>a</sup>, Qin Li<sup>a</sup>, Peng-Fei Tu<sup>a</sup>, Gui-Fang Dou<sup>b</sup>, Qing-Ying Zhang<sup>a,\*</sup>, Hong Liang<sup>a,\*</sup>

<sup>a</sup>State Key Laboratory of Natural and Biomimetic Drugs, School of Pharmaceutical Sciences, Peking University Health Science Center, Beijing 100191, PR China

<sup>b</sup>State Key Laboratory of Drug Metabolism, Laboratory of Hematological Pharmacology, Beijing Institute of Transfusion Medicine, Beijing 100850, PR China

<sup>c</sup>Institute of Medicinal Plant Development, Peking Union Medical College and Chinese Academy of Medical Sciences, Beijing 100193, PR China



### Antibacterial secondary metabolites from an endophytic fungus, *Fusarium solani* JK10

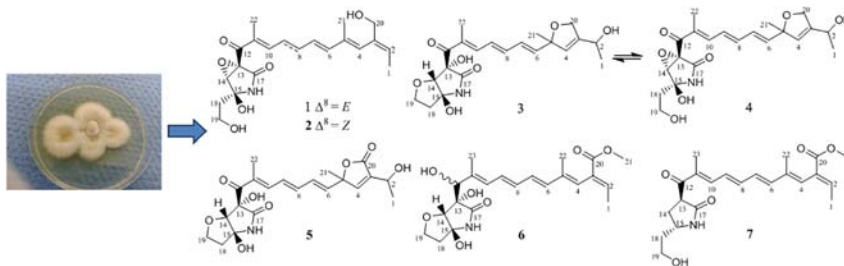
Fitoterapia 119 (2017) pp. 108–114

James Oppong Kyekyeku<sup>a,b</sup>, Souvik Kusari<sup>b,\*</sup>, Reimmel Kwame Adosraku<sup>a</sup>, Anke Bullach<sup>b</sup>, Christopher Golz<sup>c</sup>, Carsten Strohmann<sup>c</sup>, Michael Spiteller<sup>b,\*</sup>

<sup>a</sup>Department of Pharmaceutical Chemistry, Faculty of Pharmacy and Pharmaceutical Sciences, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

<sup>b</sup>Institute of Environmental Research (INFU), Department of Chemistry and Chemical Biology, Chair of Environmental Chemistry and Analytical Chemistry, TU Dortmund, Otto-Hahn-Straße 6, 44221 Dortmund, Germany

<sup>c</sup>Inorganic Chemistry, Department of Chemistry and Chemical Biology, TU Dortmund, Otto-Hahn-Straße 6, D-44221 Dortmund, Germany



### Flavonolignan 2,3-dehydrosilydianin activates Nrf2 and upregulates NAD(P)H:quinone oxidoreductase 1 in Hepa1c1c7 cells

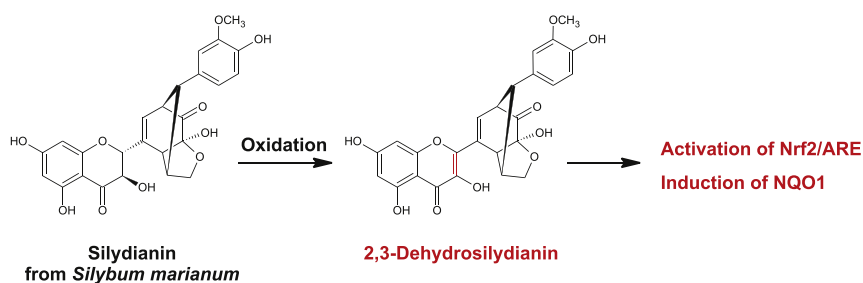
Lenka Roubalová<sup>a,b</sup>, Albenka T. Dinkova-Kostova<sup>c</sup>, David Biedermann<sup>d</sup>, Vladimír Křen<sup>d</sup>, Jitka Ulrichová<sup>a,b</sup>, Jiří Vrba<sup>a,b,\*</sup>

<sup>a</sup>Department of Medical Chemistry and Biochemistry, Faculty of Medicine and Dentistry, Palacký University, Hněvotínská 3, Olomouc 77515, Czech Republic

<sup>b</sup>Institute of Molecular and Translational Medicine, Faculty of Medicine and Dentistry, Palacký University, Hněvotínská 3, Olomouc 77515, Czech Republic

<sup>c</sup>Jacqui Wood Cancer Centre, Division of Cancer Research, School of Medicine, University of Dundee, Dundee DD1 9SY, Scotland, UK

<sup>d</sup>Institute of Microbiology, Laboratory of Biotransformation, Czech Academy of Sciences, Vídeňská 1083, Prague 14220, Czech Republic



*Fitoterapia* 119 (2017) pp. 115–120

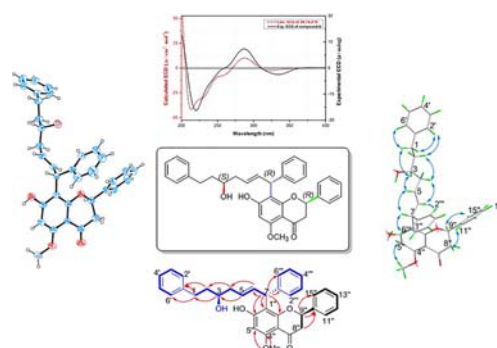
### Experimental and theoretical calculation studies on the structure elucidation and absolute configuration of calyxins from *Alpinia katsumadai*

Xiao-Bing Wang<sup>a</sup>, Chang-Shui Yang<sup>a,b,c</sup>, Jian-Guang Luo<sup>a</sup>, Chao Zhang<sup>a</sup>, Jun Luo<sup>a</sup>, Ming-Hua Yang<sup>a</sup>, Ling-Yi Kong<sup>a,\*</sup>

<sup>a</sup>State Key Laboratory of Natural Medicines, Department of Natural Medicinal Chemistry, China Pharmaceutical University, 24 Tong Jia Xiang, Nanjing 210009, PR China

<sup>b</sup>Medical school, Yangzhou University, 11 Huaihai Ave., Yangzhou 225001, PR China

<sup>c</sup>Jiangsu Co-innovation Center for Prevention and Control of Important Animal Infectious Diseases and Zoonoses, Yangzhou University, 88 South University Ave., Yangzhou 225009, PR China



*Fitoterapia* 119 (2017) pp. 121–129

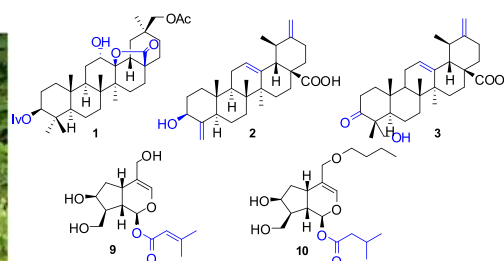
### Triterpenoids and iridoids from *Patrinia scabiosaefolia*

Zhen-Hua Liu<sup>a,b,c</sup>, Rui-Jing Ma<sup>a,b,c</sup>, Liu Yang<sup>a,c</sup>, Jin-Yu Li<sup>a,b,c</sup>, Bo Hou<sup>a,b,c</sup>, Jiang-Miao Hu<sup>a,c,\*</sup>, Jun Zhou<sup>a,c,\*</sup>

<sup>a</sup>State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650201, People's Republic of China

<sup>b</sup>University of Chinese Academy of Sciences, Beijing 100049, People's Republic of China

<sup>c</sup>Yunnan Key Laboratory of Natural Medicinal Chemistry, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650201, People's Republic of China



*Fitoterapia* 119 (2017) pp. 130–135





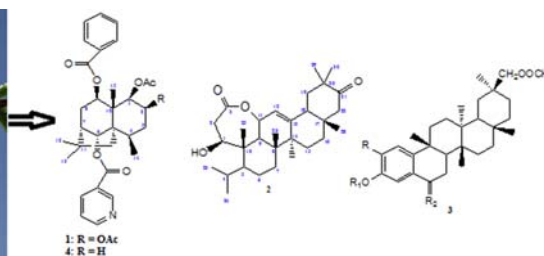
### Cyclooxygenase inhibitory compounds from *Gymnosporia heterophylla* aerial parts

Fitoterapia 119 (2017) pp. 168–174

Charles O. Ochieng<sup>a,\*</sup>, Sylvia A. Opiyo<sup>a</sup>,  
Edward W. Mureka<sup>a</sup>, Ismail O. Ishola<sup>b</sup>

<sup>a</sup>Department of Chemistry, Maseno University, Private Bag, 40105, Maseno, Kenya

<sup>b</sup>Department of Pharmacology, Faculty of Basic Medical Sciences, College of Medicine, University of Lagos, P.M.B. 12003 Lagos, Nigeria



### Chemotaxonomic and biosynthetic relationships between flavonolignans produced by *Silybum marianum* populations

Fitoterapia 119 (2017) pp. 175–184

Sameh F. AbouZid<sup>a,\*</sup>, Hayam S. Ahmed<sup>a</sup>, Abeer S. Moawad<sup>a</sup>,  
Asmaa I. Owis<sup>a</sup>, Shao-Nong Chen<sup>b,c</sup>,  
Amandine Nachtergaeel<sup>c</sup>, James B. McAlpine<sup>c</sup>,  
J. Brent Friesen<sup>c,d</sup>, Guido F. Pauli<sup>b,c</sup>

<sup>a</sup>Department of Pharmacognosy, Faculty of Pharmacy, Beni-Suef University, Beni-Suef 62111, Egypt

<sup>b</sup>UIC/NIH Center for Botanical Dietary Supplements Research, College of Pharmacy, University of Illinois at Chicago, 833 S. Wood St., M/C 781, Chicago, IL 60612, United States

<sup>c</sup>Department of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, University of Illinois at Chicago, 833 S. Wood St., M/C 781, Chicago, IL 60612, United States

<sup>d</sup>Physical Sciences Department, Rosary College of Arts and Sciences, Dominican University, 7900 West Division Street, River Forest, IL 60305, United States

