



## Graphical Abstracts/Bioorganic Chemistry 84 (2019) ii-xvi

## REGULAR ARTICLES

## Synthesis and antioxidant activity of new lipophilic dihydropyridines

Diego da Costa Cabrera<sup>a</sup>, Eduarda Santa-Helena<sup>b</sup>, Heloisa P. Leal<sup>a</sup>, Renata Rodrigues de Moura<sup>a</sup>, Luiz Eduardo Maia Nery<sup>b</sup>, Carla Amorim Neves Gonçalves<sup>b</sup>, Dennis Russowsky<sup>c</sup>, Marcelo G. Montes D'Oca<sup>a,\*</sup>

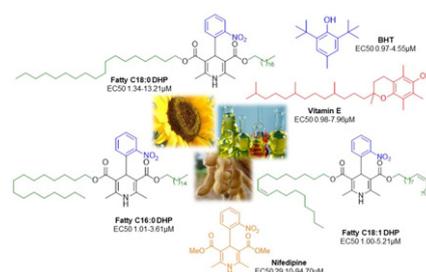
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<sup>b</sup>Institute of Biological Sciences, Federal University of Rio Grande-FURG, Rio Grande, RS, Brazil

<sup>c</sup>Laboratory of Organic Synthesis, Institute of Chemistry, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil

Bioorganic Chemistry 84 (2019) pp. 1–16

Synthesis and antioxidant activity of new lipophilic dihydropyridines



## Anti-melanogenesis potential of a new series of Morita-Baylis-Hillman adducts in B16F10 melanoma cell line

Emna Ketata<sup>a,\*</sup>, Haitham Elleuch<sup>b</sup>, Aref Neifar<sup>a,b,c</sup>, Wafa Mihoubi<sup>a</sup>, Wajdi Ayadi<sup>a</sup>, Naziha Marrakchi<sup>d</sup>, Farhat Rezgui<sup>b</sup>, Ali Gargouri<sup>a</sup>

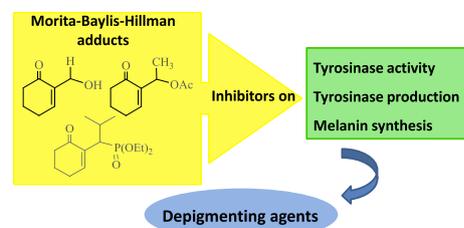
<sup>a</sup>Laboratoire de Biotechnologie Moléculaire des Eucaryotes, Centre de Biotechnologie de Sfax, Université de Sfax, Tunisia

<sup>b</sup>Laboratoire de Chimie Organique Structurale LR99ES14, Faculté des Sciences de Tunis, Université de Tunis El Manar, Campus Universitaire, 2092 Tunis, Tunisia

<sup>c</sup>Laboratoire de Biodiversité et Biotechnologie Marine, Institut National des Sciences et Technologies de la Mer (INSTM) Sfax, Tunisia

<sup>d</sup>Laboratoire des Venins et Toxines, Institut Pasteur de Tunis, Tunisia

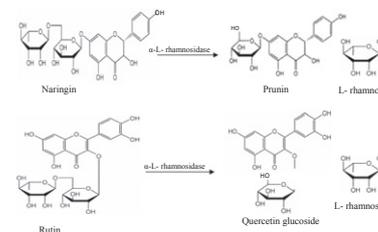
Bioorganic Chemistry 84 (2019) pp. 17–23

An alkali tolerant  $\alpha$ -L-rhamnosidase from *Fusarium moniliforme* MTCC-2088 used in de-rhamnosylation of natural glycosides

Dhirendra Kumar, Sarita Yadav<sup>\*</sup>, Sudha Yadava, K.D.S. Yadav

Department of Chemistry, Deen Dayal Upadhyay Gorakhpur University, Gorakhpur 273009, UP, India

Bioorganic Chemistry 84 (2019) pp. 24–31

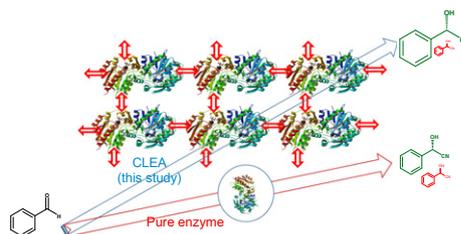


### Immobilized *Baliospermum montanum* hydroxynitrile lyase catalyzed synthesis of chiral cyanohydrins

Nisha Jangir, Santosh Kumar Padhi\*

*Biocatalysis and Enzyme Engineering Laboratory, Department of Biochemistry, School of Life Sciences, University of Hyderabad, Hyderabad 500 046, India*

*Bioorganic Chemistry 84 (2019) pp. 32–40*



### Synthesis and biological evaluation of new pyrazolone Schiff bases as monoamine oxidase and cholinesterase inhibitors

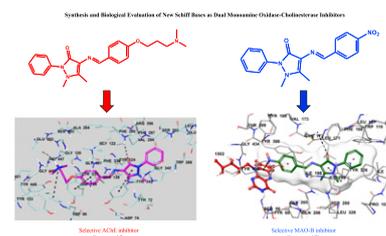
Fatih Tok<sup>a</sup>, Bedia Koçyiğit-Kaymakçioğlu<sup>a</sup>, Begüm Nurlpelin Sağlık<sup>b,c</sup>, Serkan Levent<sup>b,c</sup>, Yusuf Özkay<sup>b,c,e</sup>, Zafer Asım Kaplancıklı<sup>b</sup>

<sup>a</sup>*Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Marmara University, İstanbul, Turkey*

<sup>b</sup>*Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Anadolu University, Eskişehir, Turkey*

<sup>c</sup>*Doping and Narcotic Compounds Analysis Laboratory, Faculty of Pharmacy, Anadolu University, Eskişehir, Turkey*

*Bioorganic Chemistry 84 (2019) pp. 41–50*



### Design, synthesis and cytotoxicity of chimeric erlotinib-alkylphospholipid hybrids

Md. Maqusood Alam<sup>a,1</sup>, Ahmed H.E. Hassan<sup>b,c,1</sup>, Kun Won Lee<sup>a</sup>, Min Chang Cho<sup>a</sup>, Ji Seul Yang<sup>a</sup>, Jiho Song<sup>d</sup>, Kyung Hoon Min<sup>d</sup>, Jongki Hong<sup>b</sup>, Dong-Hyun Kim<sup>a</sup>, Yong Sup Lee<sup>a,b,e,\*</sup>

<sup>a</sup>*Department of Life and Nanopharmaceutical Sciences, Kyung Hee University, Seoul 02447, Republic of Korea*

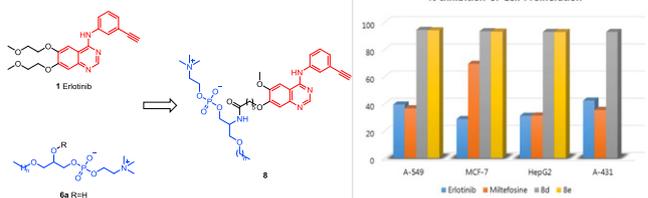
<sup>b</sup>*Department of Pharmacy, College of Pharmacy, Kyung Hee University, Seoul 02447, Republic of Korea*

<sup>c</sup>*Department of Medicinal Chemistry, Faculty of Pharmacy, Mansoura University, Mansoura 35516, Egypt*

<sup>d</sup>*Department of Pharmacy, College of Pharmacy, Chung-Ang University, Seoul 06974, Republic of Korea*

<sup>e</sup>*KHU-KIST Department of Converging Science and Technology, Kyung Hee University, Seoul 02447, Republic of Korea*

*Bioorganic Chemistry 84 (2019) pp. 51–62*



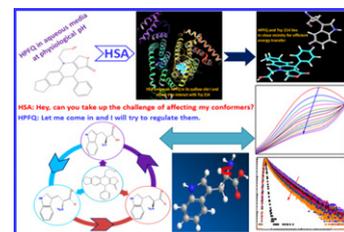
### Switching of Trp-214 intrinsic rotamer population in human serum albumin: An insight into the aftermath of embracing therapeutic bioorganic luminophore azapodophyllotoxin into sudlow site I

Soham Mukherjee<sup>a</sup>, Kapil Ganorkar<sup>a</sup>, Ajay Kumar<sup>b</sup>, Naina Sehra<sup>a</sup>, Sujit Kumar Ghosh<sup>a,\*</sup>

<sup>a</sup>*Department of Chemistry, Visvesvaraya National Institute of Technology, Nagpur, Maharashtra 440010, India*

<sup>b</sup>*International Centre for Trans-disciplinary Research, School of Environmental Affairs, Universidad Metropolitana, PR 00928, United States*

*Bioorganic Chemistry 84 (2019) pp. 63–75*

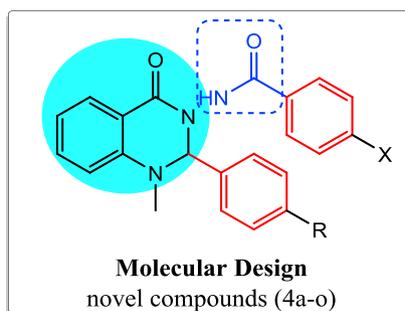


### 1,4-Dihydroquinazolin-3(2H)-yl benzamide derivatives as anti-inflammatory and analgesic agents with an improved gastric profile: Design, synthesis, COX-1/2 inhibitory activity and molecular docking study

Asmaa Sakr<sup>a,1</sup>, Hend Kothayer<sup>a,\*,1</sup>,  
Samy M. Ibrahim<sup>a</sup>, Mohamed M. Baraka<sup>a</sup>,  
Samar Rezaq<sup>b</sup>

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Zagazig University, Egypt

<sup>b</sup>Department of Pharmacology, Faculty of Pharmacy,  
Zagazig University, Egypt



Bioorganic Chemistry 84 (2019) pp. 76–86

● Heterocyclic ring    — Aryl rings  
□ Linker; Ester or Amide

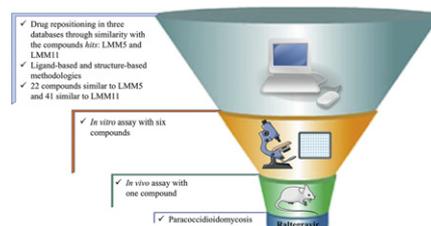
### Repurposing approach identifies new treatment options for invasive fungal disease

Isis Regina Grenier Capoci<sup>a,\*</sup>, Daniella Renata Faria<sup>a</sup>, Karina Mayumi Sakita<sup>a</sup>,  
Franciele Abigail Vilugron Rodrigues-Vendramini<sup>b</sup>, Patricia de Souza Bonfim-Mendonça<sup>a</sup>,  
Tania Cristina Alexandrino Becker<sup>a</sup>, Érika Seki Koshima<sup>a</sup>, Terezinha Inez Estivalet Svidzinski<sup>a</sup>,  
Bernard Maigret<sup>b</sup>

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<sup>b</sup>LORIA, Lorraine University, Nancy, France

Bioorganic Chemistry 84 (2019) pp. 87–97



### Biological evaluation and structure activity relationship of 9-methyl-1-phenyl-9H-pyrido[3,4-b]indole derivatives as anti-leishmanial agents

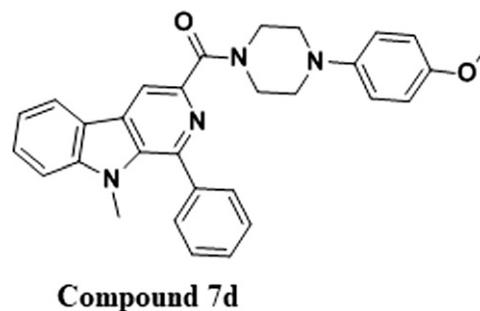
Penta Ashok<sup>a</sup>, Subhash Chander<sup>a,b</sup>, Terry K. Smith<sup>c</sup>, Rajnish Prakash Singh<sup>d</sup>, Prabhat Nath Jha<sup>d</sup>,  
Murugesan Sankaranarayanan<sup>a,\*</sup>

<sup>a</sup>Medicinal Chemistry Research Laboratory, Department of Pharmacy, Birla Institute of Technology & Science Pilani, Pilani Campus, Pilani 333031, Rajasthan, India

<sup>b</sup>School of Pharmacy, Maharaja Agrasen University, Atal ShikshaKunj, Solan, Himachal Pradesh 174103, India

<sup>c</sup>Schools of Biology & Chemistry, BSRC, The University, St. Andrews, Fife Scotland. KY16 9ST, UK

<sup>d</sup>Department of Biological Sciences, Birla Institute of Technology & Science Pilani, Pilani Campus, Pilani 333031, Rajasthan, India



Bioorganic Chemistry 84 (2019) pp. 98–105

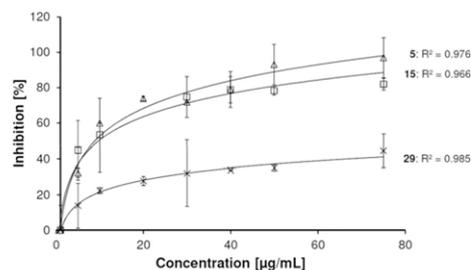
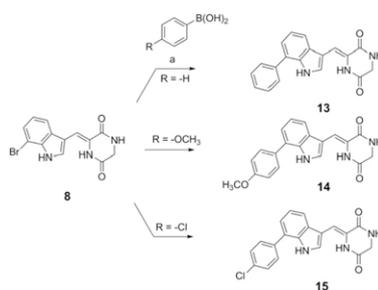
### Heterocyclic cellular lipid peroxidation inhibitors inspired by the marine antioxidant baretin

Christophe Labrière<sup>a,1</sup>, Jeanette H. Andersen<sup>b</sup>,  
Marte Albrigtsen<sup>b</sup>, Jørn H. Hansen<sup>a</sup>,  
Johan Svenson<sup>a,c,\*</sup>

<sup>a</sup>Department of Chemistry, UiT The Arctic University of Norway, Breivika, N-9037 Tromsø, Norway

<sup>b</sup>Marbio, The Norwegian College of Fishery Science, UiT The Arctic University of Norway, Breivika, N-9037 Tromsø, Norway

<sup>c</sup>Department of Chemistry and Materials, RISE Research Institutes of Sweden, Box 857, SE-501 15 Borås, Sweden



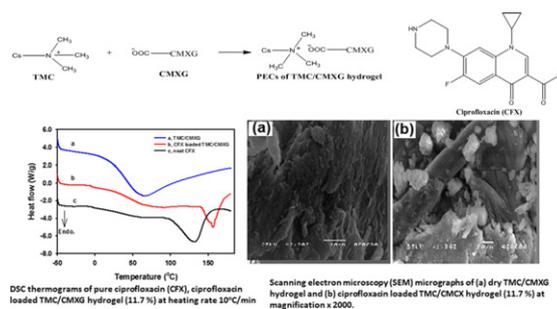
Bioorganic Chemistry 84 (2019) pp. 106–114

### Encapsulation of ciprofloxacin within modified xanthan gum- chitosan based hydrogel for drug delivery

Demiana H. Hanna<sup>a</sup>, Gamal R. Saad

Department of Chemistry, Faculty of Science, Cairo University, Giza 12613, Egypt

Bioorganic Chemistry 84 (2019) pp. 115–124



### The first target specific, highly diastereoselective synthesis, design and characterization of pyranoquinolinyl acrylic acid diastereomers as potential $\alpha$ -glucosidase inhibitors

G. Lavanya<sup>a</sup>, K. Venkatapathy<sup>a</sup>, C.J. Magesh<sup>a,\*</sup>, M. Ramanathan<sup>b</sup>, R. Jayasudha<sup>a</sup>

<sup>a</sup>PG& Research Department of Chemistry, Arignar Anna Govt Arts College, Cheyyar, Tamil Nadu, India

<sup>b</sup>Department of Chemistry, National Taiwan University, Roosevelt Road, Taipei 10617, Taiwan

Bioorganic Chemistry 84 (2019) pp. 125–136



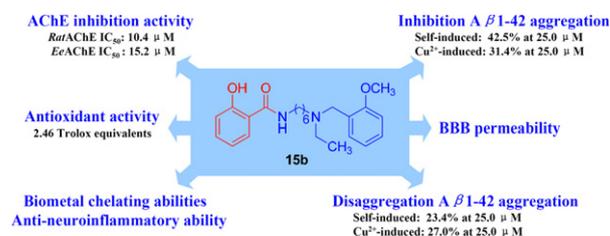
### Novel salicylamide derivatives as potent multifunctional agents for the treatment of Alzheimer's disease: Design, synthesis and biological evaluation

Qing Song<sup>a,1</sup>, Yan Li<sup>a,1</sup>, Zhongcheng Cao<sup>a</sup>, Xiaoming Qiang<sup>a</sup>, Zhenghui Tan<sup>b</sup>, Yong Deng<sup>a,\*</sup>

<sup>a</sup>Department of Medicinal Chemistry, Key Laboratory of Drug-Targeting and Drug Delivery System of the Education Ministry, Sichuan Engineering Laboratory for Plant-Sourced Drug and Sichuan Research Center for Drug Precision Industrial Technology, West China School of Pharmacy, Sichuan University, Chengdu 610041, PR China

<sup>b</sup>Institute of Traditional Chinese Medicine Pharmacology and Toxicology, Sichuan Academy of Chinese Medicine Sciences, Chengdu 610041, PR China

Bioorganic Chemistry 84 (2019) pp. 137–149



### 1,3,4-oxadiazole/chalcone hybrids: Design, synthesis, and inhibition of leukemia cell growth and EGFR, Src, IL-6 and STAT3 activities

Marwa Ali A. Fathi<sup>a,1</sup>, Amer Ali Abd El-Hafeez<sup>b,c,d,1,\*</sup>, Dalia Abdelhamid<sup>a</sup>, Samar H. Abbas<sup>a,\*</sup>, Monica M. Montano<sup>d</sup>, Mohamed Abdel-Aziz<sup>a</sup>

<sup>a</sup>Medicinal Chemistry Department, Faculty of Pharmacy, Minia University, Minia 61519, Egypt

<sup>b</sup>Pharmacology and Experimental Oncology Unit, Cancer Biology Department, National Cancer Institute, Cairo University, Cairo 11796, Egypt

<sup>c</sup>Pharmacotherapy Department, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima 734-8553, Japan

<sup>d</sup>Pharmacology Department, Case Western Reserve University School of Medicine, 10900 Euclid Avenue, Cleveland, OH 44106, USA

Bioorganic Chemistry 84 (2019) pp. 150–163



### 1-(2-Hydroxy-5-((trimethylsilyl)ethynyl)phenyl)ethanone based $\alpha,\beta$ -unsaturated derivatives an alternate to non-sulfonamide carbonic anhydrase II inhibitors, synthesis via Sonogashira coupling, binding analysis, Lipinsk's rule validation

Jamaluddin Mahar<sup>a,b</sup>, Aamer Saeed<sup>a,\*</sup>, Kevin D. Belfield<sup>b</sup>, Fayaz Ali Larik<sup>a,\*</sup>, Pervaiz Ali Channar<sup>a</sup>, Mehar Ali Kazi<sup>c</sup>, Qamar Abbas<sup>d</sup>, Mubashir Hassan<sup>e</sup>, Hussain Raza<sup>e</sup>, Sung-Yum Seo<sup>e</sup>

<sup>a</sup>Department of Chemistry, Quaid-I-Azam University, Islamabad 45320, Pakistan

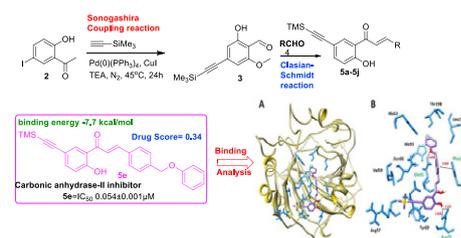
<sup>b</sup>Department of Chemistry, School of Optics/Center for Research and Education in Optics and Lasers University of Central Florida, P.O. Box 162366, Orlando, FL 32816, United States

<sup>c</sup>Institute of Biochemistry, University of Sindh, Jamshoro 76080, Pakistan

<sup>d</sup>Department of Physiology, University of Sindh, Jamshoro 76080, Pakistan

<sup>e</sup>Department of Biological Sciences, College of Natural Sciences, Kongju National University, 56 Gongjudehak-Ro, Gongju, Chungnam 314-701, Republic of Korea

Bioorganic Chemistry 84 (2019) pp. 170–176



### Antitrypanosomal activity of *epi*-polygodial from *Drimys brasiliensis* and its effects in cellular membrane models at the air-water interface

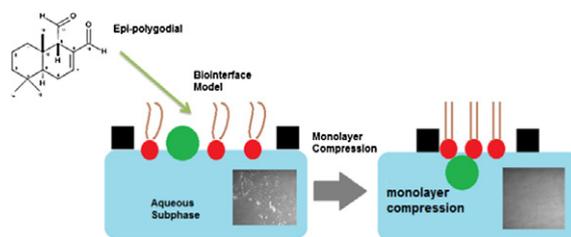
Giulia Elisa Guimarães Gonçalves<sup>a</sup>, Thiago Rahal Morais<sup>a</sup>, Kaio de Souza Gomes<sup>b</sup>, Thais Alves Costa-Silva<sup>b</sup>, Andre Gustavo Tempone<sup>c</sup>, João Henrique Ghilardi Lago<sup>b</sup>, Luciano Caseli<sup>a,\*</sup>

<sup>a</sup>Instituto de Ciências Ambientais, Químicas e Farmacêuticas, Universidade Federal de São Paulo, São Paulo, Brazil

<sup>b</sup>Centro de Ciências Naturais e Humanas, Universidade Federal do ABC, Santo André, Brazil

<sup>c</sup>Centro de Parasitologia e Micologia, Instituto Adolfo Lutz, São Paulo, Brazil

Bioorganic Chemistry 84 (2019) pp. 186–191



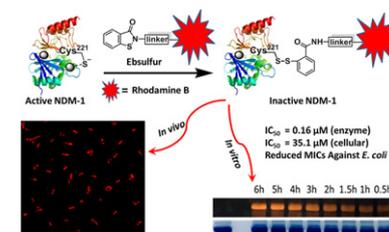
### Ebsulfur as a potent scaffold for inhibition and labelling of New Delhi metallo- $\beta$ -lactamase-1 *in vitro* and *in vivo*

Jianpeng Su<sup>a</sup>, Jiayun Liu<sup>b</sup>, Cheng Chen<sup>a</sup>, Yuejuan Zhang<sup>a</sup>, Kewu Yang<sup>a,\*</sup>

<sup>a</sup>Key Laboratory of Synthetic and Natural Functional Molecule Chemistry of Ministry of Education, Chemical Biology Innovation Laboratory, College of Chemistry and Materials Science, Northwest University, 1 Xuefu Avenue, Xi'an 710127, PR China

<sup>b</sup>Department of Clinical Laboratory, Xijing Hospital, Air Force Medical University, Xi'an 710032, PR China

Bioorganic Chemistry 84 (2019) pp. 192–201



### Synthesis, molecular modeling and BACE-1 inhibitory study of tetrahydrobenzo[b] pyran derivatives

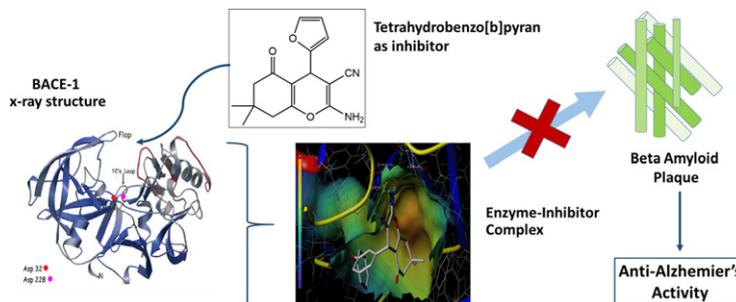
Vijaya Bhaskar<sup>a,\*</sup>, Reshma Chowdary<sup>b</sup>, Sheshagiri R. Dixit<sup>c</sup>, Shrinivas D. Joshi<sup>c</sup>

<sup>a</sup>Department of Pharmaceutical Chemistry, Manipal College of Pharmaceutical Sciences, Manipal University, Manipal 576104, India

<sup>b</sup>Department of Medicinal Chemistry, BITS-Pilani Hyderabad Campus, Hyderabad 500078, India

<sup>c</sup>Novel Drug Design and Discovery Laboratory, Department of Pharmaceutical Chemistry, SET's College of Pharmacy, Dharwad 580002, India

Bioorganic Chemistry 84 (2019) pp. 202–210



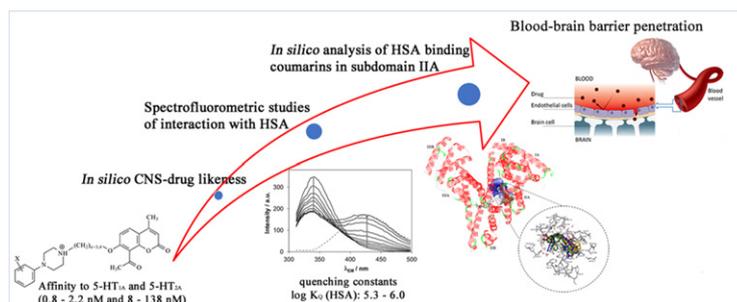
### Evaluation of blood-brain barrier penetration and examination of binding to human serum albumin of 7-O-arylpiperazinylcoumarins as potential antipsychotic agents

Bioorganic Chemistry 84 (2019) pp. 211–225

Teresa Żołek<sup>a,\*</sup>, Orsolya Dömötör<sup>b</sup>, Kinga Ostrowska<sup>a</sup>,  
Éva A. Enyedy<sup>b</sup>, Dorota Maciejewska<sup>a,\*</sup>

<sup>a</sup>Department of Organic Chemistry, Faculty of Pharmacy, Medical University of Warsaw, Banacha 1, 02-097 Warsaw, Poland

<sup>b</sup>Department of Inorganic and Analytical Chemistry, University of Szeged, Dóm tér 7, H-6720 Szeged, Hungary

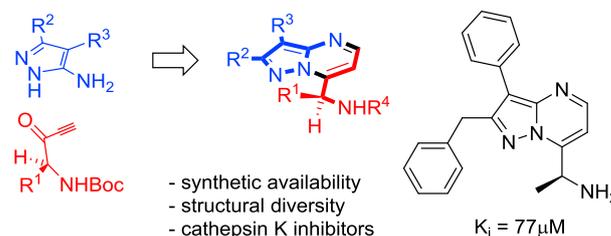


### Synthesis and biological evaluation of 7-(aminoalkyl)pyrazolo[1,5-a]pyrimidine derivatives as cathepsin K inhibitors

Bioorganic Chemistry 84 (2019) pp. 226–238

Nejc Petek, Bogdan Štefane, Marko Novinec<sup>\*</sup>, Jurij Svete<sup>\*</sup>

University of Ljubljana, Faculty of Chemistry and Chemical Technology, Večna pot 113, 1000 Ljubljana, Slovenia



### Discovery of a novel cathepsin inhibitor with dual autophagy-inducing and metastasis-inhibiting effects on breast cancer cells

Bioorganic Chemistry 84 (2019) pp. 239–253

Lei Yuan<sup>a</sup>, Jun Liu<sup>a</sup>, Wenhui He<sup>b</sup>, Youmei Bao<sup>c</sup>, Lei Sheng<sup>a</sup>,  
Chunyang Zou<sup>c</sup>, Baichun Hu<sup>a</sup>, Wentao Ge<sup>a</sup>, Yang Liu<sup>a</sup>, Jian Wang<sup>a</sup>,  
Bin Lin<sup>a</sup>, Yanchun Li<sup>d,\*</sup>, Enlong Ma<sup>b,\*</sup>

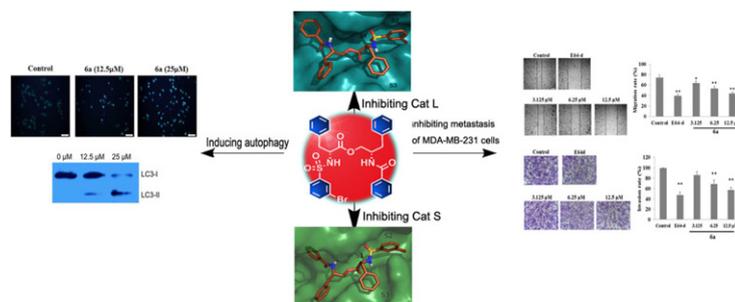
<sup>a</sup>Key Laboratory of Structure-Based Drug Design and Discovery (Shenyang Pharmaceutical University), Ministry of Education, Shenyang 110016, PR China

<sup>b</sup>Department of Pharmacology, Shenyang Pharmaceutical University, Shenyang 110016, PR China

<sup>c</sup>Department of Pharmacy, Liaoning Vocational College of Medicine, Shenyang 110101, PR China

<sup>d</sup>GLP Center, Shenyang Pharmaceutical University, Shenyang 110016, PR China

<sup>e</sup>School of Pharmaceutical Sciences, Southern Medical University, Guangzhou 510515, PR China



### TDP-43 specific reduction induced by Di-hydrophobic tags conjugated peptides

Bioorganic Chemistry 84 (2019) pp. 254–259

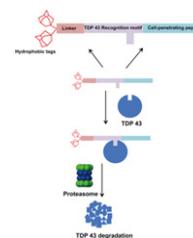
Na Gao<sup>a</sup>, Yun-Peng Huang<sup>b</sup>, Ting-Ting Chu<sup>a</sup>, Qian-Qian Li<sup>a</sup>, Bing Zhou<sup>b</sup>, Yong-Xiang Chen<sup>a,\*</sup>, Yu-Fen Zhao<sup>a</sup>, Yan-Mei Li<sup>a,c,d,\*</sup>

<sup>a</sup>Key Laboratory of Bioorganic Phosphorus Chemistry and Chemical Biology (Ministry of Education), Department of Chemistry, Tsinghua University, Beijing 100084, China

<sup>b</sup>School of Life Science, Tsinghua University, Beijing 100084, China

<sup>c</sup>Beijing Institute for Brain Disorders, Beijing 100069, China

<sup>d</sup>Center for Synthetic and Systems Biology, Tsinghua University, Beijing 100084, China



### Synthesis and anti-inflammatory activity of sulfonamides and carboxylates incorporating trimellitimides: Dual cyclooxygenase/carbonyl anhydrase inhibitory actions

Alaa A.-M. Abdel-Aziz<sup>a,b,\*</sup>, Andrea Angeli<sup>c</sup>, Adel S. El-Azab<sup>a,d</sup>, Mohammed E.A. Hammouda<sup>b</sup>, Magda A. El-Sherbeny<sup>b,e</sup>, Claudiu T. Supuran<sup>c,\*</sup>

<sup>a</sup>Department of Pharmaceutical Chemistry, College of Pharmacy, King Saud University, Riyadh 11451, Saudi Arabia

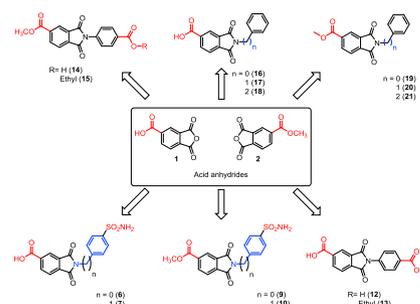
<sup>b</sup>Department of Medicinal Chemistry, Faculty of Pharmacy, Mansoura University, Mansoura 35516, Egypt

<sup>c</sup>Università degli Studi di Firenze, NEUROFARBA Dept., Sezione di Scienze Farmaceutiche, Via Ugo Schiff 6, 50019 Sesto Fiorentino, Florence, Italy

<sup>d</sup>Department of Organic Chemistry, Faculty of Pharmacy, Al-Azhar University, Cairo 11884, Egypt

<sup>e</sup>Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Delta University for Science and Technology, Gamasa City, Egypt

Bioorganic Chemistry 84 (2019) pp. 260–268



### Phenylpropanoids and lignans from *Prunus tomentosa* seeds as efficient $\beta$ -amyloid (A $\beta$ ) aggregation inhibitors

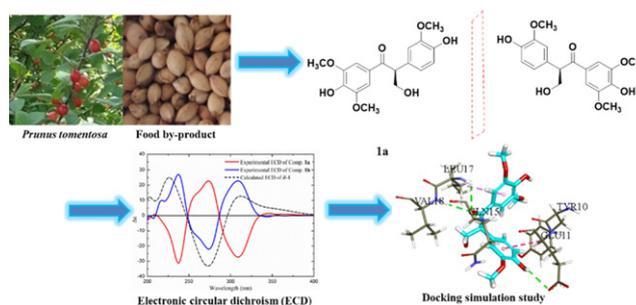
Qingbo Liu<sup>a,1</sup>, Jie Wang<sup>a,1</sup>, Bin Lin<sup>b</sup>, Zhuo-Yang Cheng<sup>a</sup>, Ming Bai<sup>a</sup>, Shaochun Shi<sup>a</sup>, Xiao-Xiao Huang<sup>a,c</sup>, Shao-Jiang Song<sup>a,\*</sup>

<sup>a</sup>School of Traditional Chinese Materia Medica, Key Laboratory of Computational Chemistry-Based Natural Antitumor Drug Research & Development, Liaoning Province, Shenyang Pharmaceutical University, Shenyang 110016, People's Republic of China

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<sup>c</sup>Chinese People's Liberation Army 210 Hospital, Dalian 116021, People's Republic of China

Bioorganic Chemistry 84 (2019) pp. 269–275



### 3D-QSAR assisted identification of FABP4 inhibitors: An effective scaffold hopping analysis/QSAR evaluation

Giuseppe Floresta<sup>a,b,c,\*</sup>, Agostino Cilibrizzi<sup>c,d</sup>, Vincenzo Abbate<sup>d</sup>, Ambra Spampinato<sup>a</sup>, Chiara Zagni<sup>a</sup>, Antonio Rescifina<sup>a,\*</sup>

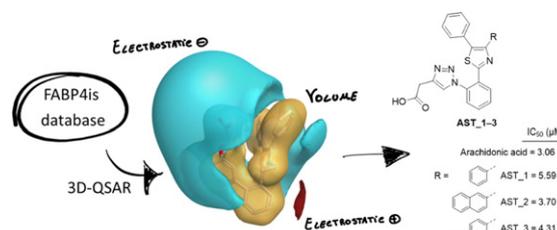
<sup>a</sup>Department of Drug Sciences, University of Catania, V.le A. Doria 6, 95125 Catania, Italy

<sup>b</sup>Department of Chemical Sciences, University of Catania, V.le A. Doria, 95125 Catania, Italy

<sup>c</sup>Institute of Pharmaceutical Science, King's College London, Stamford Street, London SE1 9NH, UK

<sup>d</sup>King's Forensics, School of Population Health & Environmental Sciences, King's College London, Franklin-Wilkins Building, 150 Stamford Street, London SE1 9NH, UK

Bioorganic Chemistry 84 (2019) pp. 276–284



### Design, synthesis and structure-activity relationship optimization of phenanthridine derivatives as new Wnt/ $\beta$ -catenin signalling pathway agonists

Duo-zhi Chen<sup>a,1</sup>, Bi-juan Yang<sup>a,c,1</sup>, Xiao-li He<sup>b,1</sup>, Shi-rui Fan<sup>a</sup>, Jie-yun Cai<sup>d</sup>, Chen-xu Jing<sup>a</sup>, Heng Zhang<sup>b</sup>, Yu Zhang<sup>a</sup>, Lin Li<sup>b,\*</sup>, Xiao-jiang Hao<sup>a,\*</sup>

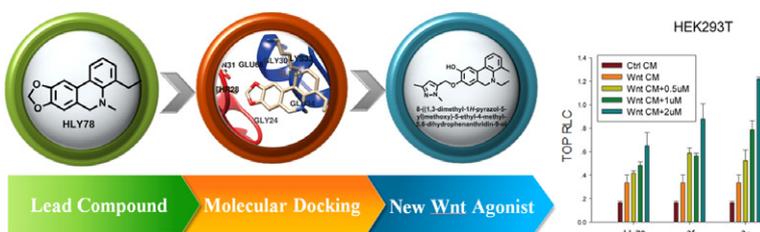
<sup>a</sup>State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, China

<sup>b</sup>State Key Laboratory of Molecular Biology, Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, Shanghai, China

<sup>c</sup>University of Chinese Academy of Sciences, Shanghai, China

<sup>d</sup>Yunnan C.T. Quality Inspection & Text Station, Kunming 650106, China

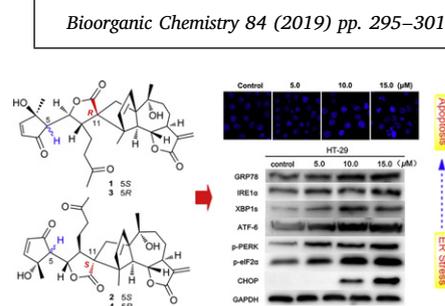
Bioorganic Chemistry 84 (2019) pp. 285–294



### Artemisianins A-D, new stereoisomers of seco-guaianolide involved heterodimeric [4+2] adducts from *Artemisia argyi* induce apoptosis via enhancement of endoplasmic reticulum stress

Gui-Min Xue, Dong-Rong Zhu, Chao Han, Xiao-Bing Wang, Jian-Guang Luo\*, Ling-Yi Kong\*

Jiangsu Key Laboratory of Bioactive Natural Product Research and State Key Laboratory of Natural Medicines, School of Traditional Chinese Pharmacy, China Pharmaceutical University, 24 Tong Jia Xiang, Nanjing 210009, People's Republic of China



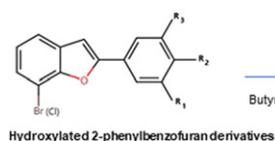
### Synthesis, molecular docking and cholinesterase inhibitory activity of hydroxylated 2-phenylbenzofuran derivatives

Antonella Fais<sup>a,1</sup>, Amit Kumar<sup>b,1</sup>, Rosaria Medda<sup>a</sup>, Francesca Pintus<sup>a</sup>, Francesco Delogu<sup>b</sup>, Maria J. Matos<sup>c</sup>, Benedetta Era<sup>a,2</sup>, Giovanna L. Delogu<sup>a,\*,2</sup>

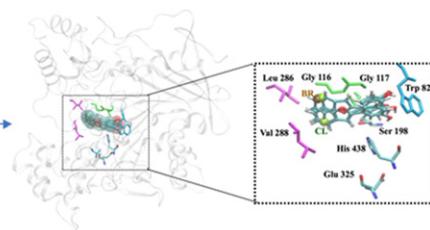
<sup>a</sup>Department of Life and Environmental Sciences, University of Cagliari, 09042 Monserrato, Cagliari, Italy

<sup>b</sup>Department of Mechanical, Chemical and Materials Engineering, University of Cagliari, via Marengo 2, 09123 Cagliari, Italy

<sup>c</sup>Department of Organic Chemistry, University of Santiago de Compostela, Santiago de Compostela, Spain



*Bioorganic Chemistry 84 (2019) pp. 302–308*



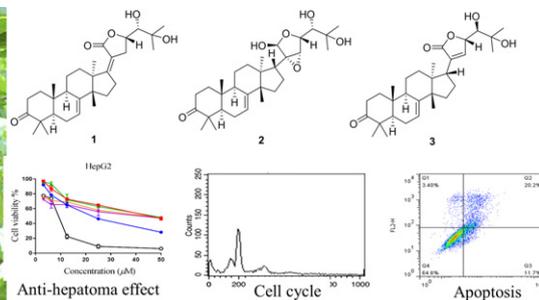
### New tirucallane triterpenoids from *Picrasma quassioides* with their potential antiproliferative activities on hepatoma cells

Wen-Yu Zhao<sup>a</sup>, Jing-Jie Chen<sup>a</sup>, Chun-Xin Zou<sup>a</sup>, Ying-Ying Zhang<sup>a</sup>, Guo-Dong Yao<sup>a</sup>, Xiao-Bo Wang<sup>b</sup>, Xiao-Xiao Huang<sup>a,b,\*</sup>, Bin Lin<sup>c,\*</sup>, Shao-Jiang Song<sup>a,\*</sup>

<sup>a</sup>School of Traditional Chinese Materia Medica, Key Laboratory of Computational Chemistry-Based Natural Antitumor Drug Research & Development, Liaoning Province, Shenyang Pharmaceutical University, Shenyang 110016, People's Republic of China

<sup>b</sup>Chinese People's Liberation Army 210 Hospital, Dalian 116021, People's Republic of China

<sup>c</sup>School of Pharmaceutical Engineering, Shenyang Pharmaceutical University, Shenyang 110016, People's Republic of China



*Bioorganic Chemistry 84 (2019) pp. 309–318*

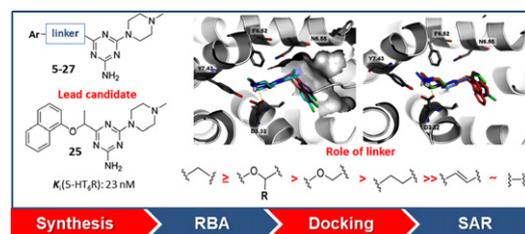
### Synthesis and computer-aided analysis of the role of linker for novel ligands of the 5-HT<sub>6</sub> serotonin receptor among substituted 1,3,5-triazinylpiperazines

Dorota Łażewska<sup>a,\*</sup>, Rafał Kurczab<sup>b</sup>, Małgorzata Więcek<sup>a</sup>, Grzegorz Satała<sup>b</sup>, Katarzyna Kieć-Kononowicz<sup>a</sup>, Jadwiga Handzlik<sup>a,\*</sup>

<sup>a</sup>Department of Technology and Biotechnology of Drugs, Faculty of Pharmacy, Jagiellonian University Medical College, 9 Medyczna Street, 30-688 Kraków, Poland

<sup>b</sup>Department of Medicinal Chemistry, Institute of Pharmacology, Polish Academy of Sciences, 12 Smętna Street, 31-343 Kraków, Poland

*Bioorganic Chemistry 84 (2019) pp. 319–325*



### Synthesis of 8-hydroxyquinoline glycoconjugates and preliminary assay of their $\beta$ 1,4-GalT inhibitory and anti-cancer properties

Monika Krawczyk<sup>a,b,c</sup>, Gabriela Pastuch-Gawolek<sup>a,b</sup>, Anna Mrozek-Wilczkiewicz<sup>c</sup>, Michal Kuczak<sup>c,d</sup>, Magdalena Skonieczna<sup>b,e</sup>, Robert Musiol<sup>d</sup>

<sup>a</sup>Department of Organic Chemistry, Bioorganic Chemistry and Biotechnology, Faculty of Chemistry, Silesian University of Technology, Krzywoustego 4, 44-100 Gliwice, Poland

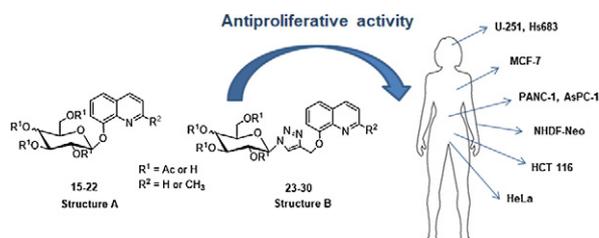
<sup>b</sup>Biotechnology Centre, Silesian University of Technology, Krzywoustego 8, 44-100 Gliwice, Poland

<sup>c</sup>Institute of Physic and Silesian Center for Education and Interdisciplinary Research, University of Silesia in Katowice, 75 Pułku Piechoty 1A, 41-500 Chorzów, Poland

<sup>d</sup>Institute of Chemistry, University of Silesia, Szkolna 9, 40-006 Katowice, Poland

<sup>e</sup>Biosystems Group, Institute of Automatic Control, Silesian University of Technology, Akademicka 16, 44-100 Gliwice, Poland

Bioorganic Chemistry 84 (2019) pp. 326–338

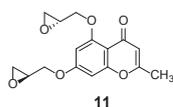


### The synthesis and anticancer activities of chiral epoxy-substituted chromone analogs

Hyunji Jo<sup>a,1</sup>, Seung Hee Seo<sup>a,1</sup>, Younghwa Na<sup>b,c</sup>, Youngjoo Kwon<sup>a,c</sup>

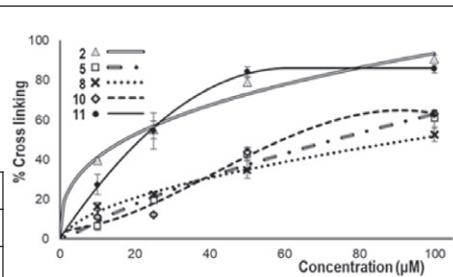
<sup>a</sup>College of Pharmacy, Graduate School of Pharmaceutical Sciences, Ewha Womans University, Seoul 120-750, Republic of Korea

<sup>b</sup>College of Pharmacy, CHA University, Pocheon 487-010, Republic of Korea



	Cytotoxicity				
Cell lines	MCF7	HeLa	DU145	HCT15	K562
IC <sub>50</sub> (μM)	1.88±0.05	1.77±0.32	6.28±0.46	9.59±0.37	0.04±0.03

Bioorganic Chemistry 84 (2019) pp. 347–354



### Combined molecular modeling and cholinesterase inhibition studies on some natural and semisynthetic O-alkylcoumarin derivatives

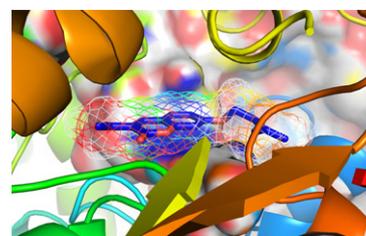
Ilkay Erdogan Orhan<sup>a,\*</sup>, F. Sezer Senol Deniz<sup>a</sup>, Ramin Ekhteiari Salmas<sup>b</sup>, Serdar Durdagi<sup>b</sup>, Francesco Epifano<sup>c,\*</sup>, Salvatore Genovese<sup>c</sup>, Serena Fiorito<sup>c</sup>

<sup>a</sup>Department of Pharmacognosy, Faculty of Pharmacy, Gazi University, 06330 Ankara, Turkey

<sup>b</sup>Computational Biology and Molecular Simulations Laboratory, Department of Biophysics, School of Medicine, Bahcesehir University, 34349 Istanbul, Turkey

<sup>c</sup>Dipartimento di Farmacia, Università "G. d'Annunzio" Chieti-Pescara, Via dei Vestini 31, 66100 Chieti Scalo, CH, Italy

Bioorganic Chemistry 84 (2019) pp. 355–362



### Multi-target inhibitors against Alzheimer disease derived from 3-hydrazinyl 1,2,4-triazine scaffold containing pendant phenoxy methyl-1,2,3-triazole: Design, synthesis and biological evaluation

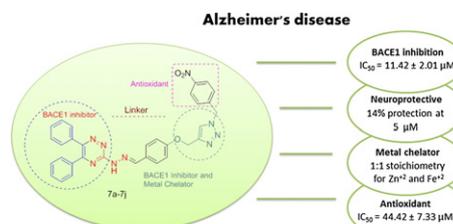
Mahnaz Yazdani<sup>a,b</sup>, Najmeh Edraki<sup>c,\*</sup>, Rashid Badri<sup>b</sup>, Mehdi Khoshneviszadeh<sup>c</sup>, Aida Iraj<sup>c</sup>, Omidreza Firuzi<sup>c</sup>

<sup>a</sup>Department of Chemistry, Khozestan Science and Research Branch, Islamic Azad University, Ahvaz, Iran

<sup>b</sup>Department of Chemistry, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran

<sup>c</sup>Medicinal and Natural Products Chemistry Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

Bioorganic Chemistry 84 (2019) pp. 363–371



### Xanthenone-based hydrazones as potent $\alpha$ -glucosidase inhibitors: Synthesis, solid state self-assembly and in silico studies

Qamar-un-Nisa Tariq<sup>a</sup>, Sana Malik<sup>b</sup>,  
Ajmal Khan<sup>c</sup>,  
Muhammad Moazzam Naseer<sup>d</sup>,  
Shafi Ullah Khan<sup>e</sup>, Abida Ashraf<sup>a,f</sup>,  
Muhammad Ashraf<sup>b</sup>, Muhammad Rafiq<sup>a</sup>,  
Khalid Mahmood<sup>g</sup>,  
Muhammad Nawaz Tahir<sup>g</sup>, Zahid Shafiq<sup>a,\*</sup>

<sup>a</sup>Institute of Chemical Sciences, Bahauddin Zakariya University, Multan 60800, Pakistan

<sup>b</sup>Department of Chemistry, The Islamia University of Bahawalpur, Bahawalpur 63100, Pakistan

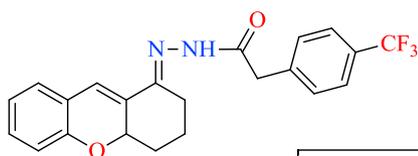
<sup>c</sup>Natural and Medical Sciences Research Center, University of Nizwa, P.O. Box 33, Birkat Al Mauz, Nizwa 616, Oman

<sup>d</sup>Department of Chemistry, Quaid-i-Azam University, Islamabad 45320, Pakistan

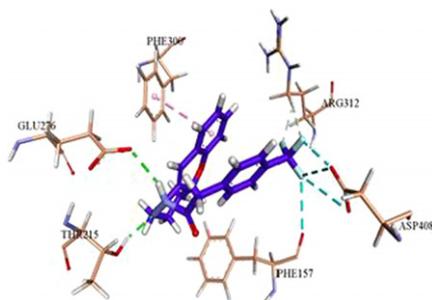
<sup>e</sup>School of Pharmacy, Monash University Malaysia, Jalan Lagoan Selatan, Bandar Sunway, 47500 Subang Jaya, Selangor, Malaysia

<sup>f</sup>Department of Chemistry, The Woman University, Multan, Pakistan

<sup>g</sup>Department of Physics, University of Sargodha, Sargodha, Pakistan



Compound **51**  
 $IC_{50} = 62.25 \pm 0.11 \mu M$   
Standard Acarbose  $IC_{50} = 375.38 \pm 0.12$



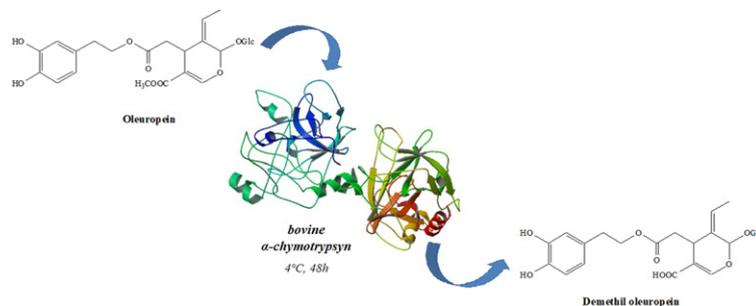
Bioorganic Chemistry 84 (2019) pp. 372–383

### Hydrolases-mediated transformation of oleuropein into demethyloleuropein

Luca Cariati<sup>a</sup>, Manuela Oliverio<sup>a,\*</sup>, Francesco G. Mutti<sup>b</sup>,  
Sonia Bonacci<sup>a</sup>, Tanja Knaus<sup>b</sup>, Paola Costanzo<sup>a</sup>, Antonio Procopio<sup>a</sup>

<sup>a</sup>Dipartimento di Scienze della Salute, Università “Magna Græcia” di Catanzaro, Viale Europa, Campus Universitario “S. Venuta”, Loc. Germaneto, 88100 CZ, Italy

<sup>b</sup>Van't Hoff Institute for Molecular Sciences, HIMS-Biocat, Science Park 904, 1098 HX Amsterdam, the Netherlands



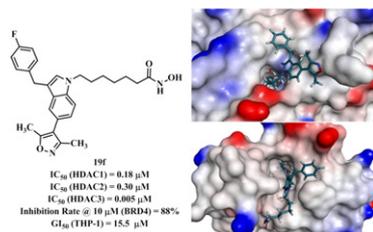
Bioorganic Chemistry 84 (2019) pp. 384–388

### Design, synthesis and biological evaluation of novel indole derivatives as potential HDAC/BRD4 dual inhibitors and anti-leukemia agents

Gaoliang Cheng, Zhi Wang, Jinyu Yang, Yu Bao, Qihao Xu, Linxiang Zhao, Dan Liu<sup>\*</sup>

Key Laboratory of Structure-Based Drugs Design & Discovery of Ministry of Education, Shenyang Pharmaceutical University, Shenyang 110016, China

Bioorganic Chemistry 84 (2019) pp. 410–417

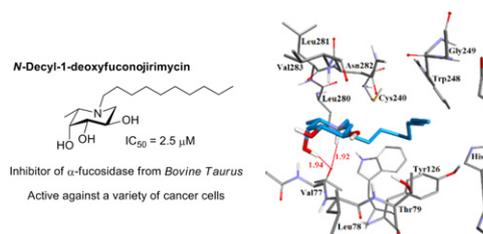


### N-Alkyl-1,5-dideoxy-1,5-imino- $\alpha$ -fucitols as fucosidase inhibitors: Synthesis, molecular modelling and activity against cancer cell lines

*Bioorganic Chemistry 84 (2019) pp. 418–433*

Jian Zhou<sup>a</sup>, Arvind Negi<sup>b</sup>, Styliana I. Miralalai<sup>b</sup>, Rolf Warta<sup>c</sup>, Christel Herold-Mende<sup>c</sup>, Michael P. Carty<sup>d</sup>, Xin-Shan Ye<sup>e</sup>, Paul V. Murphy<sup>b,\*</sup>

<sup>a</sup>School of Chemistry and Chemical Biology, University College Dublin, Dublin 4, D04 V1W8, Ireland  
<sup>b</sup>School of Chemistry, National University of Ireland Galway, University Road, Galway H91 TK33, Ireland  
<sup>c</sup>Division of Experimental Neurosurgery, Department of Neurosurgery, University of Heidelberg, Im Neuenheimer Feld 400, 69120 Heidelberg, Germany  
<sup>d</sup>School of Natural Sciences, Biochemistry and Centre for Chromosome Biology, National University of Ireland Galway, University Road, H91 TK33 Galway, Ireland  
<sup>e</sup>State Key Laboratory of Natural and Biomimetic Drugs and School of Pharmaceutical Sciences, Peking University, Xue Yuan Road No. 38, Beijing 100191, China

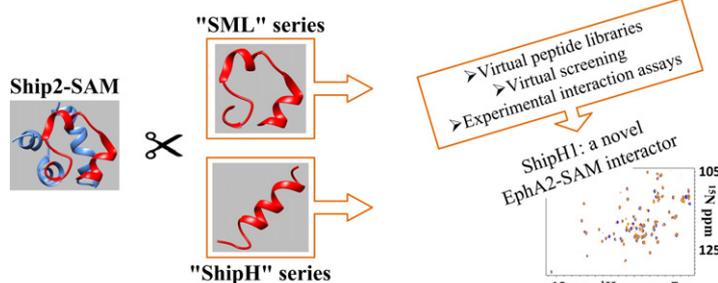


### Design and analysis of EphA2-SAM peptide ligands: A multi-disciplinary screening approach

*Bioorganic Chemistry 84 (2019) pp. 434–443*

Flavia Anna Mercurio<sup>a,b</sup>, Concetta Di Natale<sup>c</sup>, Luciano Pirone<sup>a</sup>, Daniela Marasco<sup>a,b,c</sup>, Enrica Calce<sup>a</sup>, Marian Vincenzi<sup>a</sup>, Emilia Maria Pedone<sup>a,b</sup>, Stefania De Luca<sup>a,b</sup>, Marilisa Leone<sup>a,b,\*</sup>

<sup>a</sup>Institute of Biostructures and Bioimaging (CNR), Naples, Italy  
<sup>b</sup>InterUniversity Research Centre on Bioactive Peptides (CIRPEB), University of Naples Federico II, Naples, Italy  
<sup>c</sup>University of Naples Federico II, Department of Pharmacy, Naples, Italy

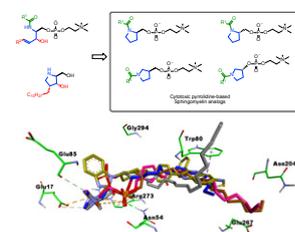


### Antiproliferative 3-deoxysphingomyelin analogs: Design, synthesis, biological evaluation and molecular docking of pyrrolidine-based 3-deoxysphingomyelin analogs as anticancer agents

*Bioorganic Chemistry 84 (2019) pp. 444–455*

Ahmed H.E. Hassan<sup>a,b,1</sup>, Hye Rim Park<sup>c,1</sup>, Yoon Mi Yoon<sup>c</sup>, Hye In Kim<sup>c</sup>, Sung Yeun Yoo<sup>c</sup>, Kun Won Lee<sup>c</sup>, Yong Sup Lee<sup>a,c,\*</sup>

<sup>a</sup>Medicinal Chemistry Laboratory, Department of Pharmacy, College of Pharmacy, Kyung Hee University, Seoul 02447, Republic of Korea  
<sup>b</sup>Department of Medicinal Chemistry, Faculty of Pharmacy, Mansoura University, Mansoura 35516, Egypt  
<sup>c</sup>Department of Life and Nanopharmaceutical Science, Kyung Hee University, Kyung Hee University, Seoul 02447, Republic of Korea

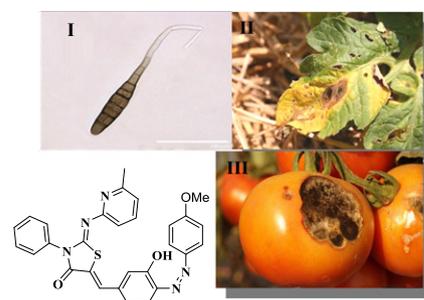


### Design, synthesis, DNA assessment and molecular docking study of novel 2-(pyridin-2-ylimino)thiazolidin-4-one derivatives as potent antifungal agents

*Bioorganic Chemistry 84 (2019) pp. 456–467*

Nadia Hanafy Metwally<sup>a,\*</sup>, Ibrahim Taha Radwan<sup>b</sup>, Walaa Salah El-Serwy<sup>c</sup>, Mohamed Ahmed Mohamed<sup>d</sup>

<sup>a</sup>Chemistry Department, Faculty of Science, Cairo University, Giza 12613, Egypt  
<sup>b</sup>Basic Science Department, Faculty of Oral and Dental Medicine, Future University, New Cairo, Egypt  
<sup>c</sup>Therapeutic Chemistry Department, National Research Center, Giza 12622, Egypt  
<sup>d</sup>Plant Pathology Research Institute, Agricultural Research Center, Giza 12619, Egypt



### Design, synthesis and biological evaluation of novel $\beta$ -pinene-based thiazole derivatives as potential anticancer agents via mitochondrial-mediated apoptosis pathway

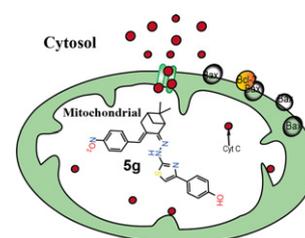
Bioorganic Chemistry 84 (2019) pp. 468–477

Yunyun Wang<sup>a</sup>, Chenliang Wu<sup>a</sup>, Qiangjian Zhang<sup>a</sup>, Yu Shan<sup>b</sup>, Wen Gu<sup>a,c,\*</sup>, Shifa Wang<sup>a,c,\*</sup>

<sup>a</sup>College of Chemical Engineering, Nanjing Forestry University, Nanjing 210037, PR China

<sup>b</sup>Institute of Botany, Jiangsu Province and Chinese Academy of Sciences (Nanjing Botanical Garden Mem. Sun Yat-Sen), 210014, PR China

<sup>c</sup>Co-Innovation Center of Efficient Processing and Utilization of Forest Resources, Nanjing Forestry University, Nanjing 210037, PR China



### Synthesis, ADME, docking studies and *in vivo* anti-hyperglycaemic potential estimation of novel Schiff base derivatives from octadec-9-enoic acid

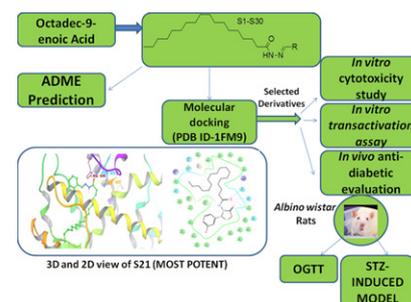
Bioorganic Chemistry 84 (2019) pp. 478–492

Garima Kapoor<sup>a,\*</sup>, Dharam Pal Pathak<sup>a</sup>, Rubina Bhutani<sup>a</sup>, Asif Husain<sup>b</sup>, Sandeep Jain<sup>c</sup>, Md. Azhar Iqbal<sup>b</sup>

<sup>a</sup>Department of Pharmaceutical Chemistry, Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, India

<sup>b</sup>Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Jamia Hamdard (Hamdard University), New Delhi, India

<sup>c</sup>Department of Pharmaceutical Chemistry, Guru Jambheshwar University of Science and Technology, Hisar, Haryana, India



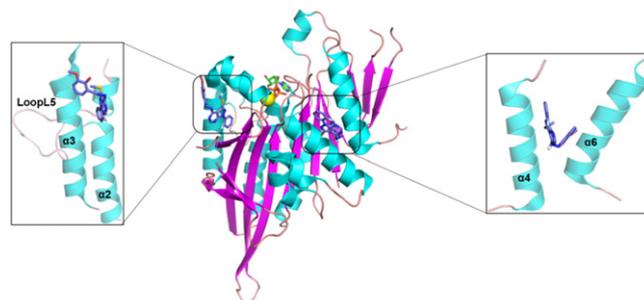
### Structure-activity relationship of pyrazolo pyrimidine derivatives as inhibitors of mitotic kinesin Eg5 and anticancer agents

Bioorganic Chemistry 84 (2019) pp. 493–504

P. Muthuraja<sup>a</sup>, V. Veeramani<sup>a</sup>, S. Prakash<sup>a</sup>, M. Himesh<sup>b</sup>,  
U. Venkatasubramanian<sup>b</sup>, P. Manisankar<sup>a,\*</sup>

<sup>a</sup>Department of Industrial Chemistry, Alagappa University, Karaikudi 630006, India

<sup>b</sup>Department of Biotechnology, School of Chemical & Biotechnology, SASTRA Deemed University, Thanjavur 613401, India

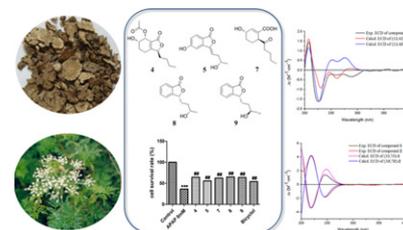


### Bioactive butylphthalide derivatives from *Ligusticum chuanxiong*

Bioorganic Chemistry 84 (2019) pp. 505–510

Xu Zhang, Zi-ming Feng, Ya-nan Yang, Jian-shuang Jiang, Pei-cheng Zhang<sup>\*</sup>

State Key Laboratory of Bioactive Substance and Function of Natural Medicines, Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100050, People's Republic of China



### Synthesis and bioactivities of pyrazoline benzensulfonamides as carbonic anhydrase and acetylcholinesterase inhibitors with low cytotoxicity

Bioorganic Chemistry 84 (2019) pp. 511–517

Dilan Ozmen Ozgun<sup>a</sup>, Halise Inci Gul<sup>b,\*</sup>, Cem Yamali<sup>b</sup>, Hiroshi Sakagami<sup>c,d</sup>, Ilhami Gulcin<sup>e,f</sup>, Murat Sukuroglu<sup>g</sup>, Claudiu T. Supuran<sup>h</sup>

<sup>a</sup>Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Agri Ibrahim Cecen University, Agri, Turkey

<sup>b</sup>Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Ataturk University, Erzurum, Turkey

<sup>c</sup>Division of Pharmacology, Meikai University School of Dentistry, Saitama, Sakado, Japan

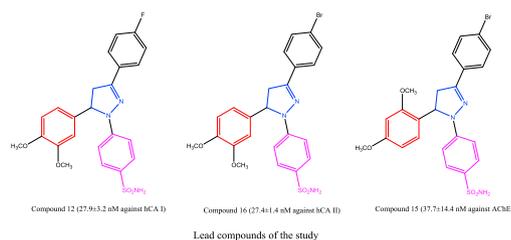
<sup>d</sup>Meikai University Research Institute of Odontology (M-RIO), Meikai University School of Dentistry, Saitama, Sakado, Japan

<sup>e</sup>Department of Chemistry, Faculty of Science, Ataturk University, Erzurum, Turkey

<sup>f</sup>Department of Zoology, College of Science, King Saud University, Riyadh, Saudi Arabia

<sup>g</sup>Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Gazi University, Ankara, Turkey

<sup>h</sup>Neurofarba Department e Laboratorio di Chimica Bioinorganica, Universita Degli Studi di Firenze, Sesto Fiorentino (Florence), Italy



### One-pot four-component synthesis of thiazolidin-2-imines using Cu<sup>I</sup>/Zn<sup>II</sup> dual catalysis: A new class of acetylcholinesterase inhibitors

Bioorganic Chemistry 84 (2019) pp. 518–528

Syeda Aaliya Shehzadi<sup>a,\*</sup>, Imtiaz Khan<sup>b</sup>, Aamer Saeed<sup>c,\*</sup>, Fayaz Ali Larik<sup>c</sup>, Pervaiz Ali Channar<sup>c</sup>, Mubashir Hassan<sup>d</sup>, Hussain Raza<sup>d</sup>, Qamar Abbas<sup>e</sup>, Sung-Yum Seo<sup>d</sup>

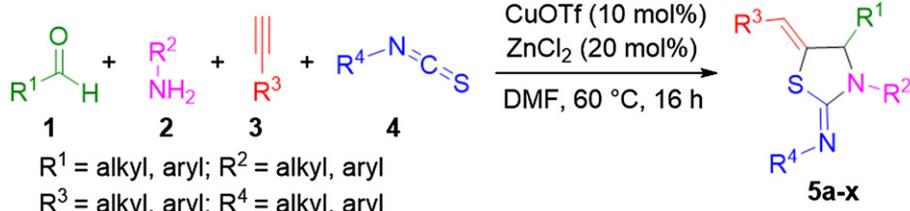
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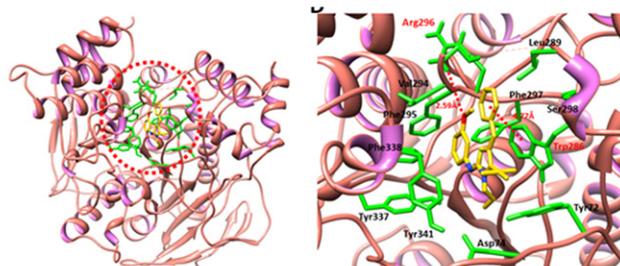
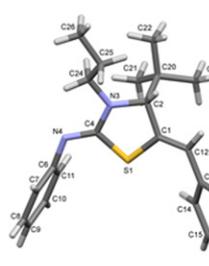
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- 23 examples
- up to 92% isolated yield
- Diverse substrate scope
- Good functional group tolerance
- One-pot multicomponent strategy
- Potent acetylcholinesterase inhibitors



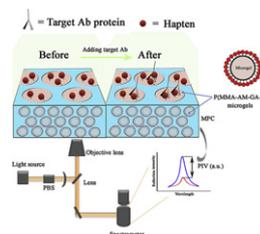
## REVIEW ARTICLES

### Antibody recognition by a novel microgel photonic crystal

Bioorganic Chemistry 84 (2019) pp. 389–393

Na Sai<sup>\*</sup>, Zhong Sun, Yuntang Wu, Guowei Huang

Department of Nutrition and Food Hygiene, School of Public Health, Tianjin Medical University, China



## PRELIMINARY COMMUNICATIONS

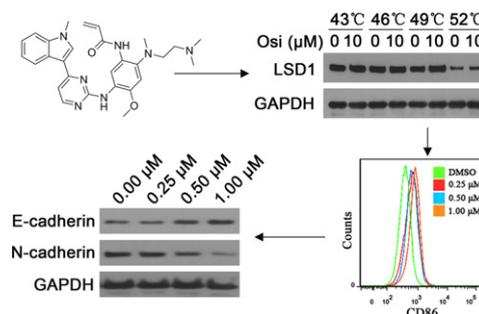
### Identification of osimertinib (AZD9291) as a lysine specific demethylase 1 inhibitor

*Bioorganic Chemistry 84 (2019) pp. 164–169*

 Zhong-Rui Li<sup>a,b,c</sup>, Feng-Zhi Suo<sup>a,b,c</sup>, Bo Hu<sup>a,b,c</sup>, Yan-Jia Guo<sup>a,b,c</sup>, Dong-Jun Fu<sup>a,b,c</sup>, Bin Yu<sup>a,b,c,d,\*</sup>, Yi-Chao Zheng<sup>a,b,c,\*</sup>, Hong-Min Liu<sup>a,b,c,\*</sup>
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<sup>d</sup>State Key Laboratory of Pharmaceutical Biotechnology, Nanjing University, Nanjing 210023, Jiangsu, PR China


### Nitric oxide inhibitory limonoids as potential anti-neuroinflammatory agents from *Swietenia mahagoni*

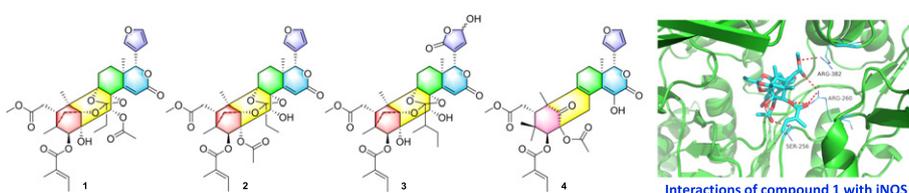
*Bioorganic Chemistry 84 (2019) pp. 177–185*

 Zhaoyu Shi<sup>a</sup>, Lijun An<sup>a</sup>, Xueyuan Yang<sup>a</sup>, Yaru Xi<sup>a</sup>, Chenyue Zhang<sup>a</sup>, Yuan Shuo<sup>a</sup>, Jie Zhang<sup>b</sup>, Da-Qing Jin<sup>c</sup>, Yasushi Ohizumi<sup>d</sup>, Dongho Lee<sup>e</sup>, Jing Xu<sup>a,\*</sup>, Yuanqiang Guo<sup>a,\*</sup>
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<sup>e</sup>Department of Biosystems and Biotechnology, College of Life Sciences and Biotechnology, Korea University, Seoul 136-713, Republic of Korea


### Synthesis and identification of novel pyridazinylpyrazolone based diazo compounds as inhibitors of human islet amyloid polypeptide aggregation

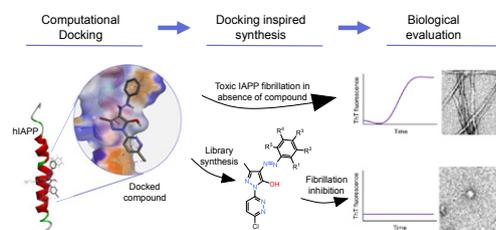
*Bioorganic Chemistry 84 (2019) pp. 339–346*

 Syed Usama Bin Farrukh<sup>a</sup>, Ibrahim Javed<sup>b</sup>, Abdul Qayyum Ather<sup>c</sup>, Abdul-Hamid Emwas<sup>d</sup>, Meshari Alazmi<sup>e</sup>, Xin Gao<sup>e</sup>, Ghayoor Abbas Chotana<sup>a</sup>, Thomas P. Davis<sup>b</sup>, Pu Chun Ke<sup>b</sup>, Rahman Shah Zaib Saleem<sup>a,\*</sup>
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<sup>e</sup>Computer, Electrical and Mathematical Sciences and Engineering Division, King Abdullah University of Science and Technology, Thuwal 23955-6900, Saudi Arabia


**Synthesis of a new disulfide Fmoc monomer for creating biologically susceptible linkages in peptide nucleic acid oligomers**

Brandon Campbell, Taylor Hood, Nathaniel Shank\*

Department of Chemistry and Biochemistry, Georgia Southern University, Savannah, GA, USA



Reduction →



*Bioorganic Chemistry 84 (2019) pp. 394–398*

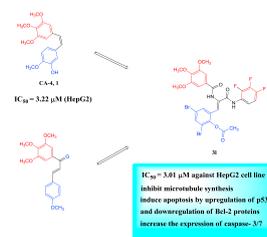
**A new class of diamide scaffold: Design, synthesis and biological evaluation as potent antimitotic agents, tubulin polymerization inhibition and apoptosis inducing activity studies**

Khaled O. Mohamed<sup>a</sup>, Islam Zaki<sup>b,\*</sup>, Ibrahim M. El-Deen<sup>c</sup>, Mohammed K. Abdelhameid<sup>a</sup>

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*Bioorganic Chemistry 84 (2019) pp. 399–409*