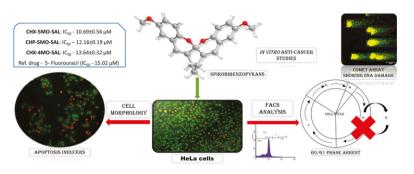
## 127199

#### Synthesis of novel spirobibenzopyrans as potent anticancer leads inducing apoptosis in HeLa cells

Swayamsiddha Kar<sup>a</sup>, Gayathri Ramamoorthy<sup>b</sup>, Kartik Mitra<sup>b</sup>, Naveen Shivalingegowda<sup>c</sup>, Mahesha<sup>d</sup>, Sai Kiran Mavileti<sup>a</sup>, Lokanath Neratur Krishnappagowda<sup>d</sup>, Mukesh Doble<sup>b</sup>, Nageswara Rao Golakoti<sup>a</sup>

<sup>a</sup>Department of Chemistry, Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam, Andhra Pradesh 515134, India <sup>b</sup>Bioengineering and Drug Design Lab, Department of Biotechnology, Bhupat and Jyoti Mehta School of Biosciences, Indian Institute of Technology, Madras, Tamil Nadu 600036, India <sup>c</sup>Department of Physics, Faculty of Engineering & Technology, Jain University, Bangalore 562 112, India <sup>d</sup>Department of Studies in Physics, Manasagangotri, University of Mysore, Mysuru 570 006, India

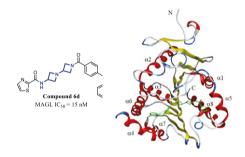


## 127198

# The discovery of diazetidinyl diamides as potent and reversible inhibitors of monoacylglycerol lipase (MAGL)

Bin Zhu, Peter J. Connolly, Sui-Po Zhang, Kristen M. Chevalier, Cynthia M. Milligan, Christopher M. Flores, Mark J. Macielag

Janssen Research & Development, L.L.C., Welsh & McKean Roads, Spring House, PA 19477, USA



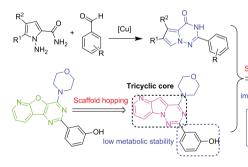
#### 127194

#### Design, synthesis and antiproliferative activity evaluation of a series of pyrrolo[2,1-f][1,2,4] triazine derivatives

Hao-Yue Xiang<sup>a,b</sup>, Yan-Hong Chen<sup>b</sup>, Yi Wang<sup>b</sup>, Xi Zhang<sup>b</sup>, Jian Ding<sup>b</sup>, Ling-Hua Meng<sup>b</sup>, Chun-Hao Yang<sup>b</sup>

<sup>a</sup>College of Chemistry and Chemical Engineering, Central South University, Changsha, Hunan 410083, PR China

<sup>b</sup>State Key Laboratory of Drug Research, Shanghai Institute of Materia Medica, Chinese Academy of Sciences, 555 Zuchongzhi Road, Shanghai 201203, PR China



Scaffold hopping improved metabolic stability 14a R<sup>1</sup> = H, R<sup>2</sup> = CONHMe, 122,119nM/p110 $\alpha \& \delta$ , 0.7 $\mu$ M/T47D 14g R<sup>1</sup> = Me, R<sup>2</sup> = CONH(CH<sub>2</sub>)<sub>2</sub>OMe, 0.4 $\mu$ M/T47D,

14r  $R^1 = Me$ ,  $R^2 = CONH(CH_2)_3OMe$ ,  $0.5\mu M/T47D$ ,

# 127193

#### Betulin isolated from *Pyrola incarnata* Fisch. inhibited lipopolysaccharide (LPS)-induced neuroinflammation with the guidance of computer-aided drug design

Qian Liu<sup>a</sup>, Jin-Ping Liu<sup>a</sup>, Jia-Hui Mei<sup>a</sup>, Shuang-Jun Li<sup>a</sup>, Li-Qiao Shi<sup>b</sup>, Zong-Hao Lin<sup>c</sup>, Bai-Yan Xie<sup>d</sup>, Wei-Guang Sun<sup>e</sup>, Zhen-Yu Wang<sup>a</sup>, Xi-Liang Yang<sup>a</sup>, Yu Zou<sup>f</sup>, Wei Fang<sup>b</sup>

<sup>a</sup>Department of Pharmacy, Hubei Province Key Laboratory of Occupational Hazard Identification and Control, Institute of Infection, Immunology and Tumor Microenvironments, Medical College, Wuhan University of Science and Technology, Wuhan 430081, China Wuhai Bioparticido Engineering Research Control Wuhai Anderson of Amiguetan Control Wuhai

<sup>b</sup>Hubei Biopesticide Engineering Research Center, Hubei Academy of Agricultural Sciences, Wuhan 430064, China 6645 Kou Jahorston of Tropical Marine Biogeneous and Barline Country of Tropical Marine Biogeneous

<sup>c</sup>CAS Key Laboratory of Tropical Marine Bio-resources and Ecology, Guangdong Key Laboratory of Marine Materia Medica, South China Sea Institute of Oceanology, Chinese Academy of Sciences, Guangzhou 510301, China

<sup>d</sup>Wuhan Institute for Drug and Medical Device Control, Wuhan 430075, China

<sup>6</sup>Hubei Key Laboratory of Natural Medicinal Chemistry and Resource Evaluation, School of Pharmacy, Tongji Medical College, Huazhong University of Science and Technology, Wuhan 430030, China <sup>6</sup>Department of Pharmacy, Hubei Province Key Laboratory of Occupational Hazard Identification and Control, Institute of Pharmaceutical Innovation, Medical College, Wuhan University of Science and Technology, Wuhan 430081, China

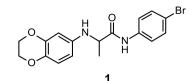


# 127192

# Identification of 2-((2,3-dihydrobenzo [b] [1,4] dioxin-6-yl)amino)-*N*-phenylpropanamides as a novel class of potent DprE1 inhibitors

Benjamin C. Whitehurst<sup>a,b</sup>, Robert J. Young<sup>a</sup>, Glenn A. Burley<sup>b</sup>, Monica Cacho<sup>c</sup>, Pedro Torres<sup>c</sup>, Laura Vela-Gonzalez del Peral<sup>c</sup>

<sup>a</sup>GlaxoSmithKline, Medicines Research Centre, Gunnels Wood Road, Stevenage, Hertfordshire SG1 2NY, UK <sup>b</sup>Department of Pure and Applied Chemistry, WestCHEM, University of Strathclyde, Glasgow G1 1XL, UK <sup>c</sup>Global Health R&D, GlaxoSmithKline, Severo Ochoa 2, Tres Cantos, 28760 Madrid, Spain



DprE1 plC50 (IC50 / µM)	7.2 (0.063)
MIC / µM	7.8
Chrom logD <sub>7.4</sub> (PFI)	<b>5.5</b> ( <b>7.5</b> )
HepG2 IC50 / µM	>100

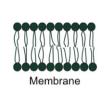
#### 127190

# Enhancing the activity of membrane remodeling epsin-peptide by trimerization

Wei-Yuan Hsu<sup>a</sup>, Toshihiro Masuda<sup>a</sup>, Sergii Afonin<sup>b</sup>, Takayuki Sakai<sup>a</sup>, Jan Vincent V. Arafiles<sup>a</sup>, Kenichi Kawano<sup>a</sup>, Hisaaki Hirose<sup>a</sup>, Miki Imanishi<sup>a</sup>, Anne S. Ulrich<sup>b,c</sup>, Shiroh Futaki<sup>a</sup>

<sup>a</sup>Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan

<sup>9</sup>Institute of Biological Interfaces (IBG-2), Karlsruhe Institute of Technology (KIT), P.O.B. 3640, 76021 Karlsruhe, Germany Ginstitute of Organic Chemistry (IOC), KIT, Fritz-Haber-Weg 6, 76131 Karlsruhe, Germany



EpN18

trime



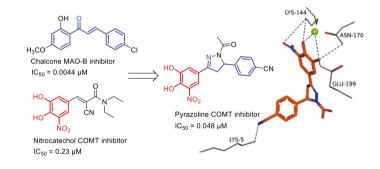
Enhanced curvature induction and packing loosening

#### 127188

Evaluation of nitrocatechol chalcone and pyrazoline derivatives as inhibitors of catechol-O-methyltransferase and monoamine oxidase

Rialette Hitge, Sharissa Smit, Anél Petzer, Jacobus P. Petzer

Pharmaceutical Chemistry, School of Pharmacy and Centre of Excellence for Pharmaceutical Sciences, North-West University, Potchefstroom 2520, South Africa



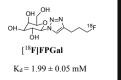
#### 127187

# Radiosynthesis and biological evaluation of an fluorine-18 labeled galactose derivative [<sup>18</sup>F]FPGal for imaging the hepatic asialoglycoprotein receptor

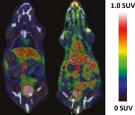
Penghui Sun<sup>a</sup>, Yun Zhu<sup>b</sup>, Yanjiang Han<sup>a</sup>, Kongzhen Hu<sup>a</sup>, Shun Huang<sup>a</sup>, Meng Wang<sup>a</sup>, Hubing Wu<sup>a</sup>, Ganghua Tang<sup>a</sup>

<sup>a</sup>Nanfang PET Center, Nanfang Hospital, Southern Medical University, Guangzhou, Guangdong Province, China bi war Tanar Contar, Donartmont of Infortious Diseases and Hanatalogy Unit, Nanfang Hospit

<sup>b</sup>Liver Tumor Center, Department of Infectious Diseases and Hepatology Unit, Nanfang Hospital, Southern Medical University, Guangzhou, Guangdong Province, China







30 min

Contents

## 127186

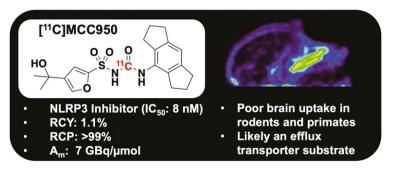
# Synthesis and evaluation of NLRP3-inhibitory sulfonylurea [<sup>11</sup>C]MCC950 in healthy animals

James R. Hill<sup>a,b</sup>, Xia Shao<sup>b</sup>, Nicholas L. Massey<sup>a</sup>, Jenelle Stauff<sup>b</sup>, Phillip S. Sherman<sup>b</sup>, Avril A.B. Robertson<sup>a,c</sup>, Peter J.H. Scott<sup>b</sup>

<sup>a</sup>Institute for Molecular Bioscience, The University of Queensland, Brisbane, Queensland 4072, Australia

<sup>b</sup>Department of Radiology, University of Michigan, Ann Arbor, MI 48109, USA (School of Chamistry and Mologular Piessianess, The University of

<sup>c</sup>School of Chemistry and Molecular Biosciences, The University of Queensland, Brisbane, Queensland 4072, Australia

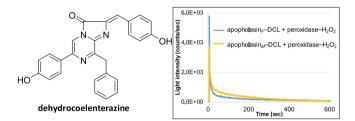


# 127177

# Expression of recombinant apopholasin using a baculovirus-silkworm multigene expression system and activation via dehydrocoelenterazine

Maiko Moriguchi<sup>a</sup>, Ryo Takahashi<sup>b</sup>, Bubwoong Kang<sup>a</sup>, Masaki Kuse<sup>a,a</sup>

<sup>a</sup>Graduate School of Agricultural Science, Kobe University, 1-1 Rokkodai, Nada-ku, Kobe 657-8501, Japan <sup>b</sup>Sysmex Corporation, 4-4-4 Takatsukadai, Nishi-ku, Kobe 657-2271, Japan



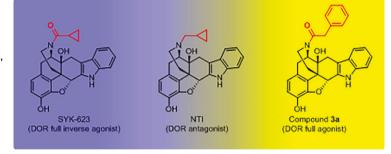
# 127176

# Discovery of $\delta$ opioid receptor full agonists lacking a basic nitrogen atom and their antidepressant-like effects

Hideaki Fujii<sup>a,b</sup>, Yota Uchida<sup>a</sup>, Marie Shibasaki<sup>a</sup>, Moeno Nishida<sup>c</sup>, Toshinori Yoshioka<sup>c</sup>, Riho Kobayashi<sup>c</sup>, Ayaka Honjo<sup>a</sup>, Kennosuke Itoh<sup>a,b</sup>, Daisuke Yamada<sup>c</sup>, Shigeto Hirayama<sup>a,b</sup>, Akiyoshi Saitoh<sup>c</sup>

<sup>a</sup>Laboratory of Medicinal Chemistry, School of Pharmacy, Kitasato University, 5-9-1, Shirokane, Minato-ku, Tokyo 108-8641, Japan <sup>b</sup>Medicinal Research Laboratories, School of Pharmacy, Kitasato University, 5-0-1, Shirakana, Minato Iw, Takya 108, 0641 Japan

5-9-1, Shirokane, Minato-ku, Tokyo 108-8641, Japan Laboratory of Pharmacology, Faculty of Pharmaceutical Sciences, Tokyo University of Science, Chiba 278-8510, Japan

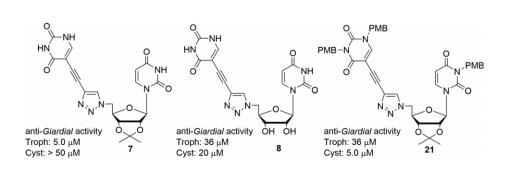


#### 127175

# Triazoxins: Novel nucleosides with anti-Giardia activity

Praveen K. Pogula<sup>a</sup>, Atasi De Chatterjee<sup>b</sup>, Miguel Chi<sup>b</sup>, Harrison W. VanKoten<sup>a</sup>, Siddhartha Das<sup>b</sup>, Steven E. Patterson<sup>a</sup>

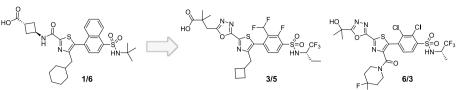
<sup>a</sup>Center for Drug Design, College of Pharmacy, Academic Health Center, University of Minnesota, Minneapolis, MN 55455, United States <sup>b</sup>Department of Biological Sciences, University of Texas at El Paso, El Paso, TX 79968-0519, United States



## Contents

## 127174

Discovery and optimization of new oxadiazole substituted thiazole RORyt inverse agonists through a bioisosteric amide replacement approach



PC9 Cell

039 049 082 032 061

μМ

EGER

GAPD

Christoph Steeneck<sup>a</sup>, Christian Gege<sup>a</sup>, Olaf Kinzel<sup>a</sup>, Michael Albers<sup>a</sup>, Gerald Kleymann<sup>a</sup>, Thomas Schlüter<sup>a</sup>, Andreas Schulz<sup>a</sup>, Xiaohua Xue<sup>b</sup>, Maxwell D. Cummings<sup>c</sup>, Anne M. Fourie<sup>b</sup>, Kristi A. Leonard<sup>c</sup>, Brian Scott<sup>b</sup>, James P. Edwards<sup>b</sup>, Thomas Hoffmann<sup>a</sup>, Steven D. Goldberg<sup>b</sup>

<sup>a</sup>Phenex Pharmaceuticals AG, Waldhofer Str 104, 69123 Heidelberg, Germany <sup>b</sup>Janssen Research and Development, LLC, San Diego, CA 92121, USA <sup>c</sup>Janssen Research and Development, Spring House, PA 19477, USA

#### 127167

Discovery and biological evaluation of proteolysis targeting chimeras (PROTACs) as an EGFR degraders based on osimertinib and lenalidomide

Kailun He<sup>a</sup>, Zhuo Zhang<sup>a</sup>, Wenbing Wang<sup>a</sup>, Xiaoliang Zheng<sup>b</sup>, Xiaoju Wang<sup>b</sup>, Xingxian Zhang<sup>a</sup>

<sup>a</sup>College of Pharmaceutical Sciences, Zhejiang University of Technology, Hangzhou, Zhejiang 310014, China <sup>b</sup>Center for Molecular Medicine, Zhejiang Academy of Medical Sciences, Hangzhou, Zhejiang 310032, China

### 127165

# Discovery of novel heat shock protein (Hsp90) inhibitors based on uminespib with potent antitumor activity Juyoung Jung<sup>a,c</sup>, Jinsun Kwon<sup>b</sup>, Soojung Hong<sup>a</sup>, An-Na Moon<sup>a</sup>, Jinah Jeong<sup>a</sup>, Sungwook Kwon<sup>a</sup>, Jeong-ah Kim<sup>a</sup>, Myoungjae Lee<sup>a</sup>, Hongsub Lee<sup>a</sup>, Jin Hee Lee<sup>a</sup>, Jeewoo Lee<sup>c</sup> a<sup>R</sup>esearch Laboratories, Ildong Pharmaceutical Co., Hwasemorg. di Cueonergi do 18406 South Korea

**16c,** n = 3

PC9:  $IC_{50} = 0.413 \ \mu M$ H1975:  $IC_{50} = 0.657 \ \mu M$ 

Hwaseong-si, Gyeonggi-do 18449, South Korea <sup>b</sup>AIMS BioScience Co., 2, Baumoe-ro 27-gil, Seochogu, Seoul 06752, South Korea

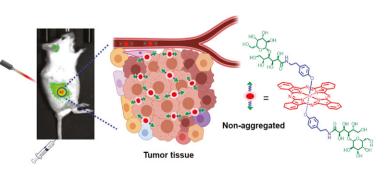
<sup>c</sup>Laboratory of Medicinal Chemistry, College of Pharmacy, Seoul National University, Seoul 08826, South Korea

### 127164

### A non-aggregated silicon(IV) phthalocyaninelactose conjugate for photodynamic therapy

Dong Li, Qing-Yan Hu, Xiao-Zhen Wang, Xingshu Li, Jia-Qian Hu, Bi-Yuan Zheng, Mei-Rong Ke, Jian-Dong Huang

State Key Laboratory of Photocatalysis on Energy and Environment, Fujian Provincial Key Laboratory of Cancer Metastasis Chemoprevention and Chemotherapy, College of Chemistry, Fuzhou University, Fuzhou 350108, China



# Contents

# 127151

#### Biotin and glucose dual-targeting, ligandmodified liposomes promote breast tumor-specific drug delivery

Mengyi Huang<sup>a,b</sup>, Yanchi Pu<sup>a,b</sup>, Yao Peng<sup>a,b</sup>, Qiuyi Fu<sup>a,b</sup>, Li Guo<sup>a,b</sup>, Yong Wu<sup>a,b</sup>, Yongxiang Zheng<sup>a,b,c</sup>

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

Department of Biopharmaceutics, West China School of Pharmacy, Sichuan University, Chengdu 610041, PR China

## 127136

#### Synthesis of novel of 2, 5-disubstituted 1, 3, 4oxadiazole derivatives and their in vitro antiinflammatory, anti-oxidant evaluation, and molecular docking study

Bharat B. Kashid<sup>a</sup>, Pravin H. Salunkhe<sup>a,b</sup>, Balasaheb B. Dongare<sup>a</sup>, Kishor R. More<sup>c</sup>, Vijay M. Khedkar<sup>d</sup>, Anil A. Ghanwat<sup>a</sup>

<sup>a</sup>Chemistry Research Laboratory, School of Chemical Sciences, Solapur University, Solapur 413255, India <sup>b</sup>CSIR- National Chemical Laboratory, Dr. Homi Bhabha Road, Pune 411008,

India

<sup>c</sup>Shandong Keyuan Pharmaceutical Co. Ltd Keyuan Street, Shandong Shanghe <sup>d</sup>School of Pharmacy, Vishwakarma University, Survey No. 2,3,4 Laxminagar,

Kondhwa (Bk.) Pune 411048, India

