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Symposium-in-Print

Chemical Neurobiology

Edited by: Prof. Dirk Trauner

University of Munich, Department of Chemistry, Butenandtstr. 5-13, 81377 Munich, Germany

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Editorial

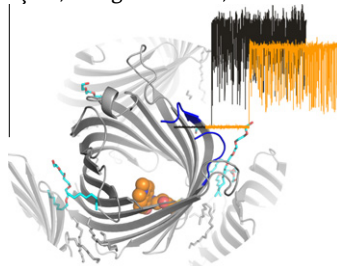
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SPECIAL ISSUE ARTICLES

Structural and functional characterization of a synthetically modified OmpG

pp 7716–7723

Wolfgang Grosse, Philipp Reiß, Simon Reitz, Menekse Çebi, Wolger Lübken, Ulrich Koert*, Lars-Oliver Essen*

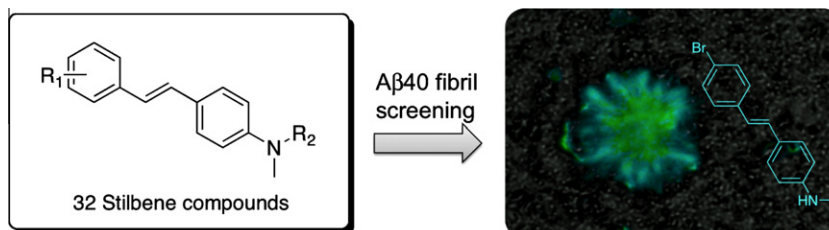


The first structure of the OmpG porin covalently modified by a synthetic compound is reported. Intimate lining of the modulator to the pore interior leads to partial current blockage.

Synthesis and evaluation of stilbene derivatives as a potential imaging agent of amyloid plaques

pp 7724–7730

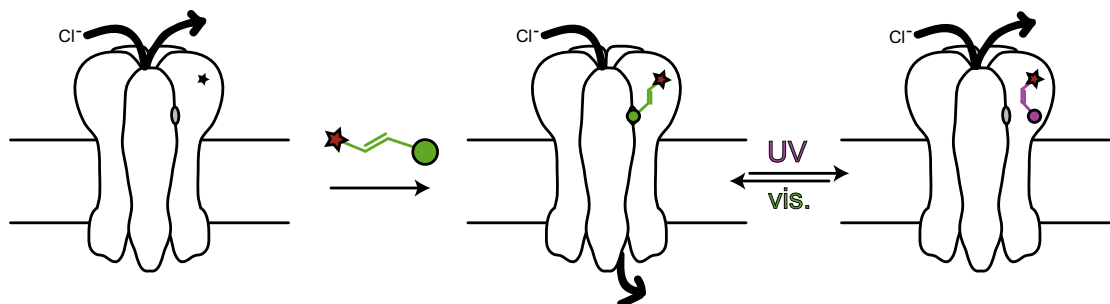
Myeng Chan Hong, Yun Kyung Kim, Jae Yong Choi, Si Qiang Yang, Hakjune Rhee, Young Hoon Ryu, Tae Hyun Choi, Gi Jeong Cheon, Gwang Il An, Hye Yun Kim, Youngsoo Kim, Dong Jin Kim, Jun-Seok Lee, Young-Tae Chang*, Kyo Chul Lee*



The GABA_A receptor as a target for photochromic molecules

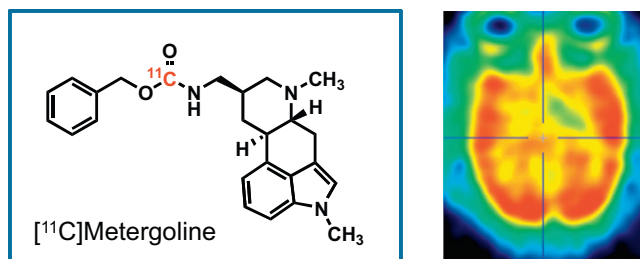
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Mariel Feliciano, Devaiah Vytla, Kathryn A. Medeiros, James J. Chambers*

**Evaluation of [¹¹C]metergoline as a PET radiotracer for 5HTR in nonhuman primates**

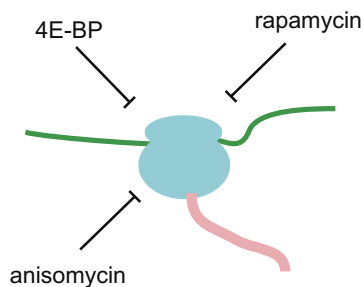
pp 7739–7745

Jacob M. Hooker*, Sung Won Kim, Achim T. Reibel, David Alexoff, Youwen Xu, Colleen Shea

**A collection of caged compounds for probing roles of local translation in neurobiology**

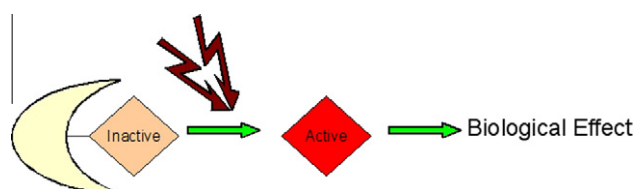
pp 7746–7752

Oleg Sadvovskii, Anna S. I. Jaikaran, Subhas Samanta, Marc R. Fabian, Ryan J. O. Dowling, Nahum Sonenberg, G. Andrew Woolley*

**Two-photon uncaging: New prospects in neuroscience and cellular biology**

pp 7753–7758

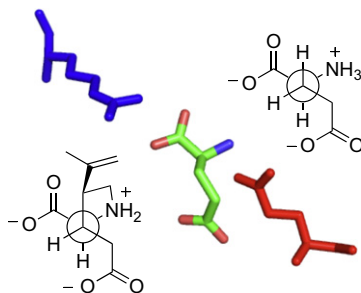
D. Warther, S. Gug, A. Specht, F. Bolze, J.-F. Nicoud, A. Mourrot, M. Goeldner*



Pharmacology of ionotropic glutamate receptors: A structural perspective

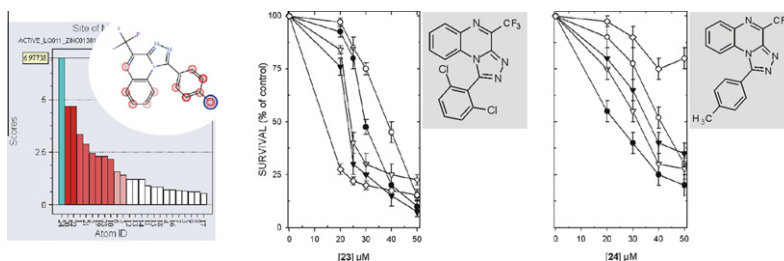
pp 7759–7772

Philipp Stawski, Harald Janovjak, Dirk Trauner*

**REGULAR ARTICLES****Ligand-based virtual screening and ADME-tox guided approach to identify triazolo-quinoxalines as folate cycle inhibitors**

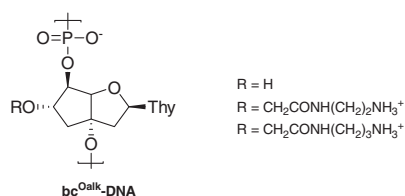
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Emanuele Carosati, Gianluca Sforza, Massimiliano Pippi, Gaetano Marverti, Alessio Ligabue, Davide Guerrieri, Sandra Piras, Giambattista Guaitoli, Rosaria Luciani, Maria Paola Costi, Gabriele Cruciani*

**Parallel synthesis and nucleic acid binding properties of C(6')-α-functionalized bicyclo-DNA**

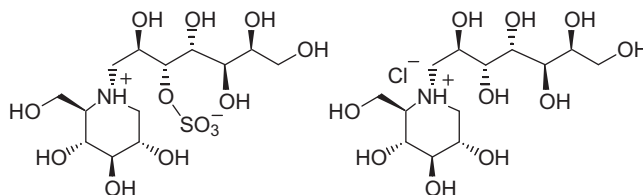
pp 7786–7793

Peter Šilhár, Christian J. Leumann*

**Probing the active-site requirements of human intestinal N-terminal maltase-glucoamylase: Synthesis and enzyme inhibitory activities of a six-membered ring nitrogen analogue of kotalanol and its de-O-sulfonated derivative**

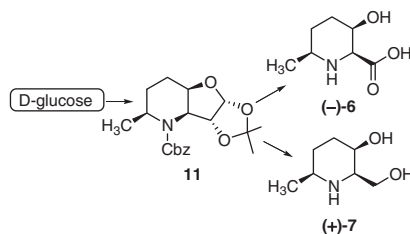
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Sankar Mohan, Lyann Sim, David R. Rose, B. Mario Pinto*



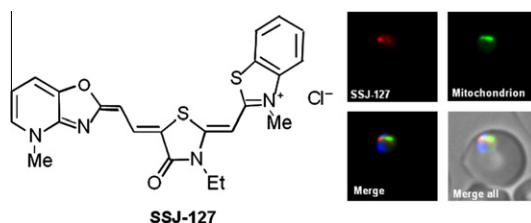
Intramolecular reductive cyclization strategy to the synthesis of (–)-6-methyl-3-hydroxy-piperidine-2-carboxylic acid, pp 7799–7803 (+)-6-methyl-(2-hydroxymethyl)-piperidine-3-ol and their glycosidase inhibitory activity

Vishwas U. Pawar, Sanjay T. Chavan, Sushma G. Sabharwal, Vaishali S. Shinde*



Selective accumulation of a novel antimalarial rhodacyanine derivative, SSJ-127, in an organelle of *Plasmodium berghei* pp 7804–7808

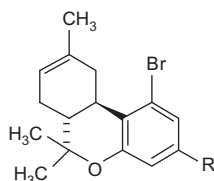
Mayumi Ikegami-Kawai*, Chika Arai, Yuko Ogawa, Ryohei Yanoshita, Masataka Ihara



A novel antimalarial rhodacyanine derivative, SSJ-127, is detected in mouse malaria parasites using fluorescence imaging. The SSJ-127-accumulating organelle is clearly different from the mitochondrion and the nucleus in terms of morphology.

1-Bromo-3-(1',1'-dimethylalkyl)-1-deoxy- Δ^8 -tetrahydrocannabinols: New selective ligands for the cannabinoid CB₂ receptor pp 7809–7815

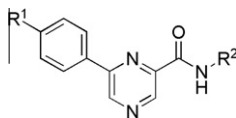
John W. Huffman*, Seon A. Hepburn, Nataliya Lyutenko, Alicia L. S. Thompson, Jenny L. Wiley, Dana E. Selley, Billy R. Martin



The synthesis and pharmacology of a series of 1-bromo-1-deoxy-3-(1',1'-dimethylalkyl)- Δ^8 -THCs is described. One of these compounds (R = dimethylhexyl) is 52-fold selective for the CB₂ receptor with good (28 nM) affinity for this receptor.

Discovery and biological evaluation of potent, selective, orally bioavailable, pyrazine-based blockers of the Na_v1.8 sodium channel with efficacy in a model of neuropathic pain pp 7816–7825

Marc J. C. Scanio*, Lei Shi, Irene Drizin, Robert J. Gregg, Robert N. Atkinson, James B. Thomas, Matthew S. Johnson, Mark L. Chapman, Dong Liu, Michael J. Krambis, Yi Liu, Char-Chang Shieh, XuFeng Zhang, Gricelda H. Simler, Shailen Joshi, Prisca Honore, Kennan C. Marsh, Alison Knox, Stephen Werness, Brett Antonio, Douglas S. Krafte, Michael F. Jarvis, Connie R. Faltynek, Brian E. Marron, Michael E. Kort

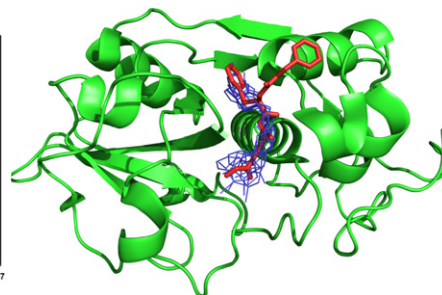
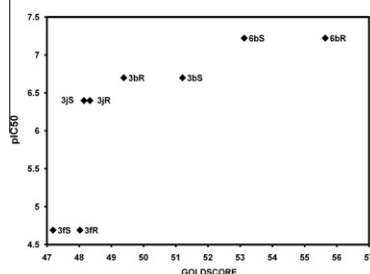


Studies toward the structural optimization of novel thiazolyldhydrazone-based potent antitrypanosomal agents

pp 7826–7835

Marcelo Zaldini Hernandez, Marcelo Montenegro Rabello, Ana Cristina Lima Leite*, Marcos Veríssimo Oliveira Cardoso, Diogo Rodrigo Magalhaes Moreira, Dalci José Brondani, Carlos Alberto Simone, Luiza Campos Reis, Marina Assis Souza, Valéria Rego Alves Pereira, Rafaela Salgado Ferreira, James Hobson McKerrow

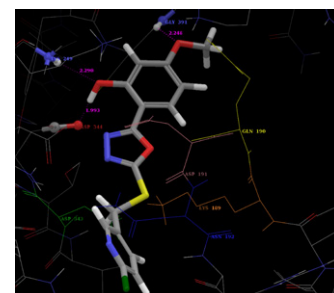
Optimization of antichagasic structures: thiazolyldhydrazones represent a class of compounds that exhibit powerful trypanocidal properties, as confirmed by in vitro and in silico (docking) evaluation using the *Trypanosoma cruzi* cruzain as drug target. Strategies for molecular optimization are presented here and structure–activity relationships (SAR) data are subsequently gathered. This represents an important progress on previously reported SAR studies for this scaffold.

**Synthesis, biological evaluation, and molecular docking studies of 2-chloropyridine derivatives possessing 1,3,4-oxadiazole moiety as potential antitumor agents**

pp 7836–7841

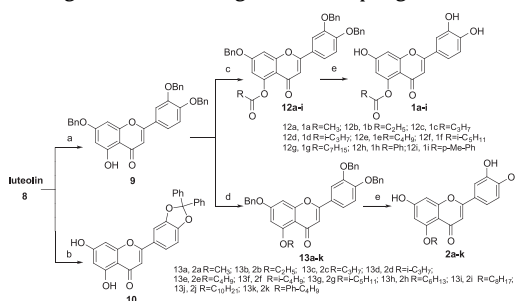
Qing-Zhong Zheng, Xiao-Min Zhang, Ying Xu, Kui Cheng, Qing-Cai Jiao*, Hai-Liang Zhu*

Antiproliferative assay results indicated that compounds **6o** and **6u** exhibited the most potent activity against gastric cancer cell SGC-7901, which was more potent than the positive control. Especially, compound **6o** exhibited significant telomerase inhibitory activity ($IC_{50} = 2.3 \pm 0.07 \mu M$), which was comparable to the positive control etidium bromide. Docking simulation was performed to position compound **6o** into the active site of telomerase (3DU6) to determine the probable binding model.

**Discovery and synthesis of novel luteolin derivatives as DAT agonists**

pp 7842–7848

Jiange Zhang*, Xianbo Liu, Xinsheng Lei*, Lei Wang, Lihe Guo*, Gang Zhao, Guoqiang Lin



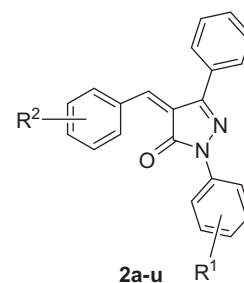
The synthesis of the novel dopamine transporter (DAT) agonist luteolin derivative **1d** ($EC_{50} = 0.046 \mu M$) is reported.

**Synthesis and evaluation of pyrazolone compounds as SARS-coronavirus 3C-like protease inhibitors**

pp 7849–7854

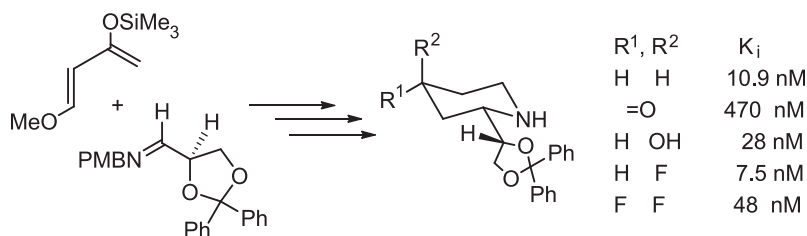
R. Ramajayam, Kian-Pin Tan, Hun-Ge Liu, Po-Huang Liang*

A series of pyrazolone compounds as possible SARS-CoV 3CL protease inhibitors were designed, synthesized, and evaluated by in vitro protease assay using fluorogenic substrate peptide in which several showed potent inhibition against the 3CL protease. Interestingly, one of the inhibitors was also active against 3C protease from coxsackievirus B3. These inhibitors could be potentially developed into anti-coronaviral and anti-picornaviral agents.



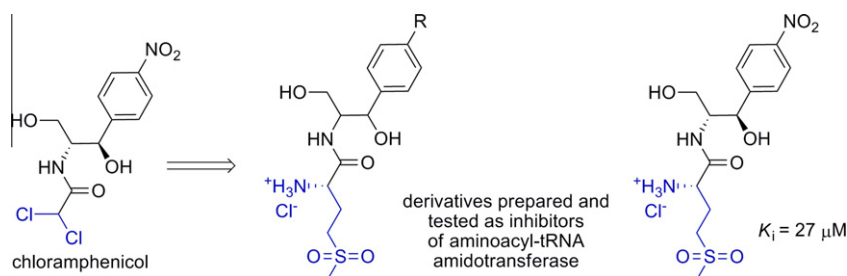
Synthesis and SAR studies of chiral non-racemic dexodadrol analogues as uncompetitive NMDA receptor antagonists pp 7855–7867

Ashutosh Banerjee, Dirk Schepmann, Jens Köhler, Ernst-Ulrich Würthwein, Bernhard Wünsch*



Inhibition of *Helicobacter pylori* aminoacyl-tRNA amidotransferase by chloramphenicol analogs pp 7868–7872

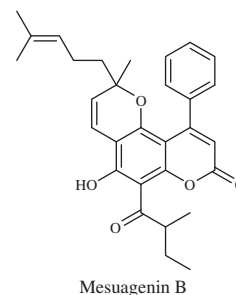
Christian Balg, Maria De Mieri, Jonathan L. Huot, Sébastien P. Blais, Jacques Lapointe, Robert Chênevert*



4-Phenylcoumarins from *Mesua elegans* with acetylcholinesterase inhibitory activity pp 7873–7877

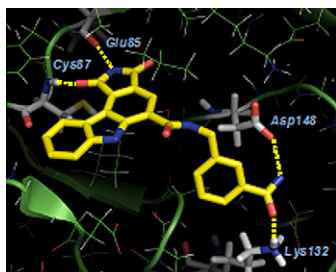
Khalijah Awang*, Gomathi Chan, Marc Litaudon, Nor Hadiani Ismail, Marie-Thérèse Martin, Françoise Gueritte

Nine 4-phenylcoumarins have been isolated from *Mesua elegans*, in which three are new; mesuagenin A, mesuagenin C, mesuagenin D, and one is a newly reported natural product; mesuagenin B. Chemical structures were elucidated using spectroscopic techniques, notably 1D and 2D NMR spectroscopy. Four compounds showed significant inhibitory activity against acetylcholinesterase, with mesuagenin B being the most potent (IC₅₀ = 0.7 μM).



Synthesis and evaluation of 5-substituted 9-hydroxypyrrolo[3,4-c]carbazole-1,3(2H,6H)-diones as check point 1 kinase inhibitors pp 7878–7889


Yuki Sako, Satoshi Ichikawa*, Akiko Osada, Akira Matsuda*



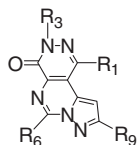
Potent inhibitors of Check point kinase 1 have been developed by a structure-based drug design.



pp 7890–7999



$R_1 = \text{CH}_3, \text{Ph}, \text{Cl}, 3\text{-Pyridine}, 4\text{-Pyridine-3-F-Ph}, 4\text{-F-Ph}$
 $R_3 = \text{PhCH}_2, \text{C}_4\text{H}_9, \text{Ph}(\text{CH})\text{CH}_3$
 $R_6 = \text{Ph}, 3\text{-thienyl}, 4\text{-OCH}_3\text{-Ph}$
 $R_9 = \text{CH}_3, \text{C}_2\text{H}_5, \text{iC}_3\text{H}_7, \text{nC}_3\text{H}_7, \text{CF}_3$



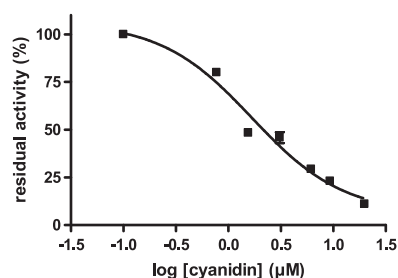
R₁ = CH₃, Ph, Cl, 3-Pyridine, 4-Pyridine, 3-F-Ph, 4-F-Ph
R₃ = PhCH₂, C₄H₉, Ph(CH)₂CH₃
R₆ = Ph, 3-thienyl, 4-OCH₃-Ph
R₉ = CH₃, C₂H₅, iC₃H₇, nC₃H₇, CF₃



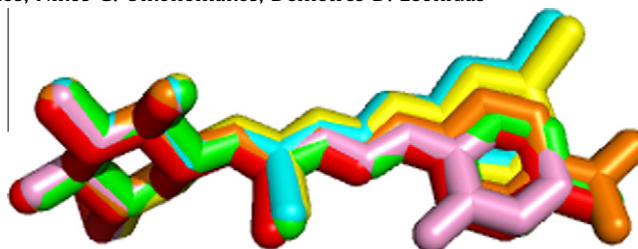
pp 7900–7910

chem>Oc1cc(O)c2c(c1)c3cc(O)c(O)cc3oc2=O

cyanidin

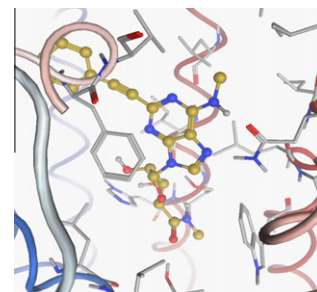


Kyra-Melinda Alexacou, Alia-Cristina Tenchiu (Deleanu), Evangelia D. Chrysina, Maria-Despoina Charavgi, Ioannis D. Kostas*, Spyros E. Zographos, Nikos G. Oikonomakos, Demetres D. Leonidas*



pp 7923–7930

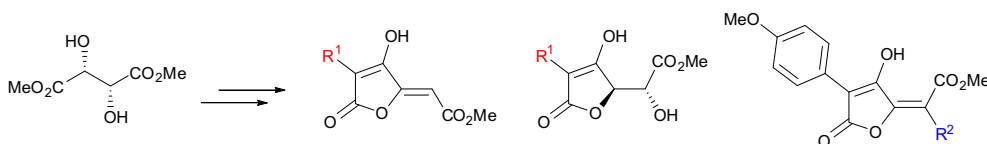
Adenosine A₃ receptor is involved in a variety of key physio-pathological processes and its agonists represent interesting tools for the development of new drugs. In this molecular modeling study, high adenosine A₃ receptor affinities and selectivities of recently reported MECA derivatives were analyzed by using adenosine receptor structural models based on the adenosine A_{2A} receptor crystal structure and molecular docking analysis.



Synthesis and antioxidant properties of pulvinic acids analogues

pp 7931–7939

Brice Nadal, Sophie A.-L. Thetiot-Laurent, Serge Pin, Jean-Philippe Renault, Damien Cressier, Ghassoub Rima, Antoine Le Roux, Stéphane Meunier, Alain Wagner, Claude Lion, Thierry Le Gall*



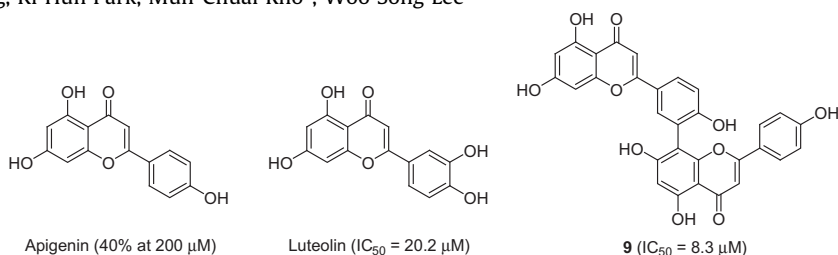
The synthesis of 28 pulvinic acids analogues from dimethyl L-tartrate and the evaluation of their antioxidant properties, using antioxidant capacity assays and free radical scavenging assays, are described.



Biflavonoids from *Torreya nucifera* displaying SARS-CoV 3CL^{pro} inhibition

pp 7940–7947

Young Bae Ryu, Hyung Jae Jeong, Jang Hoon Kim, Young Min Kim, Ji-Young Park, Doman Kim, Thi Thanh Hanh Nguyen, Su-jin Park, Jong Sun Chang, Ki Hun Park, Mun-Chual Rho*, Woo Song Lee*



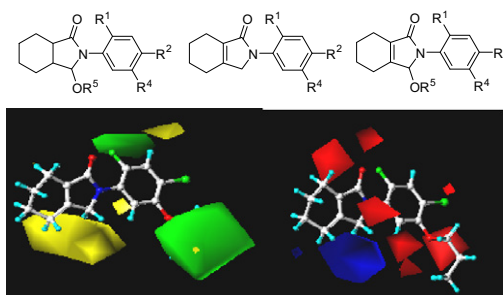
Inhibitory activity appeared to be associated with the presence of an apigenin moiety at position C-3' of flavones, as biflavonoid had an effect on SARS-CoV 3CL^{pro} inhibitory activity.



Design, syntheses and 3D-QSAR studies of novel *N*-phenyl pyrrolidin-2-ones and *N*-phenyl-1*H*-pyrrol-2-ones as protoporphyrinogen oxidase inhibitors

pp 7948–7956

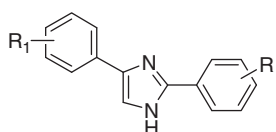
Li Zhang, Yin Tan, Neng-Xue Wang, Qiong-You Wu, Zhen Xi*, Guang-Fu Yang*



Anticonvulsant activity of 2,4(1*H*)-diarylimidazoles in mice and rats acute seizure models

pp 7957–7965

Valentina Zuliani*, Marco Fantini, Aradhya Nigam, James P. Stables, Manoj K. Patel, Mirko Rivara



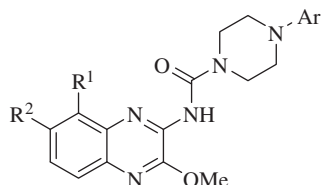
R = R₁ = H - ED₅₀ (MES) = 61.7; TD₅₀ = 126.8; PI = 2.1
 R = *m*-OCH₃, R₁ = H - ED₅₀ (MES) = 46.8; TD₅₀ = 200.8; PI = 4.3
 R = *p*-CF₃, R₁ = H - ED₅₀ (MES) = 129.5; TD₅₀ > 500; PI > 3.8
 R = H, R₁ = *m*-Cl - ED₅₀ (MES) = 136.7; TD₅₀ > 500; PI > 3.6



Synthesis and anticancer activity of new 1-[(5 or 6-substituted 2-alkoxyquinoxalin-3-yl)aminocarbonyl]-4-(hetero)arylpiperazine derivatives

pp 7966–7974

Young Bok Lee*, Young-Dae Gong*, Heejeong Yoon, Chang-Ho Ahn, Moon-Kook Jeon, Jae-Yang Kong



Compound 25: $R^1 = H$
 $R^2 = F$
 $Ar = 3,5\text{-dimethoxyphenyl}$
 $IC_{50} = 11 \sim 21 \text{ nM}$

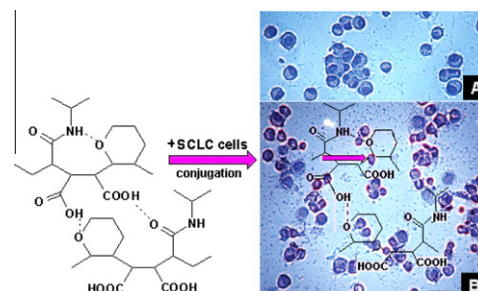


Bioengineering functional copolymers. XIV. Synthesis and interaction of poly(*N*-isopropylacrylamide-co-3,4-dihydro-2*H*-pyran-*alt*-maleic anhydride)s with SCLC cancer cells

pp 7975–7984

Mustafa Türk, Zakir M. O. Rzayev*, Sevda A. Khalilova

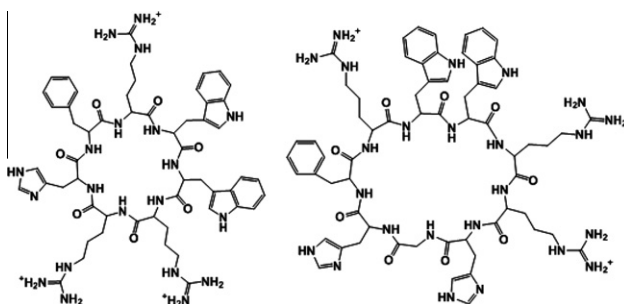
Novel bioengineering functional terpolymers containing a combination of H-bonded ionizable amide-pyran and carboxylic groups as antitumor sites were synthesized and their cytotoxic, apoptotic and necrotic effects on human lung small cell carcinoma (SCLC) are investigated. LM images: (A) non-apoptotic and (B) conjugated cells.



Synthesis of new antifungal peptides selective against *Cryptococcus neoformans*

pp 7985–7990

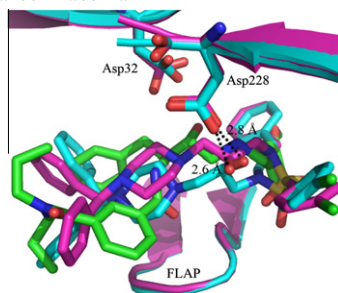
Manuela Grimaldi, Margherita De Rosa, Sara Di Marino, Mario Scrima, Brunella Posteraro, Maurizio Sanguinetti, Giovanni Fadda, Annunziata Soriente, Anna Maria D'Ursi*



BACE1 inhibitory activities of enantiomerically pure, variously substituted *N*-(3-(4-benzhydrylpiperazin-1-yl)-2-hydroxypropyl) arylsulfonamides

pp 7991–7996

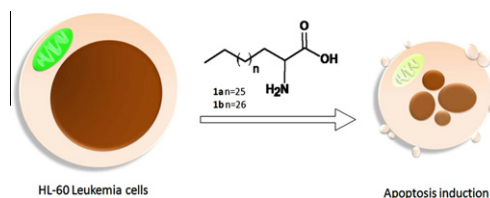
Simone Bertini, Elisa Ghilardi, Valentina Asso, Carlotta Granchi, Filippo Minutolo, Mauro Pineschi, Valeria Di Bussolo, Andrea Bortolato, Stefano Moro, Alessandro Saba, Marco Macchia*



Pro-apoptotic activity of lipidic α -amino acids isolated from *Protopalpythoa variabilis*

pp 7997–8004

Diego Veras Wilke, Paula Christine Jimenez, Renata Mendonça Araújo, Wildson Max Barbosa da Silva, Otilia Deusdênia Loiola Pessoa, Edilberto Rocha Silveira, Claudia Pessoa, Manoel Odorico de Moraes, Mariusz Skwarczynski, Pavla Simerska, Istvan Toth, Letícia Veras Costa-Lotufo*

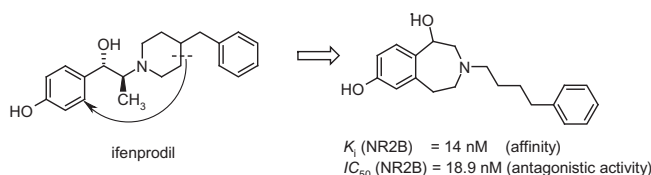


The anti-proliferative potential of 14 synthetic LAAs were evaluated on several tumor cell lines, as well as the anti-proliferative and pro-apoptotic effects of cytotoxic LAAs (**1a/1b**) isolated from the marine zoanthid *Protopalpythoa variabilis*.

Conformationally constrained NR2B selective NMDA receptor antagonists derived from ifenprodil: Synthesis and biological evaluation of tetrahydro-3-benzazepine-1,7-diols

pp 8005–8015

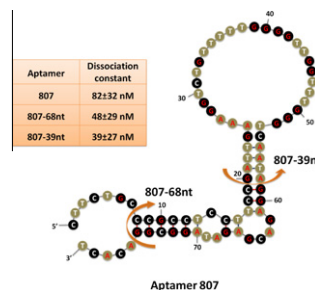
Bastian Tewes, Bastian Frehland, Dirk Schepmann, Kai-Uwe Schmidtke, Thomas Winckler, Bernhard Wünsch*

**In vitro lectin-mediated selection and characterization of rHuEPO- α -binding ssDNA aptamers**

pp 8016–8025

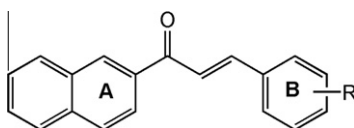
Zhaoyang Zhang, Lei Guo, Aitao Guo, Hua Xu, Jijun Tang, Xingjie Guo, Jianwei Xie*

After eight rounds of lectin-mediated affinity chromatographic SELEX, aptamer 807 of recombinant human erythropoietin- α was successfully evolved as a prevalent one for the first time. Characterization of aptamer 807 was fully investigated from the point of its secondary structural information and specific recognition towards malignant tumor cells and human urothelium tumors.

**Naphthylchalcones induce apoptosis and caspase activation in a leukemia cell line: The relationship between mitochondrial damage, oxidative stress, and cell death**

pp 8026–8034

Evelyn Winter, Louise Domeneghini Chiaradia, Clarissa A. S. de Cordova, Ricardo José Nunes, Rosendo Augusto Yunes, Tânia Beatriz Creczynski-Pasa*

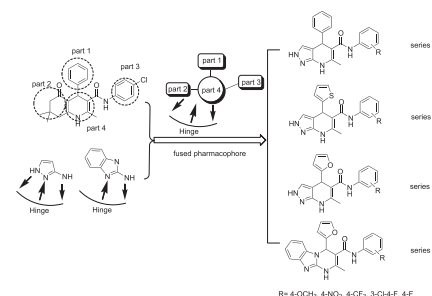


Design, synthesis and bioevaluation of dihydropyrazolo[3,4-*b*]pyridine and benzo[4,5]imidazo[1,2-*a*]pyrimidine compounds as dual KSP and Aurora-A kinase inhibitors for anti-cancer agents

pp 8035–8043

Rong-geng Fu, Qi-dong You*, Lei Yang, Wu-tong Wu, Cheng Jiang, Xiao-li Xu

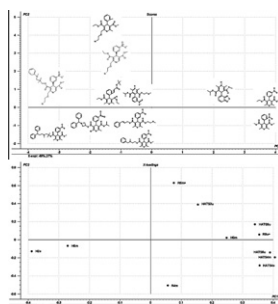
Four series of dihydropyrazolo[3,4-*b*]pyridines and benzo[4,5]imidazo[1,2-*a*]pyrimidines were designed and synthesized as dual KSP and Aurora-A kinase inhibitors for anti-cancer agents by introducing some fragments of Aurora-A kinase inhibitors into KSP inhibitor CPUYL064.



Anti-leishmanial and anti-trypanosomal activities of 1,4-dihydropyridines: In vitro evaluation and structure–activity relationship study

pp 8044–8053

Juliana Q. Reimão, Marcus T. Scotti, André G. Tempone*

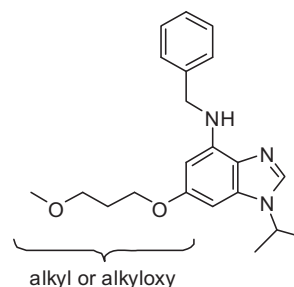


Structure–activity relationships of benzimidazole-based selective inhibitors of the mitogen activated kinase-5 signaling pathway

pp 8054–8060

Patrick T. Flaherty*, Ishveen Chopra, Prashi Jain, Darlene Monlish, Jane Cavanaugh

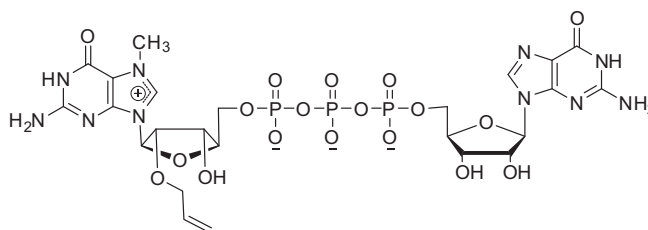
Inhibition of EGF-mediated ERK5 phosphorylation is examined for several 1-isopropyl-4-amino-6-ether linked benzimidazole-based compounds.



Synthesis and evaluation of 2'-O-allyl substituted dinucleotide cap analog for mRNA translation

pp 8061–8065

Anilkumar R. Kore*, Irudaya Charles

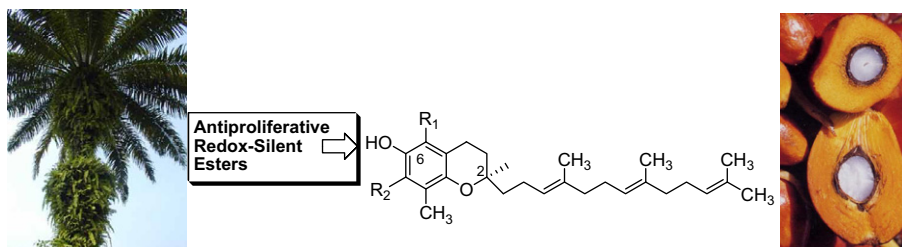


Design, synthesis and substrate properties of 2'-O-allyl substituted dinucleotide cap analog, that is, m^{7,2'-O-Allyl}GpppG is reported.

Redox-silent tocotrienol esters as breast cancer proliferation and migration inhibitors

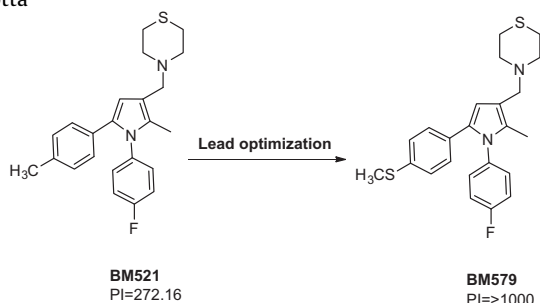
pp 8066–8075

Fathy A. Behery, Ahmed Y. Elnagar, Mohamed R. Akl, Vikram B. Wali, Bilal Abuasal, Amal Kaddoumi, Paul W. Sylvester, Khalid A. El Sayed*

**Identification of a novel pyrrole derivative endowed with antimycobacterial activity and protection index comparable to that of the current antitubercular drugs streptomycin and rifampin**

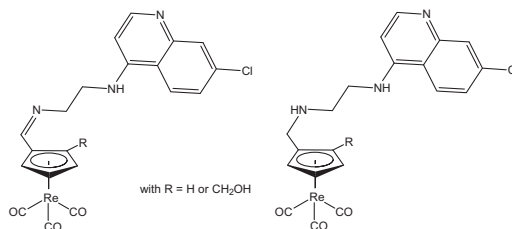
pp 8076–8084

Mariangela Biava*, Giulio Cesare Porretta, Giovanna Poce, Claudio Battilocchio, Salvatore Alfonso, Alessandro De Logu, Nadia Serra, Fabrizio Manetti, Maurizio Botta

**Synthesis and antimalarial activities of rhenium bioorganometallics based on the 4-aminoquinoline structure**

pp 8085–8091

Rodrigo Arancibia, Faustine Dubar, Bruno Pradines, Isabelle Forfar, Daniel Dive, A. Hugo Klahn, Christophe Biot*

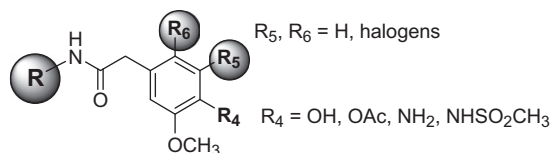


A series of new 4-aminoquinoline-cyrhethrene derivatives have been synthesized and tested for efficacy against both chloroquine-susceptible and chloroquine-resistant strains of *Plasmodium falciparum*. To establish the role of the cyrhethrenyl moiety in the antimalarial activity of this series, purely organic parent compounds were also synthesized and tested.

Halogenation of 4-hydroxy/amino-3-methoxyphenyl acetamide TRPV1 agonists showed enhanced antagonism to capsaicin

pp 8092–8105

Dong Wook Kang, Yong Soo Kim, Kwang Su Lim, Myeong Seop Kim, Larry V. Pearce, Vladimir A. Pavlyukovets, Andy K. Tao, Krystle A. Lang-Kuhs, Peter M. Blumberg, Jeewoo Lee*



Structure–activity relationships for inhibition of inosine monophosphate dehydrogenase and differentiation induction pp 8106–8111 of K562 cells among the mycophenolic acid derivatives

Shinya Mitsuhashi, Junichi Takenaka, Katsushige Iwamori, Noriyuki Nakajima, Makoto Ubukata*

1 (MPA): $R_1 = \text{H}$, $R_2 = \text{CH}_3$, $R_3 = \text{COOH}$

2: $R_1 = \text{H}$, $R_2 = \text{H}$, $R_3 = \text{COOH}$

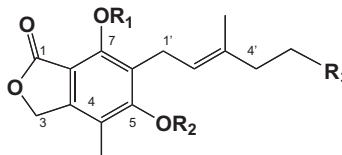
3: $R_1 = \text{COCH}_3$, $R_2 = \text{CH}_3$, $R_3 = \text{COOH}$

4: $R_1 = \text{CH}_3$, $R_2 = \text{CH}_3$, $R_3 = \text{COOH}$

5: $R_1 = \text{H}$, $R_2 = \text{CH}_3$, $R_3 = \text{COOCH}_3$

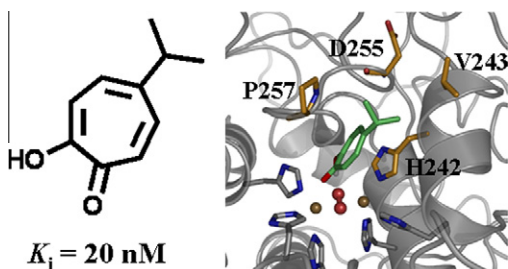
6: $R_1 = \text{H}$, $R_2 = \text{CH}_3$, $R_3 = \text{CH}_2\text{OH}$

7: $R_1 = \text{H}$, $R_2 = \text{CH}_3$, $R_3 = \text{CONHOH}$



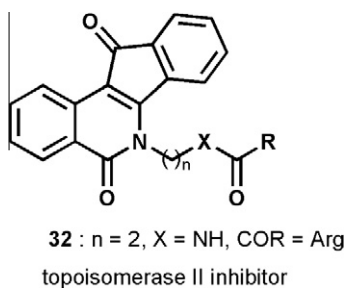
Structural insights into the hot spot amino acid residues of mushroom tyrosinase for the bindings of thujaplicins pp 8112–8118

Satoshi Takahashi, Takanori Kamiya, Kazunori Saeki, Tomoka Nezu, Shin-ichiro Takeuchi, Ryoko Takasawa, Satoshi Sunaga, Atsushi Yoshimori, Shigeo Ebizuka, Takehiko Abe, Sei-ichi Tanuma*



Indeno[1,2-c]isoquinolin-5,11-diones conjugated to amino acids: Synthesis, cytotoxicity, DNA interaction, and topoisomerase II inhibition properties pp 8119–8133

Gang Ahn, Amélie Lansiaux, Jean-François Goossens, Christian Bailly, Brigitte Baldeyrou, Nadège Schifano-Faux, Pierre Grandclaudon, Axel Couture, Adina Ryckebusch*



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*Corresponding author

Supplementary data available via ScienceDirect

COVER

The cover shows the crystal structure of an AMPA receptor, as elucidated by Eric Gouaux and colleagues, surrounded by various agonists and antagonists of ionotropic glutamate receptors. It was designed by Dirk Trauner.

Available online at www.sciencedirect.com



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