

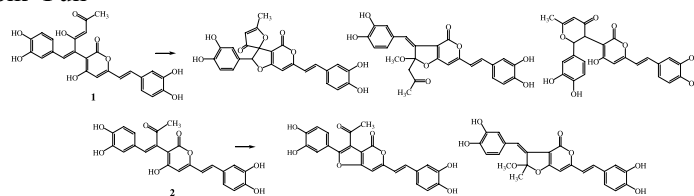
Contents

ARTICLES

Highly oxygenated and unsaturated metabolites providing a diversity of hispidin class antioxidants in the medicinal mushrooms *Inonotus* and *Phellinus*

pp 3309–3314

In-Kyoung Lee and Bong-Sik Yun*

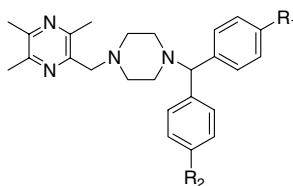


Highly oxygenated and unsaturated antioxidants were isolated from the methanolic extract of the fruiting body of the medicinal mushroom *Inonotus xeranticus* and their structures were established by extensive spectroscopic data. It is proposed that these compounds might provide a diversity of hispidin class antioxidants by the natural and/or enzymatic rearrangements in the fungi *Inonotus* and *Phellinus*.

Design, synthesis, and biological activities of novel Ligustrazine derivatives

pp 3315–3320

Xian-Chao Cheng, Xin-Yong Liu,* Wen-Fang Xu, Xiu-Li Guo and Yang Ou

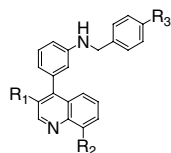


A series of novel Ligustrazine derivatives was designed and synthesized. Their protective effects on damaged ECV-304 cells and antiplatelet aggregation activities were reported.

Further modification on phenyl acetic acid based quinolines as liver X receptor modulators

pp 3321–3333

Baihua Hu,* James Jetter, David Kaufman, Robert Singhaus, Ronald Bernotas, Rayomand Unwalla, Elaine Quinet, Dawn Savio, Anita Halpern, Michael Basso, James Keith, Valerie Clerin, Liang Chen, Qiang-Yuan Liu, Irene Feingold, Christine Huselton, Farooq Azam, Annika Goos-Nilsson, Anna Wilhelmsson, Ponnal Nambi and Jay Wrobel



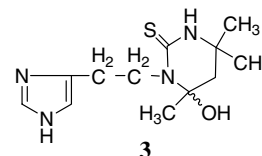
R₁ = Me, Ph, C(=O)Ph, Bn,
CN, C(=O)NH₂
R₂ = H, F, Cl, Me, CF₃
R₃ = H, CO₂H, CH₂CO₂H,
CH(Me)CO₂H,
C(Me)₂CO₂H,
CH(OH)CO₂H,
CF₂CO₂H, and acid mimics

One pot synthesis of pyrimidine and bispyrimidine derivatives and their evaluation for anti-inflammatory and analgesic activities

pp 3334–3344

Sham M. Sondhi,* Shubhi Jain, Monica Dinodia, Rakesh Shukla and Ram Raghubir

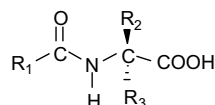
Condensation of 4-isothiocyanato-4-methyl pentan-2-one and 3-isothiocyanatobutanal with various amines and diamines gave pyrimidine (**1–10**) and bispyrimidine derivatives (**11–15**). On screening for anti-inflammatory and analgesic activities compound-3 exhibited anti-inflammatory activity comparable to ibuprofen and analgesic activity better than ibuprofen.



Potential anti-inflammatory actions of the elmiric (lipoamino) acids

pp 3345–3355

Sumner H. Burstein,* Jeffrey K. Adams, Heather B. Bradshaw, Cristian Fraioli, Ronald G. Rossetti, Rebecca A. Salmons, John W. Shaw, J. Michael Walker, Robert E. Zipkin and Robert B. Zurier

R₁ = long chain saturated or unsaturated alkyl group.R₂ or R₃ = various side chain or ring structures with or without heteroatoms.

A library of amino acid-fatty acid conjugates (elmiric acids) was synthesized and tested for their possible use as anti-inflammatory agents. The compounds were assayed in vitro for their effects on cell proliferation and prostaglandin production, and compared with their effects on in vivo models of inflammation.

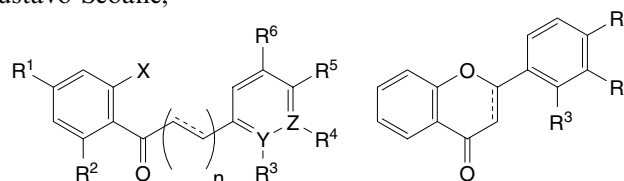
Synthetic chalcones, flavanones, and flavones as antitumoral agents:

pp 3356–3367

Biological evaluation and structure–activity relationships

Mauricio Cabrera, Macarena Simoens, Gabriela Falchi, M. Laura Lavaggi, Oscar E. Piro, Eduardo E. Castellano, Anabel Vidal, Amaia Azqueta, Antonio Monge, Adela López de Ceráin, Gabriel Sagera, Gustavo Seoane, Hugo Cerecetto* and Mercedes González*

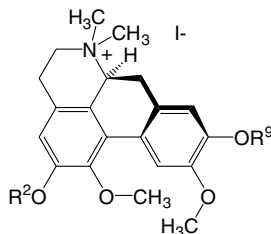
A wide series of synthetic flavonoids, with druglikeness properties, were developed and evaluated as antitumoral agents against TK-10, MCF-7, and HT-29 human tumoral cells. Comet assay was performed against non-tumoral HK-2 in order to know chromosomal aberrations in normal cells. A QSAR was obtained for anti-HT-29 activities.



Aporphine metho salts as neuronal nicotinic acetylcholine receptor blockers

pp 3368–3372

Patricio Iturriaga-Vásquez, Edwin G. Pérez, E. Yvonne Slater, Isabel Bermúdez and Bruce K. Cassels*

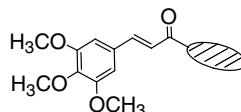


Several 1,2,9,10-tetraoxygenated aporphine metho salts were evaluated as $\alpha 7$ and $\alpha 4\beta 2$ neuronal nicotinic acetylcholine receptor antagonists. Xanthoplanine, the most potent compound of the series, blocked both receptor subtypes at low micromolar concentrations.

3-(3,4,5-Trimethoxyphenyl)-1-oxo-2-propene: A novel pharmacophore displaying potent multidrug resistance reversal and selective cytotoxicity

pp 3373–3380

Umashankar Das, Masami Kawase, Hiroshi Sakagami, Atsushi Ideo, Jun Shimada, Joseph Molnár, Zoltán Baráth, Zsuzsanna Bata and Jonathan R. Dimmock*



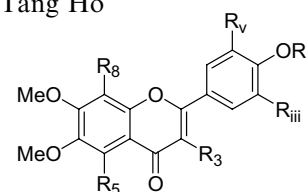
The mounting of the 3-(3,4,5-trimethoxyphenyl)-1-oxo-2-propenyl group onto different molecular scaffolds resulted in compounds displaying potent MDR-reversal properties and the ability to display selective cytotoxicity for malignant cells.

Isolation and syntheses of polymethoxyflavones and hydroxylated polymethoxyflavones as inhibitors of HL-60 cell lines

pp 3381–3389

Shiming Li,* Min-Hsiung Pan, Ching-Shu Lai, Chih-Yu Lo, Slavik Dushenkov and Chi-Tang Ho

Herein we describe the isolation, syntheses and evaluation of (hydroxylated) polymethoxyflavones in HL-60 cancer cell proliferation and apoptosis induction assays. Two 5-hydroxylated polymethoxyflavones showed strong inhibition activities and apoptosis.



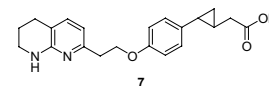
R₃: H, OH, OMe; **R₅:** OH, OMe
R₈: H, OMe; **R_{iii}:** H, OH, OMe
R_V: H, OMe; **R:** H, Me

Discovery of +(2-{4-[2-(5,6,7,8-tetrahydro-1,8-naphthyridin-2-yl)ethoxy]phenyl}-cyclopropyl)acetic acid as potent and selective $\alpha_v\beta_3$ inhibitor: Design, synthesis, and optimization

pp 3390–3412

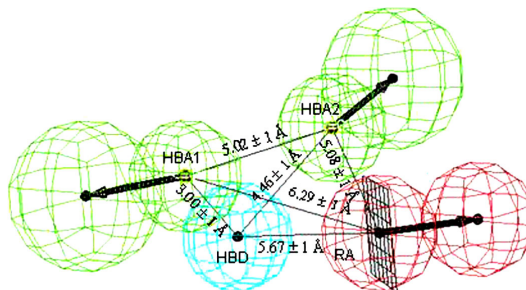
Srinivasan R. Nagarajan,* Hwang-Fun Lu, Alan F. Gasiecki, Ish K. Khanna, Mihir D. Parikh, Bipinchandra N. Desai, Thomas E. Rogers, Michael Clare, Barbara B. Chen, Mark A. Russell, Jeffery L. Keene, Tiffany Duffin, V. Wayne Engleman, Mary B. Finn, Sandra K. Freeman, Jon A. Klover, G. Alan Nickols, Maureen A. Nickols, Kristen E. Shannon, Christina A. Steininger, William F. Westlin, Marisa M. Westlin and Melanie L. Williams

The tripeptide RGD a common binding motif in several ligands that bind to $\alpha_v\beta_3$, has been depeptidized and optimized in our efforts toward discovering a small molecule inhibitor. The cyclopropyl containing new lead compound was optimized for potency, selectivity, and for its ADME properties.

**First pharmacophore-based identification of androgen receptor down-regulating agents: Discovery of potent anti-prostate cancer agents**

pp 3413–3421

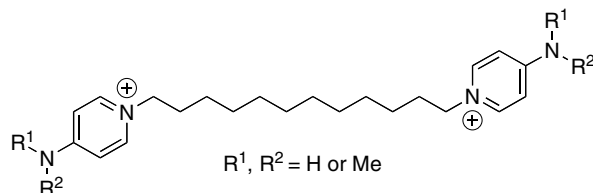
Puranik Purushottamachar, Aakanksha Khandelwal, Pankaj Chopra, Neha Maheshwari, Lalji K. Gediya, Tadas S. Vasaitis, Robert D. Bruno, Omoshile O. Clement and Vincent C. O. Njar*



Synthesis, antifungal and haemolytic activity of a series of bis(pyridinium)alkanes

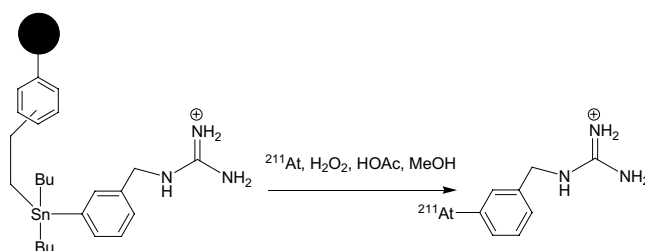
pp 3422–3429

Clarissa K. L. Ng, Vatsala Singhal, Fred Widmer, Lesley C. Wright, Tania C. Sorrell and Katrina A. Jolliffe*

MIC: *C. neoformans* 1.4 - 5.5 μM ; *C. albicans* 1.4 - 2.8 μM **A kit method for the high level synthesis of [^{211}At]MABG**

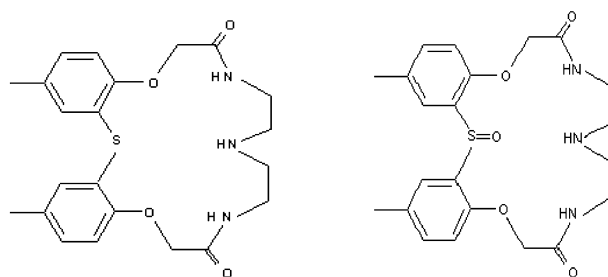
pp 3430–3436

Ganesan Vaidyanathan,* Donna J. Affleck, Kevin L. Alston, Xiao-Guang Zhao, Marc Hens, Duncan H. Hunter, John Babich and Michael R. Zalutsky

**On the cytotoxicity and status of oxidative stress of two novel synthesized tri-aza macrocyclic diamides as studied in the V79 cell lines**

pp 3437–3444

Massod Mashhadi Akbar Boojar* and Abbas Shockravi

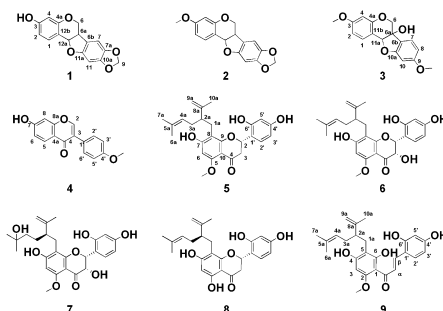


Dibenzo sulfide (TTD) macrocyclic diamide Dibenzo sulfoxide (TSD) macrocyclic diamide

 Na^+ -Glucose cotransporter (SGLT) inhibitory flavonoids from the roots of *Sophora flavescens*

pp 3445–3449

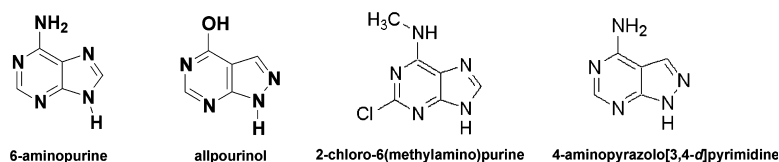
Seizo Sato,* Jiro Takeo, Chihiro Aoyama and Hiroyuki Kawahara



The screening and characterization of 6-aminopurine-based xanthine oxidase inhibitors

pp 3450–3456

Jung-Feng Hsieh, Shih-Hsiung Wu, Yu-Liang Yang, Kee-Fong Choong and Shui-Tein Chen*

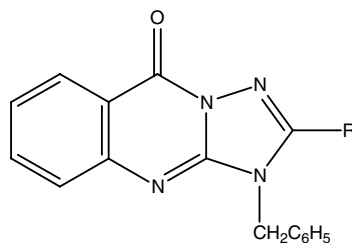


The 6-aminopurine and its analogues were evaluated as xanthine oxidase inhibitors. These inhibitors are likely to be adopted as candidates to treat gout.

Synthesis and antihypertensive activity of novel 3-benzyl-2-substituted-3*H*-[1,2,4]triazolo[5,1-*b*]-quinazolin-9-ones

pp 3457–3462

Veerachamy Alagarsamy* and Urvishbhai S. Pathak

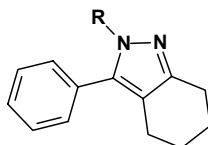


In the present study, a new series of 3-benzyl-2-substituted-3*H*-[1,2,4]triazolo[5,1-*b*]-quinazolin-9-ones were synthesized and pharmacological screening of their antihypertensive activity is described.

**Synthesis, docking studies and anti-inflammatory activity of 4,5,6,7-tetrahydro-2*H*-indazole derivatives**

pp 3463–3473

Ornelio Rosati,* Massimo Curini, Maria Carla Marcotullio, Antonio Macchiarulo, Marina Perfumi, Laura Mattioli, Francesco Rismondo and Giancarlo Cravotto

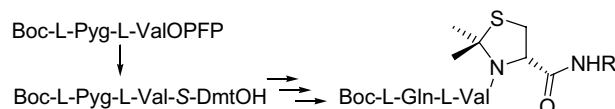


Molecular docking calculations followed by a number of in vivo biological assays were used to identify novel anti-inflammatory agents among the class of 2,3-diaryl-4,5,6,7-tetrahydro-2*H*-indazoles.

Synthetic approaches to peptides containing the L-Gln-L-Val-D(S)-Dmt motif

pp 3474–3488

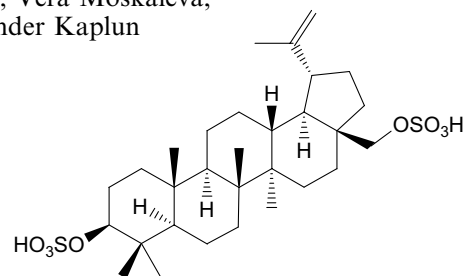
Ghadeer A. R. Y. Suaifan, Tawfiq Arafat and Michael D. Threadgill*



Selective inhibition of the interaction of C1q with immunoglobulins and the classical pathway of complement activation by steroids and triterpenoids sulfates

pp 3489–3498

Svetlana Bureeva,* Julian Andia-Pravdivy, Andrey Symon, Anna Bichucher, Vera Moskaleva, Vladimir Popenko, Alexey Shpak, Vitaly Shvets, Leonid Kozlov and Alexander Kaplun



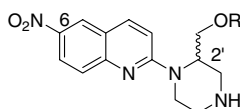
Betulin disulfate

Syntheses and binding affinities of 6-nitroquipazine analogues for serotonin transporter.

pp 3499–3504

Part 5: 2'-Substituted 6-nitroquipazines

Jae Hak Lee, Yong Hyun Choi, Yoo Jin Lim, Byoung Se Lee, Dae Yoon Chi* and Changbae Jin

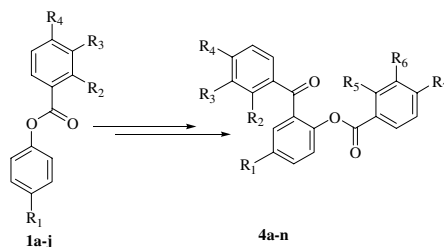


R = H, Me, Et, *n*-Pr, *n*-Bu

Synthesis and crystallographic analysis of benzophenone derivatives—The potential anti-inflammatory agents

pp 3505–3514

T. D. Venu, S. Shashikanth,* S. A. Khanum, S. Naveen, Aiysha Firdouse, M. A. Sridhar and J. Shashidhara Prasad



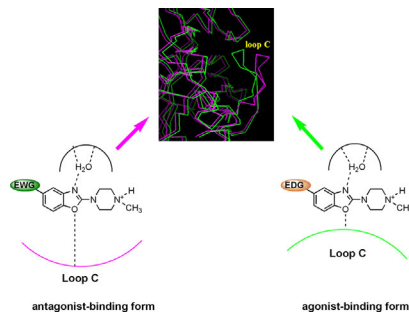
The newly synthesized compounds benzoyloxy benzophenones **4a–n** were screened for their anti-inflammatory activity and compared with standard drugs.

Regulatory molecules for the 5-HT₃ receptor ion channel gating system

pp 3515–3523

Satoshi Yoshida,* Takashi Watanabe and Yasuo Sato*

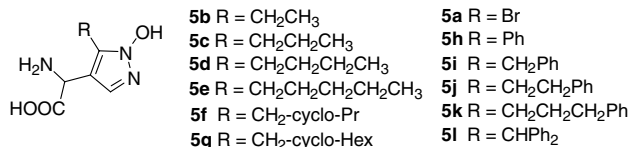
Substituted benzoxazoles uniquely modify the function of the 5-HT₃ receptor ion channel gating system. SAR and computational study explained structure and function of the 5-HT₃ receptor (EWG: electron withdrawing group, EDG: electron donating group).



Novel 5-substituted 1-pyrazolol analogues of ibotenic acid: Synthesis and pharmacology at glutamate receptors

pp 3524–3538

Charlotte G. Jørgensen, Hans Bräuner-Osborne, Birgitte Nielsen, Jan Kehler, Rasmus P. Clausen, Povl Krosgaard-Larsen and Ulf Madsen*

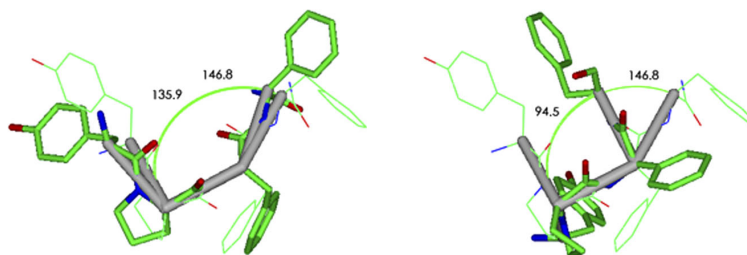


5-Substituted 1-pyrazolol analogues of ibotenic acid have been synthesized and pharmacologically characterized. The compounds represent glutamate receptor ligands with highly variable pharmacological profiles and include subtype-selective compounds.

Conformational analysis of endomorphin-2 analogs with phenylalanine mimics by NMR and molecular modeling

pp 3539–3547

Xuan Shao, Yanfeng Gao, Chuanjun Zhu, Xuehui Liu, Jinlong Yao, Yuxin Cui* and Rui Wang*

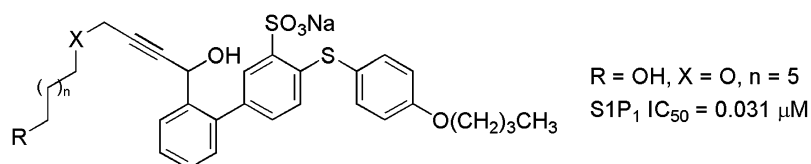


The conformations of EM-2 analogs varied from extended to folded structure as bioactivity decreases.

Synthesis and SAR studies of a novel class of S1P₁ receptor antagonists

pp 3548–3564

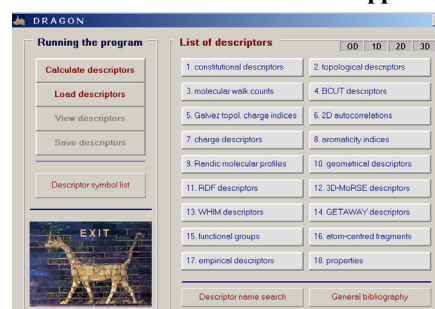
Tsuyoshi Nakamura, Kiyoaki Yonesu, Yumiko Mizuno, Chie Suzuki, Yuki Sakata, Yoh Takuwa, Futoshi Nara and Susumu Satoh*

**2D-autocorrelation descriptors for predicting cytotoxicity of naphthoquinone ester derivatives against oral human epidermoid carcinoma**

pp 3565–3571

Liane Saíz-Urra, Maykel Pérez González* and Marta Teixeira

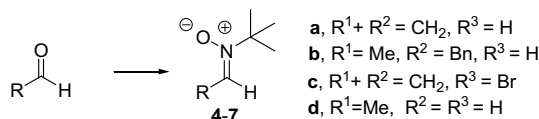
A QSAR study was developed, employing the 2D-autocorrelation descriptors and a set of 37 naphthoquinone ester derivatives, in order to model the cytotoxicity of these compounds against oral human epidermoid carcinoma. A comparison with other approaches was carried out. Mathematical models were obtained by means of the MRA and the variables were selected using the genetic algorithm. The model relative to the 2D-autocorrelation descriptors was considered the best, based on the statistical results.



α -Phenyl-*N*-*tert*-butyl nitron (PBN) derivatives: Synthesis and protective action against microvascular damages induced by ischemia/reperfusion

pp 3572–3578

Sothea Kim, Guilherme V. M. de A. Vilela, Jalloul Bouajila, Ayres G. Dias, Fatima Z. G. A. Cyrino, Eliete Bouskela,* Paulo R. R. Costa* and Françoise Nepveu*



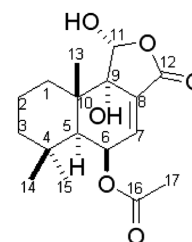
Protective effects against microvascular damages in ischemia/reperfusion in the ‘hamster cheek pouch’ assay.

Inhibition of mycobacterial arylamine *N*-acetyltransferase contributes to anti-mycobacterial activity of *Warburgia salutaris*

pp 3579–3586

Vukani Eliya Madikane,* Sanjib Bhakta, Angela J. Russell, William E. Campbell, Timothy D. W. Claridge, B. Gay Elisha, Stephen G. Davies, Peter Smith and Edith Sim

11 α -Hydroxycinnamosmolide (**1**) is a novel anti-mycobacterial drimane sesquiterpenoid lactone from *Warburgia salutaris* an endangered South African tree of medicinal importance.



OTHER CONTENTS

Summary of instructions to authors

p I

*Corresponding author

Supplementary data available via ScienceDirect

COVER

Terfenadine (an antihistamine pulled from the market in 1997) bound to a model of an open form of the homo-tetrameric pore domain of hERG, produced using Schrödinger’s “Induced Fit Docking” technology [Farid, R.; Day, T.; Friesner, R. A.; Pearlstein, R. A. *Bioorg. Med. Chem.* **2006**, *14*, 3160–3173].

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