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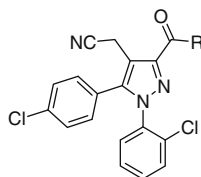
Contents

ARTICLES

Exploring SAR features in diverse library of 4-cyanomethyl-pyrazole-3-carboxamides suitable for further elaborations as CB1 antagonists

pp 26–30

Martin Cooper, Jean-Marie Receveur, Emelie Bjurling, Pia K. Nørregaard, Peter Aadal Nielsen, Niklas Sköld, Thomas Högberg *

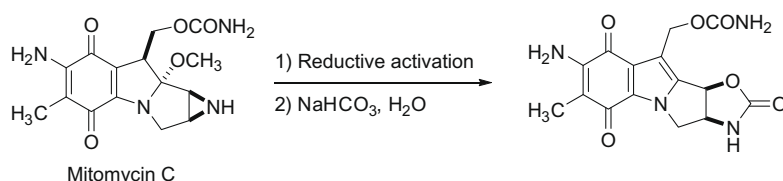


The SAR was explored in the eastern R-group as a prelude for transforming the nitrile group into compounds that are not readily passing the blood–brain-barrier.

Reaction of reductively activated mitomycin C with aqueous bicarbonate: Isolation and characterization of an oxazolidinone derivative of *cis*-1-hydroxy-2,7-diaminomitosen

pp 31–34

Manuel M. Paz



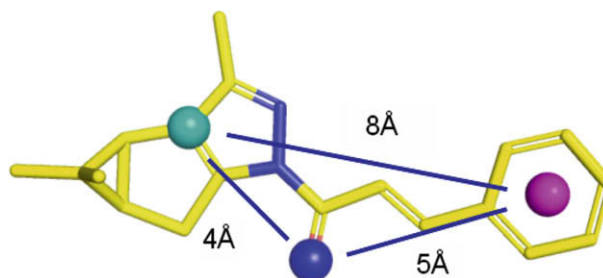
The antitumor drug mitomycin C metabolizes in vitro to an oxazolidinone derivative by a cyclization reaction of the aziridine ring with bicarbonate, the biological buffer.



Pyrazole derived from (+)-3-carene; a novel potent, selective scaffold for sphingosine-1-phosphate (S1P₁) receptor agonists

pp 35–37

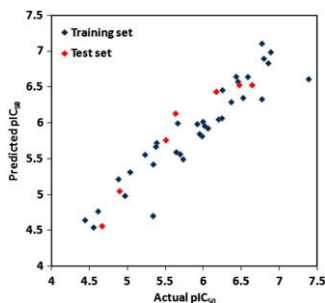
Frédéric J. Zécri *, Rainer Albert, Gregory Landrum, Klaus Hinterding, Nigel G. Cooke, Danilo Guerini, Markus Streiff, Christian Bruns, Barbara Nuesslein-Hildesheim



3D QSAR studies on 3,4-dihydroquinazolines as T-type calcium channel blocker by comparative molecular similarity indices analysis (CoMSIA)

pp 38–41

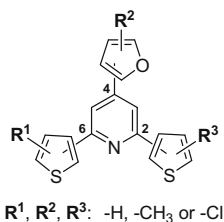
Jin Ah Jeong, Haelim Cho, Soo Yeon Jung, Han Byul Kang, Jin Yeong Park, Jungahn Kim, Dong Joon Choo, Jae Yeol Lee *



2,6-Dithienyl-4-furyl pyridines: Synthesis, topoisomerase I and II inhibition, cytotoxicity, structure–activity relationship, and docking study

pp 42–47

Arjun Basnet, Pritam Thapa, Radha Karki, Hoyoung Choi, Jae Hun Choi, Minho Yun, Byeong-Seon Jeong, Yurongdong Jahng, Younghwa Na, Won-Jea Cho, Youngjoo Kwon, Chong-Soon Lee, Eung-Seok Lee *

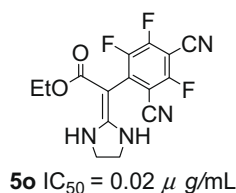


For the development of novel antitumor agents, 2,6-dithienyl-4-furyl pyridine derivatives were prepared and evaluated for their topoisomerase I and II inhibitory activity as well as cytotoxicity against several human cancer cell lines.

Solvent-free, microwave assisted synthesis of polyhalo heterocyclic ketene amins as novel anti-cancer agents

pp 48–51

Sheng-Jiao Yan, Chao Huang, Xiang-Hui Zeng, Rong Huang, Jun Lin *



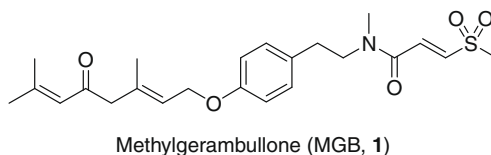
A series of polyhalo heterocyclic ketene amins (HKAs) were synthesized under solvent-free conditions and evaluated in vitro against a panel of human tumor cell lines. Trifluoro-HKAs were the most cytotoxic compounds, then difluoro-HKAs and trichloro-HKAs. Ethoxycarbonyl substituted **5o** was found to be the most potent derivative with IC₅₀ values lower than 3.7 μ g/mL against 5 human tumor cell lines making it more active than cisplatin (DDP).



Total synthesis and biological evaluation of methylgerambullone

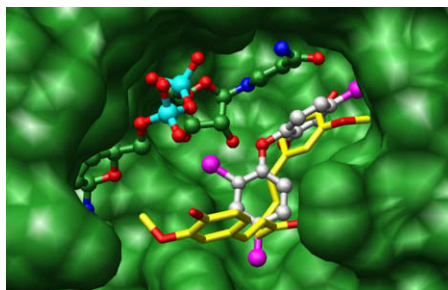
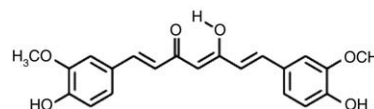
pp 52–55

Jong Taik Moon, Sung Hoon Ha, So Hyung Lee, Tae Hui Kwon, Chun Rim Oh, Young Deuk Kim, Jungahn Kim, Dong Joon Choo, Jae Yeol Lee *



Novel enoyl-ACP reductase (FabI) potential inhibitors of *Escherichia coli* from Chinese medicine monomers

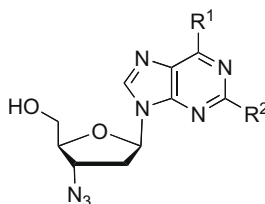
pp 56–59

Jingjing Yao, Qingye Zhang, Jun Min, Jin He^{*}, Ziniu Yu^{*}Curcumin $K_i = 15 \mu\text{M}$ 

Curcumin has been proved to be an uncompetitive inhibitor of enoyl-ACP reductase from *Escherichia coli* (EcFabI) with the inhibition constant (K_i) of $15 \mu\text{M}$. Particularly, curcumin had apparent antibacterial activity against *E. coli*, and the corresponding MIC_{90} was $73.7 \mu\text{g/mL}$.

Synthesis and evaluation of 3'-azido-2',3'-dideoxypurine nucleosides as inhibitors of human immunodeficiency virus

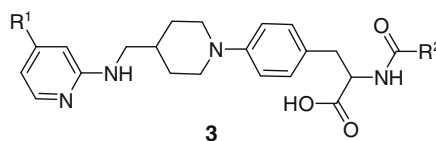
pp 60–64

Hong-wang Zhang, Steven J. Coats, Lavanya Bondada, Franck Amblard, Mervi Detorio, Ghazia Asif, Emilie Fromentin, Sarah Solomon, Aleksandr Obikhod, Tony Whitaker, Nicolas Sluis-Cremer, John W. Mellors, Raymond F. Schinazi^{*}

A series of purine modified 3'-azido nucleosides were synthesized by a chemical transglycosylation reaction and evaluated for their anti-HIV-1 activity, cytotoxicity and intracellular metabolism.

SAR of *N*-phenyl piperidine based oral integrin $\alpha 5\beta 1$ antagonists

pp 65–68

Gunther Zischinsky, Frank Osterkamp, Doerte Vossmeier, Grit Zahn, Dirk Scharn, Ariane Zwintscher, Roland Stragies^{*}

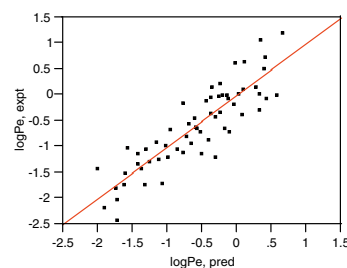
Correlation of structural features of selected *N*-phenyl piperidine derivatives **3** with integrin $\alpha 5\beta 1$ binding affinities and selectivities as well as pharmacokinetic properties are described. The best compounds were compared in pharmacokinetic studies in rat.

Development of an in silico model for human skin permeation based on a Franz cell skin permeability assay

pp 69–73

Pil H. Lee, Robert Conradi, Veerabahu Shanmugasundaram^{*}

A multiple linear regression QSAR model was developed based on a set of 61 compounds with internally consistent permeability data measured across Franz cell. The data was normalized using a mean permeability value of a reference compound, 3-isobutyl-1-methylxanthine (IBMX). The QSAR model contained only five simple descriptors and had a correlation coefficient, r^2 of 0.77 between experimental and calculated values for skin permeability. The mean absolute error was 0.3 for the entire set and the cross validation coefficient, q^2 was 0.71. The in silico skin permeability model was used as a filter for virtual libraries and to optimize skin permeation of specific compounds for several dermatology discovery projects. $\log\text{Pe} = 6.6177 - 0.0022 \cdot \text{PISA} - 0.3516 \cdot \text{donorHB} - 0.2451 \cdot \text{accptHB} - 5.8373 \cdot \text{glob} + 0.2700 \cdot \text{EA} (\text{eV})$

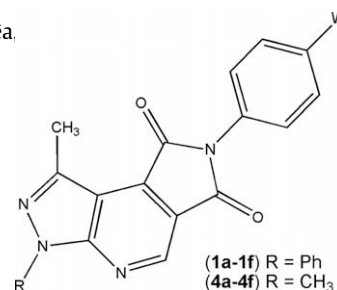


Microwave-assisted synthesis and structure–activity relationships of neuroactive pyrazolo[3,4-*b*]pyrrolo[3,4-*d*]pyridine derivatives

pp 74–77

Nailton M. Nascimento-Júnior, Thaiana C.F. Mendes, Daniella M. Leal, Claudia Maria N. Corrêa, Roberto T. Sudo, Gisele Zapata-Sudo, Eliezer J. Barreiro, Carlos A. M. Fraga *

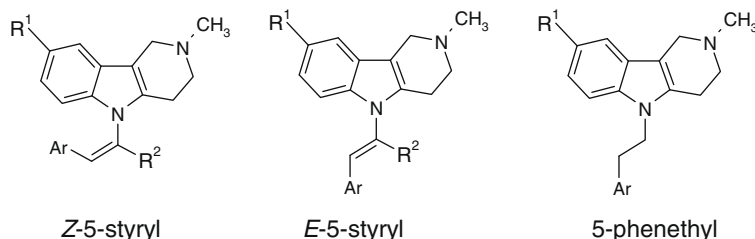
The microwave assisted hetero Diels–Alder synthesis and the sedative profile of heterocyclic pyrazolo[3,4-*b*]pyrrolo[3,4-*d*]pyridine derivatives (**1a–1f**), (**4a–4f**) and some simplified analogues is reported.



Synthesis and biological activity of 5-styryl and 5-phenethyl-substituted 2,3,4,5-tetrahydro-1*H*-pyrido[4,3-*b*]indoles

pp 78–82

Alexandre V. Ivachtchenko *, Eugen B. Frolov, Oleg D. Mitkin, Sergei E. Tkachenko, Ilya M. Okun, Alex V. Khvat



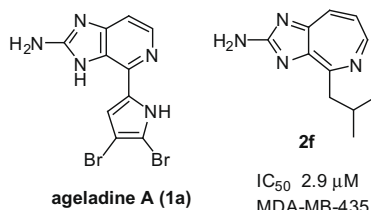
The syntheses, biological evaluations, and structure–activity relationships for a series of novel Z-5-styryl, E-5-styryl and 5-phenethyl analogs of 2,3,4,5-tetrahydro-1*H*- γ -carbolines as potent blockers of serotonin, histamine, and adrenergic receptors are disclosed.



Synthesis and anticancer activities of ageladine A and structural analogs

pp 83–86

Yuelong Ma, Sangkil Nam, Richard Jove, Kenichi Yakushijin, David A. Horne *

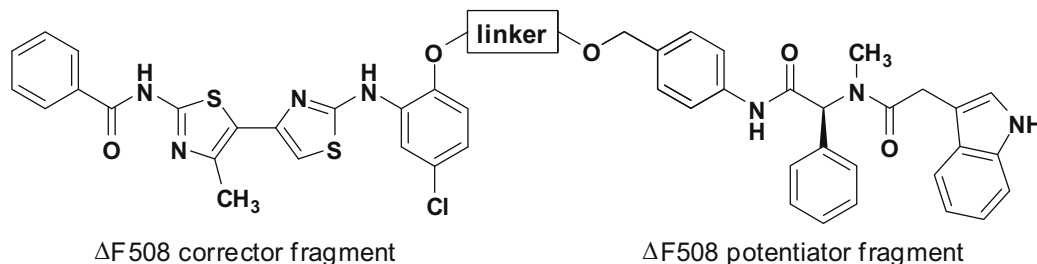


A series of ageladine A and structurally related aromatic azepine analogs have been synthesized and evaluated for anticancer activity. The key steps involve a Pictet–Spengler cyclocondensation and oxidative aromatization.

Design and synthesis of a hybrid potentiator–corrector agonist of the cystic fibrosis mutant protein Δ F508-CFTR

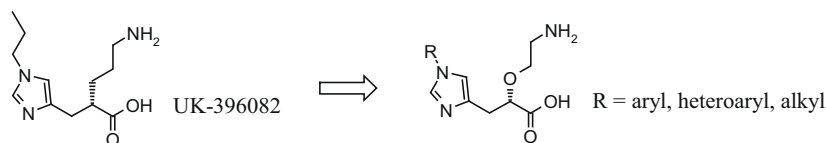
pp 87–91

Aaron D. Mills, Choong Yoo, Jeffrey D. Butler, Baoxue Yang, A. S. Verkman, Mark J. Kurth *



Oxygenated analogues of UK-396082 as inhibitors of activated thrombin activatable fibrinolysis inhibitor

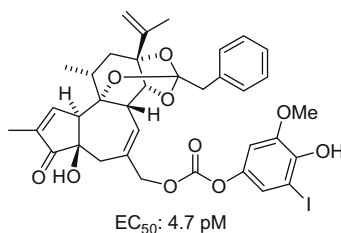
pp 92–96

Dafydd R. Owen ^{*}, David J. Bull, Mark E. Bunnage, Melanie S. Glossop, Robert J. Maguire, Ross S. Strang

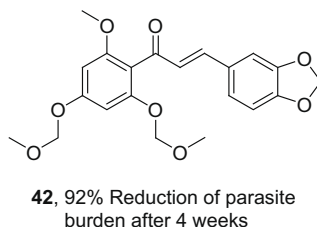
Oxygenated side-chain analogues of clinical candidate UK-396082 were found to be potent inhibitors of activated thrombin activatable fibrinolysis inhibitor (TAFIa).

Structure–activity relationships of the ultrapotent vanilloid resiniferatoxin (RTX): The side chain benzylic methylene

pp 97–99

Giovanni Appendino ^{*}, Abdellah Ech-Chahad, Alberto Minassi, Luciano De Petrocellis ^{*}, Vincenzo Di Marzo**In vitro and in vivo anti-Leishmania activity of polysubstituted synthetic chalcones**

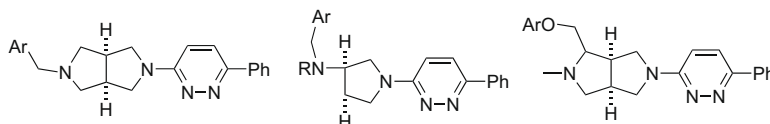
pp 100–103

José C. Aponte, Denis Castillo, Yannick Estevez, German Gonzalez, Jorge Arevalo, Gerald B. Hammond, Michel Sauvain ^{*}

The in vitro screening of 43 polysubstituted chalcones against *Leishmania amazonensis* axenic amastigotes, lead to the evaluation of nine of them in a macrophage-infected model with the two other most infectious *Leishmania* species prevalent in Peru (*Leishmania braziliensis* and *Leishmania peruviana*), five of the most active and selective were studied in vivo, resulting on the identification of two chalcones with high reduction parasite burden percentages.

**Structure–activity relationships of N-substituted ligands for the $\alpha 7$ nicotinic acetylcholine receptor**

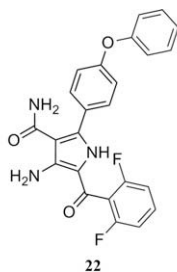
pp 104–107

Kathleen H. Mortell ^{*}, Michael R. Schrimpf, William H. Bunnelle, David J. Anderson, Jens Halvard Gronlien, Kirsten Thorin Hagene, Murali Gopalakrishnan

Pyrrole derivatives as potent inhibitors of lymphocyte-specific kinase: Structure, synthesis, and SAR

pp 108–111

Tetsuo Takayama^{*}, Hiroki Umemiya, Hideaki Amada, Tetsuya Yabuuchi, Fumiyasu Shiozawa, Hironori Katakai, Akiko Takaoka, Akie Yamaguchi, Mayumi Endo, Masakazu Sato

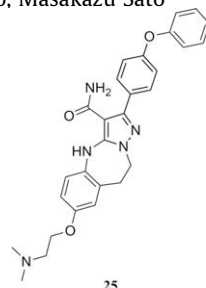


Lck IC₅₀ = 1.3 nM, MLR IC₅₀ = 31 nM

Ring-fused pyrazole derivatives as potent inhibitors of lymphocyte-specific kinase (Lck): Structure, synthesis, and SAR

pp 112–116

Tetsuo Takayama^{*}, Hiroki Umemiya, Hideaki Amada, Tetsuya Yabuuchi, Takeshi Koami, Fumiyasu Shiozawa, Yusuke Oka, Akiko Takaoka, Akie Yamaguchi, Mayumi Endo, Masakazu Sato

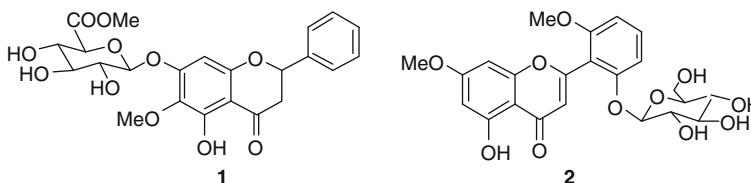


Lck IC₅₀ = 0.72 nM, MLR IC₅₀ = 0.74 nM

Gastroprotective flavonoid constituents from *Oroxylum indicum* Vent.

pp 117–120

T. Hari Babu, K. Manjulatha, G. Suresh Kumar, A. Hymavathi, Ashok K. Tiwari, Muraleedhar Purohit, J. Madhusudana Rao, K. Suresh Babu^{*}

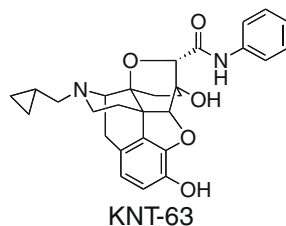


Phytochemical investigation of the stem bark of the *O.indicum* yielded two new compounds (**1**, **2**) along with known compounds (**3–9**). Antiulcer activity of the isolates was studied on various models.

Drug design and synthesis of a novel κ opioid receptor agonist with an oxabicyclo[2.2.2]octane skeleton and its pharmacology

pp 121–124

Hiroshi Nagase^{*}, Akio Watanabe, Toru Nemoto, Noriyuki Yamaotsu, Kohei Hayashida, Mayumi Nakajima, Ko Hasebe, Kaoru Nakao, Hidenori Mochizuki, Shuichi Hirono, Hideaki Fujii

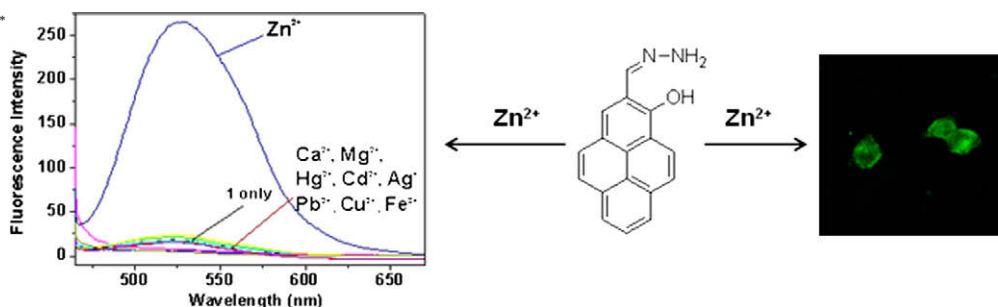


KNT-63 designed on the basis of an active conformation of selective κ agonist TRK-820 showed strong antinociceptive effects via the κ receptor.

A selective 'Off-On' fluorescent sensor for Zn²⁺ based on hydrazone-pyrene derivative and its application for imaging of intracellular Zn²⁺

pp 125–128

Ying Zhou, Ha Na Kim, Juyoung Yoon *



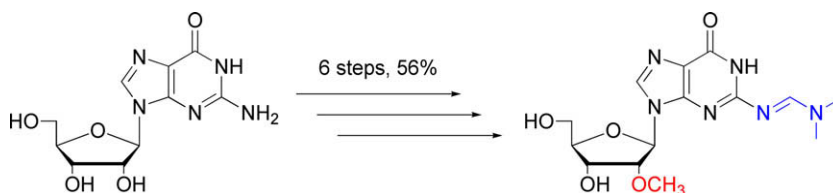
Fluorescent probe **1** displays a highly selective fluorescent enhancement with Zn²⁺, and application of this probe to detect the intrinsic Zn²⁺ ions present in pancreatic β -cells was demonstrated.



Facile and efficient approach for the synthesis of N²-dimethylaminomethylene-2'-O-methylguanosine

pp 129–131

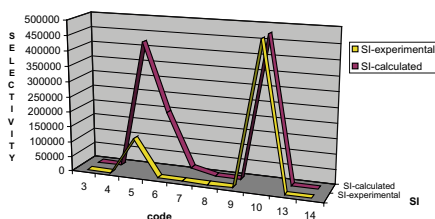
Tsuyoshi Mukobata, Yosuke Ochi, Yuji Ito, Shun-ichi Wada, Hidehito Urata *



Towards development of selective and reversible pyrazoline based MAO-inhibitors: Synthesis, biological evaluation and docking studies

pp 132–136

Anasuya Sahoo, Samiye Yabanoglu, Barij N. Sinha, Gulberk Ucar, Arijit Basu, Venkatesan Jayaprakash *



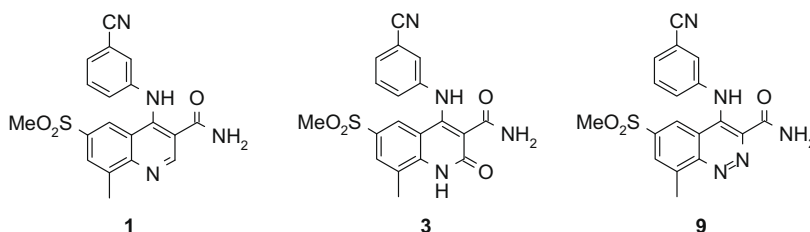
Few novel 3,5-diaryl pyrazolines were synthesized and investigated for their monoamine oxidase (MAO) inhibitory property. Compound **10** was found to have excellent selectivity index towards MAO-A.



Addressing species specific metabolism and solubility issues in a quinoline series of oral PDE4 inhibitors

pp 137–140

C. Lunniss *, C. Eldred, N. Aston, A. Craven, K. Gohil, B. Judkins, S. Keeling, L. Ranshaw, E. Robinson, T. Shipley, N. Trivedi

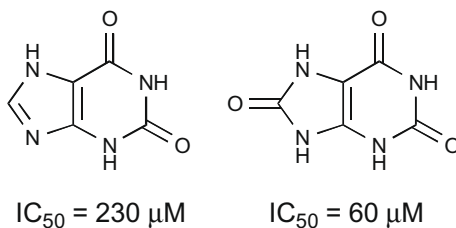


Species specific conversion of the lead PDE4 inhibitor **1** to the quinoline **3** was identified as the major route of metabolism in the cynomolgus monkey. Modification of the template to give the cinnoline **9** retained potency and selectivity, and greatly improved the pharmacokinetic profile in the cynomolgus monkey compared with **1**. Additional SAR studies aimed at improving the solubility of **9** are also described.

Inhibition of CTP synthase from *Escherichia coli* by xanthines and uric acids

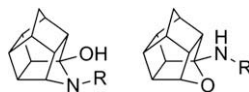
pp 141–144

Alexander C. Roy, Faylene A. Lunn, Stephen L. Bearne *

Xanthines, uric acids, and their methylated derivatives inhibit CTP synthase-catalyzed CTP formation from UTP ($IC_{50} = 0.060$ – 0.58 mM).**Oxo-bridged isomers of aza-trishomocubane sigma (σ) receptor ligands: Synthesis, in vitro binding, and molecular modeling**

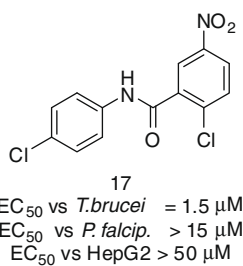
pp 145–148

Samuel D. Banister, Iman A. Moussa, Meredith J. T. Jordan, Mark J. Coster, Michael Kassiou *

The in vitro σ receptor affinity of aza-trishomocubyl hemiaminals, and their isomeric oxo-bridged analogues, is rationalized using molecular modeling.**Discovery of halo-nitrobenzamides with potential application against human African trypanosomiasis**

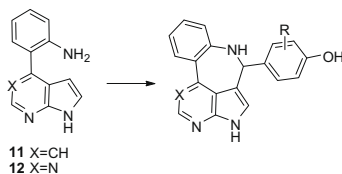
pp 149–152

Jong Yeon Hwang, David Smithson, Michele Connelly, Julie Maier, Fangyi Zhu, Kiplin R. Guy *

**A novel chemotype of kinase inhibitors: Discovery of 3,4-ring fused 7-azaindoles and deazapurines as potent JAK2 inhibitors**

pp 153–156

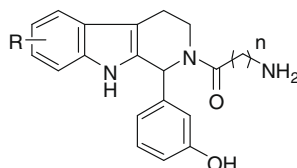
Tiansheng Wang *, Mark W. Ledebor *, John P. Duffy, Albert C. Pierce, Harmon J. Zuccola, Eric Block, Dina Shlyakter, James K. Hogan, Youssef L. Bennani

Pictet–Spengler condensation of aldehydes or alpha-keto-esters with 4-(2-anilinophenyl)-7-azaindole (**11**) or deazapurine (**12**) gave high yields of the 3,4-fused cyclic compounds. SAR studies, by varying the substituted benzaldehydes component, lead to the discovery of a series of potent JAK2 kinase inhibitors.

The discovery of tetrahydro- β -carbolines as inhibitors of the kinesin Eg5

pp 157–160

Paul A. Barsanti ^{*}, Weibo Wang, Zhi-Jie Ni, David Duhl, Nathan Brammeier, Eric Martin, Dirksen Bussiere, Annette O. Walter

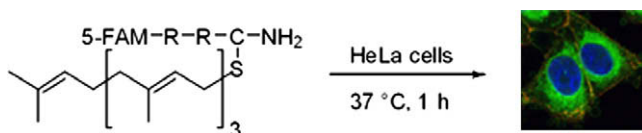


A series of tetrahydro- β -carbolines were identified by HTS as inhibitors of the kinesin Eg5. Molecular modeling and medicinal chemistry techniques were employed to explore the SAR for this series with a focus of removing potential metabolic liabilities and improving cellular potency.

Investigation of the sequence and length dependence for cell-penetrating prenylated peptides

pp 161–163

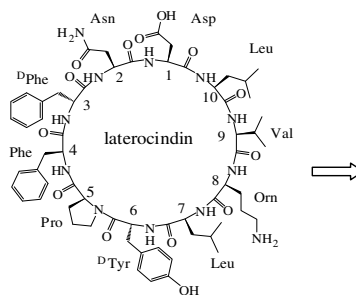
James W. Wollack, Nicholette A. Zeliadt, Joshua D. Ochocki, Daniel G. Mullen, George Barany, Elizabeth V. Wattenberg, Mark D. Distefano ^{*}

**Solid-phase synthesis and antibiotic activities of cyclodecapeptides on the scaffold of naturally occurring Laterocidin**

pp 164–167

Chunlan Xu, Chuanguang Qin ^{*}, Ruijie Zhang, Weining Niu, Xiaoya Shang

Laterocidin and its analogues **1–6** were synthesized by solid-phase techniques with side chain carboxyl group of Aspartate linked to Rink resin by using Dmb group as a temporary α -COOH protecting group during solid-phase synthesis with Fmoc chemistry. Laterocidin analogue **3** exhibits potent and broad antibacterial activities.

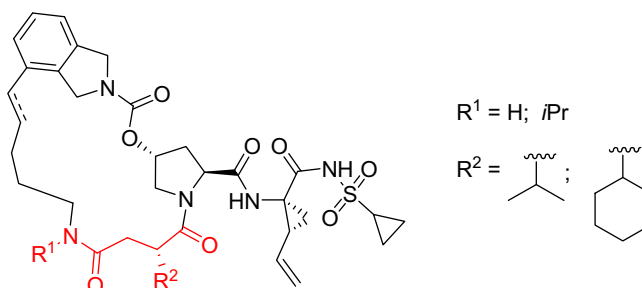


- laterocidin: cyclo[-LVOL(^DY)PF(^DF)ND-]
1. cyclo[-LVOL(^DY)PF(^DF)NN-]
 2. cyclo[-LVOL(^DF)PF(^DF)NN-]
 3. cyclo[-LVOL(^DF)PY(^DF)NN-]
 4. cyclo[-LVOL(^DF)PYFNN-]
 5. cyclo[-LVOLF^DY(^DF)NN-]
 6. cyclo[-LVOLF^DYFNN-]

**Novel P2–P4 macrocyclic inhibitors of HCV NS3/4A protease by P3 succinamide fragment depeptidization strategy**

pp 168–174

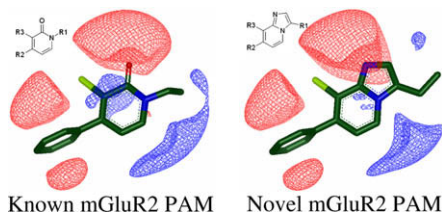
Marco Pompei ^{*}, Maria Emilia Di Francesco, Silvia Pesci, Uwe Koch, Sue Ellen Vignetti, Maria Veneziano, Paola Pace, Vincenzo Summa



Scaffold hopping from pyridones to imidazo[1,2-*a*]pyridines. New positive allosteric modulators of metabotropic glutamate 2 receptor

pp 175–179

Gary Tresadern ^{*}, Jose María Cid, Gregor J. Macdonald, Juan Antonio Vega, Ana Isabel de Lucas, Aránzazu García, Encarnación Matesanz, María Lourdes Linares, Daniel Oehlrich, Hilde Lavreysen, Ilse Biesmans, Andrés A. Trabanco ^{*}

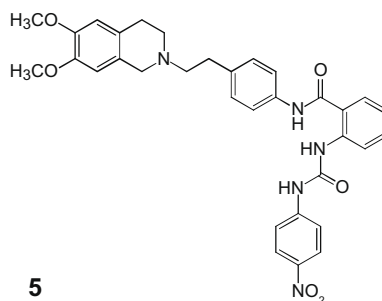


Shape and electrostatic virtual screening identified the imidazopyridine as highly similar to the pyridone mGluR2 PAM scaffold. Example compounds were synthesized and show good primary activity and promise for future work.

Novel lead for potent inhibitors of breast cancer resistance protein (BCRP)

pp 180–183

Anne Pick, Henrik Müller, Michael Wiese ^{*}

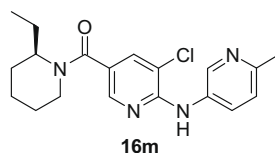


Compound **5** is a novel lead for the design of new and potent BCRP modulators.

Piperidyl amides as novel, potent and orally active mGlu5 receptor antagonists with anxiolytic-like activity

pp 184–188

Carsten Spanka, Ralf Glatthar ^{*}, Sandrine Desrayaud, Markus Fendt, David Orain, Thomas Troxler, Ivo Vranesic

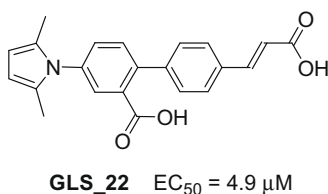


Novel mGluR5 antagonists have been developed. SAR studies and lead optimizations are described, which result in compound **16m** with high efficacy in animal models.

Structure-based design, synthesis and biological evaluation of new *N*-carboxyphenylpyrrole derivatives as HIV fusion inhibitors targeting gp41

pp 189–192

Yong Wang, Hong Lu, Qiang Zhu ^{*}, Shibo Jiang ^{*}, Yun Liao ^{*}

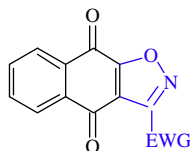


A new series of *N*-carboxyphenylpyrrole ligands were designed using GeometryFit based on an X-ray crystal structure of gp41. The synthesized ligands showed significant inhibitory activities against HIV gp41 6-helix bundle formation, HIV-1 mediated cell-cell fusion and HIV-1 replication.

Reaction of naphthoquinones with substituted nitromethanes. Facile synthesis and antifungal activity of naphtho[2,3-*d*]isoxazole-4,9-diones

pp 193–195

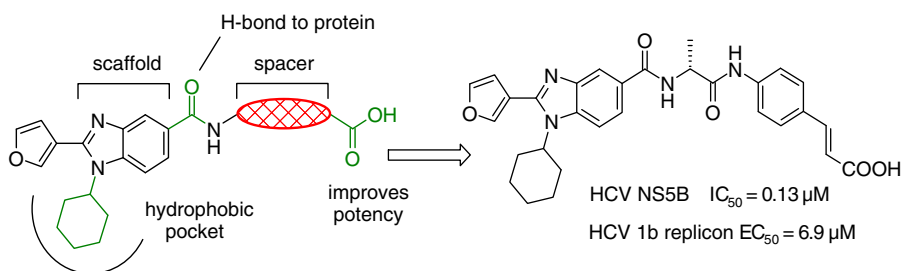
Maria M. M. Santos ^{*}, Natália Faria, Jim Iley, Simon J. Coles, Michael B. Hursthouse, M. Luz Martins, Rui Moreira



Discovery of benzimidazole-diamide finger loop (Thumb Pocket I) allosteric inhibitors of HCV NS5B polymerase: Implementing parallel synthesis for rapid linker optimization

pp 196–200

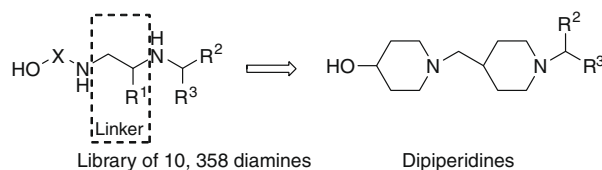
Sylvie Goulet, Marc-André Poupart ^{*}, James Gillard, Martin Poirier, George Kukulj, Pierre L. Beaulieu ^{*}



Discovery of dipiperidines as new antitubercular agents

pp 201–205

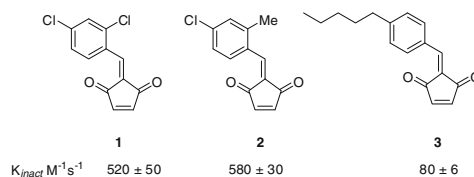
Elena Bogatcheva ^{*}, Colleen Hanrahan, Ping Chen, Jacqueline Gearhart, Katherine Sacksteder, Leo Einck, Carol Nacy, Marina Protopopova



Benzylidene cyclopentenediones: First irreversible inhibitors against botulinum neurotoxin A's zinc endopeptidase

pp 206–208

Kateřina Čapková, Mark S. Hixon, Sabine Pellett, Joseph T. Barbieri, Eric A. Johnson, Kim D. Janda ^{*}



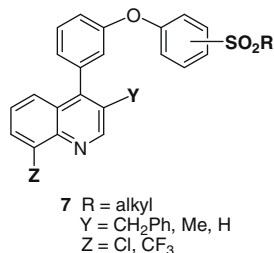
A series of benzylidene cyclopentenedione-based inhibitors, acting through covalent modification of the active site of botulinum neurotoxin A light chain metalloprotease, are reported.



4-(3-Aryloxyaryl)quinoline sulfones are potent liver X receptor agonists

pp 209–212

Ronald C. Bernotas^{*}, Robert R. Singhaus, David H. Kaufman, Jeremy M. Travins, John W. Ullrich, Rayomand Unwalla, Elaine Quinet, Mark Evans, Ponnal Nambi, Andrea Olland, Björn Kauppi, Anna Wilhelmsson, Annika Goos-Nilsson, Jay Wrobel

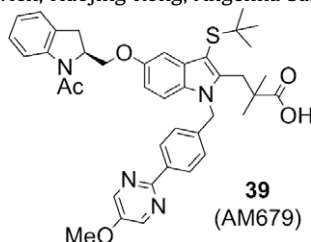


A series of 4-(3-aryloxyaryl)quinoline sulfones **7** was prepared as LXR agonists.

5-Lipoxygenase-activating protein inhibitors. Part 2: 3-{5-[(S)-1-Acetyl-2,3-dihydro-1H-indol-2-ylmethoxy]-3-tert-butylsulfanyl-1-[4-(5-methoxy-pyrimidin-2-yl)-benzyl]-1H-indol-2-yl}-2,2-dimethyl-propionic acid (AM679)—A potent FLAP inhibitor

pp 213–217

Nicholas Stock^{*}, Christopher Baccei, Gretchen Bain, Alex Broadhead, Charles Chapman, Janice Darlington, Christopher King, Catherine Lee, Yiwei Li, Daniel S. Lorrain, Pat Prodanovich, Haojing Rong, Angelina Santini, Jasmine Zunic, Jilly F. Evans, John H. Hutchinson, Peppi Prasit

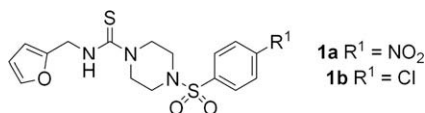


The SAR of a potent series of FLAP inhibitors is described culminating in the identification of lead compound **39** (AM679).

Antiplasmodial activity of piperazine sulfonamides

pp 218–221

Derek C. Martyn, Joseph F. Cortese, Erin Tyndall, Justin Dick, Ralph Mazitschek, Benito Munoz, Jon Clardy^{*}

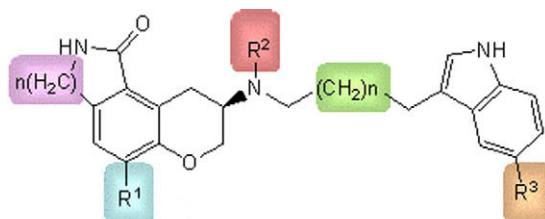


The synthesis and antiparasmodial activity of analogs based on piperazine sulfonamides screening positives **1a–b** is reported.

**Synthesis and structure–activity relationship of novel lactam-fused chroman derivatives having dual affinity at the 5-HT_{1A} receptor and the serotonin transporter**

pp 222–227

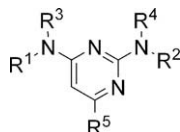
Zhongqi Shen^{*}, P. Siva Ramamoorthy, Nicole T. Hatzenbuehler, Deborah A. Evrard, Wayne Childers, Boyd L. Harrison, Michael Chlenov, Geoffrey Hornby, Deborah L. Smith, Kelly M. Sullivan, Lee E. Schechter, Terrance H. Andree



Synthesis and antiparasmodial activity of novel 2,4-diaminopyrimidines

pp 228–231

Derek C. Martyn, Amarjit Nijjar, Cassandra A. Celatka, Ralph Mazitschek, Joseph F. Cortese, Erin Tyndall, Hanlan Liu, Maria M. Fitzgerald, Thomas J. O'Shea, Sanjay Danthi, Jon Clardy *

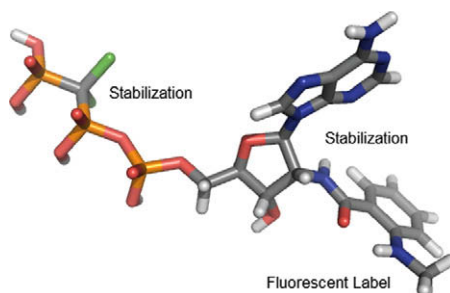


The synthesis, antiparasmodial activity and selected DMPK properties of novel 2,4-diaminopyrimidines is reported.

**Synthesis of a hydrolytically stable, fluorescent-labeled ATP analog as a tool for probing adenyl cyclases**

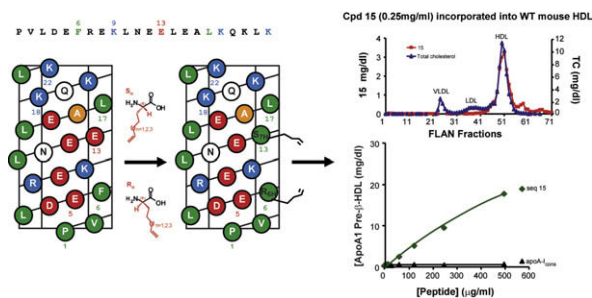
pp 232–235

Thomas Emmrich, Ali El-Tayeb, Hesham Taha, Roland Seifert, Christa E. Müller, Andreas Link *

**Novel potent apoA-I peptide mimetics that stimulate cholesterol efflux and pre-β particle formation in vitro**

pp 236–239

Raffaele Ingenito *, Charlotte Burton, Annunziata Langella, Xun Chen, Karolina Zytka, Antonello Pessi, Jun Wang, Elisabetta Bianchi

**Synthesis and antitumor activity of novel 2',3'-dideoxy-2',3'-diethanethionucleosides bearing 1,2,3-triazole residues**

pp 240–243

Jin-Lan Yu, Qin-Pei Wu *, Qing-Shan Zhang, Yan-Hong Liu, Yun-Zheng Li, Zi-Ming Zhou

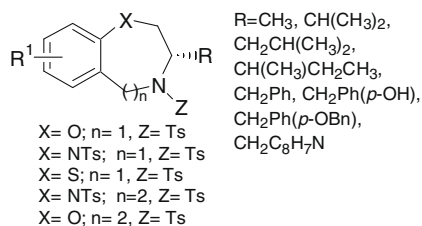


A series of novel 2',3'-dideoxy-2',3'-diethanethionucleosides with triazole ring were prepared and their antitumor activity was evaluated.

Amino acid based enantiomerically pure 3-substituted benzofused heterocycles: A new class of antithrombotic agents

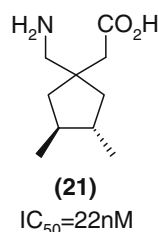
pp 244–247

Jitendra Kumar Mishra, Krishnananda Samanta, Manish Jain, Madhu Dikshit *, Gautam Panda *

**Synthesis and in vivo evaluation of 3,4-disubstituted gababutins**

pp 248–251

David C. Blakemore *, Justin S. Bryans, Pauline Carnell, Mark J. Field, Natasha Kinsella, Jack K. Kinsora, Leonard T. Meltzer, Simon A. Osborne, Lisa R. Thompson, Sophie C. Williams

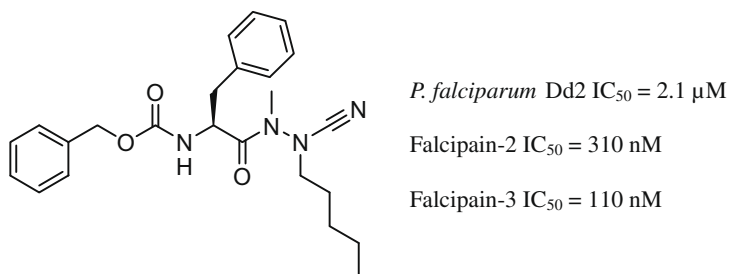


A range of 3,4-disubstituted gababutins were synthesised and, of these, the stand-out compound was (21). This compound was profiled in in vivo models of pain and anxiety.

Antimalarial activity of azadipeptide nitriles

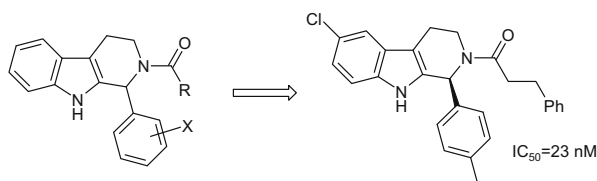
pp 252–255

Reik Löser *, Jiri Gut, Philip J. Rosenthal, Maxim Frizler, Michael Gütschow, Katherine T. Andrews

**Substituted tetrahydro- β -carboline as potential agents for the treatment of human papillomavirus infection**

pp 256–259

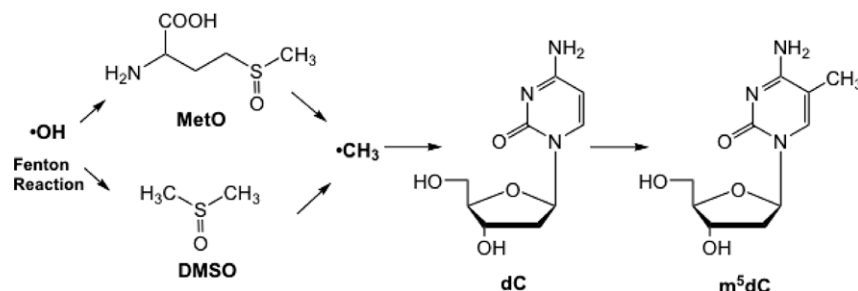
John F. Miller *, Elizabeth M. Turner, Ronald G. Sherrill, Kristjan Gudmundsson, Andrew Spaltenstein, Phiroze Sethna, Kevin W. Brown, Robert Harvey, Karen R. Romines, Pamela Golden

The identification and optimization of a series of substituted tetrahydro- β -carboline with potent activity against human papillomavirus is described. Structure–activity studies focused on the substitution pattern and chirality of the β -carboline ring system are discussed. Optimization of these parameters led to compounds with antiviral activities in the low nanomolar range.

DNA methylation by dimethyl sulfoxide and methionine sulfoxide triggered by hydroxyl radical and implications for epigenetic modifications

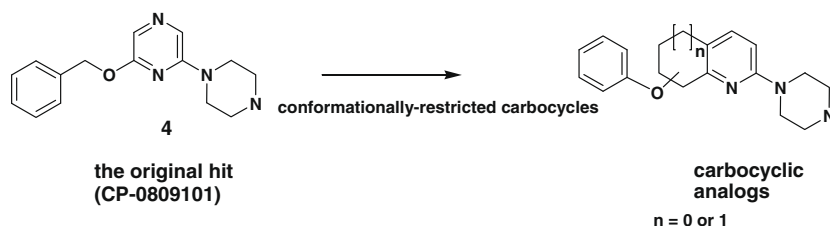
pp 260–265

Kazuaki Kawai, Yun-Shan Li, Ming-Fen Song, Hiroshi Kasai *

**Design and synthesis of orally-active and selective azaindane 5HT_{2c} agonist for the treatment of obesity**

pp 266–271

Kevin K.-C. Liu *, Peter Cornelius, Terrell A. Patterson, Yuan Zeng, Stephanie Santucci, Elizabeth Tomlinson, Colleen Gibbons, Tristan S. Maurer, Ravi Marala, Janice Brown, Jimmy X. Kong, Eunsun Lee, Wendy Werner, Zane Wenzel, Chandra Vage

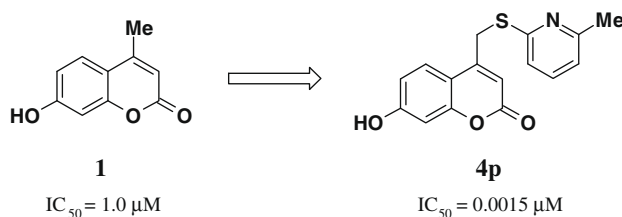


A series of novel conformationally-restricted 5HT_{2c} receptor agonists with 2-piperazin-azaindane scaffold were designed. Orally-active compounds were identified with excellent functional selectivity against 5HT_{2a} and 5HT_{2b} receptors and with excellent 2c potency.

Coumarins as novel 17 β -hydroxysteroid dehydrogenase type 3 inhibitors for potential treatment of prostate cancer

pp 272–275

Koichiro Harada *, Hideki Kubo, Yoshitaka Tomigahara, Kazuhiko Nishioka, Junya Takahashi, Mio Momose, Shinichi Inoue, Atsuyuki Kojima

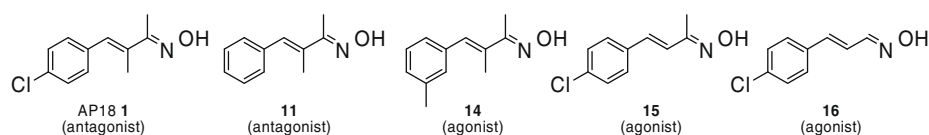


Compound 4p was identified as a potent selective inhibitor of 17 β -HSD3 resulting in the discovery of a novel lead series for further optimization.

Oxime derivatives related to AP18: Agonists and antagonists of the TRPA1 receptor

pp 276–279

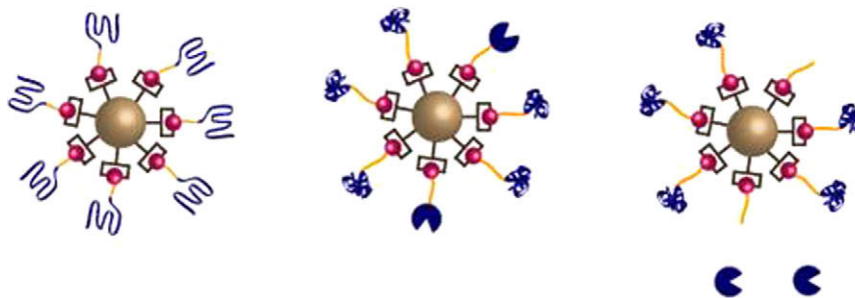
Jeff DeFalco *, Daniel Steiger, Amy Gustafson, Daniel E. Emerling, Michael G. Kelly, Matthew A. J. Dunton *



A single step purification for autolytic zinc proteinases

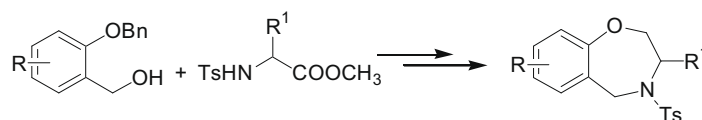
pp 280–282

Erin M. Wilfong, Ursula Locklear, Eric J. Toone *

**Anti-tumor activity of a new series of benzoxazepine derivatives in breast cancer**

pp 283–287

Krishnananda Samanta, Bandana Chakravarti, Jitendra Kumar Mishra, Shailendra Kumar Dhar Dwivedi, Lakshma Vadithe Nayak, Preeti Choudhry, Hemant Kumar Bid, Rituraj Konwar, Naibedya Chattopadhyay, Gautam Panda *

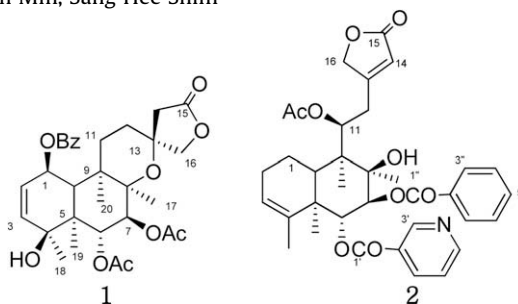


The active compound based on amino acid based benzoxazepine could cause significant reduction in tumor volume of MCF-7 xenograft tumor in nude mice model and the activity was comparable to that of tamoxifen citrate at 16 mg kg⁻¹ dose at 30 days of treatment.

**Two novel neo-clerodane diterpenoids from *Scutellaria barbata***

pp 288–290

Hanna Lee, Yujin Kim, Inho Choi, Byung Sun Min, Sang Hee Shim *

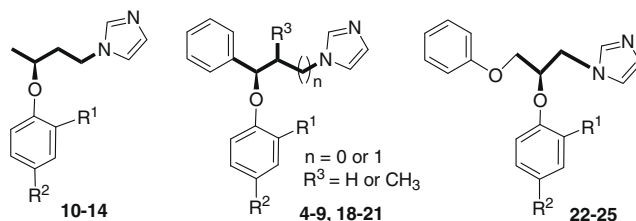


Two novel neo-clerodane diterpenoids, barbatellarine A (1) and B (2), were isolated from *Scutellaria barbata*, together with the known compound, scutebarbatine F (3). Compound 2 exhibited weak cytotoxic activity against HL-60 cell lines.

Synthesis of substituted aryloxy alkyl and aryloxy aryl alkyl imidazoles as antileishmanial agents

pp 291–293

Kalpana Bhandari *, Nagarapu Srinivas, Vijay K. Marrapu, Aditya Verma, Saumya Srivastava, Suman Gupta



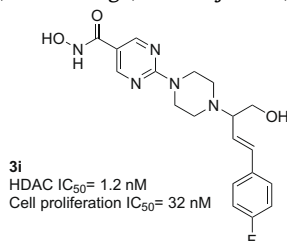
A series of aryloxy alkyl and aryloxy aryl alkyl imidazoles were synthesized and evaluated both in vitro and in vivo against *Leishmania donovani*. All the 19 compounds displayed very promising in vitro inhibition of 94–100% against promastigotes while two compounds showed medium in vivo inhibition of 58% and 60%.



Identification of a series of substituted 2-piperazinyl-5-pyrimidylhydroxamic acids as potent histone deacetylase inhibitors

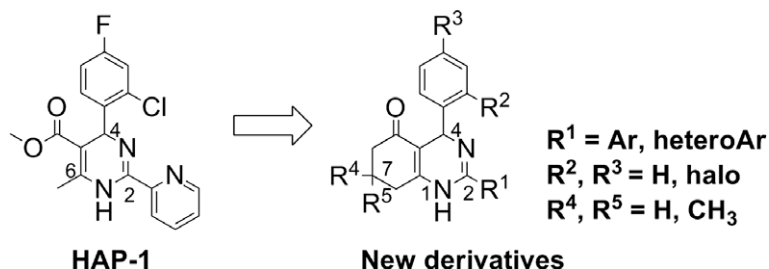
pp 294–298

Patrick Angibaud ^{*}, Kristof Van Emelen, Laurence Decrane, Sven van Brandt, Peter ten Holte, Isabelle Pilatte, Bruno Roux, Virginie Poncelet, David Speybrouck, Laurence Queguiner, Sandrine Gaurrand, Ann Mariën, Wim Floren, Lut Janssen, Marc Verdonck, Jacky van Dun, Jacky van Gompel, Ron Gilissen, Claire Mackie, Marc Du Jardin, Jozef Peeters, Marc Noppe, Luc Van Hijfte, Eddy Freyne, Martin Page, Michel Janicot, Janine Arts

**2,4-Diaryl-4,6,7,8-tetrahydroquinazolin-5(1H)-one derivatives as anti-HBV agents targeting at capsid assembly**

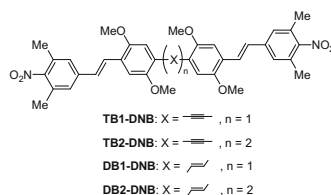
pp 299–301

Xuejun Zhu, Guoming Zhao, Xiaoping Zhou, Xiaoqian Xu, Guangqiang Xia, Zhibing Zheng, Lili Wang, Xiaohong Yang ^{*}, Song Li ^{*}

**Multiple bond-conjugated photoinduced nitric oxide releaser working with two-photon excitation**

pp 302–305

Kazuhiro Hishikawa, Hidehiko Nakagawa ^{*}, Toshiaki Furuta, Kiyoshi Fukuhara, Hiroki Tsumoto, Takayoshi Suzuki, Naoki Miyata ^{*}

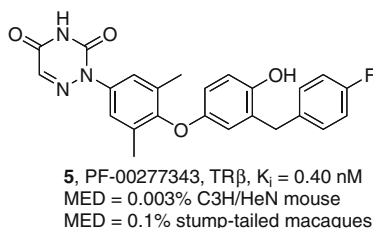


Design and synthesis of four novel NO releasers are reported together with their properties of decomposition and NO release via one- or two-photon excitation in this Letter.

**Thyroid receptor agonists for the treatment of androgenetic alopecia**

pp 306–308

Jie Jack Li ^{*}, Lorna H. Mitchell, Robert L. Dow

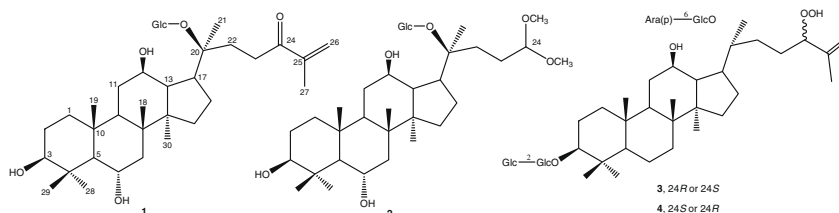


Thyroid hormone receptor β subtype-selective thyromimetic **5** was found to be efficacious in both mouse and monkey hair growth models. It penetrates the skin according to the test in human cadaver skin mounted onto Franz diffusion chambers. The serum drug level of **5** is below the limit of quantification during tests in the bald stump-tailed macaques (*Macaca arctoides*). It is also tested negative in the 3T3 neutral red uptake (NRU) phototoxicity test, indicating a low risk for causing photo-irritation.

Dammarane-type saponins from the flower buds of *Panax ginseng* and their effects on human leukemia cells

pp 309–314

Nguyen Huu Tung, Gyu Yong Song, Jeong-Ah Kim, Jae-Hee Hyun, Hee-Kyoung Kang, Young Ho Kim *

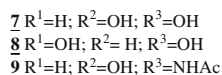
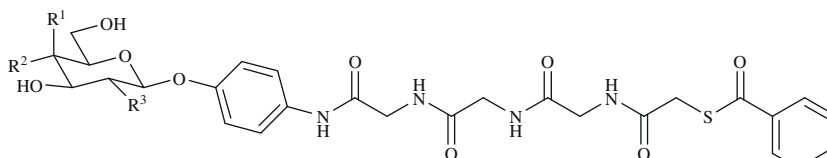


Six dammarane-type saponins, including three new floralginsenosides Ta–Tc (**1–3**), one first isolated from nature, floralginsenoside Td (**4**), along with two known ones, ginsenosides F₁ (**5**) and F₅ (**6**), were isolated from the flower buds of *Panax ginseng*. Compounds **1**, **5**, and **6** showed inhibitory effects on the growth of HL-60 cells with IC₅₀ of 36.3, 23.2, and 62.4 μM, respectively.

**Synthesis and biodistribution studies of carbohydrate derivatives radiolabeled with technetium-99m**

pp 315–317

André Luís Branco de Barros, Valbert Nascimento Cardoso, Luciene das Graças Mota, Ricardo José Alves *

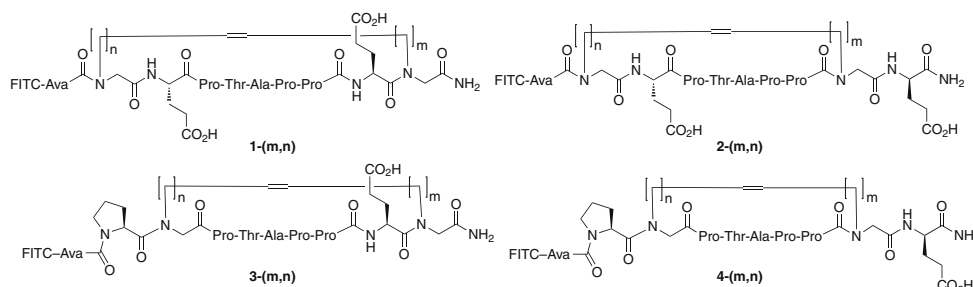


Synthesis of carbohydrate derivatives with mercaptoacetyltriglycine (MAG₃), radiolabeling with technetium-99m and biodistribution studies in mice.

Application of ring-closing metathesis macrocyclization to the development of Tsg101-binding antagonists

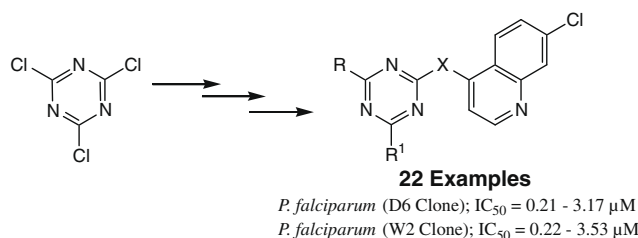
pp 318–321

Fa Liu *, Andrew G. Stephen, Abdul A. Waheed, Eric O. Freed, Robert J. Fisher, Terrence R. Burke Jr. *

**Synthesis, antimalarial activity and cytotoxicity of 4-aminoquinoline–triazine conjugates**

pp 322–325

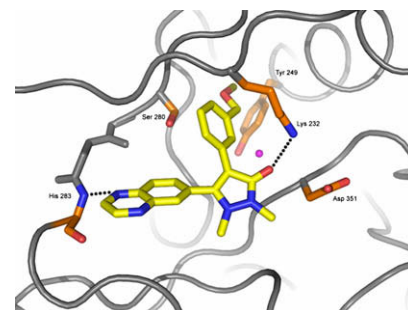
Sunny Manohar, Shabana I. Khan, Diwan S. Rawat *



Pyrazolone based TGF β R1 kinase inhibitors

pp 326–329

Kevin Guckian^{*}, Mary Beth Carter, Edward Yin-Shiang Lin, Michael Choi, Lihong Sun, P. Ann Boriack-Sjodin, Claudio Chuaqui, Benjamin Lane, Kam Cheung, Leona Ling, Wen-Cherng Lee

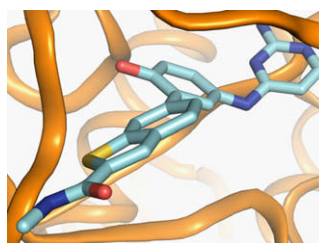


Interruption of TGF β signaling through inhibition of the TGF β R1 kinase domain may prove to have beneficial effect in both fibrotic and oncological diseases. Herein we describe the SAR of a novel series of TGF β R1 kinase inhibitors containing a pyrazolone core. Most TGF β R1 kinase inhibitors described to date contain a core five-membered ring bearing N as H-bond acceptor. Described herein is a novel strategy to replace the core structure with pyrazolone ring, in which the carbonyl group is designed as an H-bond acceptor to interact with catalytic Lys 232.

2,4-Diaminopyrimidine MK2 inhibitors. Part I: Observation of an unexpected inhibitor binding mode

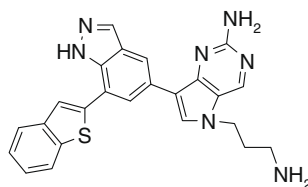
pp 330–333

Maria A. Argiriadi, Anna M. Ericsson, Christopher M. Harris, David L. Banach, David W. Borhani, David J. Calderwood, Megan D. Demers, Jennifer DiMauro, Richard W. Dixon, Jennifer Hardman, Silvia Kwak, Biqin Li, John A. Mankovich, Douglas Marcotte, Kelly D. Mullen, Baofu Ni, M. Pietras, Ramkrishna Sadhukhan, Silvino Sousa, Medha J. Tomlinson, Lu Wang, Tao Xiang, Robert V. Talanian^{*}

**2,4-Diaminopyrimidine MK2 inhibitors. Part II: Structure-based inhibitor optimization**

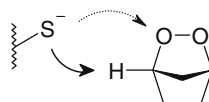
pp 334–337

Christopher M. Harris, Anna M. Ericsson, Maria A. Argiriadi, Claude Barberis, David W. Borhani, Andrew Burchat, David J. Calderwood, George A. Cunha, Richard W. Dixon, Kristine E. Frank, Eric F. Johnson, Joanne Kamens, Silvia Kwak, Biqin Li, Kelly D. Mullen, Denise C. Perron, Lu Wang, Neil Wishart, Xiaoyun Wu, Xiaolei Zhang, Tami R. Zmetra, Robert V. Talanian^{*}

**On the mechanism of microsomal prostaglandin E synthase type-2—A theoretical study of endoperoxide reaction with MeS[−]**

pp 338–340

Yi Li^{*}, Michael Angelastro, Stephen Shimshock, Stephan Reiling, Roy J. Vaz

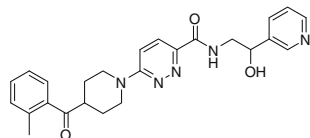


The reaction pathways of deprotonation versus nucleophilic substitution involving mPGES-2 enzyme catalysis were investigated by ab initio molecular orbital theory calculations for the reaction of methylthiolate with the endoperoxide core of PGH₂ and by the combined quantum mechanical molecular mechanical methods. The calculations showed that deprotonation mechanism is energetically more favorable than the nucleophilic substitution pathway.

Novel benzoylpiperidine-based stearyl-CoA desaturase-1 inhibitors: Identification of 6-[4-(2-methylbenzoyl)piperidin-1-yl]pyridazine-3-carboxylic acid (2-hydroxy-2-pyridin-3-ylethyl)amide and its plasma triglyceride-lowering effects in Zucker fatty rats

pp 341–345

Yoshikazu Uto ^{*}, Tsuneaki Ogata, Yohei Kiyotsuka, Yuko Ueno, Yuriko Miyazawa, Hitoshi Kurata, Tsuneo Deguchi, Nobuaki Watanabe, Masahiro Konishi, Ryo Okuyama, Nobuya Kurikawa, Toshiyuki Takagi, Satoko Wakimoto, Jun Ohsumi



IC₅₀ (mouse) = 28 nM
 IC₅₀ (human) = 43 nM
 ID₅₀ 3 mg/kg
 Plasma TG reduction: 56% at 30 mg/kg
 in Zucker fatty rats

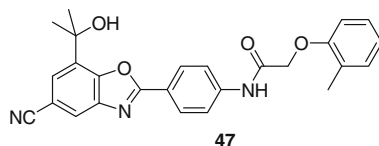
Optimization of the structure of benzoylpiperidine-based stearyl-CoA desaturase-1 inhibitors resulted in the identification of 6-[4-(2-methylbenzoyl)piperidin-1-yl]pyridazine-3-carboxylic acid (2-hydroxy-2-pyridin-3-ylethyl)amide which demonstrated plasma triglyceride-lowering effects in Zucker fatty rats in a dose-dependent manner after a 7-day administration (qd).



2-Arylbenzoxazoles as CETP inhibitors: Substitution of the benzoxazole moiety

pp 346–349

Cameron J. Smith ^{*}, Amjad Ali, Liya Chen, Milton L. Hammond, Matt S. Anderson, Ying Chen, Suzanne S. Eveland, Qiu Guo, Sheryl A. Hyland, Denise P. Milot, Carl P. Sparrow, Samuel D. Wright, Peter J. Sinclair

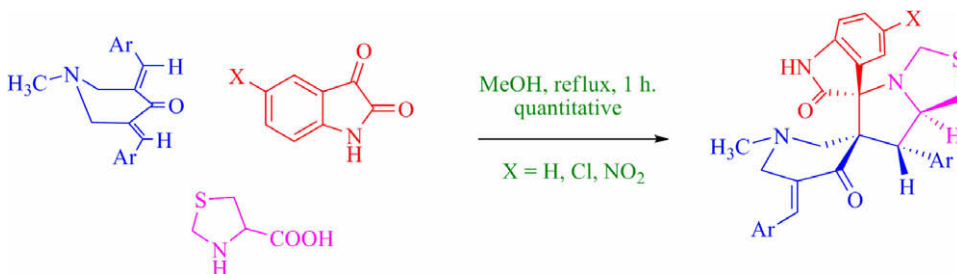


Compound **47** was found to be a potent inhibitor of CETP and had an IC₅₀ of 28 nM.

A highly atom economic, chemo-, regio- and stereoselective synthesis and evaluation of spiro-pyrrolothiazoles as antitubercular agents

pp 350–353

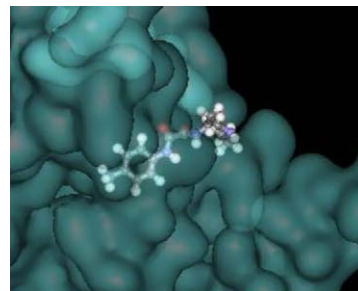
Subramanian Vedhanarayanan Karthikeyan, Balasubramanian Devi Bala, Velanganni Paul Alex Raja, Subbu Perumal ^{*}, Perumal Yogeewari, Dharmarajan Sriram



CD4 mimics targeting the mechanism of HIV entry

pp 354–358

Yuko Yamada, Chihiro Ochiai, Kazuhisa Yoshimura, Tomohiro Tanaka, Nami Ohashi, Tetsuo Narumi, Wataru Nomura, Shigeyoshi Harada, Shuzo Matsushita, Hirokazu Tamamura ^{*}

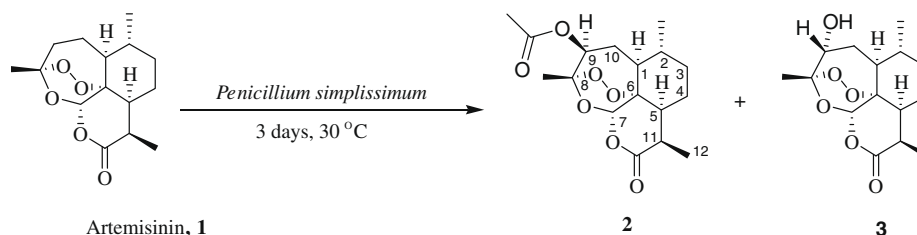


CD4 mimic small molecules interacting with a large cavity of HIV-1 gp120, which are targeted for the dynamic supramolecular mechanism of HIV entry, are reported.

Bio-transformation of artemisinin using soil microbe: Direct C-acetoxylation of artemisinin at C-9 by *Penicillium simplissimum*

pp 359–361

Abhishek Goswami, Partha P. Saikia, Nabin C. Barua^{*}, Manobjyoti Bordoloi, Archana Yadav, Tarun C. Bora, Binod K. Gogoi, Ajit Kumar Saxena, Nithasa Suri, Madhunika Sharma

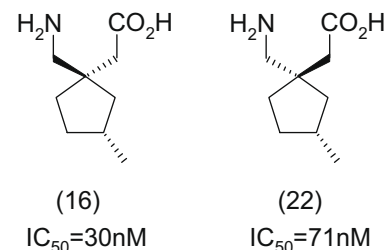


Transformation of the antimalarial drug artemisinin by *Penicillium simplissimum* was investigated. Two metabolites were isolated and characterized using high field NMR and MS–MS data.

Synthesis and in vivo evaluation of 3-substituted gababutins

pp 362–365

David C. Blakemore^{*}, Justin S. Bryans, Pauline Carnell, Nicola E. A. Chessum, Mark J. Field, Natasha Kinsella, Jack K. Kinsora, Simon A. Osborne, Sophie C. Williams

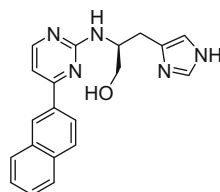


A range of 3-alkylated five-membered ring derivatives of Gabapentin were synthesized and several were found to have superior potency against the $\alpha 2\delta$ calcium subunit. Diastereoisomeric compounds, (**16**) and (**22**), were profiled in in vivo models of pain and anxiety and proved to have different levels of efficacy in the two models.

Hit to lead studies on (hetero)arylpurimidine—Agonists of the canonical Wnt- β -catenin cellular messaging system

pp 366–370

Adam M. Gilbert^{*}, Matthew G. Bursavich, Nippa Alon, Bheem M. Bhat, Frederick J. Bex, Michael Cain, Valerie Coleburn, Virginia Girona, Paula Green, Diane B. Hauze, Yogendra Kharode, Girija Krishnamurthy, Matthew Kirsits, Ho-Sun Lam, Yao-Bin Liu, Sabrina Lombardi, Jeanne Matteo, Richard Murrills, John A. Robinson, Sally Selim, Michael Sharp, Raymond Unwalla, Usha Varadarajan, Weiguang Zhao, Paul J. Yaworsky

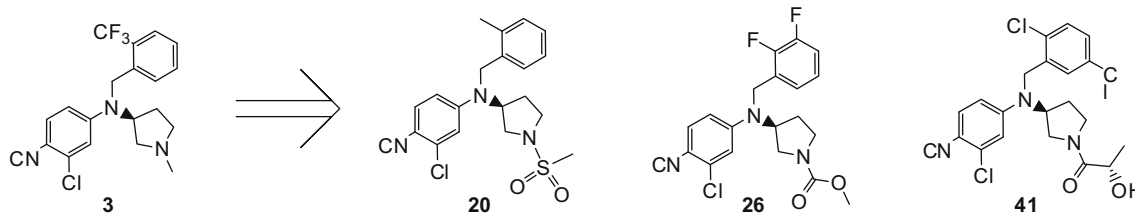


Wnt-3a/Dkk-1/TCF-Luci @20 μ M: 4.9
Wnt-3a/Dkk-1/TCF-Luci EC₅₀: 6.8 μ M
Osteogenic activity in mouse calvaria

Improving the developability profile of pyrrolidine progesterone receptor partial agonists

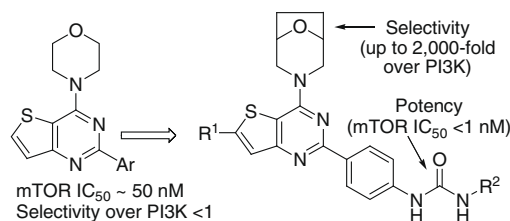
pp 371–374

Lara S. Kallander^{*}, David G. Washburn^{*}, Tram H. Hoang, James S. Frazee, Patrick Stoy, Latisha Johnson, Qing Lu, Marlys Hammond, Linda S. Barton, Jaclyn R. Patterson, Leonard M. Azzarano, Rakesh Nagilla, Kevin P. Madauss, Shawn P. Williams, Eugene L. Stewart, Chaya Duraiswami, Eugene T. Grygielko, Xiaoping Xu, Nicholas J. Laping, Jeffrey D. Bray, Scott K. Thompson



Discovery of 2-arylthieno[3,2-*d*]pyrimidines containing 8-oxa-3-azabi-cyclo[3.2.1]octane in the 4-position as potent inhibitors of mTOR with selectivity over PI3K

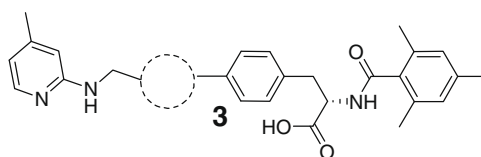
pp 375–379

Jeroen C. Verheijen^{*}, Ker Yu, Lourdes Toral-Barza, Irwin Hollander, Arie Zask

Introduction of bridged morpholine and ureidophenyl on moderately potent thienopyrimidine dual PI3K/mTOR inhibitors led to excellent mTOR potency and selectivity over PI3K.

Discovery of orally available integrin $\alpha 5\beta 1$ antagonists

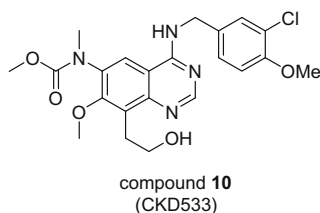
pp 380–382

Gunther Zischinsky, Frank Osterkamp, Doerte Vossmeier, Grit Zahn, Dirk Scharn, Ariane Zwintscher, Roland Stragies^{*}

Combining structural features of integrin $\alpha 5\beta 1$ antagonists leads to the generic structure **3**. The compounds expressing high integrin $\alpha 5\beta 1$ binding affinities, low systemic clearances and long terminal half-lives in male Wistar rat. Promising oral bioavailabilities were also observed for these compounds.

Discovery of potent, selective, and orally bioavailable PDE5 inhibitor: Methyl-4-(3-chloro-4-methoxybenzylamino)-8-(2-hydroxyethyl)-7-methoxyquinazolin-6-ylmethylcarbamate (CKD 533)

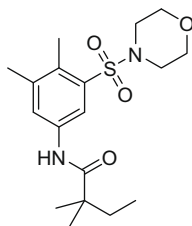
pp 383–386

Hojin Choi, Jaekwang Lee, Young Hoon Kim, Dai Sig Im, In-Chang Hwang, Soo Jin Kim, Seung Kee Moon, Hong Woo Lee, Sung Sook Lee, Soon Kil Ahn, Sang Woong Kim, Nam Song Choi, Kyung Joo Lee^{*}

Property-based design of potent and selective PDE5 inhibitor is described.

Novel sulfamoyl benzamides as selective CB₂ agonists with improved in vitro metabolic stability

pp 387–391

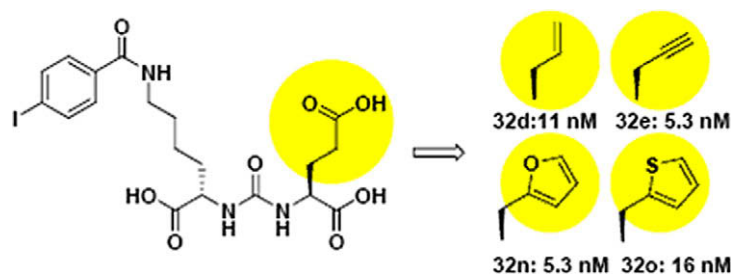
Ian Sellitto, Bertrand Le Bourdonnec^{*}, Karin Worm, Allan Goodman, Markku A. Savolainen, Guo-Hua Chu, Christopher W. Ajello, Christopher T. Saeui, Lara K. Leister, Joel A. Cassel, Robert N. DeHaven, Christopher J. LaBuda, Michael Koblish, Patrick J. Little, Bernice L. Brogdon, Steven A. Smith, Roland E. Dolle

The discovery and SAR studies of a series of xylene sulfonamides as CB₂ selective agonists are reported.

Bioisosterism of urea-based GCPII inhibitors: Synthesis and structure–activity relationship studies

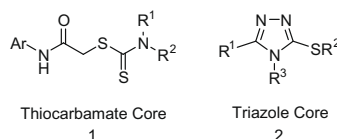
pp 392–397

Haofan Wang, Youngjoo Byun, Cyril Barinka, Mrudula Pullambhatla, Hyo-eun C. Bhang, James J. Fox, Jacek Lubkowski, Ronnie C. Mease, Martin G. Pomper *

**Small molecule inhibitors of HIV RT Ribonuclease H**

pp 398–402

Martin Di Grandi *, Matthew Olson, Amar S. Prashad, Geraldine Bebernitz, Amara Luckay, Stanley Mullen, Yongbo Hu, Girija Krishnamurthy, Keith Pitts, John O'Connell

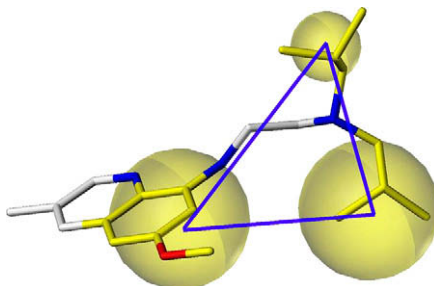


Two classes of compounds, thiocarbamates **1** and triazoles **2**, have been identified as HIV RT RNase H inhibitors using a novel FRET-based HTS assay. The potent analogs in each series exhibited selectivity and were active in cell-based assays. In addition, saturable, 1:1 stoichiometric binding to target was established and time of addition studies were consistent with inhibition of RT-mediated HIV replication.

**p16^{INK4a} Peptide mimetics identified via virtual screening**

pp 403–405

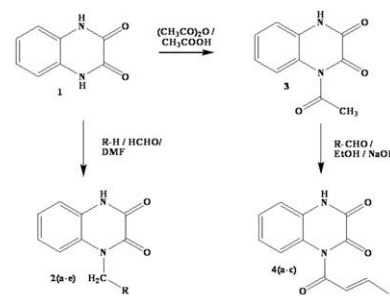
Mark A. Klein *, Kevin H. Mayo, Robert A. Kratzke *

**In vitro antitubercular and antimicrobial activities of 1-substituted quinoxaline-2,3(1H,4H)-diones**

pp 406–408

P. Ramalingam *, S. Ganapaty, Ch. Babu Rao

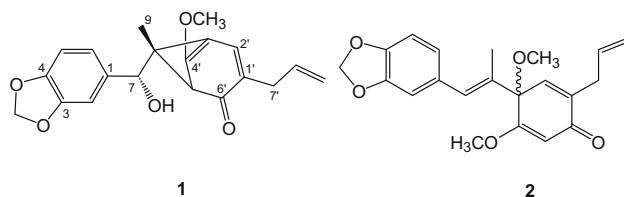
1-((Substituted)methyl)quinoxaline-2,3(1H,4H)-dione (**2a–e**) and 1-((substituted)acryloyl)quinoxaline-2,3(1H,4H)-dione (**4a–c**) were synthesized from quinoxaline-2,3(1H,4H)-dione **1** and evaluated for their antimicrobial activities. Results of the antitubercular screening against *Mycobacterium tuberculosis* H₃₇Rv showed that the compounds **2b**, **3**, and **4a** were the most effective, with minimum inhibitory concentrations of 8.012, 8.561, and 8.928 µg/ml, respectively. All the compounds exhibited significant antibacterial and considerable antifungal activities.



Neolignans from *Piper kadsura* and their anti-neuroinflammatory activity

pp 409–412

Ki Hyun Kim, Jung Wook Choi, Sang Keun Ha, Sun Yeou Kim, Kang Ro Lee *

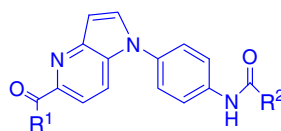


A new neolignan, piperkadsin C (**1**), together with eight known neolignans (**2–9**) were isolated from *Piper kadsura*. Compounds **1** and **2** potentially inhibited NO production in microglia cells.

**Synthesis and antiproliferative activity of pyrrolo[3,2-*b*]pyridine derivatives against melanoma**

pp 413–417

Hee Jin Kim, Myung-Ho Jung, Hwan Kim, Mohammed I. El-Gamal, Tae Bo Sim, So Ha Lee, Jun Hee Hong, Jung-Mi Hah, Jung-Hyuck Cho, Jung Hoon Choi, Kyung Ho Yoo, Chang-Hyun Oh *

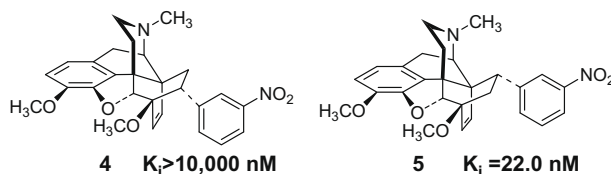


Synthesis of a new series of diarylureas and amides having pyrrolo[3,2-*b*]pyridine scaffold is described. Their in vitro antiproliferative activity against human melanoma cell line A375 and HS 27 human fibroblast cell line was tested and the effect of substituents on the pyrrolo[3,2-*b*]pyridine was investigated. The newly synthesized compounds, except *meta*-substituted derivatives (**lj–k** and **lv–w**), generally showed superior or similar activity against A375 to Sorafenib. Among all of these derivatives, compounds **lr** and **lt** having 5-benzylamide substituted 4'-amide moieties showed the most potent antiproliferative activity against A375.

Highly selective and potent μ opioid ligands by unexpected substituent on morphine skeleton

pp 418–421

Wei Li, Yi-Min Tao, Yun Tang, Xue-Jun Xu, Jie Chen, Wei Fu, Xing-Hai Wang, Bo Chao, Wei Sheng, Qiong Xie, Zhui-Bai Qiu *, Jing-Gen Liu

**OTHER CONTENTS****Corrigenda**

pp 422–424

*Corresponding author

Supplementary data available via ScienceDirect

COVER

Overlay of high resolution co-crystal structures of **R-22**-ADP (cyan) and **1**-ADP (green) bound in an allosteric binding site of the mitotic kinesin KSP. [Roecker, A. J.; Coleman, P. J.; Mercer, S. P.; Schreier, J. D.; Buser, C. A.; Walsh, E. S.; Hamilton, K.; Lobell, R. B.; Tao, W.; Diehl, R. E.; South, V. J.; Davide, J. P.; Kohl, N. E.; Yan, Y.; Kuo, L. C.; Li, C.; Fernandez-Metzler, C.; Mahan, E. A.; Prueksaritanont, T.; Hartman, G. D. *Bioorg. Med. Chem. Lett.* **2007**, 17, 5677.]

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