

Contents

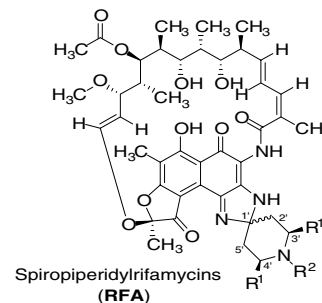
ARTICLES

New rifabutin analogs: Synthesis and biological activity against *Mycobacterium tuberculosis*

pp 5717–5722

José Barluenga,* Fernando Aznar, Ana-Belén García, María-Paz Cabal,
Juan J. Palacios and María-Angela Menéndez

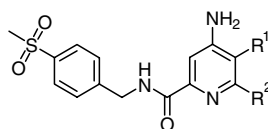
The synthesis and biological evaluation of novel rifamycin derivatives are described.



Aminopyridine carboxamides as c-Jun N-terminal kinase inhibitors: Targeting the gatekeeper residue and beyond

pp 5723–5730

Gang Liu,* Hongyu Zhao, Bo Liu, Zhili Xin, Mei Liu, Christi Kosogof,
Bruce G. Szczepankiewicz, Sanyi Wang, Jill E. Clampit, Rebecca J. Gum,
Deanna L. Haasch, James M. Trevillyan and Hing L. Sham

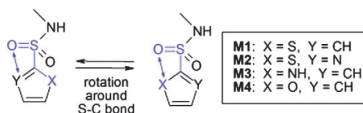


The structure–activity relationships of 5,6-positions of aminopyridine carboxamide-based c-Jun N-terminal Kinase (JNK) inhibitors were explored to expand interaction with the kinase specificity and ribose-binding pockets.

Arylsulfonamides: A study of the relationship between activity and conformational preferences for a series of factor Xa inhibitors

pp 5731–5735

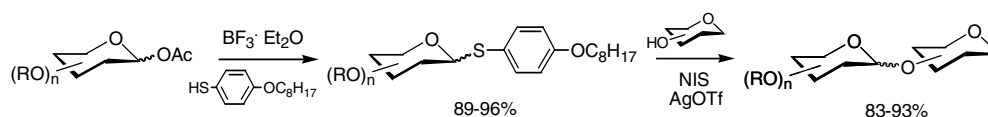
Stefan Senger,* Máire A. Convery, Chuen Chan and Nigel S. Watson



Odorless benzenethiols in synthesis of thioglycosides and its application for glycosylation reactions

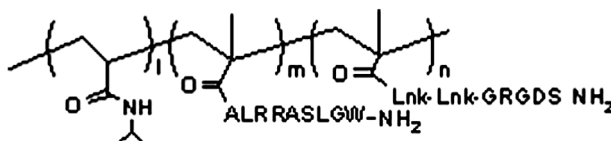
pp 5736–5739

Tetsuya Kajimoto, Yuichi Ishioka, Takahiro Katoh and Manabu Node*

*Under Odorless Conditions***A protein kinase signal-responsive gene carrier modified RGD peptide**

pp 5740–5743

Jun Oishi, Moeko Ijuin, Tatsuhiko Sonoda, Jeong-Hun Kang, Kenji Kawamura, Takeshi Mori, Takuro Niidome and Yoshiki Katayama*



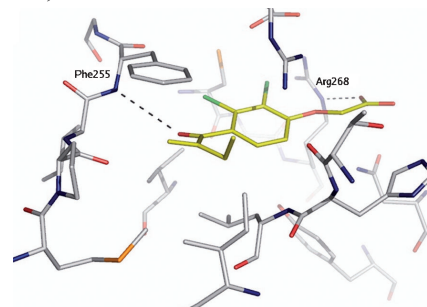
Development and evaluation of RGD peptide modified signal-responsive gene carrier are reported.

Identification of novel inhibitors of UDP-Glc 4'-epimerase, a validated drug target for african sleeping sickness

pp 5744–5747

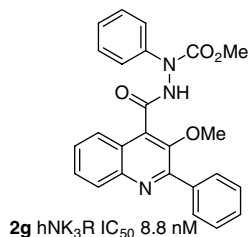
Michael D. Urbaniak, Jioji N. Tabudravu, Aichi Msaki, Kathy Mansfield Matera, Ruth Brenk, Marcel Jaspars and Michael A. J. Ferguson*

Novel inhibitors of *Trypanosoma brucei* and human UDP-Glc 4'-epimerase with micromolar potency were identified by screening marine natural products and drug-like molecules.

**N',2-Diphenylquinoline-4-carbohydrazide based NK₃ receptor antagonists**

pp 5748–5751

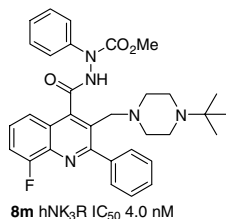
Jason M. Elliott,* Robert W. Carling, Mark Chambers, Gary G. Chicchi, Peter H. Hutson, A. Brian Jones, Angus MacLeod, Rose Marwood, Georgina Meneses-Lorente, Elena Mezzogori, Fraser Murray, Michael Rigby, Inmaculada Royo, Michael G. N. Russell, Bindi Sohal, Kwei Lan Tsao and Brian Williams



N',2-Diphenylquinoline-4-carbohydrazide based NK₃ receptor antagonists II

pp 5752–5756

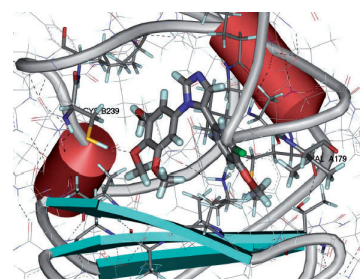
Jason M. Elliott,* Robert W. Carling, Gary G. Chicchi, James Crawforth, Peter H. Hutson, A. Brian Jones, Sarah Kelly, Rose Marwood, Georgina Meneses-Lorente, Elena Mezzogori, Fraser Murray, Michael Rigby, Inmaculada Royo, Michael G. N. Russell, Duncan Shaw, Bindi Sohal, Kwei Lan Tsao and Brian Williams

**Novel imidazole-based combretastatin A-4 analogues: Evaluation of their in vitro antitumor activity and molecular modeling study of their binding to the colchicine site of tubulin**

pp 5757–5762

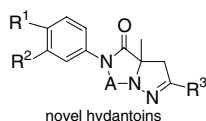
Fabio Bellina,* Silvia Cauteruccio, Susanna Monti* and Renzo Rossi

The results of docking experiments aimed at calculating the interaction energies of a variety of 1,5- and 1,2-diaryl-1*H*-imidazoles with the colchicine binding site of tubulin are reported along with their in vitro antitumor activity data.

**Synthesis and SAR of novel hydantoin derivatives as selective androgen receptor modulators**

pp 5763–5766

Xuqing Zhang,* George F. Allan, Tifanie Sbriscia, Olivia Linton, Scott G. Lundeen and Zhihua Sui

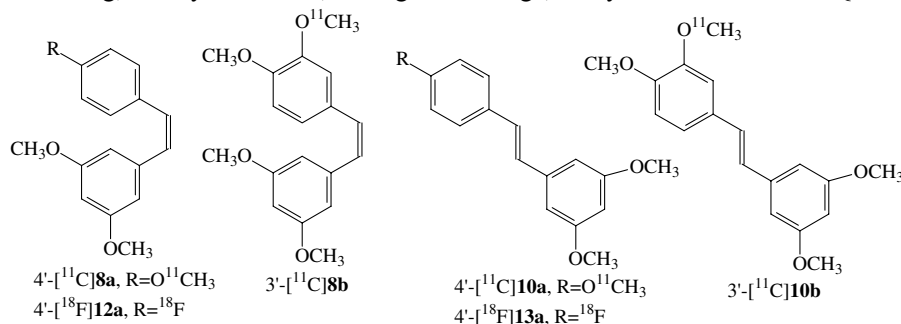


A novel series of hydantoin derivatives were identified by in vivo studies as tissue selective androgen receptor modulators. SAR around this series revealed that the function of the ligand could be altered by minor structural modification.

**Synthesis of radiolabeled stilbene derivatives as new potential PET probes for aryl hydrocarbon receptor in cancers**

pp 5767–5772

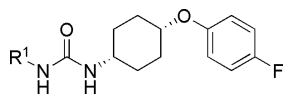
Mingzhang Gao, Min Wang, Kathy D. Miller, George W. Sledge, Gary D. Hutchins and Qi-Huang Zheng*



Solid-phase combinatorial approach for the optimization of soluble epoxide hydrolase inhibitors

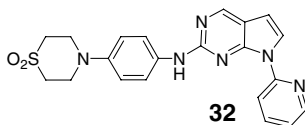
pp 5773–5777

Sung Hee Hwang, Christophe Morisseau, Zung Do and Bruce D. Hammock*

**The synthesis and SAR of 2-amino-pyrrolo[2,3-*d*]pyrimidines: A new class of Aurora-A kinase inhibitors**

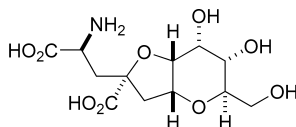
pp 5778–5783

Kevin J. Moriarty,* Holly K. Koblish, Thomas Garrabrant, Jahanvi Maisuria, Ehab Khalil, Farah Ali, Ioanna P. Petrounia, Carl S. Crysler, Anna C. Maroney, Dana L. Johnson and Robert A. Galemme, Jr.

The synthesis of a potent Aurora-A inhibitor **32** ($IC_{50} = 0.8$ nM) is reported.**Design, total synthesis, and biological evaluation of neodysiherbaine A derivative as potential probes**

pp 5784–5787

Makoto Sasaki,* Koichi Tsubone, Muneco Shoji, Masato Oikawa, Keiko Shimamoto and Ryuichi Sakai

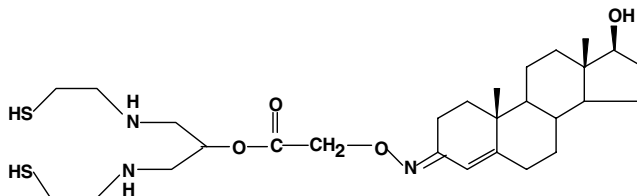


The total synthesis and biological evaluation of neodysiherbaine A analogue are described.

A novel ^{99m}Tc -labeled testosterone derivative as a potential agent for targeting androgen receptors

pp 5788–5792

Tapas Das, Sharmila Banerjee,* Grace Samuel, Ketaki Bapat, Suresh Subramanian, Maroor R. A. Pillai and Meera Venkatesh

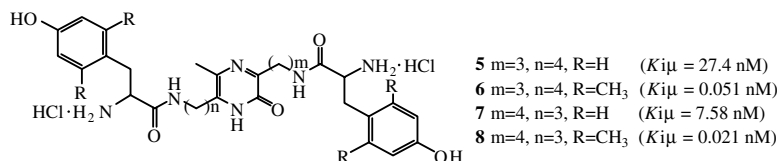


A novel testosterone–BFCA conjugate is prepared and radiolabeled with ^{99m}Tc , an ideal diagnostic radioisotope, in an attempt to prepare an agent for targeting androgen receptors. The bio-efficacy studies of the radiolabeled agent toward suitable cell line expressing androgen receptors showed retention of biological activity.

Synthesis of 3,6-bis[H-Tyr/H-Dmt-NH(CH₂)_{m,n}]-2(1*H*)pyrazinone derivatives: Function of alkyl chain length on opioid activity

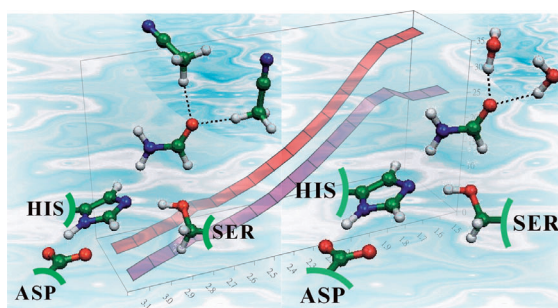
pp 5793–5796

Kimitaka Shiotani, Tingyou Li, Anna Miyazaki, Yuko Tsuda, Sharon D. Bryant, Akihiro Ambo, Yusuke Sasaki, Lawrence H. Lazarus and Yoshio Okada*

**SER-HIS-ASP catalytic triad in model non-aqueous solvent environment: A computational study**

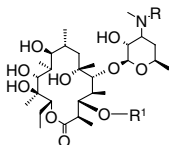
pp 5797–5800

Justin Kai-Chi Lau and Yuen-Kit Cheng*

**Design, synthesis and in vivo activity of 9-(*S*)-dihydroerythromycin derivatives as potent anti-inflammatory agents**

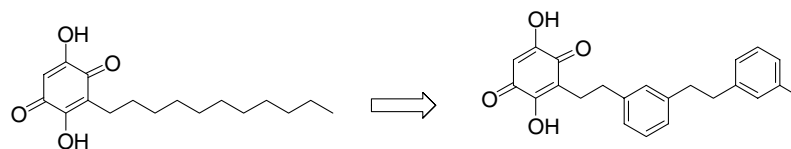
pp 5801–5804

A. Mereu,* E. Moriggi, M. Napoletano, C. Regazzoni, S. Manfredini, T. P. Mercurio and F. Pellacini

The synthesis of a new class of 9-(*S*)-dihydroerythromycin derivatives and their anti-inflammatory activity are reported.**Design, synthesis, and characterization of new embelin derivatives as potent inhibitors of X-linked inhibitor of apoptosis protein**

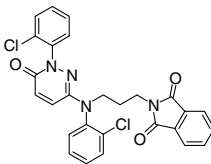
pp 5805–5808

Jianyong Chen, Zaneta Nikolovska-Coleska, Guoping Wang, Su Qiu and Shaomeng Wang*

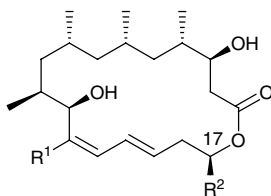
**1**, Embelin (initial lead)*K*_i = 0.40 ± 0.13 μM to XIAP BIR3**6g***K*_i = 0.18 ± 0.09 μM to XIAP BIR3

p38 MAP kinase inhibitors. Part 6: 2-Arylpyridazin-3-ones as templates for inhibitor design**pp 5809–5813**

Swaminathan R. Natarajan,* Stephen T. Heller, Kiyeon Nam, Suresh B. Singh, Giovanna Scapin, Sangita Patel, James E. Thompson, Catherine E. Fitzgerald and Stephen J. O'Keefe

**Separation of anti-angiogenic and cytotoxic activities of borrelidin by modification at the C17 side chain****pp 5814–5817**

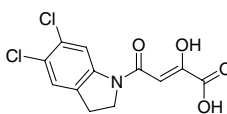
Barrie Wilkinson,* Matthew A. Gregory, Steven J. Moss, Isabelle Carletti, Rose M. Sheridan, Andrew Kaja, Michael Ward, Carlos Olano, Carmen Mendez, José A. Salas, Peter F. Leadlay, Rob vanGinckel and Ming-Qiang Zhang



An SAR analysis of borrelidin analogues is presented.

Exploration of the diketoacid integrase inhibitor chemotype leading to the discovery of the anilide-ketoacids chemotype**pp 5818–5821**

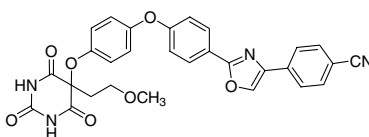
Michael A. Walker,* Timothy Johnson, Zhuping Ma, Yunhui Zhang, Jacques Banville,* Roger Remillard, Serge Plamondon, Annapurna Pendri, Henry Wong, Daniel Smith, Albert Torri, Himadri Samanta, Zeyu Lin, Carol Deminie, Brian Terry, Mark Krystal and Nicholas Meanwell



The synthesis of aniline and indoline amide ketoacids as inhibitors of HIV integrase.

Potent, selective pyrimidinetrione-based inhibitors of MMP-13**pp 5822–5826**

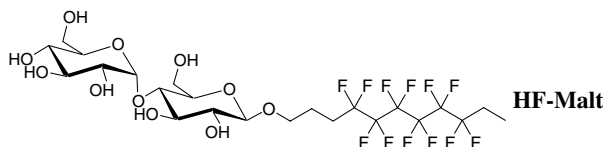
Lawrence A. Reiter,* Kevin D. Freeman-Cook, Christopher S. Jones, Gary J. Martinelli, Amy S. Antipas, Martin A. Berliner, Kaushik Datta, James T. Downs, James D. Eskra, Michael D. Forman, Elaine M. Greer, Roberto Guzman, Joel R. Hardink, Fouad Janat, Nandell F. Keene, Ellen R. Laird, Jennifer L. Liras, Lori L. Lopresti-Morrow, Peter G. Mitchell, Jayvardhan Pandit, Donald Robertson, Diana Sperger, Marcie L. Vaughn-Bowser, Darra M. Waller and Sue A. Yocum



Fluorinated and hemifluorinated surfactants derived from maltose: Synthesis and application to handling membrane proteins in aqueous solution

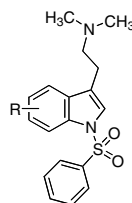
pp 5827–5831

Ange Polidori,* Marc Presset, Florence Lebaupain, Bruno Ameduri, Jean-Luc Popot, Cécile Breyton and Bernard Pucci*

**Interaction of N_1 -unsubstituted and N_1 -benzenesulfonyltryptamines at 5-HT_6 receptors**

pp 5832–5835

Renata Kolanos, Małgorzata Dukat, Bryan L. Roth and Richard A. Glennon*

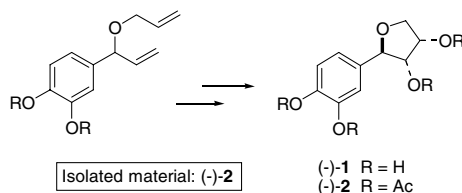


Comparative analysis indicates that N_1 -unsubstituted- and N_1 -benzenesulfonyltryptamines bind differently at 5-HT_6 receptors. Additionally, evaluation of conformationally constrained analogs suggests that a non-coplanar benzenesulfonyl moiety may be optimal for binding.

Synthesis and free radical scavenging activity of a novel metabolite from the fungus *Colletotrichum gloeosporioides*

pp 5836–5839

Mariencia Femenía-Ríos, Carlos M. García-Pajón, Rosario Hernández-Galán, Antonio J. Macías-Sánchez and Isidro G. Collado*

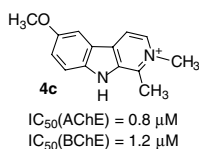


Stereoselective synthesis of a novel metabolite from a strain of the phytopathogenic fungus *Colletotrichum gloeosporioides* was carried out. The tetraol (–)-1 showed free radical scavenging activity comparable to that of protocatechuic acid.

6-Hydroxy- and 6-methoxy- β -carbolines as acetyl- and butyrylcholinesterase inhibitors

pp 5840–5843

Yvonne Schott, Michael Decker,* Hans Rommelspacher and Jochen Lehmann*

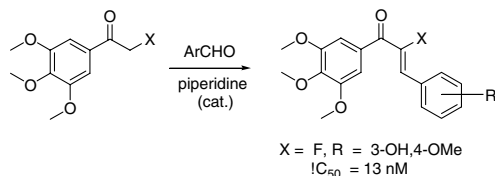


A series of β -carbolines and β -carbolinium salts were synthesized and their inhibitory activities towards AChE and BChE measured. Micromolar inhibitors with some selectivity toward AChE were identified.

Effects of α -substitutions on structure and biological activity of anticancer chalcones

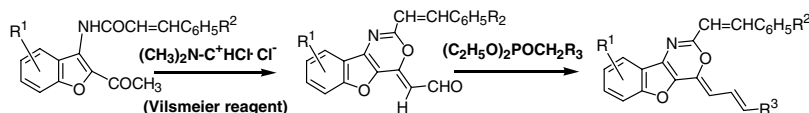
pp 5844–5848

Nicholas J. Lawrence,* Richard P. Patterson, Li-Ling Ooi, Darren Cook and Sylvie Ducki

**A novel oxazine ring closure reaction affording (Z)-((E)-2-styrylbenzo[b]furo[3,2-d]-[1,3]oxazin-4-ylideno)acetaldehydes and their anti-osteoclastic bone resorption activity**

pp 5849–5854

Yuko Ando, Kumiko Ando, Mami Yamaguchi, Jun-ichi Kunitomo, Masao Koida, Ryo Fukuyama, Hiromichi Nakamuta, Masayuki Yamashita, Shunsaku Ohta and Yoshitaka Ohishi*

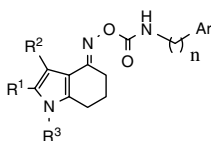


A novel ring closure reaction using the Vilsmeier reagent afforded (Z)-((E)-2-styrylbenzo[b]furo[3,2-d][1,3]oxazin-4-ylideno)acetaldehydes which gave butadiene compounds having potent anti-osteoclastic bone resorption activity.

Discovery and synthesis of tetrahydroindolone-derived carbamates as Kv1.5 blockers

pp 5855–5858

Andrew Fluxe,* Shengde Wu, James B. Sheffer, John M. Janusz, Michael Murawsky, Gina M. Fadaye, Bin Fang, Michelle Hare and Laurent Djandjighian

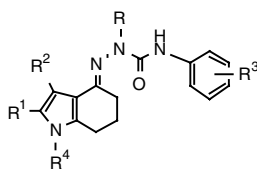


A novel class of tetrahydroindolone-derived carbamates has been discovered whose members are potent Kv1.5 blockers. The in vitro data show that compounds **6** and **29** are quite potent. They are also very selective over hERG (>450-fold) and L-type calcium channels (>450-fold).

Discovery and synthesis of tetrahydroindolone derived semicarbazones as selective Kv1.5 blockers

pp 5859–5863

Shengde Wu,* Andrew Fluxe, John M. Janusz, James B. Sheffer, Greg Browning, Benjamin Blass, Keith Coburn, Richard Hedges, Michael Murawsky, Bin Fang, Gina M. Fadaye, Michelle Hare and Laurent Djandjighian



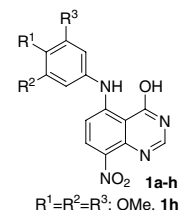
A novel class of tetrahydroindolone-derived semicarbazones has been discovered as potent Kv1.5 blockers. In in vitro studies, several compounds exhibited very good potency for blockade of Kv1.5. Compound **8i** showed good selectivity for blockade of Kv1.5 vs hERG and L-type calcium channels. In an anesthetized pig model, compounds **8i** and **10c** increased atrial ERP by 17–26% in the right atrium without affecting ventricular ERP.

4'-Alkoxy substitution enhancing the anti-mitotic effect of 5-(3',4',5'-substituted) anilino-4-hydroxy-8-nitroquinazolines as a novel class of anti-microtubule agents

pp 5864–5869

Yi Jin, Zu-Yu Zhou, Wei Tian, Qiang Yu and Ya-Qiu Long*

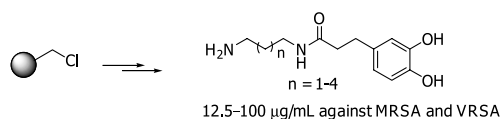
The design and synthesis of 5-(3',4',5'-substituted)anilino-4-hydroxy-8-nitroquinazolines as a new class of mitosis inhibitors was reported. The alkoxy substitution on 3',4'-positions of 5-anilino portion was found favorable for the potency. So, the best activity was exhibited by the 5-(3',4',5'-trimethoxy)anilino-8-nitroquinazoline (**1h**) in arresting 81% of the tumor cells at the G2/M phase at the concentration of 50 μ M.



Solid-phase synthesis and antibacterial activity of hydroxycinnamic acid amides and analogues against methicillin-resistant *Staphylococcus aureus* and vancomycin-resistant *S. aureus*

pp 5870–5873

Boon-ek Yingyongnarongkul,* Nuttapon Apiratikul, Nuntana Aroonrerk and Apichart Suksamrarn

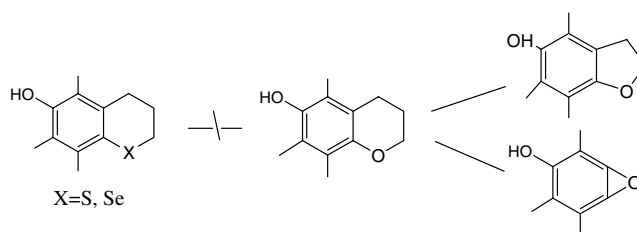


A library of hydroxycinnamic acid amides and analogues were synthesized and evaluated as antimicrobial activity against MRSA and VRSA. The biological assay showed that dihydrocaffeoyl analogues were active against MRSA and VRSA.

Exploring a possible way to synthesize novel better antioxidants based on vitamin E: A DFT study

pp 5874–5877

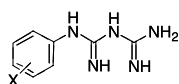
Weijun Chen, Jirong Song,* Ping Guo, Wei Cao and Jiang Bian



Discovery of small molecule inhibitors of integrin α v β 3 through structure-based virtual screening

pp 5878–5882

Yuan Zhou, Hui Peng, Qing Ji, Jing Qi, Zhenping Zhu and Chunzheng Yang*

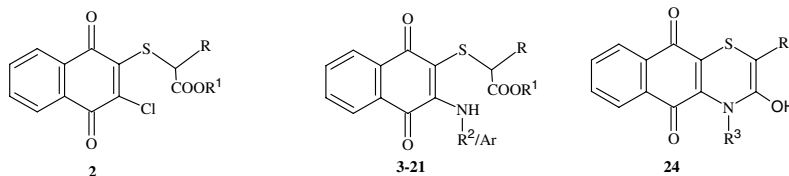


Structure type of the best hit that targets integrin α v β 3 via structure-based virtual screening.

Naphtho[2,3-*b*][1,4]-thiazine-5,10-diones and 3-substituted-1,4-dioxo-1,4-dihydronaphthalen-2-yl-thioalkanoate derivatives: Synthesis and biological evaluation as potential antibacterial and antifungal agents

pp 5883–5887

Vishnu K. Tandon,* Hardesh K. Maurya, Dharmendra B. Yadav, Ashutosh Tripathi, Manish Kumar and Praveen K. Shukla

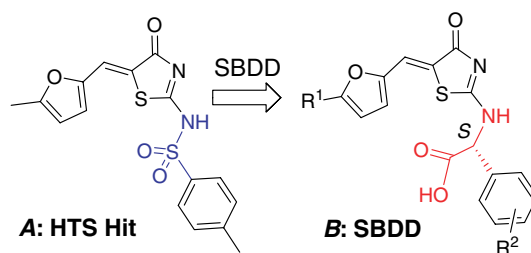


The synthesis, antibacterial and antifungal activities of **2–24** are described.

Structure-based design of a novel thiazolone scaffold as HCV NS5B polymerase allosteric inhibitors

pp 5888–5891

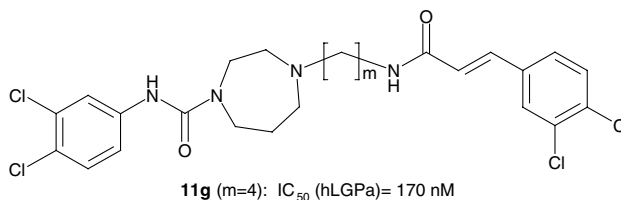
Shunqi Yan,* Todd Appleby, Gary Larson, Jim Z. Wu, Robert Hamatake, Zhi Hong and Nanhua Yao*



Synthesis and structure–activity relationships of 3-phenyl-2-propenamides as inhibitors of glycogen phosphorylase *a*

pp 5892–5896

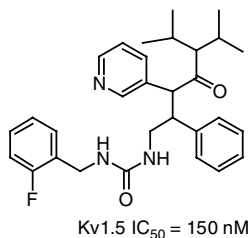
Yue H. Li, Frank T. Coppo, Karen A. Evans,* Todd L. Graybill, Mehul Patel, Jennifer Gale, Hu Li, Francis Tavares and Stephen A. Thomson



Potent antagonists of the Kv1.5 potassium channel: Synthesis and evaluation of analogous *N,N*-diisopropyl-2-(pyridine-3-yl)acetamides

pp 5897–5901

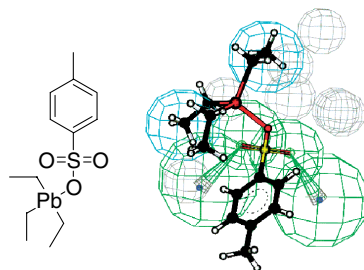
Kausik K. Nanda, M. Brad Nolt,* Matthew J. Cato, Stefanie A. Kane, Laszlo Kiss, Robert H. Spencer, Jixin Wang, Joseph J. Lynch, Christopher P. Regan, Gary L. Stump, Bing Li, Rebecca White, Suzie Yeh, Michael J. Bogusky, Mark T. Bilodeau, Christopher J. Dinsmore, Craig W. Lindsley, George D. Hartman, Scott E. Wolkenberg and B. Wesley Trotter



Discovery of potent inhibitors of pseudomonal quorum sensing via pharmacophore modeling and in silico screening

pp 5902–5906

Mutasem O. Taha,* Amal G. Al-Bakri and Waleed A. Zalloum



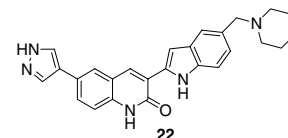
In silico-based discovery of new potent pseudomonal quorum sensing inhibitors is reported.

Development of 6-substituted indolylquinolinones as potent Chek1 kinase inhibitors

pp 5907–5912

Shaei Huang,* Robert M. Garbaccio, Mark E. Fraley, Justin Steen, Constantine Kreatsoulas, George Hartman, Steve Stirdivant, Bob Drakas, Keith Rickert, Eileen Walsh, Kelly Hamilton, Carolyn A. Buser, James Hardwick, Xianzhi Mao, Marc Abrams, Steve Beck, Weikang Tao, Rob Lobell, Laura Sepp-Lorenzino, Youwei Yan, Mari Ikuta, Joan Zugay Murphy, Vinod Sardana, Sanjeev Munshi, Lawrence Kuo, Michael Reilly and Elizabeth Mahan

6-Substituted 3-(indol-2-yl)quinolinones are reported as potent Chek1 inhibitors.

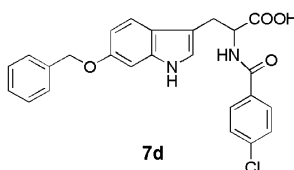


Chek1 IC₅₀ = 0.65 nM
Cell EC₅₀ = 97 nM

Structure-based de novo design, synthesis, and biological evaluation of the indole-based PPAR γ ligands (I)

pp 5913–5916

Xiaochun Dong, Zhenshan Zhang, Ren Wen,* Jianhua Shen, Xu Shen and Hualiang Jiang



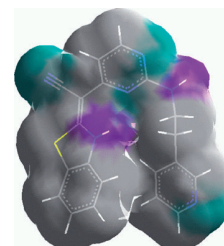
A series of 3-(6-benzyloxy-1*H*-indol-3-yl)-2-acylaminopropionic acid derivatives were designed, synthesized, and tested for the PPAR γ protein binding activities. Compounds **7d** possessed potent binding activity ($K_D = 6.86 \times 10^{-6}$ mol/L) close to marketed drug rosiglitazone ($K_D = 4.98 \times 10^{-6}$ mol/L) in vitro.

Three-dimensional quantitative structure–activity relationship (3 D-QSAR) and docking studies on (benzothiazole-2-yl) acetonitrile derivatives as c-Jun N-terminal kinase-3 (JNK3) inhibitors

pp 5917–5925

Abdul Rajjak Shaikh, Mohamed Ismael, Carlos A. Del Carpio,* Hideyuki Tsuboi, Michihisa Koyama, Akira Endou, Momoji Kubo, Ewa Broclawik and Akira Miyamoto*

We have developed a 3D-QSAR model and performed a series of structural studies on a series of benzothiazole-2-yl acetonitrile derivatives with high inhibition activity towards c-Jun N-terminal kinase-3. The results were compared with experimental structure-based studies using JNK3 crystal structure to gain insight into the structural requirements for inhibitory activity of this class.



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*Corresponding author

①⁺ Supplementary data available via ScienceDirect**COVER**

View of the crystal structure of the DB819-d(CGCGAATTCGCG)₂ complex, looking down the minor groove of the DNA (see Campbell, N.H.; Evans, D.A.; Lee, M.P.H.; Parkinson, G.N.; Neidle, S. *Bioorg. Med. Chem. Lett.* **2006**, 16, 15). The DB819 molecule is shown in space-filling mode. Visualisation produced with the VMD program. [Humphrey, W.; Dalke, A.; Schulten, K. *J. Mol. Graphics* **1996**, 14, 33.]

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