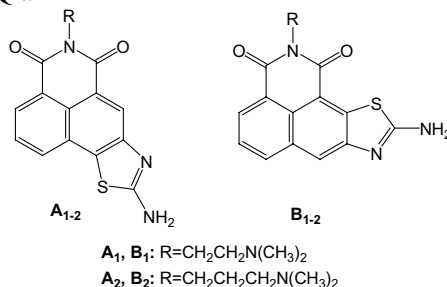


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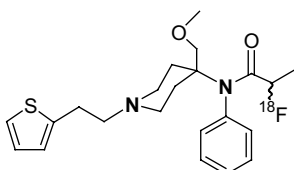
- Novel 2-aminothiazonaphthalimides as visible light activatable photonucleases: effects of intercalation, heterocyclic-fused area and side chains** pp 1769–1772

Zhigang Li, Qing Yang and Xuhong Qian*



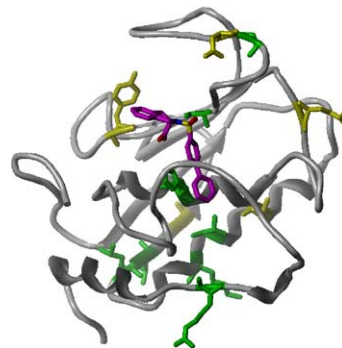
- ¹⁸F-Labeled sufentanil for PET-imaging of μ-opioid receptors** pp 1773–1777

Gjermund Henriksen, Stefan Platzer, Andrea Hauser, Frode Willoch, Achim Berthele, Markus Schwaiger and Hans-Jürgen Wester*



- QSAR-by-NMR: quantitative insights into structural determinants for binding affinity by analysis of ¹H/¹⁵N chemical shift differences in MMP-3 ligands** pp 1779–1783

Hans Matter,* Manfred Schudok, Bettina Elshorst, Doris M. Jacobs, Krishna Saxena and Herbert Kogler



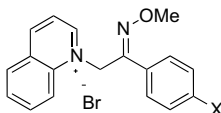
An NMR strategy for insights on residues influencing biological affinity is presented.



Quinolinium salt as a potent inhibitor of lymphocyte apoptosis

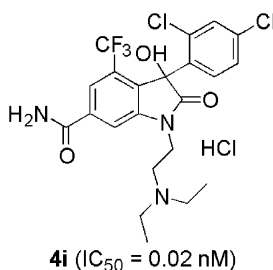
pp 1785–1788

Sylvie D. Barchéath, Rommel I. Tawatao, Maripat Corr, Dennis A. Carson and Howard B. Cottam*

**Structure–activity relationships of the oxindole growth hormone secretagogues**

pp 1789–1792

Teruhisa Tokunaga, W. Ewan Hume, Jun Nagamine, Tetsuya Kawamura, Mutsuo Taiji and Ryu Nagata*



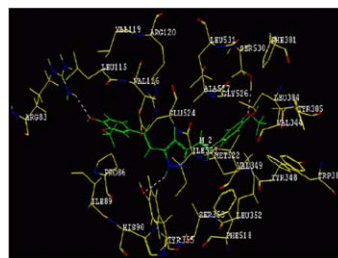
The synthesis and the structure–activity relationships of a series of oxindole-based growth hormone secretagogues are reported. Compound **4i** was found to have potent in vitro and in vivo activity.

Design, synthesis, biological evaluation and molecular docking of curcumin analogues as antioxidant, cyclooxygenase inhibitory and anti-inflammatory agents

pp 1793–1797

C. Selvam, Sanjay M. Jachak,* Ramasamy Thilagavathi and Asit. K. Chakraborti

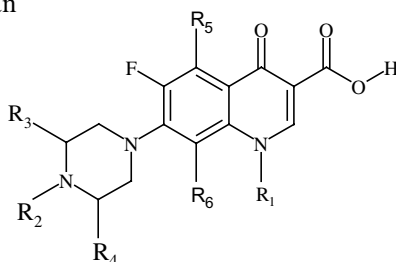
Curcuminoids were isolated from *Curcuma longa* and their pyrazole and isoxazole analogues were synthesized and evaluated for antioxidant, COX-1/COX-2 inhibitory and anti-inflammatory activities. Molecular docking study revealed the binding orientations of curcumin analogues in the active sites of COX-1 and COX-2.



Novel fluoroquinolones: design, synthesis, and in vivo activity in mice against *Mycobacterium tuberculosis* H₃₇Rv

pp 1803–1806

Anand V. Shindikar* and C. L. Viswanathan

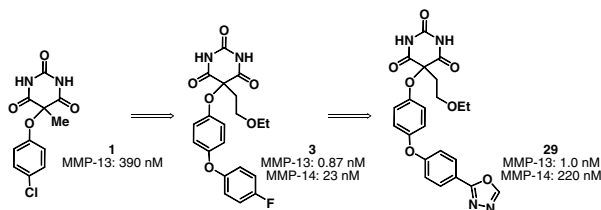


Synthesis and in vivo anti-tubercular activity of 6,8-difluoro-1-alkyl-5-amino-1,4-dihydro-4-oxo-7-{4-substituted piperazin-1-yl}-quinoline-3-carboxylic acids is reported.

Potent pyrimidinetrione-based inhibitors of MMP-13 with enhanced selectivity over MMP-14

pp 1807–1810

Julian A. Blagg, Mark C. Noe, Lilli A. Wolf-Gouveia, Lawrence A. Reiter,* Ellen R. Laird, Shang-Poa P. Chang, Dennis E. Danley, James T. Downs, Nancy C. Elliott, James D. Eskra, Richard J. Griffiths, Joel R. Hardink, Amber I. Hargeto, Christopher S. Jones, Jennifer L. Liras, Lori L. Lopresti-Morrow, Peter G. Mitchell, Jayvardhan Pandit, Ralph P. Robinson, Chakrapani Subramanyam, Marcie L. Vaughn-Bowser and Sue A. Yocum

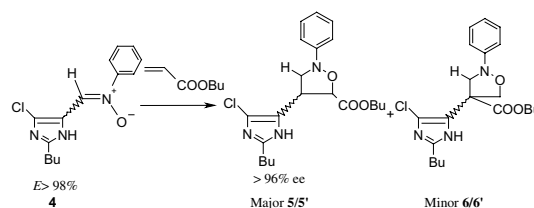


Enhancement in antimicrobial activity of 2-(phenyl)-3-(2-butyl-4-chloro-1H-imidazolyl)-5-butylate isoxazolidine

pp 1811–1814

M. P. Sadashiva, H. Mallesha, K. Karunakara Murthy and K. S. Rangappa*

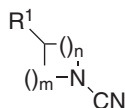
The *trans* rich isomer, 2-(phenyl)-3-(2-butyl-4-chloro-1H-imidazolyl)-5-butylate isoxazolidine (>96% ee) was synthesized by the condensation of *E* isomer rich nitrone (>98% ee) with butyl acrylate in an inert solvent. Thus obtained isoxazolidine was screened for its antifungal activity against *Aspergillus niger*, *Cephalosporium acremonium*, *Fusarium moniliforme* by using nystatin as positive control. It was also tested for its antibacterial activity against *Bacillus subtilis*, *Escherichia coli*, and *Staphylococcus aureus* by using streptomycin as a positive control. Enhanced antifungal activity was observed in isoxazolidine of >96% ee compared to the isoxazolidine of >69% ee, which was reported previously, and enhancement was not observed in antibacterial activity.



Novel and potent cyclic cyanamide-based cathepsin K inhibitors

pp 1815–1819

David N. Deaton,* Anne M. Hassell, Robert B. McFadyen, Aaron B. Miller, Larry R. Miller, Lisa M. Shewchuk, Francis X. Tavares, Derril H. Willard, Jr. and Lois L. Wright

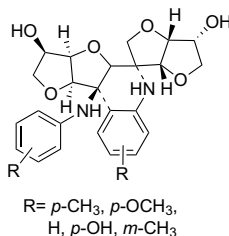


Starting from a PDE IV inhibitor hit derived from high throughput screening of the compound collection, a key pyrrolidine cyanamide pharmacophore was identified. Modifications of the pyrrolidine ring produced enhancements in cathepsin K inhibition. An X-ray co-crystal structure of a cyanamide with cathepsin K confirmed the mode of inhibition.

Asymmetric synthesis of novel tetrahydroquinoline derivatives with a sugar building block and their bioactivities

pp 1821–1824

Hong-Min Liu,* Feng-Wu Liu, Da-Peng Zou and Gui-Fu Dai

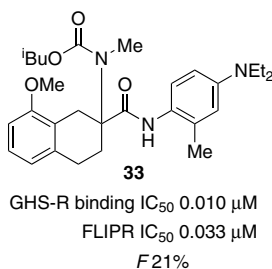


Some novel tetrahydroquinoline derivatives were synthesized and tested for in vitro immunobiological activity and cytotoxicity against human cancer cell lines.

Structure–activity relationship studies on tetralin carboxamide growth hormone secretagogue receptor antagonists

pp 1825–1828

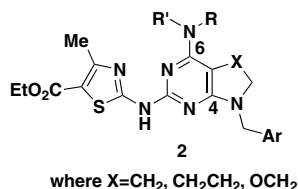
Hongyu Zhao,* Zhili Xin, Jyoti R. Patel, Lissa T. J. Nelson, Bo Liu, Bruce G. Szczepankiewicz, Verlyn G. Schaefer, H. Douglas Falls, Wiweka Kaszubska, Christine A. Collins, Hing L. Sham and Gang Liu



Fused pyrimidine based inhibitors of phosphodiesterase 7 (PDE7): synthesis and initial structure–activity relationships

pp 1829–1833

James Kempson,* William J. Pitts, Joseph Barbosa, Junqing Guo, Omonike Omotoso, Andrew Watson, Karen Stebbins, Gary C. Starling, John H. Dodd, Joel C. Barrish, Raymond Felix and Karl Fischer

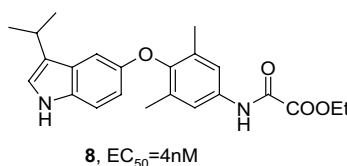


A series of fused pyrimidine based inhibitors of PDE7 have been derived from an earlier screening lead. The synthesis, structure–activity relationships (SAR) and selectivity against several other PDE family members are described.

Novel heterocyclic thyromimetics

pp 1835–1840

Helmut Haning,* Michael Woltering, Ulrich Mueller, Gunter Schmidt, Carsten Schmeck, Verena Voehringer, Axel Kretschmer and Josef Pernerstorfer

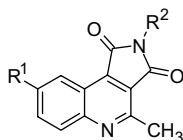


The synthesis of novel heterocycle containing thyromimetics is reported. Potent indole thyromimetics are presented (e.g., **8**) that show a 10-fold selectivity in activation of THRβ over THRα.

1,3-Dioxo-4-methyl-2,3-dihydro-1H-pyrrolo[3,4-c]quinolines as potent caspase-3 inhibitors

pp 1841–1845

Dmitri V. Kravchenko, Vladimir V. Kysil, Alexey P. Ilyn, Sergey E. Tkachenko, Sergey Maliarchouk, Ilya M. Okun and Alexandre V. Ivachtchenko*

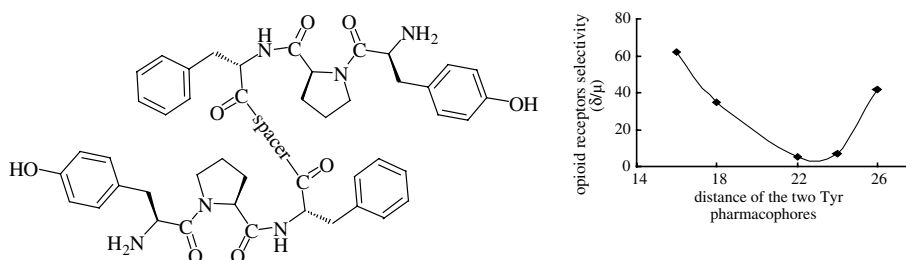


Synthesis, biological evaluation and structure–activity relationships for a series of novel nonpeptide small molecule inhibitors of caspase-3.

Structure–activity relationship of the novel bivalent and C-terminal modified analogues of endomorphin-2

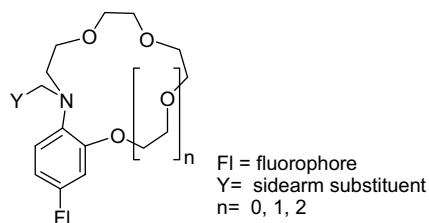
pp 1847–1850

Yanfeng Gao, Xin Liu, Jie Wei, Beibei Zhu, Qiang Chen and Rui Wang*

**Fluorescent metal ion indicators based on benzoannulated crown systems: a green fluorescent indicator for intracellular sodium ions**

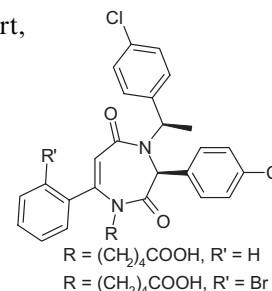
pp 1851–1855

Vladimir V. Martin, Anca Rothe and Kyle R. Gee*

**Structure-based design, synthesis, and biological evaluation of novel 1,4-diazepines as HDM2 antagonists**

pp 1857–1861

Pierre Raboisson, Juan José Marugán,* Carsten Schubert, Holly K. Koblish, Tianbao Lu, Shuyuan Zhao, Mark R. Player, Anna C. Maroney, Rolanda L. Reed, Norman D. Huebert, Jennifer Lattanze, Daniel J. Parks and Maxwell D. Cummings*

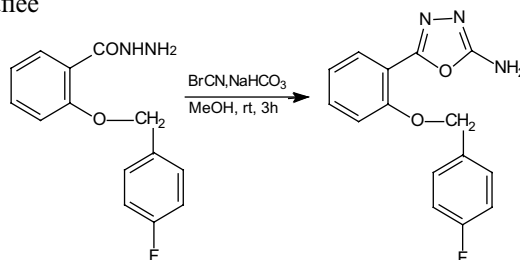


Novel 1,4-diazepine-2,5-diones that act as antagonists of the HDM2–p53 interaction are reported.

Synthesis and anticonvulsant activity of new 2-substituted-5-(2-benzyloxyphenyl)-1,3,4-oxadiazoles

pp 1863–1865

Afshin Zarghi,* Sayyed A. Tabatabai, Mehrdad Faizi, Avidah Ahadian, Parisa Navabi, Vahideh Zanganeh and Abbas Shafiee

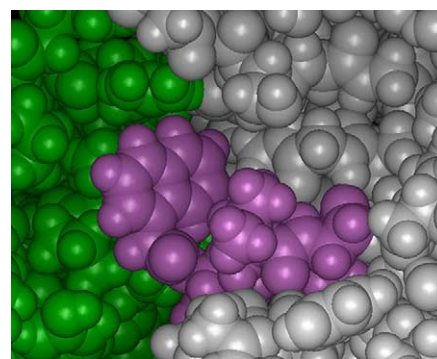


1,3,4-Oxadiazole derivatives were synthesized as anticonvulsant agents. The anticonvulsant activity of the synthesized compounds was determined through PTZ and MES tests.

Structure-based design of derivatives of tyropeptin A as the potent and selective inhibitors of mammalian 20S proteasome

pp 1867–1871

Isao Momose,* Yoji Umezawa, Sehei Hirose, Hironobu Inuma and Daishiro Ikeda

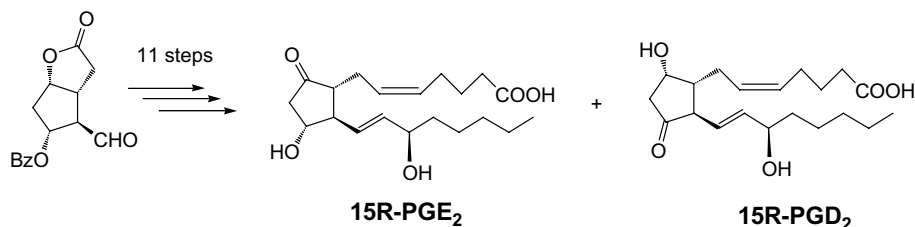


We describe herein the structure-based design of derivatives of tyropeptin A as the inhibitors of mammalian 20S proteasome.

Synthesis of 15R-PGD₂: a potential DP₂ receptor agonist

pp 1873–1876

Seongjin Kim, Sophie Bellone, Kirk M. Maxey, William S. Powell, Gue-Jae Lee and Joshua Rokach*

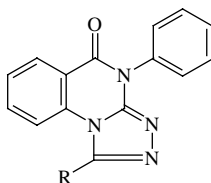


The first total synthesis of 15R-PGD₂ was accomplished. The approach used can be also an efficient method to produce 15R-PGE₂. The synthesis is part of a structure activity picture for the newly discovered PGD₂ receptor.

Synthesis and pharmacological investigation of novel 1-substituted-4-phenyl-1,2,4-triazolo[4,3-*a*]-quinazolin-5(4*H*)-ones as a new class of H₁-antihistaminic agents

pp 1877–1880

Veerachamy Alagarsamy,* Rajani Giridhar and Mangai Ram Yadav

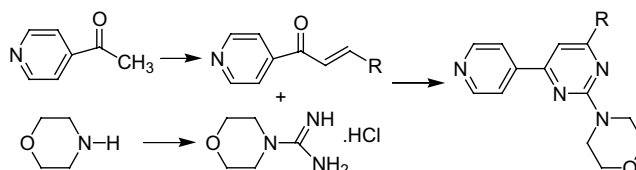


A series of novel 1-substituted-4-phenyl-1,2,4-triazolo[4,3-*a*]quinazolin-5(4*H*)-ones were prepared and evaluated for H₁-antihistaminic activity.

Antimalarial activity of 2,4,6-trisubstituted pyrimidines

pp 1881–1883

Anu Agarwal, Kumkum Srivastava, S. K. Puri and Prem M. S. Chauhan*

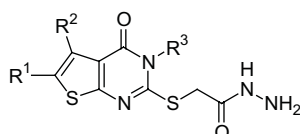


A series of 2,4,6-trisubstituted-pyrimidines was synthesized and evaluated for their in vitro antimalarial activity against *P. falciparum*. Out of the 15 compounds synthesized 11 compounds showed MIC in the range of 0.5–2 µg/mL.

Structure–activity relationship study of novel tissue transglutaminase inhibitors

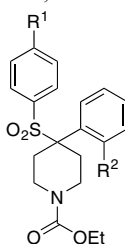
pp 1885–1889

Eric Duval, April Case, Ross L. Stein and Gregory D. Cuny*

**Molecular-modeling based design, synthesis, and activity of substituted piperidines as γ-secretase inhibitors**

pp 1891–1894

Eric Gundersen,* Kristi Fan, Kimberly Haas, Donna Huryn, J. Steven Jacobsen, Anthony Kreft, Robert Martone, Scott Mayer, June Sonnenberg-Reines, Shaiu-Ching Sun and Hua Zhou



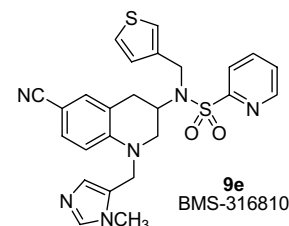
A new series of γ-secretase inhibitors was designed using a *ROCS* search to identify likely scaffolds.

Design, synthesis, and structure–activity relationships of tetrahydroquinoline-based farnesyltransferase inhibitors

pp 1895–1899

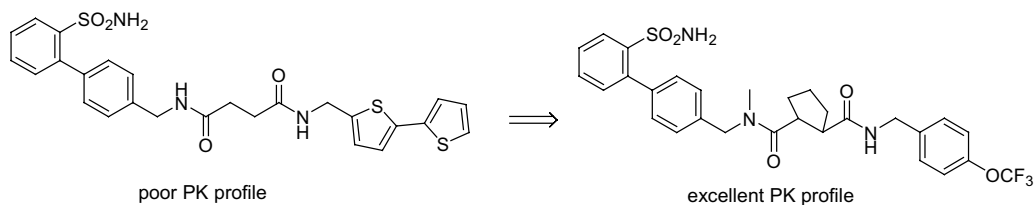
Louis J. Lombardo,* Amy Camuso, John Clark, Krista Fager, Johnni Gullo-Brown, John T. Hunt, Ivan Inigo, David Kan, Barry Koplowitz, Francis Lee, Kelly McGlinchey, Ligang Qian, Carolyn Ricca, George Rovnyak, Sarah Traeger, John Tokarski, David K. Williams, Laurence I. Wu, Yufen Zhao, Veeraswamy Manne and Rajeev S. Bhide

Tetrahydroquinoline-based small molecule inhibitors of farnesyltransferase (FT) have been identified. Lead compounds were shown to have nanomolar to sub-nanomolar activity in biochemical assays with excellent potency in a Ras-mutated cellular reversion assay. BMS-316810 (**9e**), a 0.7 nM FT inhibitor, was orally-active in a nude mouse tumor allograft efficacy study.

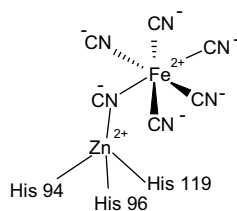


Novel cyclopentane dicarboxamide sodium channel blockers as a potential treatment for chronic pain pp 1901–1907

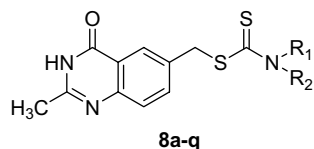
Pengchang P. Shao,* Dong Ok,* Michael H. Fisher, Maria L. Garcia, Gregory J. Kaczorowski, Chunshi Li, Kathryn A. Lyons, William J. Martin, Peter T. Meinke, Birgit T. Priest, McHardy M. Smith, Matthew J. Wyvratt, Feng Ye and William H. Parsons

**Carbonic anhydrase inhibitors. Inhibition of isozymes I, II, IV, V and IX with complex fluorides, chlorides and cyanides** pp 1909–1913

Alessio Innocenti, Jochen Antel,* Michael Wurl, Daniela Vullo, Michael A. Firnges, Andrea Scozzafava and Claudiu T. Supuran*

**Synthesis and in vitro antitumor activity of 4(3H)-quinazolinone derivatives with dithiocarbamate side chains** pp 1915–1917

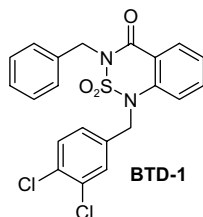
Sheng-Li Cao,* Yu-Ping Feng, Yu-Yang Jiang, Shi-Ying Liu, Guo-Yu Ding and Run-Tao Li



The synthesis and in vitro antitumor activity of a series of 4(3H)-quinazolinone derivatives is reported.

Good oral absorption prediction on non-nucleoside benzothiadiazine dioxide human cytomegalovirus inhibitors using combined chromatographic and neuronal network techniques pp 1919–1921

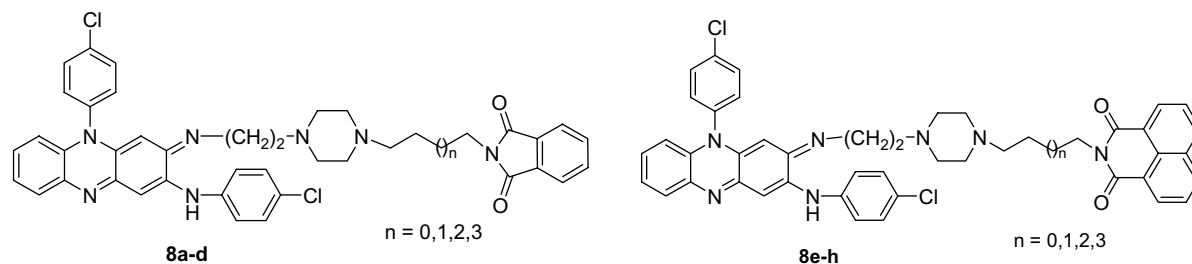
Carmen Gil, Isabel Dorronsoro, Ana Castro and Ana Martinez*



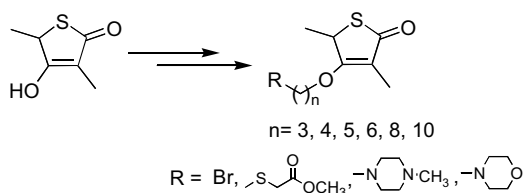
CODES neural networks and biopartitioning micellar chromatography (BMC) has been used to estimate the oral absorption of BTD derivatives and their efficacy has been verified.

Antitubercular agents. Part 1: Synthesis of phthalimido- and naphthalimido-linked phenazines as new prototype antitubercular agents pp 1923–1926

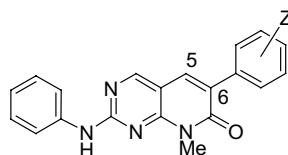
Ahmed Kamal,* A. Hari Babu, A. Venkata Ramana, Rakesh Sinha, J. S. Yadav and Sudarshan K. Arora

**Antitubercular agents. Part 2: New thiolactomycin analogues active against *Mycobacterium tuberculosis*** pp 1927–1929

Ahmed Kamal,* Ahmad Ali Shaik, Rakesh Sinha, J. S. Yadav and Sudarshan K. Arora

**Structure–activity relationships for 2-anilino-6-phenylpyrido[2,3-*d*]pyrimidin-7(8*H*)-ones as inhibitors of the cellular checkpoint kinase Wee1** pp 1931–1935

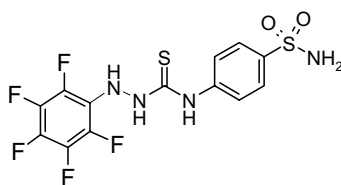
Brian D. Palmer,* Jeff B. Smaill, Gordon W. Rewcastle, Ellen M. Dobrusin, Alan Kraker, Charles W. Moore, Randall W. Steinkampf and William A. Denny



2-Anilino-6-phenylpyrido[2,3-*d*]pyrimidin-7(8*H*)-ones are inhibitors of c-Src and Wee1 kinases. Selectivity for c-Src was not markedly changed by 6-phenyl ring substituents, but was lowered by 5-alkyl substituents.

Carbonic anhydrase inhibitors: X-ray crystal structure of a benzenesulfonamide strong CA II and CA IX inhibitor bearing a pentafluorophenylaminothioureido tail in complex with isozyme II pp 1937–1942

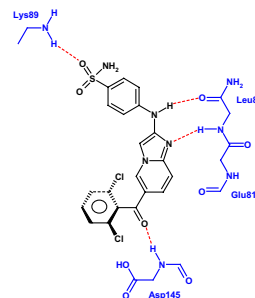
Anna Di Fiore, Giuseppina De Simone,* Valeria Menchise, Carlo Pedone, Angela Casini, Andrea Scozzafava and Claudiu T. Supuran*



Structure-based design of a new class of highly selective aminoimidazo[1,2-*a*]pyridine-based inhibitors of cyclin dependent kinases

pp 1943–1947

Chafiq Hamdouchi,* Boyu Zhong, Jose Mendoza, Elizabeth Collins, Carlos Jaramillo, Jose Eugenio De Diego, Daniel Robertson, Charles D. Spencer, Bryan D. Anderson, Scott A. Watkins, Faming Zhang and Harold B. Brooks



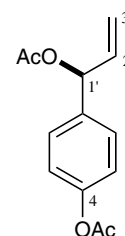
Structure-based design approach was successfully used to design and discover a new structural class of imidazopyridine as highly specific cyclin dependent kinase inhibitors.

Structure–activity relationships of 1'-*S*-1'-acetoxychavicol acetate for inhibitory effect on NO production in lipopolysaccharide-activated mouse peritoneal macrophages

pp 1949–1953

Hisashi Matsuda, Shin Ando, Toshio Morikawa, Shinya Kataoka and Masayuki Yoshikawa*

1'-*S*-1'-Acetoxychavicol acetate from the rhizomes of *Alpinia galanga* inhibited nitric oxide (NO) production in lipopolysaccharide-activated mouse peritoneal macrophages with an IC₅₀ value of 2.3 μM. To clarify the structure–activity relationship of 1'-*S*-1'-acetoxychavicol acetate, various natural and synthetic phenylpropanoids and synthetic phenylbutanoids were examined, and the following structural requirements were clarified. (1) The *para* or *ortho* substitution of the acetoxy and 1-acetoxypropenyl groups at the benzene ring was essential. (2) The *S* configuration of the 1'-acetoxy group was preferable. (3) The presence of the 3-methoxyl group and disappearance of the 2'–3' double bond by hydrogenation reduced the activity. (4) The substitution of acetyl groups with propionyl or methyl groups reduced the activity. (5) Lengthening of the carbon chain between the 1'- and 2'-positions reduced the activity.




1'-*S*-1'-acetoxychavicol acetate

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*Corresponding author

 Supplementary data available via ScienceDirect

COVER

A structure-based design approach was used to guide the evolution of an imidazopyridine scaffold yielding a new structural class of highly selective inhibitors of cyclin dependent kinases. The superposed structures of the original inhibitor (green, experimental data), the proposed inhibitor (yellow, computational model) and actual conformation of the bound inhibitor in CDK2 (blue, experimental data) is shown. [Hamdouchi, C.; Zhong, B.; Mendoza, J.; Collins, E.; Jaramillo, C.; De Diego, J. E.; Robertson, D.; Spencer, C. D.; Anderson, B. D.; Watkins, S. A.; Zhang, F.; Brooks, H. B. *Bioorg. Med. Chem. Lett.* **2005**, *15*, 1943.]

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