

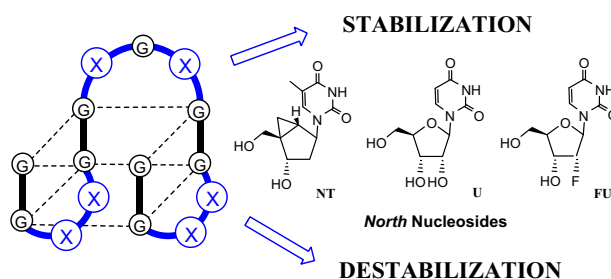


Bioorganic & Medicinal Chemistry Volume 20, Issue 14, 2012

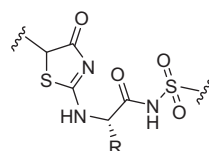
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- The effect on quadruplex stability of North-nucleoside derivatives in the loops of the thrombin-binding aptamer** pp 4186–4193
 Anna Aviño*, Stefania Mazzini, Ruben Ferreira, Raimundo Gargallo, Victor E. Marquez, Ramon Eritja*

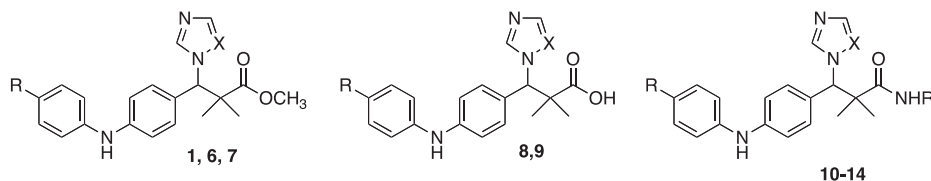


- Structure-based design of rhodanine-based acylsulfonamide derivatives as antagonists of the anti-apoptotic Bcl-2 protein** pp 4194–4200
 Huan-qiu Li, Jing Yang, Shuhua Ma, Chunhua Qiao*



Rhodanine-based sulfonamides were developed as antagonists of anti-apoptotic Bcl-2 protein.

- Novel retinoic acid 4-hydroxylase (CYP26) inhibitors based on a 3-(1H-imidazol- and triazol-1-yl)-2,2-dimethyl-3-(4-(phenylamino)phenyl)propyl scaffold** pp 4201–4207
 Mohamed S. Gomaa, Caroline E. Bridgens, Nicola A. Illingworth, Gareth J. Veal, Christopher P. F. Redfern, Andrea Brancale, Jane L. Armstrong*, Claire Simons*

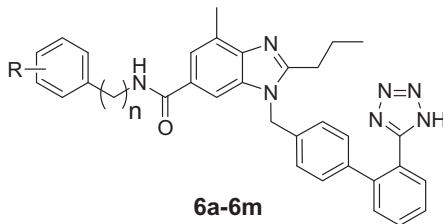


The synthesis and inhibitory activity of novel 3-(1H-imidazol- and triazol-1-yl)-2,2-dimethyl-3-(4-(phenylamino)phenyl)propyl derivatives in a MCF-7 CYP26A1 microsomal assay are described. The most promising inhibitor methyl 2,2-dimethyl-3-(4-(phenylamino)phenyl)-3-(1H-1,2,4-triazol-1-yl)propanoate (**6**, R = H, X = N) exhibited an IC₅₀ of 13 nM (compared with standards Liarozole IC₅₀ 540 nM and R116010 IC₅₀ 10 nM) and >100-fold selectivity for CYP26 compared with CYP1A2, 2C9 and 2D6 observed and 15-fold selectivity compared with CYP3A4. The results demonstrate the potential for further development of these potent inhibitors.

Design, synthesis and biological activity of 6-substituted carbamoyl benzimidazoles as new nonpeptidic angiotensin II AT₁ receptor antagonists

pp 4208–4216

Jun Zhang, Jin-Liang Wang, Zhi-Ming Zhou*, Zhi-Huai Li, Wei-Zhe Xue, Di Xu, Li-Ping Hao, Xiao-Feng Han, Fan Fei, Ting Liu, Ai-Hua Liang

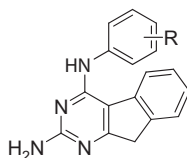


A series of 6-substituted carbamoyl benzimidazoles were designed and synthesised. The in vitro and in vivo evaluation results showed that compound **6g** is an orally active AT₁ receptor antagonist with low toxicity.

Novel tricyclic indeno[2,1-d]pyrimidines with dual antiangiogenic and cytotoxic activities as potent antitumor agents

pp 4217–4225

Aleem Gangjee*, Ying Zhao, Michael A. Ihnat, Jessica E. Thorpe, Lora C. Bailey-Downs, Roy L. Kisliuk

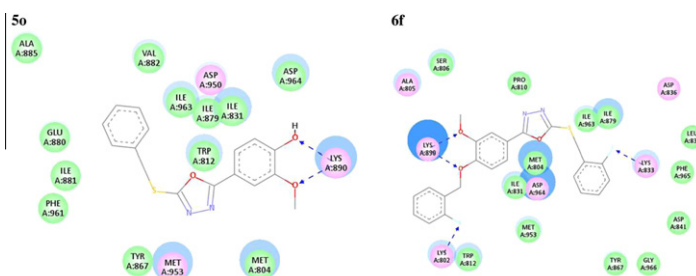


Design, synthesis, biological evaluation and molecular modeling of novel 1,3,4-oxadiazole derivatives based on Vanillic acid as potential immunosuppressive agents

pp 4226–4236

Jian-Feng Tang, Xian-Hai Lv, Xiao-Liang Wang, Jian Sun, Yan-Bin Zhang, Yu-Shun Yang, Hai-Bin Gong*, Hai-Liang Zhu*

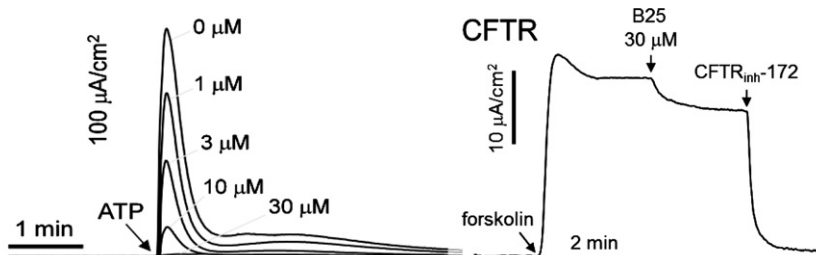
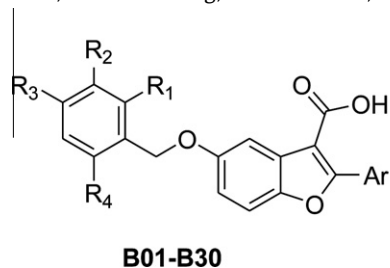
A series of 1,3,4-oxadiazole derivatives (**5a–5q**, **6a–6q**) have been first synthesized for their potential immunosuppressive activity. Among them, compound **5o** and **6f** displayed the most potential biological activity against T cells (IC_{50} = 1.25 μ M and 4.75 μ M for T cells) and the IC_{50} of positive control (csa) is 2.12 μ M. The preliminary mechanism of compound **5o** and **6f** inhibition effects was also detected by flow cytometry (FCM) and the compounds exerted immunosuppressive activity via inducing the apoptosis of activated lymph node cells in a dose dependent manner. Docking simulation was performed to position compound **5o** and **6f** into the PI3K γ structure active site to determine the probable binding model.



Novel 5-substituted benzyloxy-2-arylbenzofuran-3-carboxylic acids as calcium activated chloride channel inhibitors

pp 4237–4244

Satish Kumar, Wan Namkung, A. S. Verkman, Pawan K. Sharma*

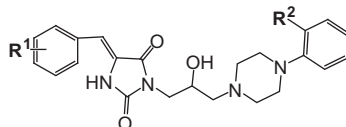


Thirty novel 5-substituted benzyloxy-2-arylbenzofuran-3-carboxylic acids (**B01–B30**) were synthesized and evaluated for their TMEM16A inhibitory activity by using short circuit current measurements in Fischer rat thyroid (FRT) cells expressing human TMEM16A. Eight of the novel compounds exhibit excellent CaCCs inhibition with IC_{50} value <6 μ M, with compound **B25** exhibiting the lowest IC_{50} value of 2.8 μ M.

Synthesis and SAR-study for novel arylpiperazine derivatives of 5-arylidenehydantoin with α_1 -adrenoceptor antagonistic properties

pp 4245–4257

Jadwiga Handzlik, Ewa Szymańska, Renata Wójcik, Anna Dela, Magdalena Jastrzębska-Więsek, Janina Karolak-Wojciechowska, Andrzej Fruziński, Agata Siwek, Barbara Filipek, Katarzyna Kieć-Kononowicz*



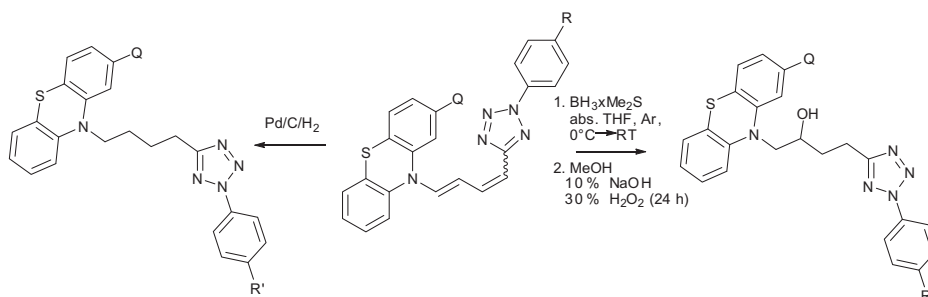
A series of novel arylidenehydantoin phenylpiperazine derivatives were synthesized and evaluated towards α_1 -adrenoceptor antagonistic properties in vitro. SAR-analysis, basing on crystallographic and molecular modelling studies, was performed.



Selective hydroboration of dieneamines. Formation of hydroxyalkylphenothiazines as MDR modulators

pp 4258–4270

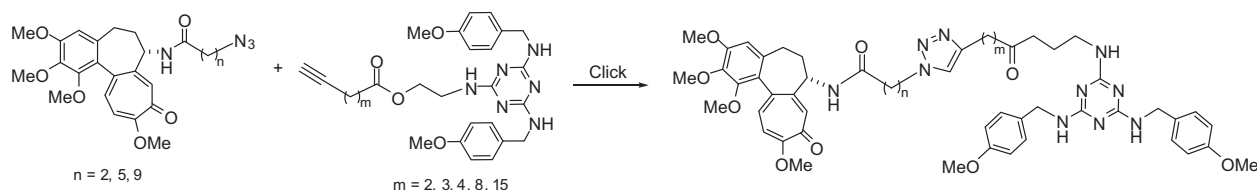
Daniella Takács, Ildikó Nagy, Petra Bombicz, Orsolya Egyed, Katalin Jemnitz, Zsuzsanna Riedl, József Molnár, Leonard Amaral, György Hajós*



Synthesis and biological evaluation of novel anticancer bivalent colchicine–tubulizine hybrids

pp 4271–4278

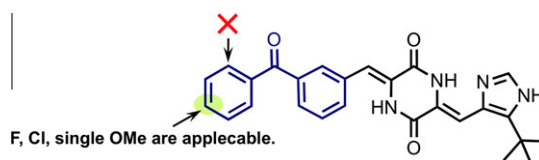
Yulia B. Malysheva, Sebastien Combes, Diane Allegro, Vincent Peyrot, Paul Knochel, Andrei E. Gavryushin, Alexey Yu. Fedorov*



Synthesis and structure–activity relationships of benzophenone-bearing diketopiperazine-type anti-microtubule agents

pp 4279–4289

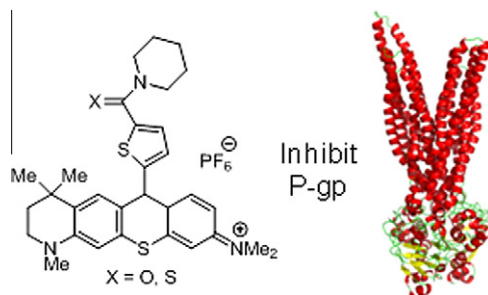
Yuri Yamazaki, Makiko Sumikura, Yurika Masuda, Yoshiki Hayashi, Hiroyuki Yasui, Yoshiaki Kiso, Takumi Chinen, Takeo Usui, Fumika Yakushiji, Barbara Potts, Saskia Neuteboom, Michael Palladino, George Kenneth Lloyd, Yoshio Hayashi*



Thiorhodamines containing amide and thioamide functionality as inhibitors of the ATP-binding cassette drug transporter P-glycoprotein (ABCB1)

pp 4290–4302

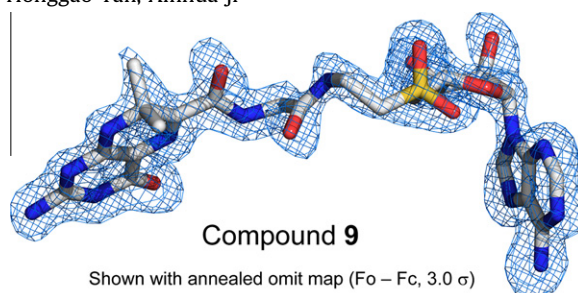
Alexandra Orchard, Gregory A. Schamerhorn, Brandon D. Calitree, Geri A. Sawada, Tip W. Loo, M. Claire Bartlett, David M. Clarke, Michael R. Detty*



Bisubstrate analog inhibitors of 6-hydroxymethyl-7,8-dihydropterin pyrophosphokinase: New lead exhibits a distinct binding mode

pp 4303–4309

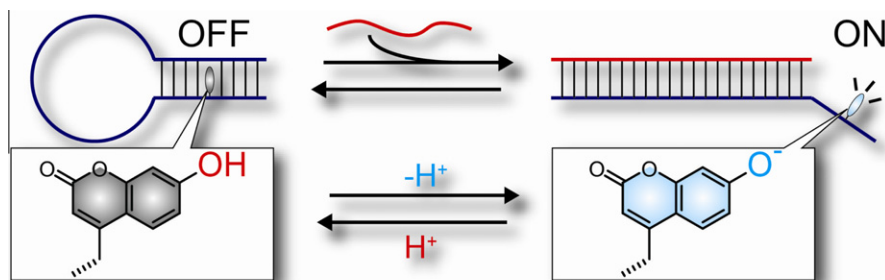
Genbin Shi, Gary Shaw, Yue Li, Yan Wu, Honggao Yan, Xinhua Ji*



Quencher-free molecular beacon tethering 7-hydroxycoumarin detects targets through protonation/deprotonation

pp 4310–4315

Hiromu Kashida, Kyohei Yamaguchi, Yuichi Hara, Hiroyuki Asanuma*

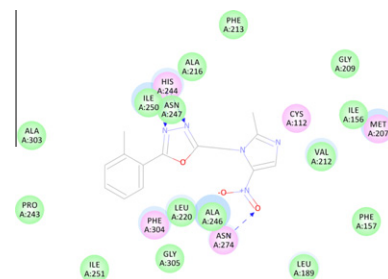


Design, synthesis and antimicrobial activities of nitroimidazole derivatives containing 1,3,4-oxadiazole scaffold as FabH inhibitors

pp 4316–4322

Yao Li, Yin Luo, Yang Hu, Di-Di Zhu, Shuai Zhang, Zhi-Jun Liu, Hai-Bin Gong*, Hai-Liang Zhu*

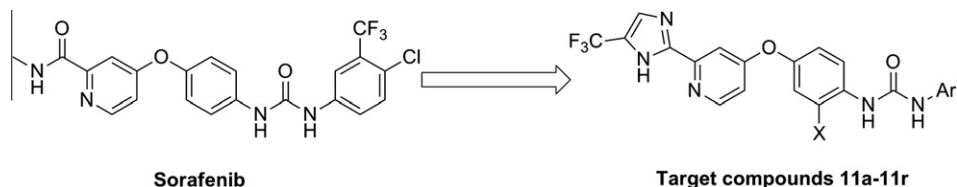
Nitroimidazoles and their derivatives have drawn continuing interest over the years because of their varied biological activities, recently found application in drug development for antimicrobial chemotherapeutics and antiangiogenic hypoxic cell radiosensitizers. In order to search for novel antibacterial agents, we designed and synthesized a series of secnidazole analogs based on oxadiazole scaffold (**4–21**). Among these compounds, **4** and **7–21** were reported for the first time. These compounds were tested for antibacterial activities against *Escherichia coli*, *Pseudomonas aeruginosa*, *Bacillus subtilis* and *Staphylococcus aureus*. This new nitroimidazole derivatives class demonstrated strong antibacterial activities. *Escherichia coli* β -ketoacyl-acyl carrier protein synthase III (FabH) inhibitory assay and docking simulation indicated that the compounds 2-((2-methoxyphenyl)-5-((2-methyl-5-nitro-1H-imidazol-1-yl)methyl)-1,3,4-oxadiazole (**11**) with MIC of 1.56–3.13 μ g/mL against the tested bacterial strains and 2-((2-methyl-5-nitro-1H-imidazol-1-yl)methyl)-5-((2-methylbenzyl)-1,3,4-oxadiazole (**12**) with MIC of 1.56–6.25 μ g/mL were most potent inhibitors of *Escherichia coli* FabH.



Design, synthesis and antitumor activities of novel bis-aryl ureas derivatives as Raf kinase inhibitors

pp 4323–4329

Wenhu Zhan, Yanyang Li, Weiping Huang, Yanjin Zhao, Zhenglin Yao, Shanyou Yu, Shoujun Yuan, Falong Jiang, Shan Yao, Shuxin Li*

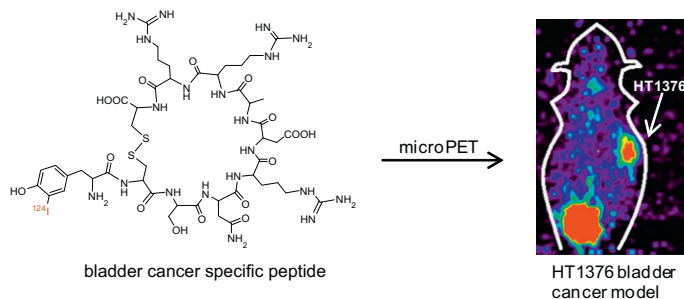


A series of novel bis-aryl ureas derivatives were designed and synthesized as Raf kinase inhibitors based on the lead compound of Sorafenib.

Synthesis and evaluation of a radioiodinated bladder cancer specific peptide

pp 4330–4335

Yeong Su Ha, Hwa Young Lee, Gwang Il An, Jonghee Kim, Wonjung Kwak, Eun-Ju Lee, Seung-Min Lee, Byung-Heon Lee, In-San Kim, Takele Belay, Woonghee Lee, Byeong-Cheol Ahn, Jaetae Lee, Jeongsoo Yoo*

**Inhibition of monoamine oxidase by 8-phenoxymethylcaffeine derivatives**

pp 4336–4347

Thokozile Okaecwe, Abraham J. Swanepoel, Anél Petzer, Jacobus J. Bergh, Jacobus P. Petzer*

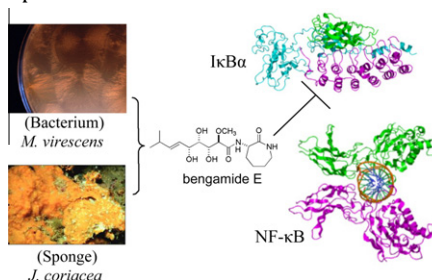
	n	R	X	IC ₅₀ MAO-A μM	IC ₅₀ MAO-B μM
3c	1	3-Br	O	34.0	0.148
3i	1	4-Br	O	10.7	0.187
4c	1	3-Br	S	23.8	4.90
5b	2	3-Br	S	No inhibition	5.67

The human MAO inhibition potencies of a synthetic series of caffeine derivatives are reported.

Myxobacteria versus sponge-derived alkaloids: The bengamide family identified as potent immune modulating agents by scrutiny of LC-MS/ELSD libraries

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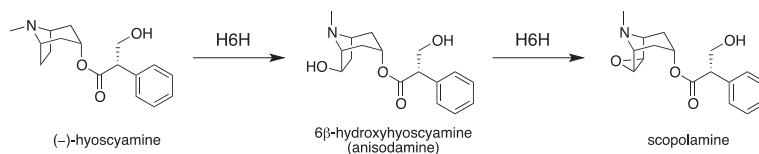
Tyler A. Johnson, Johann Sohn, Yvette M. Vaske, Kimberly N. White, Tanya L. Cohen, Helene C. Vervoort, Karen Tenney, Frederick A. Valeriote, Leonard F. Bjeldanes, Phillip Crews*



Functional characterization of recombinant hyoscyamine 6 β -hydroxylase from *Atropa belladonna*

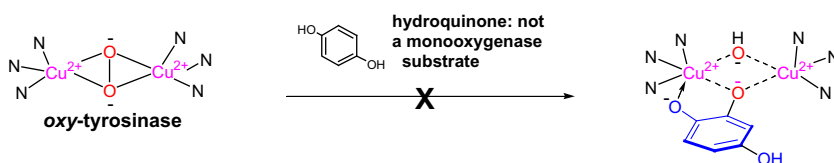
pp 4356–4363

Jing Li, Marco J. van Belkum, John C. Vederas*

**The influence of hydroquinone on tyrosinase kinetics**

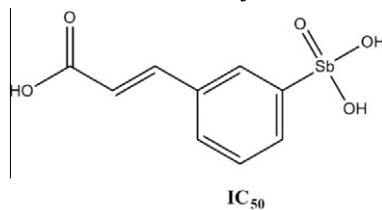
pp 4364–4370

Michael R. L. Stratford, Christopher A. Ramsden*, Patrick A. Riley

**Arylstibonic acids are potent and isoform-selective inhibitors of Cdc25a and Cdc25b phosphatases**

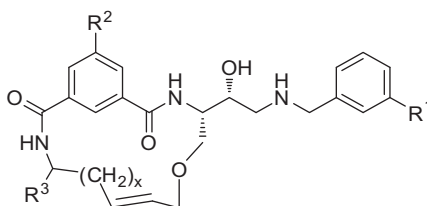
pp 4371–4376

Lok Hang Mak, Jessica Knott, Katherine A. Scott, Claire Scott, Gillian F. Whyte, Yu Ye, David J. Mann, Oscar Ces, James Stivers, Rudiger Woscholski*

Cdc25a: 0.11 ± 0.01 μ MCdc25b: 0.60 ± 0.07 μ MCdc25c: >>10 μ M**Highly potent macrocyclic BACE-1 inhibitors incorporating a hydroxyethylamine core: Design, synthesis and X-ray crystal structures of enzyme inhibitor complexes**

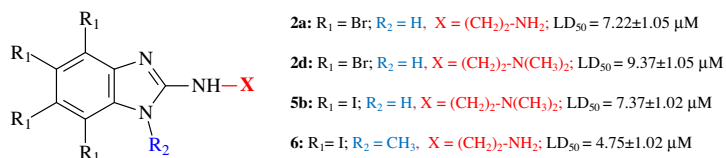
pp 4377–4389

Veronica Sandgren, Tatiana Agback, Per-Ola Johansson, Jimmy Lindberg, Ingemar Kvarnström, Bertil Samuelsson, Oscar Belda*, Anders Dahlgren*

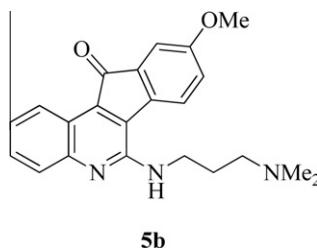


Modified tetrahalogenated benzimidazoles with CK2 inhibitory activity are active against human prostate cancer cells LNCaP in vitro pp 4390–4396

Carolin C. Schneider, Sabine Kartarius, Mathias Montenarh, Andrzej Orzeszko, Zygmunt Kazimierzczuk*

**Synthesis of 6-substituted 9-methoxy-11H-indeno[1,2-c]quinoline-11-one derivatives as potential anticancer agents** pp 4397–4404

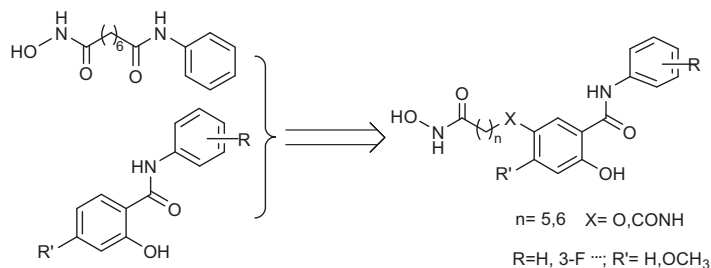
Chih-Hua Tseng, Yeh-Long Chen, Chiao-Li Yang, Chih-Mei Cheng, Chein-Hwa Han, Cheng-Chyi Tzeng*



Compound **5b** was the most active with a mean GI_{50} value of $3.39 \mu\text{M}$, and intercalates DNA, induces cell cycle arrest at G2/M phase via cleavage of PARP, induces caspase-3 and caspase-8 activities and consequently to cause the cell death.

Synthesis and biological evaluation of N-aryl salicylamides with a hydroxamic acid moiety at 5-position as novel HDAC- EGFR dual inhibitors pp 4405–4412

Miao Zuo, Yue-Wen Zheng, She-Min Lu, Yan Li, San-Qi Zhang*

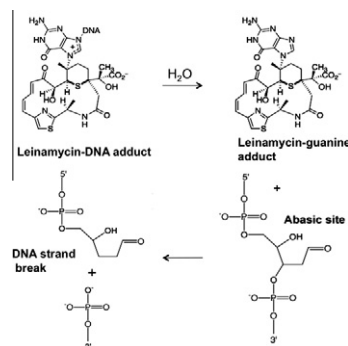


N-Aryl salicylamide and the pharmacophore of HDAC inhibitor (hydroxamic acid) were incorporated to present a novel class of EGFR–HDAC dual inhibitors.

DNA cleavage induced by antitumor antibiotic leinamycin and its biological consequences

pp 4413–4421

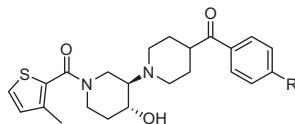
Velliyur Viswesh, Allison M. Hays, Kent Gates, Daekyu Sun*



Synthesis and evaluation of in vitro bioactivity for vesicular acetylcholine transporter inhibitors containing two carbonyl groups

pp 4422–4429

Zhude Tu*, Wei Wang, Jinqian Cui, Xiang Zhang, Xiaoxia Lu, Jinbin Xu, Stanley M. Parsons



9g, R = F

 $K_i\text{-VACHT} = 11.4 \text{ nM}$ $K_i\text{-}\sigma_1 = 12125 \text{ nM}$ $K_i\text{-}\sigma_2 = 4219 \text{ nM}$ $\sigma_1/\text{VACHT} = 1063$ $\sigma_2/\text{VACHT} = 370$

Log P = 2.53

10g, R = OCH₃ $K_i\text{-VACHT} = 10.2 \text{ nM}$ $K_i\text{-}\sigma_1 = 15300 \text{ nM}$ $K_i\text{-}\sigma_2 = 20700 \text{ nM}$ $\sigma_1/\text{VACHT} = 1500$ $\sigma_2/\text{VACHT} = 2030$

Log P = 2.51

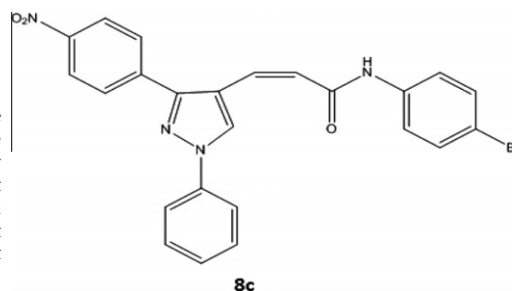


Synthesis, biological evaluation and molecular docking studies of 3-(1,3-diphenyl-1H-pyrazol-4-yl)-N-phenylacrylamide derivatives as inhibitors of HDAC activity

pp 4430–4436

Xi Li, Jia-Lin Liu, Xian-Hui Yang, Xiang Lu, Ting-Ting Zhao, Hai-Bin Gong*, Hai-Liang Zhu*

In present study, a series of 3-(1,3-diphenyl-1H-pyrazol-4-yl)-N-phenylacrylamide derivatives (**5a–8d**) were designed, synthesized, and evaluated for HDAC inhibition and tumor cell antiproliferation. All of these compounds are reported for the first time, the chemical structures of these compounds were confirmed by means of ¹H NMR, ESI-MS and elemental analyzes. Among the compounds, compound **8c** showed the most potent biological activity against HCT116 cancer cell line (IC_{50} of $0.42 \pm 0.02 \mu\text{M}$ for HDAC-1 and $\text{IC}_{50} = 0.62 \pm 0.02$ for HCT116). The results of Docking simulation and Western-blot demonstrated that compound **8c** with potent inhibitory activity in tumor growth inhibition may be a potential anticancer agent against HCT116 cancer cell.

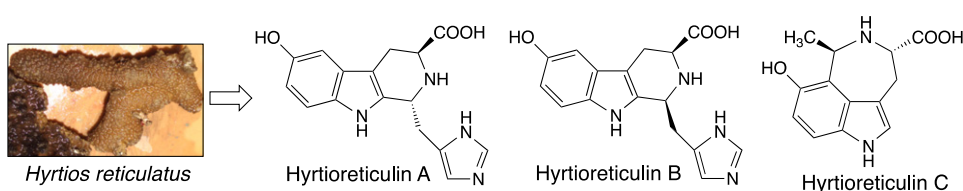


8c

Hyrtioreticulins A–E, indole alkaloids inhibiting the ubiquitin-activating enzyme, from the marine sponge *Hyrtios reticulatus*

pp 4437–4442

Rumi Yamanokuchi, Kumiko Imada, Mitsue Miyazaki, Hikaru Kato, Tadashi Watanabe, Masahiro Fujimuro, Yasushi Saeki, Sosuke Yoshinaga, Hiroaki Terasawa, Noriyuki Iwasaki, Henki Rotinsulu, Fitje Losung, Remy E. P. Mangindaan, Michio Namikoshi, Nicole J. de Voogd, Hideyoshi Yokosawa, Sachiko Tsukamoto*



Hyrtios reticulatus

Hyrtioreticulins A

Hyrtioreticulins B

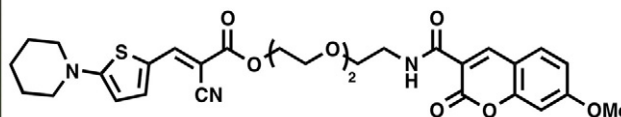
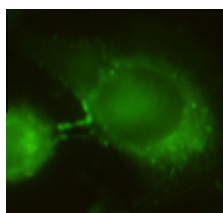
Hyrtioreticulins C



Self-calibrating viscosity probes: Design and subcellular localization

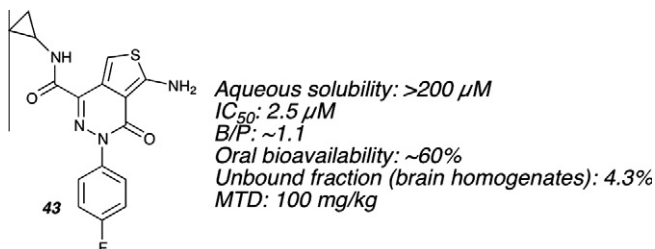
pp 4443–4450

Marianna Dakanali*, Thai H. Do, Austin Horn, Akaraphon Chongchivat, Tuptim Jarusreni, Darcy Lichlyter, Gianni Guizzunti, Mark A. Haidekker*, Emmanuel A. Theodorakis*



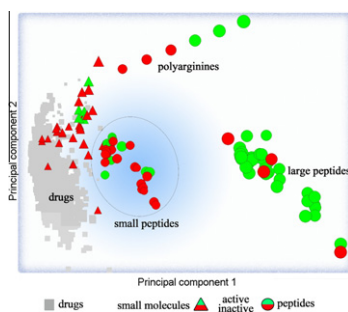
Aminothienopyridazine inhibitors of tau aggregation: Evaluation of structure–activity relationship leads to selection of candidates with desirable in vivo properties pp 4451–4461

Carlo Ballatore*, Alex Crowe, Francesco Piscitelli, Michael James, Kevin Lou, Gabrielle Rossidivito, Yuemang Yao, John Q. Trojanowski, Virginia M.-Y. Lee, Kurt R. Brunden, Amos B. Smith III



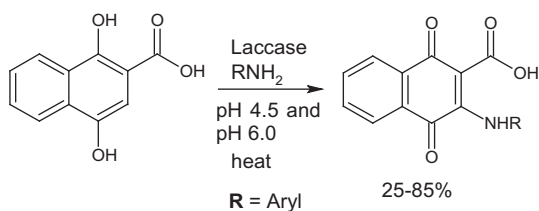
Furin inhibitors: Importance of the positive formal charge and beyond pp 4462–4471

Fabian López-Vallejo, Karina Martínez-Mayorga*



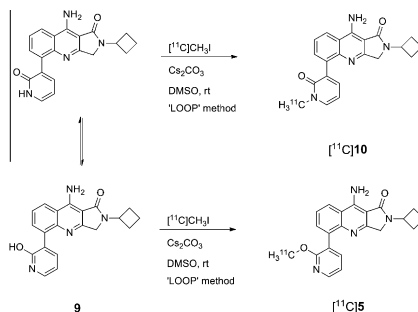
A laccase-catalysed one-pot synthesis of aminonaphthoquinones and their anticancer activity pp 4472–4481

Kevin W. Wellington*, Natasha I. Kolesnikova



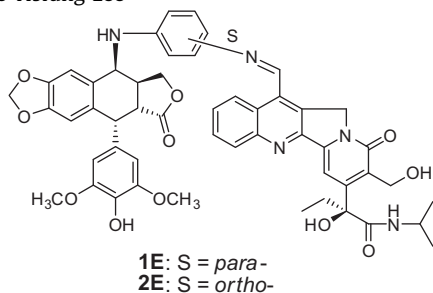
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Matthew D. Moran, Alan A. Wilson, Charles S. Elmore, Jun Parkes, Alvina Ng, Oleg Sadovski, Ariel Graff, Zafiris J. Daskalakis, Sylvain Houle, Marc J. Chapdelaine, Neil Vasdev*



Antitumor agents 294. Novel E-ring-modified camptothecin-4 β -anilino-4'-O-demethyl-epipodophyllotoxin conjugates as DNA topoisomerase I inhibitors and cytotoxic agents pp 4489–4494

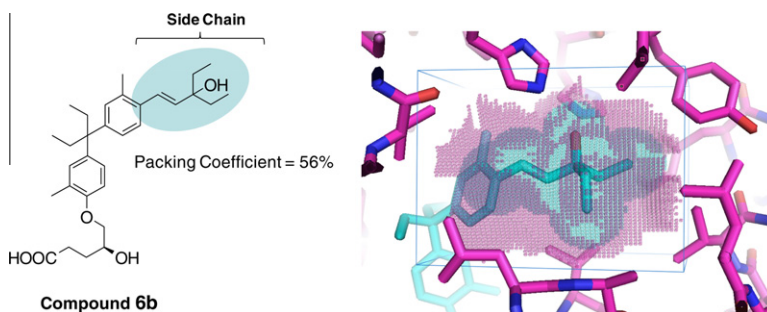
Deyong Ye, Qian Shi*, Chung-Hang Leung, Seung-Whan Kim, Shin-Young Park, Elizabeth A. Gullen, Zao Li Jiang, Hao Zhu, Susan L. Morris-Natschke, Yung-Chi Cheng*, Kuo-Hsiung Lee*



Systematic SAR study of the side chain of nonsecosteroidal vitamin D₃ analogs

pp 4495–4506

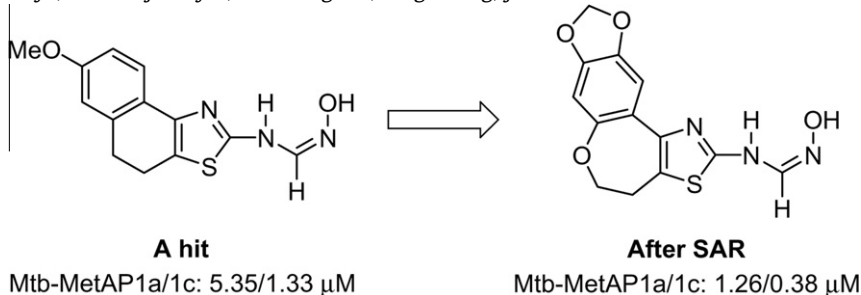
Hirota Kashiwagi*, Yoshiyuki Ono, Masateru Ohta, Kenji Morikami, Tadakatsu Takahashi



Analogs of N-hydroxy-N-(4H,5H-naphtho[1,2-d]thiazol-2-yl)methanimidamide inhibit *Mycobacterium tuberculosis* methionine aminopeptidases

pp 4507–4513

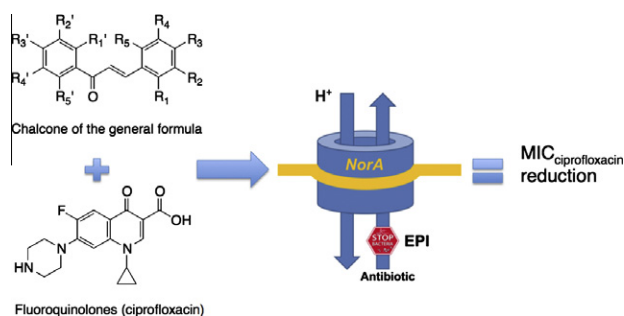
Shridhar Bhat, Omonike Olaleye, Kirsten J. Meyer, Wanliang Shi, Ying Zhang, Jun O. Liu*



Chalcone inhibitors of the NorA efflux pump in *Staphylococcus aureus* whole cells and enriched everted membrane vesicles

pp 4514–4521

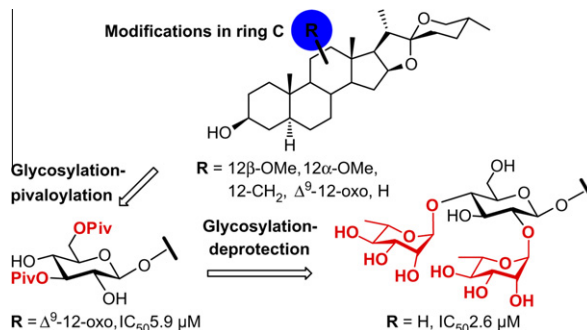
Jes Gitz Holler*, Hans-Christian Slotved, Per Mølgaard, Carl Erik Olsen, Søren Brøgger Christensen



Effect of C-ring modifications on the cytotoxicity of spirostan saponins and related glycosides

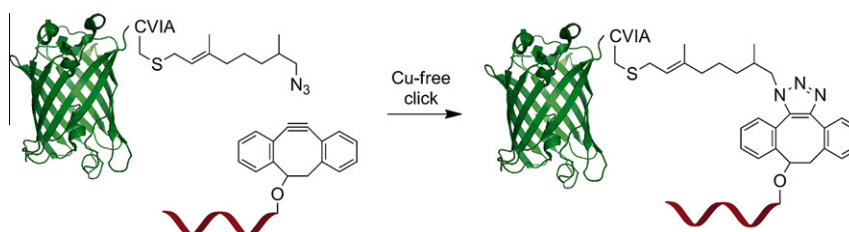
pp 4522–4531

Karell Pérez-Labrada, Ignacio Brouard*, Sara Estévez, María Teresa Marrero, Francisco Estévez, Daniel G. Rivera*

**Covalent protein–oligonucleotide conjugates by copper-free click reaction**

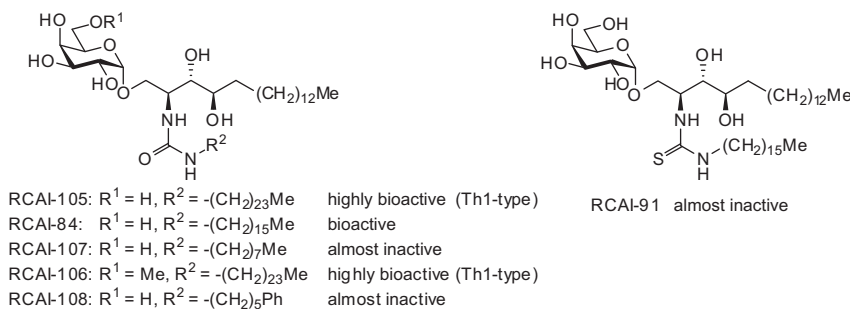
pp 4532–4539

Santoshkumar L. Khatwani, Jun Sung Kang, Daniel G. Mullen, Michael A. Hast, Lorena S. Beese, Mark D. Distefano, T. Andrew Taton*

**RCAI-84, 91, and 105-108, ureido and thioureido analogs of KRN7000: Their synthesis and bioactivity for mouse lymphocytes to produce Th1-biased cytokines**

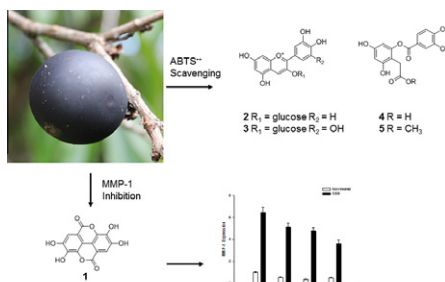
pp 4540–4548

Takuya Tashiro, Tomokuni Shigeura, Hiroshi Watarai, Masaru Taniguchi, Kenji Mori*

**Edible *Myrciaria vexator* fruits: Bioactive phenolics for potential COPD therapy**

pp 4549–4555

Keyvan Dastmalchi, Gema Flores, Shi-Biao Wu, Chunhui Ma, Abdoulaye J. Dabo, Kathleen Whalen, Kurt A. Reynertson, Robert F. Foronjy, Jeanine M. ÓArmiento, Edward J. Kennelly*

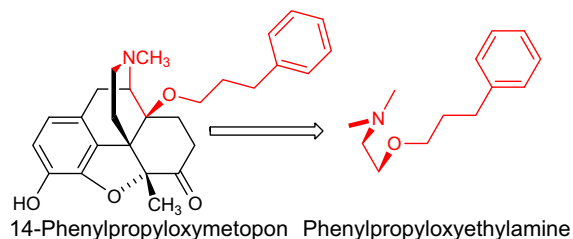


Deconstructing 14-phenylpropyloxymetopon: Minimal requirements for binding to mu opioid receptors

pp 4556–4563

Lidiya Stavitskaya, Jihyun Shim, Jason R. Healy, Rae R. Matsumoto, Alexander D. MacKerell Jr., Andrew Coop*

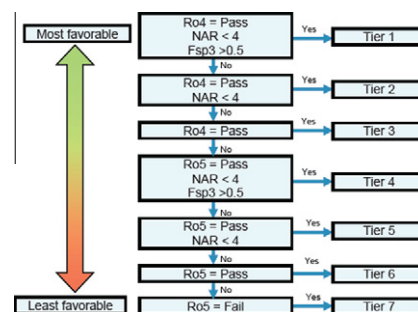
A series of phenylpropyloxyethylamines and cinnamyloxyethylamines were synthesized as deconstructed analogs of 14-phenylpropyloxymetopon and analyzed for opioid receptor binding affinity. Using the Conformationally Sampled Pharmacophore modeling approach, we discovered a series of compounds lacking a tyrosine mimetic, historically considered essential for μ opioid binding. Based on the binding studies, we have identified the optimal analogs to be *N*-methyl-*N*-phenylpropyl-2-(3-phenylpropoxy)ethanamine, with 1520 nM, and 2-(cinnamyloxy)-*N*-methyl-*N*-phenylethanamine with 1680 nM affinity for the μ opioid receptor. These partial opioid structure analogs will serve as the novel lead compounds for future optimization studies.

**Abbott Physicochemical Tiering (APT)—A unified approach to HTS triage**

pp 4564–4573

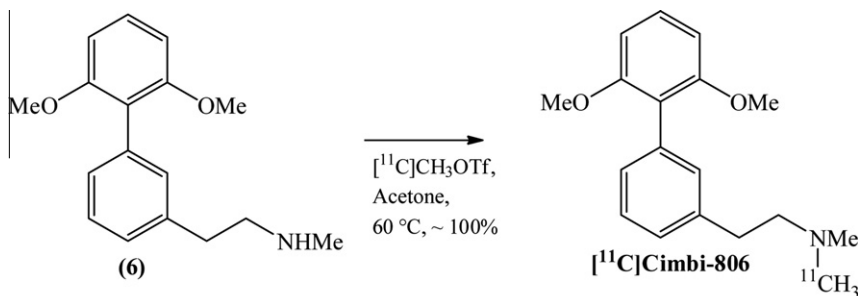
Philip B. Cox*, Robert J. Gregg, Anil Vasudevan

An in silico tool has been developed to help prioritize hits from HTS based on multi-parametric physicochemical properties. This Abbott Physicochemical Tiering (APT) system is used routinely at Abbott in all HTS triage campaigns.

**Synthesis and evaluation of [¹¹C]Cimbi-806 as a potential PET ligand for 5-HT₇ receptor imaging**

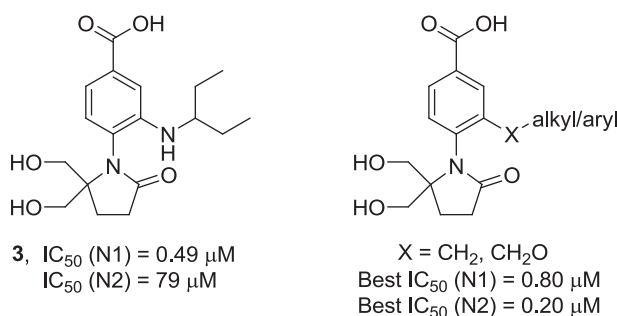
pp 4574–4581

Matthias M. Herth, Hanne D. Hansen, Anders Ettrup, Agnete Dyssegaard, Szabolcs Lehel, Jesper Kristensen, Gitte M. Knudsen*

**Pyrrolidinobenzoic acid inhibitors of influenza virus neuraminidase: The hydrophobic side chain influences type A subtype selectivity**

pp 4582–4589

Yanwu Li, Arundutt Silamkoti, Gundurao Kolavi, Liyuan Mou, Shelly Gulati, Gillian M. Air, Wayne J. Brouillette*



A series of analogues of compound 3, containing varied hydrophobic side chains, was synthesized and evaluated for selectivity of inhibition for N1 versus N2 influenza A neuraminidase.

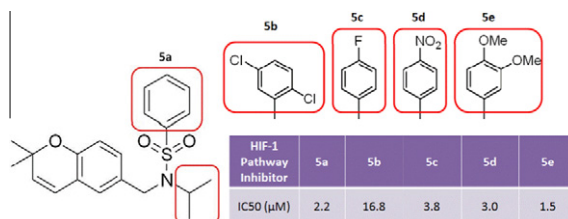


Structure–activity relationship of 2,2-dimethyl-2H-chromene based arylsulfonamide analogs of 3,4-dimethoxy-N-[(2,2-dimethyl-2H-chromen-6-yl)methyl]-N-phenylbenzenesulfonamide, a novel small molecule hypoxia inducible factor-1 (HIF-1) pathway inhibitor and anti-cancer agent

pp 4590–4597

Jiyoung Mun, Adnan Abdul Jabbar, Narra Sarojini Devi,
Yuan Liu, Erwin G. Van Meir*, Mark M. Goodman*

3,4-Dimethoxy-N-[(2,2-dimethyl-2H-chromen-6-yl)methyl]-N-phenylbenzenesulfonamide, a novel small molecule HIF-1 pathway inhibitor, can antagonize tumor growth in animal models of cancer. The structure–activity relationships of 15 N-[(2,2-dimethyl-2H-chromen-6-yl)methyl]-N-R-aryl sulfonamides were investigated.



*Corresponding author

Supplementary data available via SciVerse ScienceDirect

COVER

Dipyron (metamizol) is a common antipyretic drug and the most popular non-opioid analgesic in many countries. In spite of its long and widespread use, molecular details of its fate in the body are not fully known. Two unknown metabolites were now found, viz. arachidonoyl amides, and positively tested for cannabis receptor binding (CB1 and CB2) and cyclooxygenase inhibition. Two more puzzle pieces of the dipyron story found! (Rogosch, T.; Sinning, C.; Podlewski, A.; Watzer, B.; Schlosburg, J.; Lichtman, A.H.; Cascio, M.G.; Bisogno, T.; Di Marzo, V.; Nüsing, R.; Imming, P. *Bioorg. Med. Chem.* **2012**, 20, 103–109.)

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