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### **Bioorganic & Medicinal Chemistry**

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# Bioorganic & Medicinal Chemistry Volume 19, Issue 8, 2011

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#### ARTICLES

New and more efficient multivalent glyco-ligands for asialoglycoprotein receptor of mammalian hepatocytes Reiko T. Lee, Mei-Hui Wang, Wuu-Jyh Lin\*, Yuan C. Lee\*

pp 2494-2500

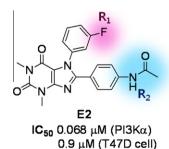
**Diphenylamine-based retinoid antagonists: Regulation of RAR and RXR function depending on the N-substituent** Kiminori Ohta, Emiko Kawachi, Hiroshi Fukasawa, Koichi Shudo, Hiroyuki Kagechika\*

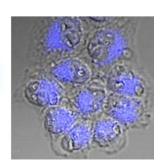
pp 2501-2507

N-Benzylated diphenylamine derivative 10f potently inhibited Am80-induced HL-60 cell differentiation as a result of RAR-antagonistic action.

**Fluorescent phosphoinositide 3-kinase inhibitors suitable for monitoring of intracellular distribution** Donghee Kim, Hyunseung Lee, Hwiseok Jun, Soon-Sun Hong\*, Sungwoo Hong\*

pp 2508-2516





#### Synthesis and pharmacological evaluation of thieno[2,3-b]pyridine derivatives as novel c-Src inhibitors

pp 2517-2528

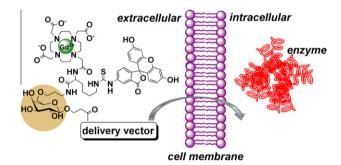
Isabelle Pevet, Cédric Brulé, André Tizot, Arnaud Gohier, Francisco Cruzalegui, Jean A. Boutin, Solo Goldstein\*

We report the preparation and pharmacological profile of new c-Src inhibitors elaborated around a 3-amino-thieno[2,3-b]pyridine nucleus.

#### Synthesis and characterization of a cell-permeable bimodal contrast agent targeting $\beta$ -galactosidase

pp 2529-2540

Aneta Keliris\*, Thomas Ziegler, Ritu Mishra, Rolf Pohmann, Martin G. Sauer, Kamil Ugurbil, Jörn Engelmann\*





#### Synthesis and biological evaluation of tetracyclic thienopyridones as antibacterial and antitumor agents

pp 2541-2548

Salah A. Al-Trawneh, Mustafa M. El-Abadelah\*, Jalal A. Zahra, Samir A. Al-Taweel, Franca Zani, Matteo Incerti, Andrea Cavazzoni, Paola Vicini\*

$$R_3$$
 $R_2$ 
 $NH$ 
 $O$ 
 $CO_2H$ 

The novel tetracyclic compounds, synthesized as bioisosters of fluoroquinolones, exhibited potent activity against bacteria and cancer cell lines, together with absence of cytotoxicity against normal cells.

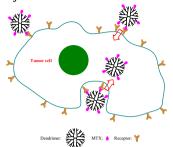
Small molecule antagonists of the urokinase (uPA): urokinase receptor (uPAR) interaction with high reported potencies pp 2549–2556 show only weak effects in cell-based competition assays employing the native uPAR ligand

Melissa De Souza, Hayden Matthews, Jodi A. Lee, Marie Ranson, Michael J. Kelso\*

 $IC_{50} = 0.8 \text{ nM}$  uPA fragments - radioligand binding assays > 100  $\mu$ M native uPA - flow cytometry/fluorescence assays

## Polyvalent saccharide-functionalized generation 3 poly(amidoamine) dendrimer–methotrexate conjugate as a potential pp 2557–2564 anticancer agent

Yuehua Zhang, Thommey P. Thomas, Kyung-Hoon Lee, Minghsin Li, Hong Zong, Ankur M. Desai, Alina Kotlyar, Baohua Huang, Mark M. Banaszak Holl, James R. Baker Jr.\*



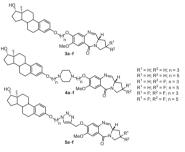
Polyvalent tumor-targeted nanomedicine.



### Synthesis and biological evaluation of estradiol linked pyrrolo[2,1-c][1,4]benzodiazepine (PBD) conjugates as potential pp 2565–2581 anticancer agents

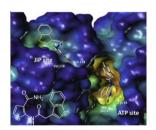
Ahmed Kamal\*, M. Kashi Reddy, M. Janaki Ramaiah, Rajender, J. Surendranadha Reddy, Y. V. V. Srikanth, D. Dastagiri, E. Vijaya Bharathi, S. N. C. V. L. Pushpavalli, Pranjal Sarma, Manika Pal-Bhadra\*

A new class of estradiol-pyrrolobenzodiazepine conjugates have been prepared and evaluated for their anticancer activity. Further, some of the biological assays related to mechanism aspects have also been carried out.



### Design, synthesis, and structure–activity relationship studies of thiophene-3-carboxamide derivatives as dual inhibitors pp 2582–2588 of the c-Jun N-terminal kinase

Surya K. De, Elisa Barile, Vida Chen, John L. Stebbins, Jason F. Cellitti, Thomas Machleidt, Coby B. Carlson, Li Yang, Russell Dahl, Maurizio Pellecchia\*

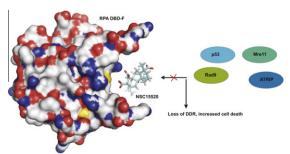




### Small molecule inhibitor of the RPA70 N-terminal protein interaction domain discovered using in silico and in vitro methods

pp 2589-2595

Jason G. Glanzer, Shengqin Liu, Gregory G. Oakley\*

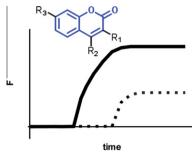




### Inhibition of amyloid- $\beta$ aggregation by coumarin analogs can be manipulated by functionalization of the aromatic

pp 2596-2602

Deborah D. Soto-Ortega, Brandon P. Murphy, Francisco J. Gonzalez-Velasquez, Kelly A. Wilson, Fang Xie, Qian Wang\*, Melissa A. Moss\*



#### Design, synthesis, and evaluation of small molecule Hsp90 probes

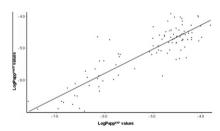
pp 2603-2614

Tony Taldone, Danuta Zatorska, Pallav D. Patel, Hongliang Zong, Anna Rodina, James H. Ahn, Kamalika Moulick, Monica L. Guzman, Gabriela Chiosis\*

#### QSAR-based permeability model for drug-like compounds

pp 2615-2624

Rafael Gozalbes\*, Mary Jacewicz, Robert Annand, Katya Tsaioun, Antonio Pineda-Lucena\*



A QSAR model for predicting the permeability of drug-like compounds has been developed based on simple 1D and 2D descriptors. The model does not require any experimentally determined value and it is intended to be used as a decision tool when evaluating compounds in drug discovery campaigns.

#### Cytotoxic and anti-inflammatory cembranoids from the Vietnamese soft coral Lobophytum laevigatum

pp 2625-2632

Tran Hong Quang, Tran Thu Ha, Chau Van Minh, Phan Van Kiem, Hoang Thanh Huong, Nguyen Thi Thanh Ngan, Nguyen Xuan Nhiem, Nguyen Huu Tung, Bui Huu Tai, Dinh Thi Thu Thuy, Seok Bean Song, Hee-Kyoung Kang, Young Ho Kim\*



## Synthesis and biological evaluation of 1-substituted-3(5)-(6-methylpyridin-2-yl)-4-(quinolin-6-yl)pyrazoles as transforming growth factor- $\beta$ type 1 receptor kinase inhibitors

pp 2633-2640

Cheng Hua Jin, Maddeboina Krishnaiah, Domalapally Sreenu, Kota Sudhakar Rao, Vura Bala Subrahmanyam, Chul-Yong Park, Jee-Yeon Son, Yhun Yhong Sheen, Dae-Kee Kim\*

#### Inhibitory properties of 2-substituent-1H-benzimidazole-4-carboxamide derivatives against enteroviruses

pp 2641-2649

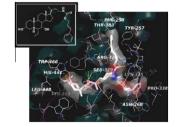
Fei Xue, Xianjin Luo\*, Chenghao Ye, Weidong Ye, Yue Wang\*



### Extending SAR of bile acids as FXR ligands: Discovery of 23-N-(carbocinnamyloxy)-3 $\alpha$ ,7 $\alpha$ -dihydroxy-6 $\alpha$ -ethyl-24-nor-5 $\beta$ -cholan-23-amine

pp 2650-2658

Antimo Gioiello, Antonio Macchiarulo, Andrea Carotti, Paolo Filipponi, Gabriele Costantino, Giovanni Rizzo, Luciano Adorini, Roberto Pellicciari\*

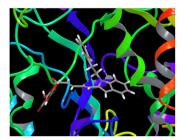




### Inhibitors and promoters of tubulin polymerization: Synthesis and biological evaluation of chalcones and related dienones as potential anticancer agents

pp 2659-2665

Christine Dyrager, Malin Wickström, Maria Fridén-Saxin, Annika Friberg, Kristian Dahlén, Erik A. A. Wallén, Joachim Gullbo, Morten Grøtli, Kristina Luthman\*



#### A novel application of DDQ as electrophile in the Nenitzescu reaction

pp 2666-2674

U. Kucklaender\*, R. Bollig, W. Frank, A. Gratz, J. Jose

#### Fused heterocyclic amido compounds as anti-hepatitis C virus agents

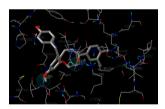
pp 2675-2687

Hiroshi Aoyama\*, Kazuyuki Sugita, Masahiko Nakamura, Atsushi Aoyama, Mohammed T. A. Salim, Mika Okamoto, Masanori Baba\*, Yuichi Hashimoto

A series of phenanthridine analogues were synthesized and evaluated for their anti-hepatitis C virus (HCV) activity. Among the compounds alkoxylated analogues **18** and **24** showed significant inhibition against HCV RNA replication with an  $EC_{50}$  values of 180, 50 nM, respectively. In addition, they had acceptable cytotoxicities resulting in high SI values, 42 and 128, respectively.

Synthesis, biological evaluation, and molecular docking studies of resveratrol derivatives possessing chalcone moiety pp 2688–2695 as potential antitubulin agents

Ban-Feng Ruan, Xiang Lu, Jian-Feng Tang, Yao Wei, Xiao-Liang Wang, Yan-Bin Zhang, Li-Sheng Wang, Hai-Liang Zhu\*



Twenty-three resveratrol derivatives possessing chalcone moiety were synthesized and characterized, and their biological activities were also evaluated as potential antiproliferation and antitubulin polymerization inhibitors. Docking simulation was performed to position compound C19 into the colchicine binding site to determine the probable binding mode.

#### Geminal dialkyl derivatives of N-substituted pantothenamides: Synthesis and antibacterial activity

pp 2696-2706

T. Olukayode Akinnusi, Kenward Vong, Karine Auclair\*

New antibacterials!



### Anti-tumor and anti-leishmanial evaluations of 1,3,4-oxadiazine, pyran derivatives derived from cross-coupling reactions of $\beta$ -bromo-6*H*-1,3,4-oxadiazine derivatives

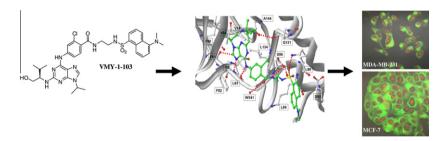
pp 2707-2713

Rafat M. Mohareb\*, Jürgen Schatz

#### Fluorescent cyclin-dependent kinase inhibitors block the proliferation of human breast cancer cells

pp 2714-2725

Venkata Mahidhar Yenugonda, Tushar B. Deb, Scott C. Grindrod, Sivanesan Dakshanamurthy, Yonghong Yang, Mikell Paige, Milton L. Brown\*





#### 7-Azabicyclo[2.2.1]heptane as a structural motif to block mutagenicity of nitrosamines

pp 2726-2741

Tomohiko Ohwada\*, Satoko Ishikawa, Yusuke Mine, Keiko Inami, Takahiro Yanagimoto, Fumika Karaki, Yoji Kabasawa, Yuko Otani, Masataka Mochizuki\*

#### The synthesis and evaluation of indolylureas as $PKC\alpha$ inhibitors

pp 2742-2750

Jane F. Djung, Richard. J. Mears\*, Christian A. G. N. Montalbetti, Thomas S. Coulter, Adam Golebiowski, Andrew N. Carr, Oliver Barker, Kenneth D. Greis, Songtao Zhou, Elizabeth Dolan, Gregory F. Davis



Inhibitory effects of Mannich bases of heterocyclic chalcones on NO production by activated RAW 264.7 macrophages pp 2751–2756 and superoxide anion generation and elastase release by activated human neutrophils

M. Vijaya Bhaskar Reddy, Tsong-Long Hwang, Yann-Lii Leu, Wen-Fei Chiou, Tian-Shung Wu\*

#### In vitro and QSAR studies of cucurbitacins on HepG2 and HSC-T6 liver cell lines

Judit Bartalis, Fathi T. Halaweish\*

R1 2 H H 23 OR4

Cucurbitacin Skeleton

Cucurbitacin analogues with potential anticancer activity and hepatoprotective agents against fibrosis that deserve further examination.



#### Introduction of aromatic group on 4'-OH of α-GalCer manipulated NKT cell cytokine production

Wenpeng Zhang, Chengfeng Xia\*, Janos Nadas, Wenlan Chen, Li Gu, Peng George Wang\*

pp 2767-2776

pp 2757-2766

\*Corresponding author

\*\* Supplementary data available via ScienceDirect

#### COVER

The known veterinary anthelmintic and proton ionophore, closantel, was recently discovered to also exhibit potent chitinase inhibition activity and inhibit molting in the parasitic nematode, *Onchocerca volvulus*, the causative agent of the neglected tropical disease onchocerciasis. [C. Gloeckner, A. L. Garner, F. Mersha, Y. Oksov, N. Tricoche, L. M. Eubanks, S. Lustigman, G. F. Kaufmann, K. D. Janda, Repositioning of an existing drug for the neglected tropical disease Onchocerciasis, *Proc. Natl. Acad. Sci., U.S.A.* **2010**, 107, 3424.]

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