

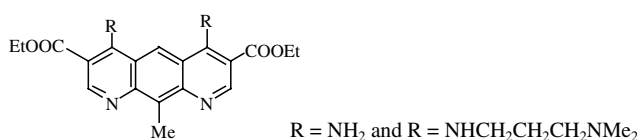
## Contents

### ARTICLES

#### Synthesis and antiproliferative evaluation of certain pyrido[3,2-*g*]quinoline derivatives

pp 7370–7376

Shu-Yu Li, Yeh-Long Chen, Chihuei Wang\* and Cherng-Chyi Tzeng\*



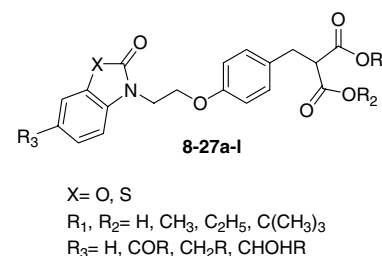
A number of pyrido[3,2-*g*]quinoline derivatives were synthesized and evaluated for antiproliferative activity.

#### Novel 1,3-dicarbonyl compounds having 2(3*H*)-benzazolonc heterocycles as PPAR $\gamma$ agonists

pp 7377–7391

Elodie Blanc-Delmas, Nicolas Lebegue,\* Valérie Wallez, Véronique Leclerc, Saïd Yous, Pascal Carato, Amaury Farce, Caroline Bennejean, Pierre Renard, Daniel-Henri Caignard, Valérie Audinot-Bouchez, Pascale Chomarat, Jean Boutin, Nathalie Hennuyer, Katie Louche, Maria Carmen Carmona, Bart Staels, Luc Pénicaud, Louis Casteilla, Michel Lonchampt, Catherine Dacquet, Philippe Chavatte, Pascal Berthelot and Daniel Lesieur

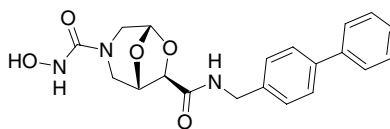
A series of 1,3-dicarbonyl compounds having 2(3*H*)-benzazolonc heterocycles has been synthesized and tested for PPAR $\gamma$  agonist activity. SAR were developed and revealed that 6-acyl-2(3*H*)-benzothiazolone derivatives with 1,3-dicarbonyl group were the most potent. IP administration of compound **22** exhibited comparable levels of glucose and triglyceride correction to PO administration of rosiglitazone in the *ob/ob* mouse studies.



#### Synthesis of bicyclic molecular scaffolds (BTAA): An investigation towards new selective MMP-12 inhibitors

pp 7392–7403

Claudia Mannino, Marco Nievo, Fabrizio Machetti, Athanasios Papakyriakou, Vito Calderone, Marco Fragai and Antonio Guarna\*

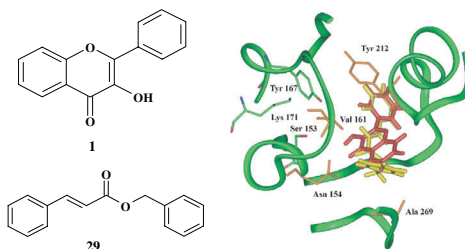


A selective MMP-12 inhibitor based on 3-aza-6,8-dioxabicyclo[3.2.1]octane-7-carboxylic acid (BTAA) is described. The observed inhibitory activity and the structural information on protein/inhibitor complexes provided by NMR experiments and X-ray assessments suggest that bicyclic scaffold derivatives (BTAA) may be exploited for the design of new selective MMP inhibitors.

**Flavonoids and cinnamic acid esters as inhibitors of fungal 17 $\beta$ -hydroxysteroid dehydrogenase: A synthesis, QSAR and modelling study**

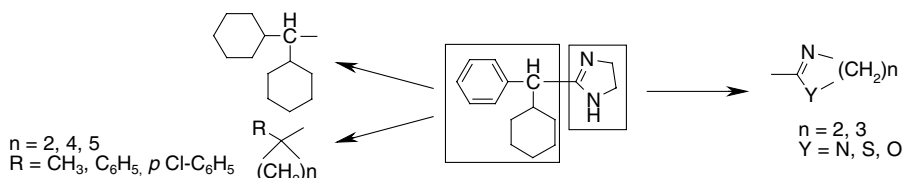
pp 7404–7418

Matej Sova, Andrej Perdih, Miha Kotnik, Katja Kristan, Tea Lanišnik Rižner, Tom Solmajer and Stanislav Gobec\*


**Design and synthesis of novel imidazoline derivatives with potent antihyperglycemic activity in a rat model of type 2 diabetes**

pp 7419–7433

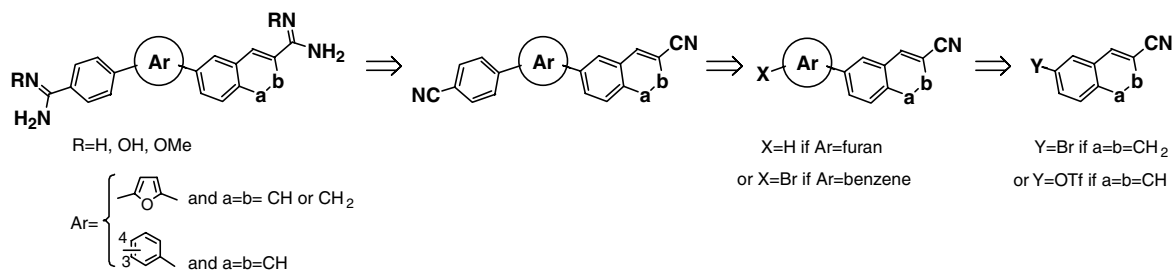
Louis Crane, Maria Anastassiadou, Salomé El Hage, Jean Luc Stigliani, Geneviève Baziard-Mouysset,\* Marc Payard, Jean Michel Leger, Jean-Guy Bizot-Espiard, Alain Ktorza, Daniel-Henri Caignard and Pierre Renard


 Two series of imidazolines derived of 2-( $\alpha$ -cyclohexyl-benzyl)-4,5-dihydro-1H-imidazole were synthesized and evaluated for their in vivo antidiabetic activity in a rat model of type-2 diabetes.

**Dicationic DNA-targeted antiprotozoal agents: Naphthalene replacement of benzimidazole**

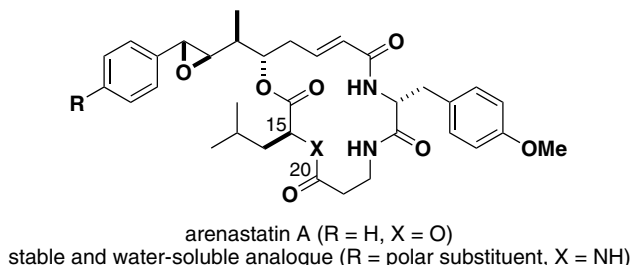
pp 7434–7445

Sarah Chackal-Catoen, Yi Miao, W. David Wilson, Tanja Wenzler, Reto Brun and David W. Boykin\*


**Synthesis of 15,20-triamide analogue with polar substituent on the phenyl ring of arenastatin A, an extremely potent cytotoxic spongean depsipeptide**

pp 7446–7457

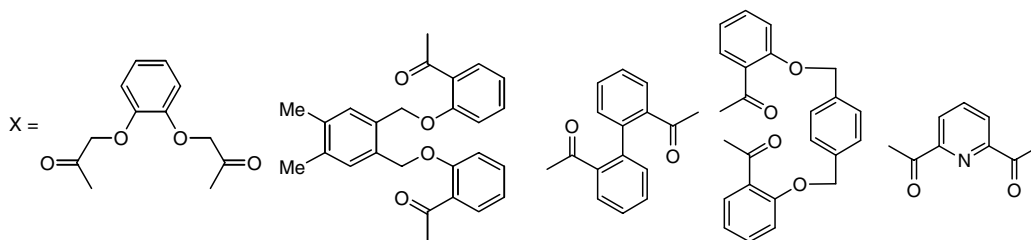
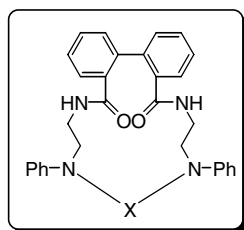
Naoyuki Kotoku, Tomoya Kato, Fuminori Narumi, Emiko Ohtani, Sayo Kamada, Shunji Aoki, Naoki Okada, Shinsaku Nakagawa and Motomasa Kobayashi\*



**Synthesis, characterization, and anti-bacterial efficacy of some novel cyclophane amide**

pp 7458–7467

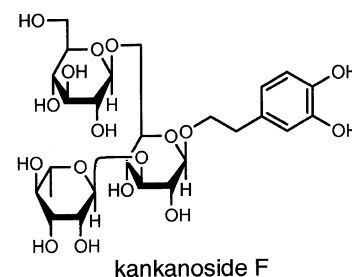
Perumal Rajakumar,\* A. Mohammed Abdul Rasheed, P. M. Balu and K. Murugesan

**Phenylethanoid oligoglycosides and acylated oligosugars with vasorelaxant activity from *Cistanche tubulosa***

pp 7468–7475

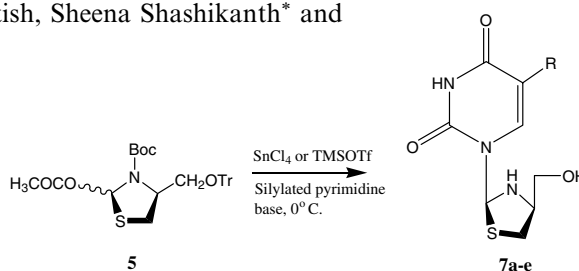
Masayuki Yoshikawa,\* Hisashi Matsuda, Toshio Morikawa, Haihui Xie, Seikou Nakamura and Osamu Muraoka

The methanolic extract from the dried stems of *Cistanche tubulosa* (Schrenk) R. Wight was found to show an inhibitory effect on contractions induced by noradrenaline in isolated rat aortic strips. From the extract, new phenylethanoid oligoglycoside constituents, kankanosides F and G, and an acylated oligosugar, kankanose, were isolated together with 14 known compounds. The structures of these new compounds were determined on the basis of their chemical and physicochemical evidence. In addition, principal constituents, kankanoside F, kankanose, echinacoside, acteoside, and cistanoside F, showed vasorelaxant activity, and several structural requirements for the activity were clarified.

**Design, synthesis and antibacterial activity of novel 1,3-thiazolidine pyrimidine nucleoside analogues**

pp 7476–7481

Shimoga Nagaraj Sriharsha, Sridharamurthy Satish, Sheena Shashikanth\* and Koteshwara Anandarao Raveesha



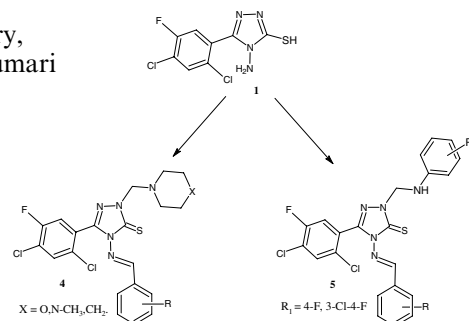
The new class of 1-(4-hydroxymethyl-1,3-thiazolidine-2-yl) pyrimidine nucleoside analogues were synthesized following Vorbruggen procedure. The characterization of the compounds was accomplished by IR, NMR, mass, elemental analysis and NOE experiments. The antibacterial activity of these compounds against 14 human pathogens is highlighted.

**Synthesis and biological activity of Schiff and Mannich bases bearing 2,4-dichloro-5-fluorophenyl moiety**

pp 7482–7489

Mari Sithambaram Karthikeyan,\* Dasappa Jagadeesh Prasad, Boja Poojary, K. Subrahmanya Bhat, Bantwal Shivarama Holla and Nalilu Suchetha Kumari

Series of Schiff bases was prepared by condensing triazole with aromatic aldehydes. Aminomethylation of Schiff bases with secondary amines and substituted primary amines gave Mannich bases. Newly synthesized compounds were characterized by spectral data and elemental analysis. All compounds were tested for their antimicrobial activity.



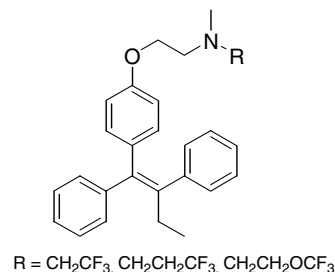


### Loss of antagonistic activity of tamoxifen by replacement of one *N*-methyl of its side chain by fluorinated residues

pp 7531–7538

Vangelis Agouridas, Ioanna Laïos, Anny Cleeren, Elyane Kizilian, Emmanuel Magnier, Jean-Claude Blazejewski\* and Guy Leclercq\*

Efforts to limit the metabolic alteration of the aminoalkyl side chain of tamoxifen by fluorination largely decrease its ER-mediated antagonistic properties in MCF-7 cells, but enhance the agonistic activity.

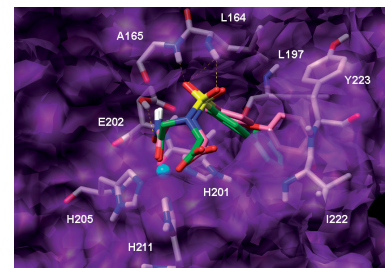


### Design, synthesis and molecular modeling study of iminodiacetyl monohydroxamic acid derivatives as MMP inhibitors

pp 7539–7550

M. Amélia Santos,\* Sérgio M. Marques, Tiziano Tuccinardi, Paolo Carelli, Laura Panelli and Armando Rossello\*

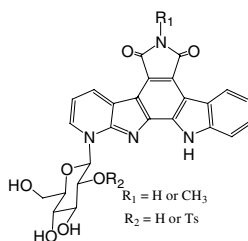
We present the design, synthesis and docking studies on a series of new non-peptidic hydroxamate-based matrix metalloproteinase inhibitors, incorporating the iminodiacetic hydroxamic acid scaffolds.



### Synthesis and biological activities of 7-aza rebeccamycin analogues bearing the sugar moiety on the nitrogen of the pyridine ring

pp 7551–7562

Samir Messaoudi, Fabrice Anizon, Paul Peixoto, Marie-Hélène David-Cordonnier, Roy M. Golsteyn, Stéphane Léonce, Bruno Pfeiffer and Michelle Prudhomme\*

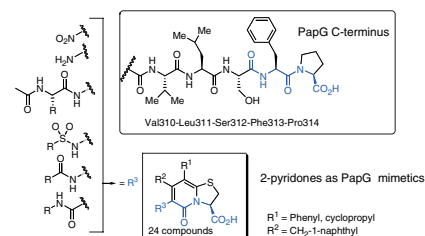


### Design, synthesis and evaluation of peptidomimetics based on substituted bicyclic 2-pyridones—Targeting virulence of uropathogenic *E. coli*

pp 7563–7581

Veronica Åberg, Magnus Sellstedt, Mattias Hedenström, Jerome S. Pinkner, Scott J. Hultgren and Fredrik Almqvist\*

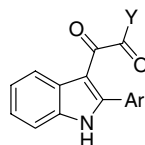
Efficient procedures to amino-substituted bicyclic 2-pyridone scaffolds have been developed. From these, peptidomimetics were prepared and evaluated as potential inhibitors of pilus assembly in *Escherichia coli* giving valuable structure–activity relationships.



### Synthesis and receptor binding studies of halogenated *N,N*-dialkyl-(2-phenyl-1*H*-indol-3-yl)glyoxylamides to visualize peripheral benzodiazepine receptors with SPECT or PET

pp 7582–7591

Idriss Bennacef, Colin N. Haile, Anne Schmidt, Andrei O. Koren, John P. Seibyl, Julie K. Staley, Frederic Bois, Ronald M. Baldwin and Gilles Tamagnan\*



A library of halogenated 2-arylindolyl-3-oxocarboxamides was prepared to develop radioligands to visualize cerebral PBR by SPECT and PET imaging. In vitro evaluation showed that most of the synthesized compounds were selective, high-affinity PBR ligands with adequate lipophilicity ( $\log D_{7.4}$  in the range of 1.6–2.4). The iodinated derivative **11** ( $K_i = 2.6$  nM) and the fluorinated analog **26** ( $K_i = 6.2$  nM) displayed higher affinity than reference compounds.

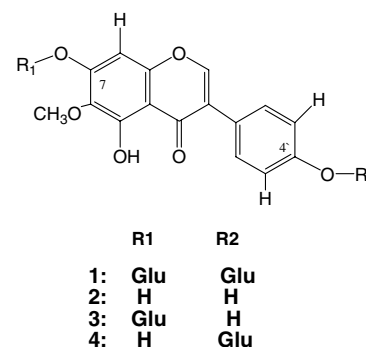


### Aldose reductase inhibitory effect by tectorigenin derivatives from *Viola hondoensis*

pp 7592–7594

Hyung-In Moon,\* Jae-Chul Jung and Joongku Lee

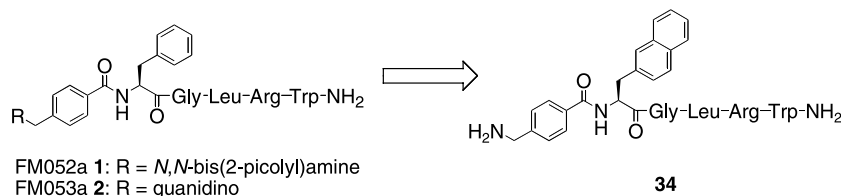
These results indicate that substitution of a glucose group at C-4' of tectorigenin increases the inhibitory activity of aldose reductase. Furthermore, our results indicate that glucose conjugation position in this type of isoflavonoids may be required for the activity.



### Structure–activity relationship study on small peptidic GPR54 agonists

pp 7595–7603

Kenji Tomita, Ayumu Niida, Shinya Oishi, Hiroaki Ohno, Jérôme Cluzeau, Jean-Marc Navenot, Zi-xuan Wang, Stephen C. Peiper and Nobutaka Fujii\*



Structure–activity relationship study on GPR54 agonists was conducted based on the structures of FM052a **1** and FM053a **2**. Optimization of each amino acid and the N-terminal functional group afforded a novel potent agonist **34** having a 3-(2-naphthyl)alanine.

### Synthesis and conformational analysis of His-Phe-Arg-Trp-NH<sub>2</sub> and analogues with antifungal properties

pp 7604–7614

Marcelo F. Masman, Ana M. Rodríguez, Laura Svetaz, Susana A. Zacchino, Csaba Somlai, Imre G. Csizmadia, Botond Penke and Ricardo D. Enriz\*

The synthesis, in vitro evaluation, and conformational study of His-Phe-Arg-Trp-NH<sub>2</sub> and related derivatives acting as antifungal agents are reported. Among them, His-Phe-Arg-Trp-NH<sub>2</sub> and His-Tyr-Arg-Trp-NH<sub>2</sub> exhibited antifungal activity against *Cryptococcus neoformans*.

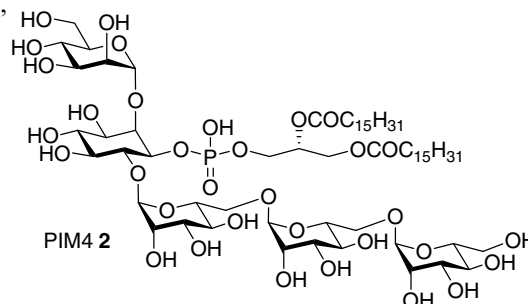


**Phosphatidylinositol mannosides: Synthesis and adjuvant properties of phosphatidylinositol di- and tetramannosides**

pp 7615–7624

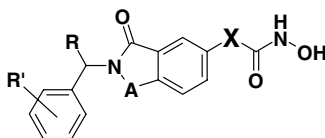
Gary D. Ainge, Natalie A. Parlane, Michel Denis, Colin M. Hayman, David S. Larsen and Gavin F. Painter\*

The adjuvant properties of synthetic phosphatidylinositol mannosides PIM2 **1** and PIM4 **2** were tested in an in vivo mouse model.

**Design, synthesis, and evaluation of cyclic amide/imide-bearing hydroxamic acid derivatives as class-selective histone deacetylase (HDAC) inhibitors**

pp 7625–7651

Chihiro Shinji, Satoko Maeda, Keisuke Imai, Minoru Yoshida, Yuichi Hashimoto and Hiroyuki Miyachi\*




We report the design, synthesis, and histone deacetylase-inhibitory activity (including class-selectivity) of a series of hydroxamic acids bearing a cyclic amide/imide as a linker/cap structure.

**OTHER CONTENTS****Summary of instructions to authors**

p I

\*Corresponding author

 Supplementary data available via ScienceDirect

**COVER**

2006: The cover figure shows a synthetic multifunctional pore that is composed of rigid-rod staves (para-octiphenyls, tan) and beta-sheet hoops (arrows) and can be activated with external ligands (fullerenes, golden spheres) and closed with internal blockers (alpha-helix, red ribbon) [Gorteau, V.; Bollot, G.; Mareda, J.; Pasini, D.; Tran, D.-H.; Lazar, A. N.; Coleman, A. W.; Sakai, N.; Matile, S. *Bioorg. Med. Chem.* **2005**, 13, 5171–5180].

Indexed/Abstracted in: Beilstein, Biochemistry & Biophysics Citation Index, CANCERLIT, Chemical Abstracts, Chemistry Citation Index, Current Awareness in Biological Sciences/BIOBASE, Current Contents: Life Sciences, EMBASE/Excerpta Medica, MEDLINE, PASCAL, Research Alert, Science Citation Index, SciSearch, TOXFILE



ELSEVIER

ISSN 0968-0896