Graphical Abstracts

Bioorg. Med. Chem. 10 (2002) 1647

Novel 4,5-Diaryl-3-hydroxy-2(5*H*)-furanones as Anti-Oxidants and Anti-Inflammatory Agents

Valérie Weber,[a] Pascal Coudert,[a] Catherine Rubat,[b] Eliane Duroux,[b] Danielle Vallée-Goyet,[c] Daniel Gardette,[c] Marc Bria,[d] Eliane Albuisson,[e] Fernand Leal,[a] Jean-Claude Gramain,[c] Jacques Couquelet[a] and Michel Madesclaire[a]

[a]*Laboratoire de Chimie Thérapeutique, Faculté de Pharmacie, 28, place Henri Dunant, 63001, Clermont-Ferrand Cedex, France*
[b]*Laboratoire de Pharmacologie, Faculté de Pharmacie, 28, place Henri Dunant, 63001, Clermont-Ferrand Cedex, France*
[c]*Equipe Synthèse Organique UMR 6504, Université Blaise Pascal, 63177, Aubière Cedex, France*
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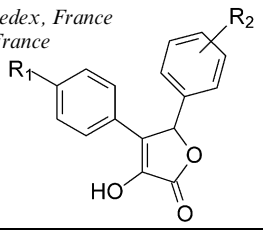
[e]*Laboratoire de Biomathématiques et Informatique Médicale, Faculté de Médecine, 28, place Henri Dunant, 63001, Clermont-Ferrand Cedex, France*



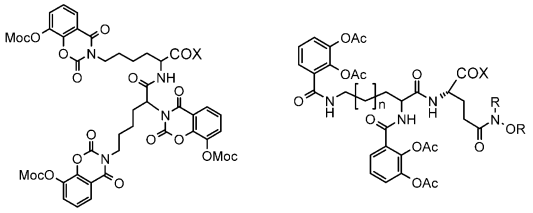
Bioorg. Med. Chem. 10 (2002) 1659

New Synthetic Siderophores and Their β-Lactam Conjugates Based on Diamino Acids and Dipeptides

S. Wittmann,[a] M. Schnabelrauch,[a] I. Scherlitz-Hofmann,[a] U. Möllmann,[a] D. Ankel-Fuchs[b] and L. Heinisch[a]

[a]*Hans Knöll Institute for Natural Product Research, Jena, Beutenbergstraße 11, D-07745 Jena, Germany*
[b]*Grünenthal GmbH, Post box 50 04 44, D-52088 Aachen, Germany*

X = H: siderophores, X = betalactams: Highly antibacterial active Conjugates



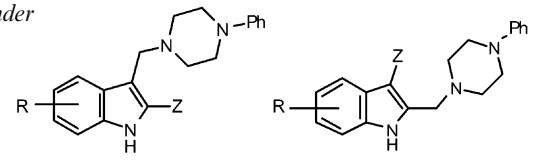
Bioorg. Med. Chem. 10 (2002) 1671

Phenylpiperazinylmethylindolecarboxylates and Derivatives as Selective D_4-Ligands

Annette Moll, Harald Hübner, Peter Gmeiner and Reinhard Troschütz

Department of Medicinal Chemistry, Emil Fischer Center, Friedrich-Alexander University, Schuhstrasse 19, D-91052 Erlangen, Germany

Introduction of electronegative moieties *Z* into phenylpiperazinylmethylindoles causes increased D_4 selectivity.



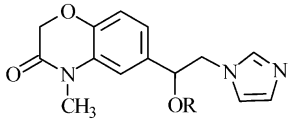
Z = COOR, CN, CHO, CH_2OH, CH=NOH, $CH=C(CN)_2$
R = H, OH, OMe, F, Cl

Bioorg. Med. Chem. 10 (2002) 1681

Anti-*Candida Albicans* Properties of Novel Benzoxazine Analogues

Renata Fringuelli,[a] Donatella Pietrella,[b] Fausto Schiaffella,[a] Alessia Guarraci,[a] Stefano Perito,[b] Francesco Bistoni[b] and Anna Vecchiarelli[b]

[a]*Department of Drug Chemistry and Technology, University of Perugia, Via del Liceo 1, 06123 Perugia, Italy*
[b]*Department of Experimental Medicine and Biochemical Sciences, Microbiology Section, Via del Giochetto, University of Perugia, 06122 Perugia, Italy*



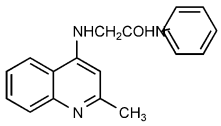
Bioorg. Med. Chem. 10 (2002) 1687

Synthesis of a Novel Quinoline Derivative, 2-(2-Methylquinolin-4-ylamino)-*N*-phenylacetamide—A Potential Antileishmanial Agent

Niranjan P. Sahu,[a] Chiranjib Pal,[b] Nirup B. Mandal,[a] Sukdeb Banerjee,[a] Mausumi Raha,[a] Ashis P. Kundu,[a] Anirban Basu,[b] Monidipa Ghosh,[b] Keshab Roy[b] and Santu Bandyopadhyay[b]

[a]*Steroid and Terpenoid Chemistry Division, Indian Institute of Chemical Biology, 4 Raja SC Mullick Road, Jadavpur, Kolkata 700 032, India*
[b]*Immunology Division, Indian Institute of Chemical Biology, 4 Raja SC Mullick Road, Jadavpur, Kolkata 700 032, India*

Some novel quinoline derivatives were prepared and tested for antileishmanial activity in hamster models. 2-(2-Methylquinolin-4-ylamino)-*N*-phenylacetamide (**2**) was found to be significantly more active than the standard antileishmanial drug sodium antimony gluconate (SAG) in reducing the parasite load, both in the spleen and liver, at a much lower concentration in hamster models. The results suggest that the compound could be exploited as an antileishmanial drug.



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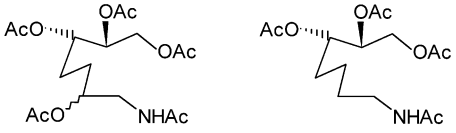
Bioorg. Med. Chem. 10 (2002) 1695

Higher Acyclic Nitrogen Containing Deoxy Sugar Derivatives: A New Lead in the Generation of Antimycobacterial Chemotherapeutics

Rashmi Pathak,[a] Arun K. Shaw,[a] Amiya P. Bhaduri,[a] K. V. G. Chandrasekhar,[a] Anil Srivastava,[b] Kishore K. Srivastava,[b] Vineeta Chaturvedi,[b] Ranjana Srivastava,[b] Brahm S. Srivastava,[b] Shalini Arora[c] and Sudhir Sinha[c]

[a]*Medicinal Chemistry Division, Central Drug Research Institute, Lucknow-226001, India*
[b]*Microbiology Division,Central Drug Research Institute, Lucknow-226001, India*
[c]*Biochemistry Division, Central Drug Research Institute, Lucknow-226001, India*

Syntheses of higher acyclic nitrogen containing deoxy sugar derivatives via nitroaldol reaction of different nitroalkanes with 2,3-dideoxy-α,β-unsaturated aldehydo sugars obtained from glycals namely acetylated glucal and galactal and their in vitro antimycobacterial activity are presented.

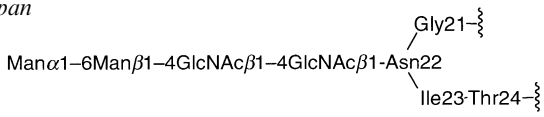


Bioorg. Med. Chem. 10 (2002) 1703

Determination of a Sugar Chain and Its Linkage Site on a Glycoprotein TIME-EA4 from Silkworm Diapause Eggs by Means of LC-ESI-Q-TOF-MS and MS/MS

Takuya Kurahashi,[a] Asaka Miyazaki,[a] Yoshiko Murakami,[a] Sathorn Suwan,[a] Thomas Franz,[a] Minoru Isobe,[a] Naoki Tani[b] and Hidenori Kai[b]

[a]*Laboratory of Organic Chemistry, Graduate School of Bioagricultural Sciences, Nagoya University, Chikusa, Nagoya 464-8601, Japan*
[b]*Labborarory of Insect Biochemistry and Biotechnology, Department of Biochemistry and Biotechnology, Faculty of Agriculture, Tottori University, Koyama, Tottori 680-8553, Japan*



Bioorg. Med. Chem. 10 (2002) 1711

Metabolites of Orally Active NO-Independent Pyrazolopyridine Stimulators of Soluble Guanylate Cyclase

Alexander Straub,[a] Jordi Benet-Buckholz,[b] Rita Fröde,[b] Armin Kern,[c] Christian Kohlsdorfer,[d] Peter Schmitt,[a] Thomas Schwarz,[d] Hans-Martin Siefert[d] and Johannes-Peter Stasch[e]

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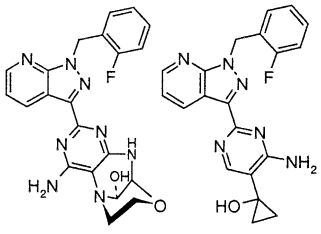
[b]*Central Research, Division of Structural Research, Bayer AG, D-51368 Leverkusen, Germany*
[c]*Department of Drug Metabolism and Isotope Chemistry, Pharma Research Centre, Bayer AG, D-42096 Wuppertal, Germany*
[d]*Department of Preclinical Pharmacokinetics, Pharma Research Centre, Bayer AG, D-42096 Wuppertal, Germany*
[e]*Institute of Cardiovascular Research, Pharma Research Centre, Bayer AG, D-42096 Wuppertal, Germany*

The stimulators of soluble guanylate cyclase BAY 41-2272 and BAY 41-8543 were oxidised in vivo in rats and dogs at their 5-pyrimidinyl-cyclopropyl and-morpholino residue, respectively, to yield metabolites with vasorelaxing activity.

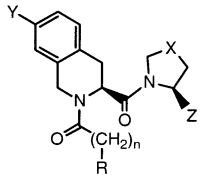


Bioorg. Med. Chem. 10 (2002) 1719

Comparison of the Inhibition of Human and *Trypanosoma Cruzi* Prolyl Endopeptidases

Sandrine Vendeville,[a] Filip Goossens,[c] Marie-Ange Debreu-Fontaine,[a] Valérie Landry,[a] Elisabeth Davioud-Charvet,[a] Philippe Grellier,[b] Simon Scharpe[c] and Christian Sergheraert[a]

[a]*Institut de Biologie de Lille - Institut Pasteur de Lille, UMR CNRS 8525, Faculté de Pharmacie, Université de Lille II, 1 rue du rofesseur Calmette, BP447, 59021 Lille cedex, France*
[b]*Laboratoire de Biologie Parasitaire, Museum National d'Histoire Naturelle, IFR CNRS 63, 61 rue Buffon, 75231 Paris, France*
[c]*Laboratory for Medicinal Biochemistry, University of Antwerp, Universiteitplein 1, B-2610 Antwerp, Belgium*



1-31

A structure–activity relationship study carried out in a tetrahydroisoquinoline series allowed to obtain potent competitive inhibitors of human and *Trypanosoma cruzi* prolyl endopeptidases. From the best compound, the possibility of an ireeversible inhibition was also investigated.

Bioorg. Med. Chem. 10 (2002) 1731

Arbutin Synthase, a Novel Member of the NRD1β Glycosyltransferase Family, is a Unique Multifunctional Enzyme Converting Various Natural Products and Xenobiotics

Tobias Hefner,[a] Joachim Arend,[a] Heribert Warzecha,[b] Karsten Siems[c] and Joachim Stöckigt[a]

[a]*Johannes Gutenberg-University Mainz, Institute of Pharmacy, Department of Pharmaceutical Biology, Staudinger Weg 5, D-55099 Mainz, Germany*
[b]*Boyce Thompson Institute for Plant Research, Cornell University, Tower Road, 14850 Ithaca, NY, USA*
[c]*AnalytiCon Discovery, Hermannswerder Haus 17, D-14473 Potsdam, Germany*

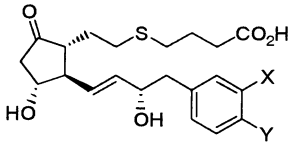
The novel arbutin synthase, a member of the NRD1β glycosyltransferase superfamily shows the broadest substrate acceptance in this family. It is the most multifunctional enzyme of secondary metabolism, glucosylating phenolic compounds of six different groups of plant natural products and various xenobiotics.

Bioorg. Med. Chem. 10 (2002) 1743

Design and Synthesis of a Selective EP4-Receptor Agonist. Part 3: 16-Phenyl-5-thiaPGE$_1$ and 9-β-Halo Derivatives with Improved Stability

Toru Maruyama, Masaki Asada, Tai Shiraishi, Hideyuki Yoshida, Takayuki Maruyama, Shuichi Ohuchida, Hisao Nakai, Kigen Kondo and Masaaki Toda

Minase Research Institute, Ono Pharmaceutical Co., Ltd., Shimamoto, Mishima, Osaka 618-8585, Japan



33a X = CH_2OCH_3, Y = H
33c X = CH_3, Y = OH

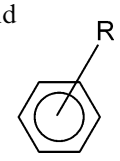
16-Phenyl-5-thiaPGE$_1$ analogues **33a** and **33c** were discovered to be potent and highly selective EP4-receptor agonists with improved stability.

Bioorg. Med. Chem. 10 (2002) 1761

Study on Quantitative Structure–Toxicity Relationships of Benzene Derivatives Acting by Narcosis

Padmakar V. Khadikar,[a] Keshav C. Mather,[b] Shalini Singh,[b] Anjani Phadnis,[c] Anjali Shrivastava[d] and Manorama Mandaloi[d]

[a]*Research Division, Laxmi Fumigation and Pest Control Pvt. Ltd., 3, Khatipura, Indore 452 007 India*
[b]*Department of Chemistry, A.P.S. University, Rewa 486003, India*
[c]*Department of Chemistry, R.S. College, Indore 452 001, India*
[d]*Department of Chemistry, Holkar Model and Autonomous College, Indore 452 001, India*



A QSTR study on the toxicity of benzene derivatives has been carried out using informatic-theoretic index (Id). Excellent results are obtained in multiparametric regression upon introducing indicator parameters.

Bioorg. Med. Chem. 10 (2002) 1767

Molecular Recognition by *Kluyveromyces* of Amphotericin B-Loaded, Galactose-Tagged, Poly (Lactic Acid) Microspheres

Rima Kassab,[a] Hélène Parrot-Lopez,[a] Hatem Fessi,[b] Jean Menaucourt,[c] Roger Bonaly[d] and Joël Coulon[d]

[a]*UMR 5078 CNRS, Université Claude Bernard, Bât. 305, 43 bd du 11 Novembre 1918, 69622 Villeurbanne Cedex, France*
[b]*Laboratoire de Génie Pharmaceutique UMR 5007 CNRS, Faculté de Pharmacie, 8 avenue Rockfeller, 69373 Lyon Cedex, France*
[c]*UMR UHP-CNRS 7564, Chimie et Spectrochimie des Interfaces, LCPME, 405 rue de Vandoeuvre, 54600 Villers les Nancy, France*
[d]*UMR UHP-CNRS 7564, Biochimie Microbienne, Faculté de Pharmacie, 5 rue Albert Lebrun, BP 403, 54001 Nancy Cedex, France*

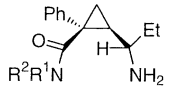
We have incorporated amphotericin B (AmB) into biodegradable galactosylated poly (L-lactic acid) (L-PLA) and poly (L-lactic-co-glycolic acid) (PLGA) microspheres. These novel functionalised microspheres could be required for the delivering of bioactive molecules according to their recognition to specific cells.

Bioorg. Med. Chem. 10 (2002) 1777

Synthesis of (1*S*,2*R*)-1-Phenyl-2-[(*S*)-1-aminopropyl]-*N*, *N*-diethylcyclopropanecarboxamide (PPDC) Derivatives Modified at the Carbamoyl Moiety As a New Class of NMDA Receptor Antagonists

Yuji Kazuta,[a] Ryuichi Tsujita,[b] Kiyoshi Ogawa,[b] Tadami Hokonohara,[b] Kanako Yamashita,[b] Kiyoko Morino,[a] Akira Matsuda[a] and Satoshi Shuto[a]

[a]*Graduate School of Pharmaceutical Sciences, Hokkaido University, Kita-12, Nishi-6, Kita-ku, Sapporo 060-0812, Japan*
[b]*Institute of Life Science Research, Asahi Chemical Industry Co., Ltd., Ohito-cho, Shizuoka 410-2321, Japan*



R^1 = Et, R^2 = H
R^1 = R^2 = Me, Pr, Bu, *i*-Bu, Bn
R^1, R^2 = -$(CH_2)_4$-, -$(CH_2)_5$

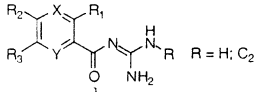
Bioorg. Med. Chem. 10 (2002) 1793

Synthesis and Biological Evaluation of Aroylguanidines Related to Amiloride as Inhibitors of the Human Platelet Na^+/H^+ Exchanger

Didier Laeckmann,[a] Françoise Rogister,[b] Jean-Victor Dejardin,[a] Christelle Prosperi-Meys,[c] Joseph Géczy,[b] Jacques Delarge[a] and Bernard Masereel[d]

[a]*Department of Medicinal Chemistry, Natural and Synthetic Drugs Research Center, Université de Liège, CHU, 1 avenue de l'Hôpital, B 36, tour 4, B-4000 Liège, Belgium*
[b]*Therabel Research S.A., 108 rue Egide Van Ophem, B-1180 Bruxelles, Belgium*
[c]*Service de Physique Expérimentale, Institut de Physique, B 5, Université de Liège, B-4000 Liège, Belgium*
[d]*Department of Pharmacy, University of Namur, FUNDP, 61 rue de Bruxelles, B-5000 Namur, Belgium*

Pyridine and benzene derivatives of amiloride were synthesized and evaluated on human platelets for their inhibitory activity against the Na^+/H^+ exchanger (NHE). The nature of ring and the position of the nitrogen heterocycle were crucial for NHE activity.



X=N; Y=CH
X=CH; Y=N
} pyridine series

X=CH; Y=CH } benzene series

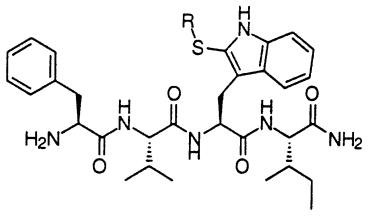
Bioorg. Med. Chem. 10 (2002) 1805

Design and Synthesis of Novel Tetra-Peptide Motilin Agonists

Masayuki Haramura, Kouichi Tsuzuki, Akira Okamachi, Kenji Yogo, Makoto Ikuta, Toshiro Kozono, Hisanori Takanashi and Eigoro Murayama

Fuji-Gotemba Research Laboratories, Chugai Pharmaceutical Co. Ltd., 1-135 Komakado, Gotemba, Shizuoka 412-8513, Japan

A series of novel tetra-peptide motilin agonists, having the general structure H-Phe-Val-X-Ile-NH_2, were designed and synthesized. Peptides, in which X is a side-chain substituted tryptophan residue, have agonistic activity.

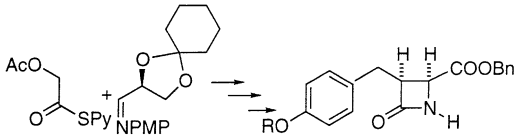


Bioorg. Med. Chem. 10 (2002) 1813

Efficient and Highly Stereoselective Synthesis of a β-Lactam Inhibitor of the Serine Protease Prostate-Specific Antigen

Rita Annunziata, Maurizio Benaglia, Mauro Cinquini, Franco Cozzi and Alessandra Puglisi

Centro CNR and Dipartimento di Chimica Organica e Industriale, Universita' degli Studi di Milano, Via Golgi 19, I-20133 Milan, Italy

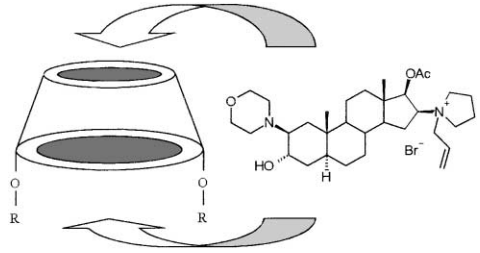


Bioorg. Med. Chem. 10 (2002) 1819

2-*O*-Substituted Cyclodextrins as Reversal Agents for the Neuromuscular Blocker Rocuronium Bromide

Gary J. Tarver,[a] Simon J.A. Grove,[a] Kirsteen Buchanan,[a] Anton Bom,[b] Andrew Cooke,[a] Samantha J. Rutherford[c] and Ming-Qiang Zhang[a]

[a]*Department of Medicinal Chemistry, Organon Laboratories Ltd., Newhouse, Lanarkshire ML1 5SH, Scotland, UK*
[b]*Department of Pharmacology, Organon Laboratories Ltd., Newhouse, Lanarkshire ML1 5SH, Scotland, UK*
[c]*Department of Analytical Chemistry, Organon Laboratories Ltd., Newhouse, Lanarkshire ML1 5SH, Scotland, UK*



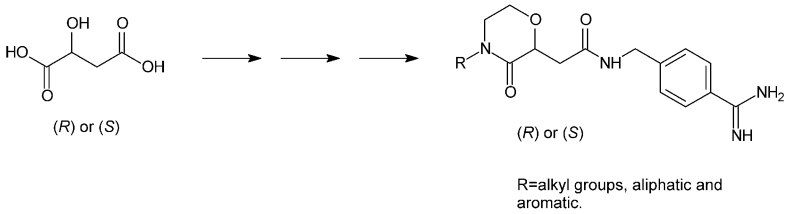
Bioorg. Med. Chem. 10 (2002) 1829

Novel Morpholinone-Based D-Phe-Pro-Arg Mimics as Potential Thrombin Inhibitors: Design, Synthesis, and X-ray Crystal Structure of an Enzyme Inhibitor Complex

Anders Dahlgren,[a] Per-Ola Johansson,[a] Ingemar Kvarnström,[a] Djordje Musil,[b] Ingemar Nilsson[c] and Bertil Samuelsson[d,e]

[a]*Department of Chemistry, Linköping University, S-581 83 Linköping, Sweden*
[b]*AstraZeneca R&D, Structural Chemistry Laboratory, S-431 83 Mölndal, Sweden*
[c]*AstraZeneca R&D, Medicinal Chemistry, S-431 83 Mölndal, Sweden*
[d]*Department of Organic Chemistry, Stockholm University, S-106 91 Stockholm, Sweden*
[e]*Medivir AB, Lunastigen 7, S-141 44 Huddinge, Sweden*

Potential thrombin inhibitors synthesized from malic acid.



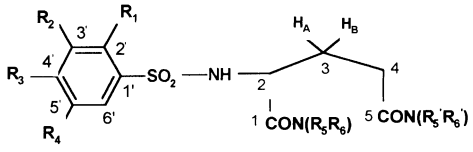
Bioorg. Med. Chem. 10 (2002) 1841

Syntheses, Biological Evaluation and QSAR Study on Antitumor Activity of 1,5-*N*,*N*′-Disubstituted-2-(substituted Benzenesulphonyl) Glutamamides

K. Srikanth, Bikash Debnath and Tarun Jha

Division of Medicinal and Pharmaceutical Chemistry, Department of Pharmaceutical Technology, Jadavpur University, Kolkata-700 032, India

The synthesis, screening and QSAR of 36 new structural variants of glutamine, 1,5-*N*,*N*′-disubsituted-2-(substituted benzenesulphonyl) glutamamides have been reported.



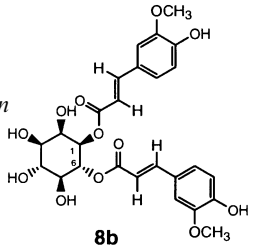
Bioorg. Med. Chem. 10 (2002) 1855

Synthesis of Feruloyl-*myo*-insitol Derivatives and their Inhibitory Effects on Phorbol Ester-Induced Superoxide Generation and Esptein–Barr Virus Activation

Asao Hosoda,[a] Eisaku Nomura,[a] Akira Murakami,[b] Koichi Koshimizu,[b] Hajime Ohigashi,[c] Kazuhiko Mizuno[d] and Hisaji Taniguchi[a]

[a]*Industrial Technology Center of Wakayama Prefecture, 60 Ogura, Wakayama 649-6261, Japan*
[b]*Department of Biotechnological Science, Faculty of Biology-Oriented Science and Technology, Kinki University, Iwade-Uchita, Wakayama 649-6493, Japan*
[c]*Division of Applied Science, Graduate School of Agriculture, Kyoto University, Kyoto 606-8502, Japan*
[d]*Department of Applied Chemistry, College of Engineering, Osaka Prefecture University, 1-1 Gakuen-cho, Sakai, Osaka 599-8531, Japan*

We prepared 14 feruloyl-*myo*-inositol derivatives, and examined their structure–activity relationship of the inhibitory activity toward the TPA-induced O_2^- generation and the EBV activation.



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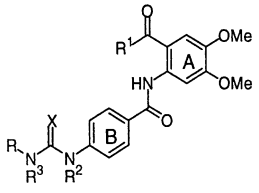
Bioorg. Med. Chem. 10 (2002) 1865

Synthesis and Structure–activity Relationship of Diarylamide Urea Derivatives as Selective Inhibitors of the Proliferation of Human Coronary Artery Smooth Muscle Cells

Haruhisa Ogita, Yoshiaki Isobe, Haruo Takaku, Rena Sekine, Yuso Goto, Satoru Misawa and Hideya Hayashi

Pharmaceuticals & Biotechnology Laboratory, Japan Energy Corporation, 3-17-35, Niizo-Minami, Toda-shi, Saitama 335-8502, Japan

A series of diarylamide urea derivatives were synthesized and evaluated for their inhibitory activities against the proliferation of human coronary artery smooth muscle cells (SMCs) and human coronaty artery endothelial cells (ECs).



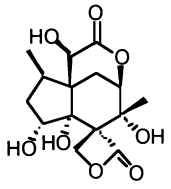
Bioorg. Med. Chem. 10 (2002) 1873

Structure–Activity Relationships of *seco*-Prezizaane Terpenoids in γ-Aminobutyric Acid Receptors of Houseflies and Rats

Tadahiko Kuriyama,[a] Thomas J. Schmidt,[b] Emi Okuyama[c] and Yoshihisa Ozoe[a]

[a]*Department of Life Science and Biotechnology, Faculty of Life and Environmental Science, Shimane University, Matsue, Shimane 690-8504, Japan*
[b]*Institut für Pharmazeutische Biologie der Heinrich-Heine-Universität Düsseldorf, Universitätsstrasse 1, D-40225 Düsseldorf, Germany*
[c]*Faculty of Pharmaceutical Sciences, Chiba University, Inage-Ku, Chiba 263-8522, Japan*

Thirteen *seco*-prezizaane terpenoids including anisatin were investigated for their ability to inhibit the specific binding of a tritiated noncompetitive antagonist to housefly and rat GABA receptors.



Anisatin

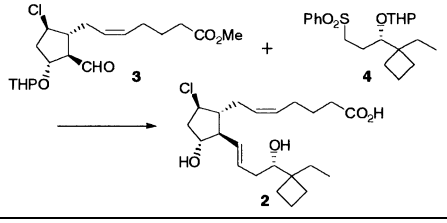
Bioorg. Med. Chem. 10 (2002) 1883

A Practical Synthesis and Biological Evaluation of 9-Halogenated PGF Analogues

Kousuke Tani,[a] Atsushi Naganawa,[a] Akiharu Ishida,[a] Hiromu Egashira,[a] Yoshihiko Odagaki,[a] Toru Miyazaki,[a] Tomoyuki Hasegawa,[b] Yasufumi Kawanaka,[b] Kenji Sagawa,[a] Hiroyuki Harada,[a] Mikio Ogawa,[a] Takayuki Maruyama,[a] Hisao Nakai,[a] Shuichi Ohuchida,[a] Kigen Kondo[a] and Masaaki Toda[a]

[a]*Minase Research Institute, Ono Pharmaceutical Co., Ltd., Shimamoto, Mishima, Osaka 618-8585, Japan*
[b]*Fukui Research Institute, Ono Pharmaceutical Co., Ltd., Mikuni, Sakai, Fukui 913-8538, Japan*

A practical synthetic method of **2** containing Julia olefination of the aldehyde **3** with an optically active sulfone **4** was developed.



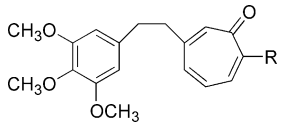
Bioorg. Med. Chem. 10 (2002) 1895

Synthesis and Antimicrotubule Activity of Combretatropone Derivatives

Mark E. Janik[a] and Susan L. Bane[b]

[a]*Department of Chemistry, SUNY-Binghamton, Binghamton, NY 13902, USA*
[b]*Department of Chemistry, SUNY-Fredonia, Fredonia, NY 14063, USA*

Syntheses and antimicrotubule activities of combretatropone derivatives are reported.



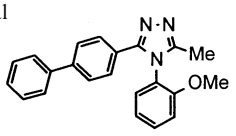
Bioorg. Med. Chem. 10 (2002) 1905

Discovery of 4,5-Diphenyl-1,2,4-triazole Derivatives as a Novel Class of Selective Antagonists for the Human V_{1A} Receptor

Akio Kakefuda, Takeshi Suzuki, Takahiko Tobe, Atsuo Tahara, Shuichi Sakamoto and Shin-ichi Tsukamoto

Institute for Drug Discovery Research, Yamanouchi Pharmaceutical Co. Ltd., 21 Miyukigaoka, Tsukuba, Ibaraki 305-8585, Japan

High-throughput screening using CHO cells expressing the cloned human V_{1A} receptor and further pharmacological evaluation led to the identification of **3** which was an antagonist for the human V_{1A} receptor with the novel 4,5-diphenyl-1,2,4-triazole structure.



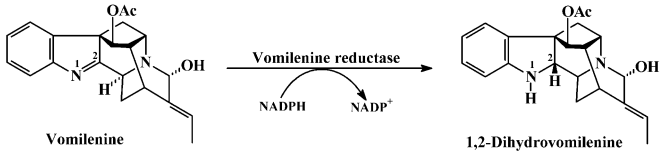
3

Bioorg. Med. Chem. 10 (2002) 1913

Vomilenine Reductase — a Novel Enzyme Catalyzing a Crucial Step in the Biosynthesis of the Therapeutically Applied Antiarrhythmic Alkaloid Ajmaline

Gerald von Schumann, Shujuan Gao and Joachim Stöckigt

Department of Pharmaceutical Biology, Institute of Pharmacy, Johannes Gutenberg-University, Staudinger Weg 5, D-55099 Mainz, Germany

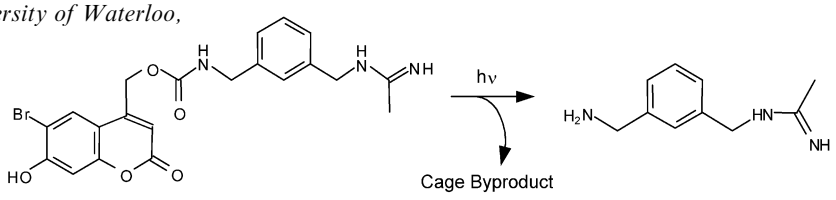


Bioorg. Med. Chem. 10 (2002) 1919

Photo-Control of Nitric Oxide Synthase Activity Using a Caged Isoform Specific Inhibitor

Heather J. Montgomery,[a] Basil Perdicakis,[b] Dan Fishlock,[a] Gilles A. Lajoie,[a] Eric Jervis[b] and J. Guy Guillemette[a]

[a]*Department of Chemistry, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1*
[b]*Department of Chemical Engineering, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1*



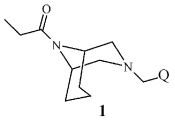
Bioorg. Med. Chem. 10 (2002) 1929

N-3(9)-Arylpropenyl-*N*-9(3)-propionyl-3,9-diazabicyclo[3.3.1]nonanes as μ-Opioid Receptor Agonists. Effects on μ-Affinity of Arylalkenyl Chain Modifications

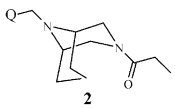
Gérard A. Pinna,[a] Giorgio Cignarella,[b] Giovanni Loriga,[a,c] Gabriele Murineddu,[a,c] Jean-Mario Mussinu,[a] Stefania Ruiu,[c] Paola Fadda[d] and Walter Fratta[d]

[a]*Dipartimento Farmaco Chimico Tossicologico, Università di Sassari, via F. Muroni 23/A, 07100 Sassari, Italy*
[b]*Istituto di Chimica Farmaceutica e Tossicologica, Università di Milano, viale Abruzzi 42, 20131 Milan, Italy*
[c]*Neuroscienze S.c.a.r.l., Zona Industriale Macchiareddu, 09010 Uta, Cagliari, Italy*
[d]*Dipartimento di Neuroscienze, Università di Cagliari, Cittadella Universitaria, 09042 Monserrato, Cagliari, Italy*

A series of 3-cinnamyl-9-propionyl-3,9-diazabicyclo[3.3.1]nonanes (**1b–j**) and related reverted analogues (**2b–j**), in which the cinnamyl moiety was replaced by other aralk(en)yl $N_{9(3)}$-substituents, were synthesised and evaluated for their ability to bind to μ-, δ- and κ-opioid receptors. The binding data indicated that compounds **1i**, **2d**, **2f**, **2g** and **2j** showed high affinity for the μ-receptor, and **2d** or **2f** had high δ/μ selectivity. The N_3-propionyl-N_9-diphenylpropenyl-3,9-diazabicyclo[3.3.1]nonane (**2d**) had potent antinociceptive activity in the hot-plate assay.



1



2

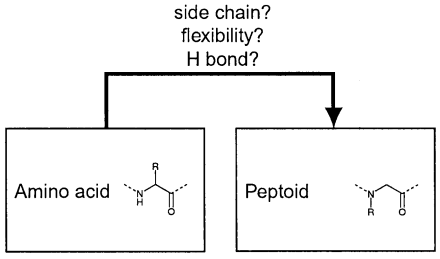
Bioorg. Med. Chem. 10 (2002) 1939

Major Histocompatibility Complex Class II Binding Characteristics of Peptoid–Peptide Hybrids

Ellen C. de Haan,[a] Marca H. M. Wauben,[b] Mayken C. Grosfeld-Stulemeyer,[b] John A. W. Kruijtzer,[a] Rob M. J. Liskamp[a] and Ed E. Moret[a]

[a]*Department of Medicinal Chemistry, Utrecht Institute for Pharmaceutical Sciences, Utrecht University, PO Box 80082, 3508 TB Utrecht, The Netherlands*
[b]*Immunology Division, Department of Infectious Diseases and Immunology, Utrecht University, PO Box 80165, 3508 TD Utrecht, The Netherlands*

The influence of side chain shifting of solvent-exposed peptide residues on MHC class II binding was studied in peptoid–peptide hybrids. It was concluded that the side chain position as well as the backbone nitrogen atom hydrogen bonding features of solvent-exposed peptide residues can be important for MHC binding.



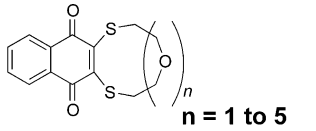
Bioorg. Med. Chem. 10 (2002) 1947

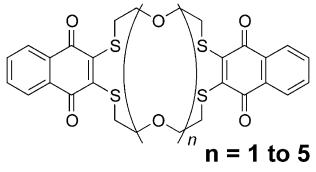
Efficient Synthesis of 'Redox-Switched' Naphthoquinone Thiol-Crown Ethers and Their Biological Activity Evaluation

Sheng-Tung Huang, Hsien-Shou Kuo, Chiao-Long Hsiao and Yuh-Ling Lin

Department of Biochemistry, Taipei Medical University, Taipei, Taiwan

Series of naphthoquinone thiol-crown ethers had been prepared. The antibacterial, antifungal, and cytotoxic activities of these synthetic naphthoquinone thiol-crown ethers were investigated. All of the compounds tested displayed antibacterial, cytotoxic and antifungal activities. The bis-naphthoquinone thiol-crown ether 7a was the most potent inhibitor among tested analogues against *Staphylococcus aureus* methicillin resistance with MIC value of 2.68 mM.





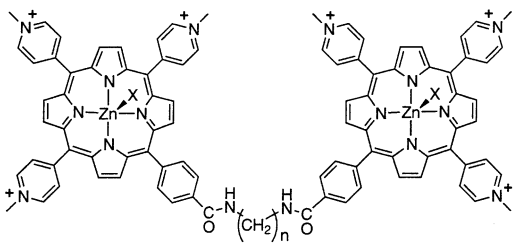
Bioorg. Med. Chem. 10 (2002) 1953

Potent DNA Photocleavage by Zinc(II) Complexes of Cationic Bis-porphyrins Linked with Aliphatic Diamine

Yoshinobu Ishikawa, Naoki Yamakawa and Tadayuki Uno

Faculty of Pharmaceutical Sciences, Kumamoto University, 5-1 Oe-honmachi, Kumamoto 862-0973, Japan

Zinc(II) insertion into metal-free cationic bis-porphyrins linked with a series of aliphatic diamines fully enhanced their DNA photocleavage activities.



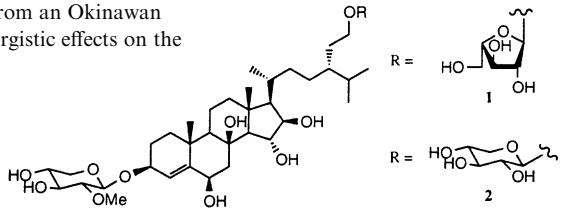
Bioorg. Med. Chem. 10 (2002) 1961

Linckosides A and B, Two New Neuritogenic Steroid Glycosides from the Okinawan Starfish *Linckia laevigata*

Jianhua Qi, Makoto Ojika and Youji Sakagami

Graduate School of Bioagricultural Sciences, Nagoya University, Chikusa-ku, Nagoya 464-8601, Japan

Two new steroid glycosides, named linckosides A (**1**) and B (**2**), were isolated from an Okinawan starfish. They showed notably neuritogenic activity against PC12 cells and synergistic effects on the NGF-induced neuronal differentiation of PC12 cells.

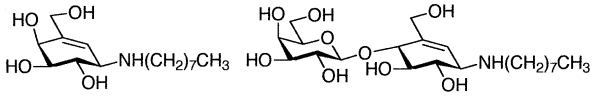


Bioorg. Med. Chem. 10 (2002) 1967

Chemical Modification of the β-Glucocerebrosidase Inhibitor *N*-Octyl-β-valienamine: Synthesis and Biological Evaluation of 4-Epimeric and 4-*O*-(β-D-Galactopyranosyl) Derivatives

Seiichiro Ogawa,[a] Yuko Kobayashi Matsunaga[a] and Yoshiyuki Suzuki[b]

[a]*Department of Applied Chemistry, Faculty of Science and Technology, Keio University, Hiyoshi, Kohoku-ku, Yokohama, 223–8522 Japan*
[b]*Nasu Institute for Developmental Disabilities, International University of Health and Welfare, 2600-7 Kita-Kanemaru, Otawara, 324-0011 Japan*



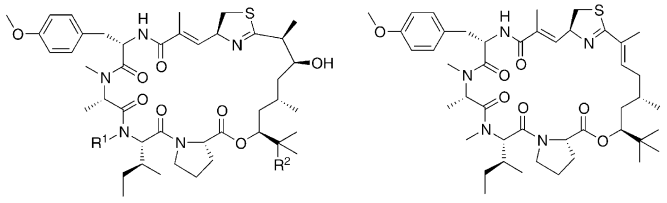
Bioorg. Med. Chem. 10 (2002) 1973

New Apratoxins of Marine Cyanobacterial Origin from Guam and Palau

Hendrik Luesch,[a] Wesley Y. Yoshida,[a] Richard E. Moore[a] and Valerie J. Paul[b]

[a]*Department of Chemistry, University of Hawaii at Manoa, Honolulu, HI 96822, USA*
[b]*University of Guam Marine Laboratory, UOG Station, Mangilao, GU 96913, USA*

Analogues of the potent cytotoxin apratoxin A are described.



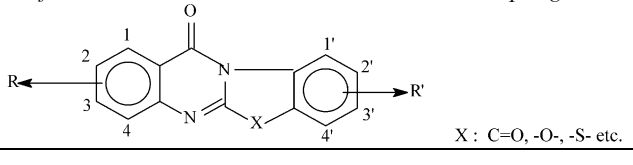
Bioorg. Med. Chem. 10 (2002) 1979

Analysis of Stereoelectronic Properties, Mechanism of Action and Pharmacophore of Synthetic Indolo[2,1-*b*]quinazoline-6,12-dione Derivatives in Relation to Antileishmanial Activity Using Quantum Chemical, Cyclic Voltammetry and 3-D-QSAR CATALYST Procedures

Apurba K. Bhattacharjee, David J. Skanchy, Barton Jennings, Thomas H. Hudson, James J. Brendle and Karl A. Werbovetz

Division of Experimental Therapeutics, Walter Reed Army Institute of Research, 503 Robert Grant Avenue, Silver Spring, MD 20910, USA

Indolo[2,1-*b*]quinazoline-6,12-diones exhibited remarkable antileishmanial activity (< 100 ng/mL).

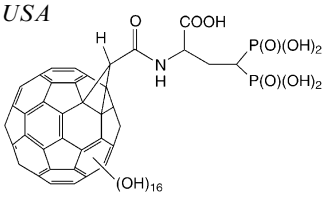


Bioorg. Med. Chem. 10 (2002) 1991

Synthesis and In Vitro Characterization of a Tissue-Selective Fullerene: Vectoring $C_{60}(OH)_{16}$AMBP to Mineralized Bone

Kelly A. Gonzalez,[a] Lon J. Wilson,[a] Wenju Wu[b] and George H. Nancollas[b]

[a]*Department of Chemistry and the Center for Nanoscale Science and Technology and the Laboratory for Biochemical and Genetic Engineering, MS-60, Rice University, PO Box 1892, Houston, TX 77251-1892, USA*
[b]*Department of Chemistry, State University of New York at Buffalo, Buffalo, NY 14214-3001, USA*

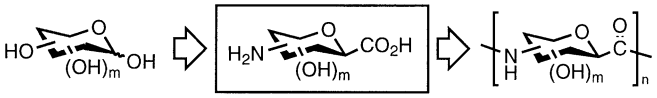


Bioorg. Med. Chem. 10 (2002) 1999

Oligomers of Glycamino Acid

Yoshitomo Suhara,[a] Yoshiki Yamaguchi,[c] Brian Collins,[a] Ronald L. Schnaar,[a] Masaki Yanagishita,[b] James E.K. Hildreth[a], Ichio Shimada[c] and Yoshitaka Ichikawa[a]

[a]*Department of Pharmacology and Molecular Sciences, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205, USA*
[b]*Department of Biochemistry, School of Dentistry, Tokyo Medical and Dental University, 1-5-45 Yushima, Bunkyo-ku, Tokyo 113-8549, Japan*
[c]*Graduate School of Pharmaceutical Sciences, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan*

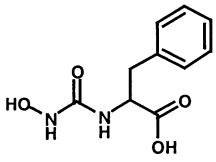


Bioorg. Med. Chem. 10 (2001) 2015

Insight into the Stereochemistry in the Inhibition of CarboxypeptidaseA with *N*-(hydroxyaminocarbonyl)phenylalanine: Binding Modes of an Enantiomeric Pair of the Inhibitor to Carboxypeptidase A

Jae Hyun Cho,[a] Dong H. Kim,[b] Sang J. Chung,[b] Nam-Chul Ha,[c] Byung-Ha Oh[c] and Kwan Yong Choi[a]

[a]*National Research Laboratory for Protein Engineering, Pohang University of Science and Technology, San 31Hyoja-dong, Pohang 790-784, Republic of Korea*
[b]*Center for Biofunctional Molecules, Pohang University of Science and Technology, San 31Hyoja-dong, Pohang 790-784, Republic of Korea*
[c]*National Creative Research Initiative Center for Biomolecular Recognition, Pohang University of Science and Technology, San 31Hyoja-dong, Pohang 790-784, Republic of Korea*



Bioorg. Med. Chem. 10 (2002) 2023

Exploration of the DTrp-NMeLys Motif in the Search for Potent Somatostatin Antagonists

W. G. Rajeswaran,[a] William A. Murphy,[a] John E. Taylor[b] and David H. Coy[a]

[a]*Peptide Research Labs, SL 53, Department of Medicine, Tulane University Health Sciences Center, 1430 Tulane Avenue, New Orleans, LA 70112, USA*
[b]*Biomeasure Inc., Milford, MA 01757, USA*

SAR of DTrp4-NMeLys5 motif in cyclic, bicyclic and bivalent peptides have been explored.

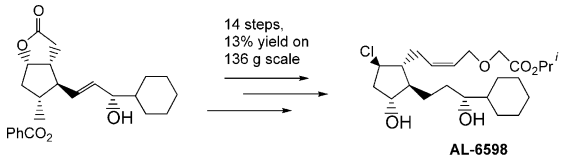
Cpa-(Cys-Tyr-DTrp-NMeLys-Thr-Cys)-Nal-NH_2

Bioorg. Med. Chem. 10 (2002) 2031

3-Oxa-15-cyclohexyl Prostaglandin DP Receptor Agonists as Topical Antiglaucoma Agents

Mark R. Hellberg,[a] Raymond E. Conrow,[b] Najam A. Sharif,[c] Marsha A. McLaughlin,[d] John E. Bishop,[a] Julie Y. Crider,[c] W. Dennis Dean,[b] Kevin A. DeWolf,[b] David R. Pierce,[b] Verney L. Sallee,[d] Robert D. Selliah,[a] Bryon S. Severns,[a,b] Steven J. Sproull,[b] Gary W. Williams,[c] Paul W. Zinke[a] and Peter G. Klimko[a]

[a]*Department of Medicinal Chemistry, Alcon Research, Ltd., Pharmaceutical Products Research, 6201 South Freeway, Fort Worth, TX 76134, USA*
[b]*Department of Chemical Preparations Research, Alcon Research, Ltd., Pharmaceutical Products Research, 6201 South Freeway, Fort Worth, TX 76134, USA*
[c]*Department of Molecular Pharmacology, Alcon Research, Ltd., Pharmaceutical Products Research, 6201 South Freeway, Fort Worth, TX 76134, USA*
[d]*Department of In Vivo Pharmacology, Alcon Research, Ltd., Pharmaceutical Products Research, 6201 South Freeway, Fort Worth, TX 76134, USA*

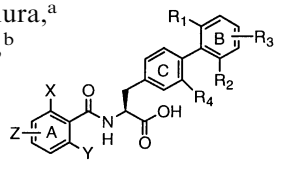


Bioorg. Med. Chem. 10 (2002) 2051

Synthesis and SAR of *N*-Benzoyl-L-Biphenylalanine Derivatives: Discovery of TR-14035, a Dual $\alpha_4\beta_7/\alpha_4\beta_1$ Integrin Antagonist

Ila Sircar,[a] Kristjan S. Gudmundsson,[a] Richard Martin,[a] Jimmy Liang,[a] Sumihiro Nomura,[a] Honnappa Jayakumar,[a] Bradley R. Teegarden,[a] Dawn M. Nowlin,[b] Pina M. Cardarelli,[b] Jason R. Mah,[b] Samuel Connell,[b] Ronald C. Griffith[a] and Elias Lazarides[b]

[a]*Department of Chemical Science, Tanabe Research Laboratories, USA, Inc., 4540 Towne Centre Court, San Diego, CA 92121, USA*
[b]*Department of Biological Science, Tanabe Research Laboratories, USA, Inc., 4540 Towne Centre Court, San Diego, CA 92121, USA*

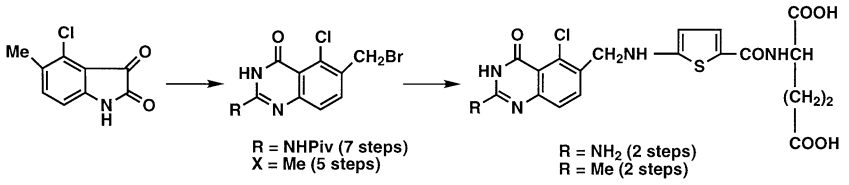


Bioorg. Med. Chem. 10 (2002) 2067

Synthesis and In Vitro Antitumor Activity of Thiophene Analogues of 5-Chloro-5,8-dideazafolic Acid and 2-Methyl-2-desamino-5-chloro-5,8-dideazafolic Acid

Ronald A. Forsch, Joel E. Wright and Andre Rosowsky

Dana-Farber Cancer Institute and the Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, Boston, MA 02115, USA



Bioorg. Med. Chem. 10 (2002) 2077

Novel Tacrine Derivatives that Block Neuronal Calcium Channels

Cristóbal de los Ríos,[a,c] José L. Marco,[c] María D.C. Carreiras,[d] P.M. Chinchón,[c] Antonio G. García[a,b] and Mercedes Villarroya[a]

[a]*Instituto Teófilo Hernando, Departamento de Farmacología, Facultad de Medicina, Universidad Autónoma de Madrid. C/Arzobispo Morcillo, 4, 28029 Madrid, Spain*
[b]*Servicio de Farmacología Clínica e Instituto de Gerontología, Hospital de la Princesa, C/Diego de León 62, 28006 Madrid, Spain*
[c]*Instituto de Química Orgánica General (C.S.I.C.), C/Juan de la Cierva 3, 28006 Madrid, Spain*
[d]*CEFC, Faculdade de Farmácia de Lisbon, Av. das Forças Armadas, 1600 Lisbon, Portugal*