Bioorg. Med. Chem. 10 (2002) 2091

In Vitro Monitoring Sub-Nanogram Amounts Analgin in Human Urine by Its Inhibitory of the Luminol-Periodate Chemiluminescence Reaction Using Reagent Immobilization Release Technique

Zhenghua Song and Ni Zhang

Department of Chemistry, Northwest University, Xi'an, 710069, China

Without any pre-treatment procedures, a selective and sensitive as well as rapid chemiluminescence (CL) flow sensor for the determination of analgin in human urine and medicine is described. It is based on the inhibition of analgin in the CL reaction between luminol and periodate and the CL light decrement is related to the amount of analgin. It was found that the analgin concentration reached its maximum after being orally administrated for 4 h and dropped sharply within a few hours, and the analgin metabolism ratio in 10 h was 9.28% in the body of volunteers.

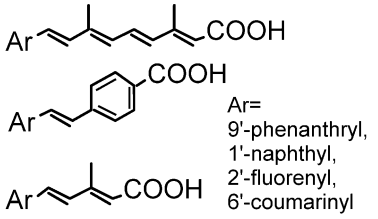
Bioorg. Med. Chem. 10 (2002) 2099

RAR–RXR Selectivity and Biological Activity of New Retinoic Acid Analogues with Heterocyclic or Polycyclic Aromatic Systems

D. Ivanova,[a] C. Gaudon,[b] A. Rossin,[b] W. Bourguet[c] and H. Gronemeyer[b]

[a]*Institute of Organic Chemistry, Bulgarian Academy of Sciences, Sofia 1113, Bulgaria*
[b]*Institut de Genetique et de Biologie Moleculaire et Cellulaire, (IGBMC)/CNRS/INSERM/ULP;BP 163, 67404 Illkirch Cedex, C.U. de Strasbourg, France*
[c]*Centre de Biochimie Structurale, CNRS UMR 5048-UM1-INSERM UMR 554, Faculté de Pharmacie, 15 Avenue C. Flahoult, 34060 Montpellier, France*

Biological activity of new selective retinoids was analysed in genetically engineered 'reporter' cells and in NB4 APL cells. Ligand docking experiments are presented.



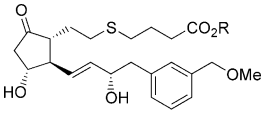
Bioorg. Med. Chem. 10 (2002) 2103

Design and Synthesis of a Selective EP4-receptor Agonist. Part 4: Practical Synthesis and Biological Evaluation of a Novel Highly Selective EP4-Receptor Agonist

Toru Maruyama, Shin-Itsu Kuwabe, Yasufumi Kawanaka, Tai Shiraishi, Yoshiyuki Shinagawa, Kiyoto Sakata, Akiteru Seki, Yoko Kishida, Hideyuki Yoshida, Takayuki Maruyama, Shuichi Ohuchida, Hisao Nakai, Shinsuke Hashimoto, Masanori Kawamura, Kigen Kondo and Masaaki Toda

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

A practical method of synthesizing a highly selective EP4-receptor agonist **1a** and **1b** was developed. Further biological evaluation of **1a** and **1b** was also reported.



1a R = Me
1b R = H

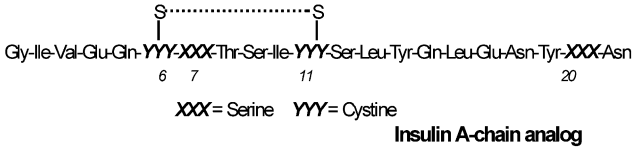
Bioorg. Med. Chem. 10 (2002) 2111

Synthesis, and Functional Properties of a Modified Human Insulin A-Chain: Implication in a 'Mini-Insulin' Structure Determination

Guillaume Le Flem,[a,b] François-Yves Dupradeau,[a] Jean-Pierre Pujol,[b] Jean-Pierre Monti[c] and Patrick Bogdanowicz[b]

[a]*GRPD, UPRES EA 2629, Faculté de Pharmacie et de Médecine, 1–3 rue des Louvels, 80037 Amiens Cedex 1, France*
[b]*Laboratoire de Biochimie du Tissu Conjonctif, UPRES EA 3214, Faculté de Médecine, 14032 Caen Cedex, France*
[c]*GESNIT, UPRES 461, Faculté des Sciences Pharmaceutiques, 146 rue Leo Saignat, 33076 Bordeaux Cedex, France*

A novel insulin A-chain analogue has been synthesized and tested in three in vitro cell culture assays. The data clearly show that this analogue mimics insulin effects on DNA synthesis, glucose uptake and glycogen synthesis without loss of potency as compared to insulin.



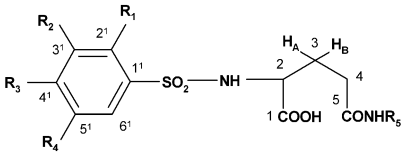
Bioorg. Med. Chem. 10 (2002) 2119

Synthesis, Screening and Quantitative Structure–Activity Relationship (QSAR) Studies of Some Glutamine Analogues for Possible Anticancer Activity

K. Srikanth, Ch. Anil Kumar, Balaram Ghosh and Tarun Jha

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

The synthesis, biological activity and QSAR studies of 36 new glutamine analogues, 5-*N*-substituted-2-(substituted benzenesulphonyl) glutamines have been reported.

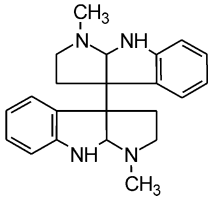


Bioorg. Med. Chem. 10 (2002) 2133

Synthesis and Antinociceptive Activity of Chimonanthines and Pyrrolidinoindoline-Type Alkaloids

L. Verotta,[a] F. Orsini,[a] M. Sbacchi,[b] M.A. Scheildler,[b] T.A. Amador[c] and E. Elisabetsky[c,d]

[a]*Dipartimento di Chimica Organica e Industriale, Università degli Studi di Milano,via Venezian 21, 20133 Milan, Italy*
[b]*Neurobiology Research, GlaxoSmithKline, Via Zambeletti, I-20021 Baranzate di Bollate, Milan, Italy*
[c]*Curso de Pós-graduação em Ciências Biológicas-Bioquímica, Universidade Federal do Rio Grande do Sul, Ramiro Barcelos 2600/anexo, Porto Alegre/RS, Brazil*
[d]*Departamento de Farmacologia, Universidade Federal do Rio Grande do Sul, Rua Sarmento Leite 500/202, 90040-100, Porto Alegre/RS, Brazil*



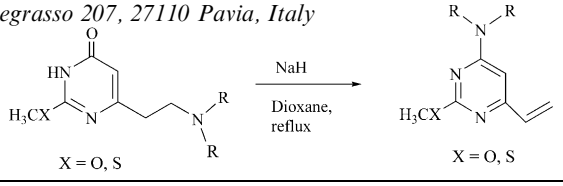
(+)-, (−)-, (meso)-chimonanthine and the pyrrolidinoindoline-type intermediates from the synthetic pathway were tested in in vitro, in vivo models of analgesia, and compared to the active natural compound hodgkinsine, a trimeric pyrrolidinoindoline alkaloid isolated from *Psychotria colorata* (Rubiaceae).

Bioorg. Med. Chem. 10 (2002) 2143

A New and Efficient Synthesis of Substituted 6-[(2′-Dialkylamino) ethyl] Pyrimidine and 4-*N*,*N*-Dialkyl-6-vinyl-cytosine Derivatives and Evaluation of their Anti-Rubella Activity

Raffaele Saladino,[a] Umberto Ciambecchini,[a] Giovanni Maga,[b] Paola Mastromarino,[c] Cinzia Conti[c] and Maurizio Botta[d]

[a]*Unità INFM, Dipartimento Agrochimico Agrobiologico, Università della Tuscia, via San Camillo de Lellis, 01100 Viterbo, Italy*
[b]*Istituto di Genetica Biochimica ed Evoluzionistica del CNR, Via Abbiategrasso 207, 27110 Pavia, Italy*
[c]*Dipartimento di Scienze di Sanità Pubblica, Università di Roma 'La Sapienza', P.le Aldo Moro 5, 00185, Rome, Italy*
[d]*Dipartimento Farmaco Chimico Tecnologico, Banchi di Sotto 55, Università degli Studi, 53100 Siena, Italy*

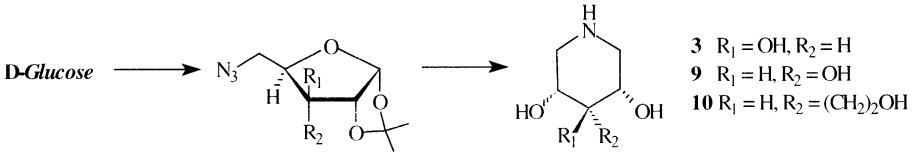


Bioorg. Med. Chem. 10 (2002) 2155

1-Aza-sugars from D-Glucose. Preparation of 1-Deoxy-5-dehydroxymethyl) Nojirimycin, Its Analogues and Evaluation of Glycosidase Inhibitory Activity

Nitin T. Patil,[a] Sheeja John,[b] Sushma G. Sabharwal[b] and Dilip D. Dhavale[a]

[a]*Department of Chemistry, Garware Research Centre, University of Pune, Pune-411 007, India*
[b]*Department of Chemistry, Division of Biochemistry, University of Pune, Pune-411 007, India*



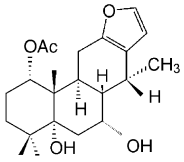
Bioorg. Med. Chem. 10 (2002) 2161

Molecular Structures and Antiviral Activities of Naturally Occurring and Modified Cassane Furanoditerpenoids and Friedelane Triterpenoids from *Caesalpinia minax*

Ren-Wang Jiang,[a] Shuang-Cheng Ma,[b] Zhen-Dan He,[b] Xue-Song Huang,[c] Paul Pui-Hay But,[b] Hua Wang,[b] Siu-Pang Chan,[a] Vincent Eng-Choon Ooi,[b] Hong-Xi Xu[b] and Thomas C.W. Mak[a]

[a]*Department of Chemistry & Institute of Chinese Medicine, The Chinese University of Hong Kong, Hong Kong SAR, PR China*
[b]*Department of Biology & Institute of Chinese Medicine, The Chinese University of Hong Kong, Hong Kong SAR, PR China*
[c]*College of Food Science and Engineering, Shandong Agricultural University, Taian, Shan Dong, PR China*

Three cassane fuanoditerpenoids **1**–**3** and a friedelane triterpenoid (**7**) were isolated from seed and stem of *Caesalpinia minax*, respectively. The antiviral activities of these natural compounds and their reductive products **4**–**6** and **8** were assessed by CPE reduction assay.



caesalmin H (**1**)

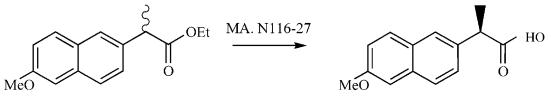
Bioorg. Med. Chem. 10 (2002) 2171

Enantioselective Hydrolysis of Naproxen Ethyl Ester Catalyzed by Monoclonal Antibodies

Zhen-Dan Shi,[a] Bing-Hui Yang,[a] Jing-Jing Zhao,[a] Yu-Lin Wu,[a] Yong-Yong Ji[b] and Ming Yeh[b]

[a]*State Key Laboratory of Bio-organic and Natural Products Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 354 Fenglin Road, Shanghai 200032, China*
[b]*Shanghai Institute of Cell Biology, Chinese Academy of Sciences, Shanghai 200031, China*

Monoclonal antibody N116-27 capable of enantioselective hydrolysis of the *R*-(−)-naproxen ethyl ester was described.



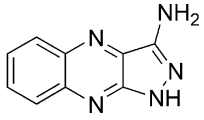
1a **2c**

Bioorg. Med. Chem. 10 (2002) 2177

Pyrazolo[3,4-*b*]quinoxalines. A New Class of Cyclin-Dependent Kinases Inhibitors

Miguel A. Ortega,[a] María E. Montoya,[b] Belén Zarranz,[a] Andrés Jaso,[a] Ignacio Aldana,[a] Sophie Leclerc,[c] Laurent Meijer[c] and Antonio Monge[a]

[a]*Unidad en Investigación y Desarrollo de Medicamentos, Centro de Investigación en Farmacobiología Aplicada (CIFA), Universidad de Navarra, E-31080 Pamplona, Spain*
[b]*Facultad de Farmacia y Bioquímica, Universidad Nacional Mayor de San Marcos, Lima, Peru*
[c]*Cell Cycle Laboratory, CNRS, Station Biologique, BP 74, 29682 Roscoff Cedex, Bretagne, France*



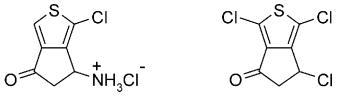
The synthesis and inhibitory activity of CDK's of numerous pyrazolo[3,4-*b*]quinoxalines are described here. The most active compound (shown in the figure) proved to be a good inhibitor of the brain kinases CDK5/p25 and GSK-3, in addition to CDK1/cyclin B. None of the compounds showed any activity in the CDC25 phosphatase assay. As an additional approach, affinity chromatography on immobilized pyrazolo-[3,4-*b*]quinoxalines will be used to identify the intracellular targets of this family of compounds.

Bioorg. Med. Chem. 10 (2002) 2185

Synthesis and Biological Evaluation of Cyclopenta[*c*]thiophene Related Compounds as New Antitumor Agents

Patrick Dallemagne, Lan Pham Khanh, Abdellah Alsaïdi, Olivier Renault, Isabelle Varlet, Valérie Collot, Ronan Bureau and Sylvain Rault

Centre d'Etudes et de Recherche sur le Médicament de Normandie, U.F.R. des Sciences Pharmaceutiques, Université de Caen, 1, rue Vaubénard 14032 Caen cedex, France



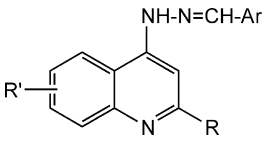
Bioorg. Med. Chem. 10 (2002) 2193

Synthesis and Anti-Tubercular Evaluation of 4-Quinolylhydrazones

Luisa Savini, Luisa Chiasserini, Alessandra Gaeta and Cesare Pellerano

Dipartimento Farmaco Chimico Tecnologico, Università degli Studi di Siena, Via A. Moro, 53100 Siena, Italy

A series of 4-quinolylhydrazones were synthesized by 4-quinolylhydrazine and aryl- or heteroaryl-carboxaldehyde. These compounds, tested against *Mycobacterium tuberculosis* H37Rv, showed interesting antitubercular properties. Two compounds resulted active also against *Mycobacterium avium*.



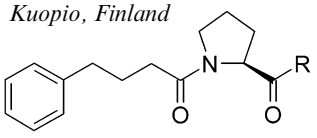
Bioorg. Med. Chem. 10 (2002) 2199

4-Phenylbutanoyl-2(*S*)-acylpyrrolidines and 4-Phenylbutanoyl-L-prolyl-2(*S*)-acylpyrrolidines as Prolyl Oligopeptidase Inhibitors

Erik A. A. Wallén,[a] Johannes A. M. Christiaans,[a] Susanna M. Saario,[a] Markus M. Forsberg,[b] Jarkko I. Venäläinen,[b] Hanna M. Paso,[b] Pekka T. Männistö[b,c] and Jukka Gynther[a,c]

[a]*Department of Pharmaceutical Chemistry, University of Kuopio, PO Box 1627, FIN-70211 Kuopio, Finland*
[b]*Department of Pharmacology and Toxicology, University of Kuopio, P.O.Box 1627, FIN-70211 Kuopio, Finland*
[c]*Finncovery Ltd., Kuopio, Finland*

New 4-phenylbutanoyl-2(*S*)-acylpyrrolidines and 4-phenylbutanoyl-L-prolyl-2(*S*)-acylpyrrolidines were synthesized. Their inhibitory activity against prolyl oligopeptidase from pig brain was tested in vitro. In the series of 4-phenylbutanoyl-2(*S*)-acylpyrrolidines, the cyclopentanecarbonyl and benzoyl derivatives have IC_{50} values of 30 and 23 nM, respectively.



R=cyclopentyl: IC_{50}=30 nM
R=phenyl: IC_{50}=23 nM

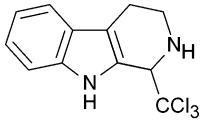
Bioorg. Med. Chem. 10 (2002) 2207

1-Trichloromethyl-1,2,3,4-tetrahydro-β-carboline (TaClo) and Related Derivatives: Chemistry and Biochemical Effects on Catecholamine Biosynthesis

Gerhard Bringmann,[a] Doris Feineis,[a] Ralf God,[a] Karl Peters,[b] Eva-Maria Peters,[b] Joachim Scholz,[c] Franz Riederer[c] and Andreas Moser[c]

[a]*Institut für Organische Chemie, Universität Würzburg, Am Hubland, D-97074 Würzburg, Germany*
[b]*Max-Planck-Institut für Festkörperforschung, Heisenbergstraße 1, D-70506 Stuttgart, Germany*
[c]*Klinik für Neurologie, Universitätsklinikum Lübeck, Ratzeburger Allee 160, D-23538 Lübeck, Germany*

The mammalian alkaloid TaClo dose-dependently inhibited basal tyrosine hydroxylase (TH) activity in vitro using rat brain homogenates prepared from the TH-rich nucleus accumbens.



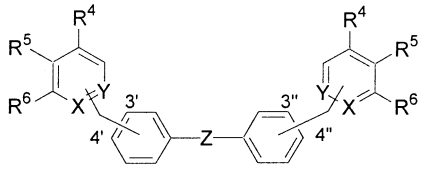
'TaClo'

Bioorg. Med. Chem. 10 (2002) 2215

Quantitative Structure–Activity Relationships for a Series of Symmetrical Bisquaternary Anticancer Compounds

Joaquín M. Campos,[a] María C. Núñez,[a] Rosario M. Sánchez,[a] José A. Gómez-Vidal,[a] Agustín Rodríguez-González,[b] Mónica Báñez,[b] Miguel A. Gallo,[a] Juan Carlos Lacal[b] and A. Espinosa[a]

[a]*Departamento de Química Farmacéutica y Orgánica, Facultad de Farmacia, c/Campus de Cartuja s/n, 18071 Granada Spain*
[b]*Instituto de Investigaciones Biomédicas, Consejo Superior de Investigaciones Científicas, c/Arturo Duperier, 28029 Madrid, Spain*



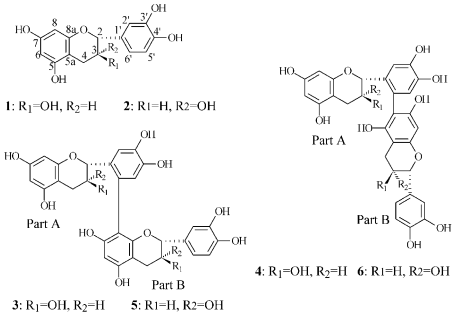
Bioorg. Med. Chem. 10 (2002) 2233

Chemical Studies on Antioxidant Mechanism of Tea Catechins: Analysis of Radical Reaction Products of Catechin and Epicatechin with 2,2-Diphenyl-1-picrylhydrazyl

Shengmin Sang,[a] Xiaofang Cheng,[b] Ruth E. Stark,[b] Robert T. Rosen,[a] Chung S. Yang[c] and Chi-Tang Ho[a]

[a]*Department of Food Science and Center for Advanced Food Technology, Rutgers University, 65 Dudley Road, New Brunswick, NJ 08901-8520, USA*
[b]*Department of Chemistry, College of Staten Island, City University of New York, NY 10314, USA*
[c]*Laboratory for Cancer Research, College of Pharmacy, Rutgers University, 164 Frelinghuysen Road, Piscataway, NJ 08854-8020, USA*

Two reaction products of (+)-catechin, and two reaction products of (−)-epicatechin were purified and identified, when they were reacted separately with DPPH radical. Structure elucidation of these products can provide insights into specific mechanisms of antioxidant reaction. A possible mechanism of the formation of reaction products is suggested.



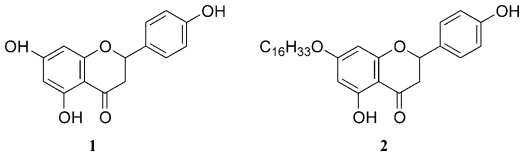
Bioorg. Med. Chem. 10 (2002) 2239

Supplementation of Naringenin and Its Synthetic Derivative Alters Antioxidant Enzyme Activities of Erythrocyte and Liver in High Cholesterol-Fed Rats

Mi-Kyung Lee,[a] Song-Hae Bok,[b] Tae-Sook Jeong,[b] Surk-Sik Moon,[c] Seung-Eun Lee,[c] Yong Bok Park[d] and Myung-Sook Choi[a]

[a]*Department of Food Science and Nutrition, Kyungpook National University, Taegu, South Korea*
[b]*Cardiovascular Research Laboratory, Korea Research Institute of Bioscience and Biotechnology, PO Box 115, Taejon, South Korea*
[c]*Department of Chemistry, Kongju National University, Kongju, South Korea*
[d]*Department of Genetic Engineering, Kyungpook National University, Taegu, South Korea*

The antioxidative effects of naringenin (**1**) and its synthetic derivative, naringenin-7-*O*-cetyl ether (**2**) in high-cholestrol fed rats. The supplementation of **1** and **2** was effective in improving the antioxidant capacity of the erythrocyte and liver.

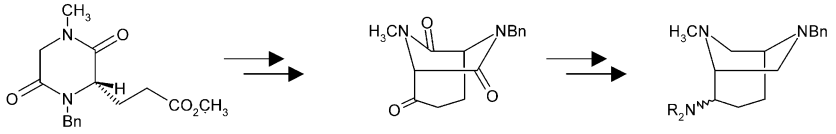


Bioorg. Med. Chem. 10 (2002) 2245

Conformationally Constrained Ethylenediamines: Synthesis and Receptor Binding of 6,8-Diazabicyclo[3.2.2]nonanes

Manuela Weigl, Stephan Bedürftig, Christoph A. Maier and Bernhard Wünsch

Pharmazeutisches Institut der Universität Freiburg, Albertstraße 25, D-79104 Freiburg i. Br., Germany



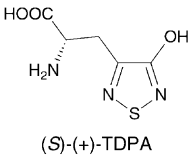
Bioorg. Med. Chem. 10 (2002) 2259

2-Amino-3-(3-hydroxy-1,2,5-thiadiazol-4-yl)propionic Acid: Resolution, Absolute Stereochemistry and Enantiopharmacology at Glutamate Receptors

Tommy N. Johansen, Yves L. Janin, Birgitte Nielsen, Karla Frydenvang, Hans Bräuner-Osborne, Tine B. Stensbøl, Stine B. Vogensen, Ulf Madsen and Povl Krogsgaard-Larsen

Department of Medicinal Chemistry, NeuroScience PharmaBiotec Research Center, The Royal Danish School of Pharmacy, 2 Universitetsparken, DK-2100 Copenhagen, Denmark

(*RS*)-2-Amino-3-(3-hydroxy-1,2,5-thiadiazol-4-yl)propionic acid [(*RS*)-TDPA] was synthesized, chromatographically resolved, and pharmacologically characterized at glutamate receptors. Both enantiomers showed AMPA receptor agonist activites, (*R*)-TDPA showing lower affinity but higher potency than (*S*)-TDPA. (*S*)-TDPA also showed agonist activity at cloned group I, but not group II or III, metabotropic receptors.



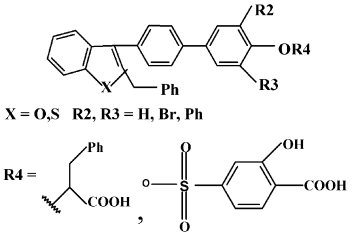
Bioorg. Med. Chem. 10 (2002) 2267

3D-QSAR CoMFA and CoMSIA on Protein Tyrosine Phosphatase 1B Inhibitors

V. Sreenivasa Murthy and Vithal M. Kulkarni

Pharmaceutical Technology and Pharmacy Division, Institute of Chemical Technology, University of Mumbai, Matunga, Mumbai 400 019, India

3D-QSAR CoMFA and CoMSIA was performed on a series of benzofuran/benzothiophene biphenyls as PTP 1B inhibitors with anti-hyperglycemic activity. Comparison of 3D-QSAR contour maps with steric, electrostatic and hydrophobic properties of the PTP 1B enzyme shows a high level of compatibility



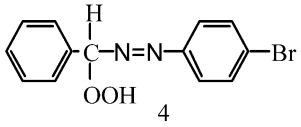
Bioorg. Med. Chem. 10 (2002) 2283

Hydroxyl Radical as a Strong Electrophilic Species

Hiroshi Marusawa,[a] Kazuhiko Ichikawa,[b] Nozomu Narita,[b] Hiromu Murakami,[b] Keiichi Ito[b] and Takahiro Tezuka[b]

[a]*Medical Supplies & Systems, Fujisawa Pharmaceutical Co., Ltd., 10-2 Kanda-Tomiyamacho, Chiyoda-ku, Tokyo 101-0043, Japan*
[b]*Department of Chemistry, University of Tsukuba, 1-1-1 Tennoudai, Tsukuba, Ibaraki 305-8575, Japan*

In order to clarify an index which would be used as proof of the presence of hydroxyl radical, a new isomer distribution ratio of phenols formed from aromatic hydroxylation by photolysis of [(4-bromophenyl)diazenyl](phenyl)-methyl hydroperoxide **4** as a stable source of hydroxyl radical is reported.



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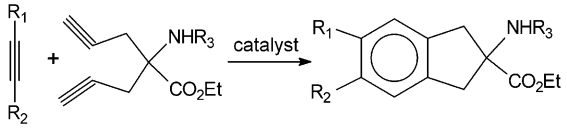
Bioorg. Med. Chem. 10 (2002) 2291

Synthesis of Constrained Phenylalanine Derivatives Via a [2 + 2 + 2] Cycloaddition Strategy

Sambasivarao Kotha and Enugurthi Brahmachary

Department of Chemistry, Indian Institute of Technology—Bombay, Mumbai-400 076, India

A simple synthesis of various constrain phenylalanine derivatives is described via a [2 + 2 + 2] cycloaddition reaction as a key step.



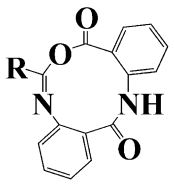
Bioorg. Med. Chem. 10 (2002) 2297

An Efficient, Convenient Synthesis of Novel Medium-Sized 13*H*-Dibenzo[*d*,*h*][1,3,7]oxadiazecine-8,14-dione Macrolides as Anticipated Antineoplastic Agents

Atef Abdel-Monem Abdel-Hafez

Department of Pharmaceutical Medicinal Chemistry, Faculty of Pharmacy, Assiut University, Assiut 71526, Egypt

In an ongoing effort to develop new antineoplastic agents, a series of novel medium-sized 13*H*-dibenzo [*d*,*h*][1,3,7]oxadiazecine-8,14-dione macrolides were synthesized and evaluated for their anticancer activity.



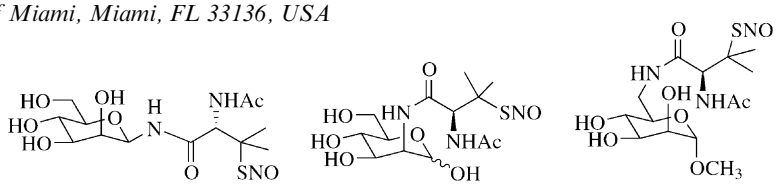
Bioorg. Med. Chem. 10 (2002) 2303

Synthesis and Cytotoxicities of Mannose Conjugated *S*-Nitroso-*N*-acetylpenicillamine (SNAP)

Xuejun Wu,[a] Xiaoping Tang,[a] Ming Xian,[a] Paul G. Brauschweiger[b] and Peng George Wang[a]

[a]*Department of Chemistry, Wayne State University, Detroit, MI 48202, USA*
[b]*Department of Radiation Oncology, University of Miami, Miami, FL 33136, USA*

A series of mannose conjugated *S*-nitroso-*N*-acetylpenicillamines (SNAPs) has been synthesized, and their cytotoxicities were assessed for DU 145 human prostate cancer cells and Hela R cancer cells.

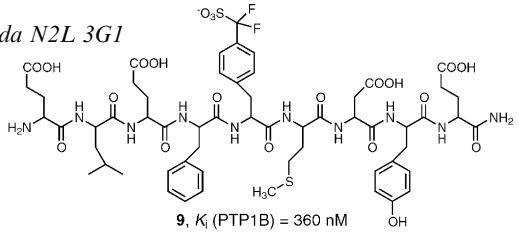


Bioorg. Med. Chem. 10 (2002) 2309

The Difluoromethylenesulfonic Acid Group as a Monoanionic Phosphate Surrogate for Obtaining PTP1B Inhibitors

Carmen Leung, Justyna Grzyb, Jason Lee, Natalie Meyer, Gabriel Hum, Chenguo Jia, Shifeng Liu and Scott D. Taylor

Department of Chemistry, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1



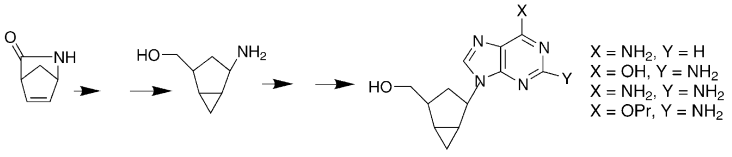
Bioorg. Med. Chem. 10 (2002) 2325

Synthesis of Conformationally Restricted 2′,3′-*exo*-Methylene Carbocyclic Nucleosides Built on a Bicyclo[3.1.0]hexane Template

Rashmi Gupta Bhushan and Robert Vince

Department of Medicinal Chemistry, College of Pharmacy, University of Minnesota, Minneapolis, MN 55455, USA

A series of 2′,3′-*exo*-methylene carbocyclic nucleosides built on a bicyclo[3.1.0]hexane template was synthesized as potential antiviral compounds.



Bioorg. Med. Chem. 10 (2002) 2335

A Simple Method for the Preparation of (5*Z*,8*Z*,11*Z*,14*Z*)-16-Hydroxyeicosa-5,8,11,14-tetraenoic Acid Enantiomers and the Corresponding 14,15-Dehydro Analogues: Role of the 16-Hydroxy Group for the Lipoxygenase Reaction

Igor V. Ivanov,[a,c] Stepan G. Romanov,[a] Nataliya V. Groza,[a] Santosh Nigam,[b] Hartmut Kuhn[c] and Galina I. Myagkova[a]

[a]*M.V. Lomonosov State Academy of Fine Chemical Technology, 117571 Pr. Vernadskogo 86, Moscow, Russian Federation*
[b]*Eicosanoid Research Division, Department of Gynecology, University Medical Centre Benjamin Franklin, Free University Berlin, D-12200 Berlin, Germany*
[c]*Institute of Biochemistry, University Clinics Charité, Humboldt University, D-10115 Berlin, Germany*

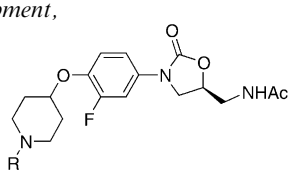
Bioorg. Med. Chem. 10 (2002) 2345

Novel Piperidinyloxy Oxazolidinone Antibacterial Agents. Diversification of the *N*-Substituent

Michele A. Weidner-Wells, Christine M. Boggs, Barbara D. Foleno, John Melton, Karen Bush, Raul M. Goldschmidt and Dennis J. Hlasta

Antimicrobial Agents Research Team, Johnson and Johnson Pharmaceutical Research and Development, LLC 1000 Route 202, Raritan, NJ 08869, USA

Oxazolidinone antibacterial agents, where the morpholino group of linezolid was replaced with an *N*-substituted piperidinyloxy moiety, were synthesized and shown to be active against a variety of resistant and susceptible Gram-positive organisms. The functionality attached to the piperidine nitrogen was varied to determine the SAR for this series.

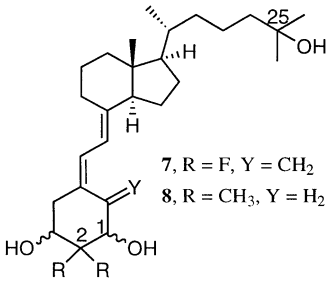


Bioorg. Med. Chem. 10 (2002) 2353

2,2-Disubstituted Analogues of the Natural Hormone 1α,25-Dihydroxyvitamin D_3: Chemistry and Biology

Gary H. Posner,[a,*] Benjamin T. Woodard,[a] Kenneth R. Crawford,[a] Sara Peleg,[b] Alex J. Brown,[c] Patrick Dolan[d] and Thomas W. Kensler[d]

[a]*Department of Chemistry, Krieger School of Arts and Sciences, The Johns Hopkins University, Baltimore, MD 21218, USA*
[b]*Department of Medical Specialties, The University of Texas, M. D. Anderson Cancer Center, Houston, TX, 77030, USA*
[c]*Renal Division, Washington University School of Medicine, St. Louis, MO 63110, USA*
[d]*Department of Environmental Health Sciences, Division of Toxicological Sciences, Bloomberg School of Public Health, The Johns Hopkins University, Baltimore, MD 21205, USA*



7, R = F, Y = CH_2
8, R = CH_3, Y = H_2

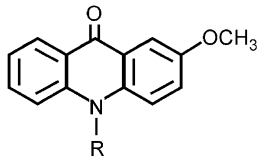
Bioorg. Med. Chem. 10 (2002) 2367

Synthesis and Chemical Characterization of 2-Methoxy-N^{10}-substituted Acridones Needed to Reverse Vinblastine Resistance in Multidrug Resistant (MDR) Cancer Cells

Gowdahalli Krishnegowda,[a] Padma Thimmaiah,[b] Ravi Hegde,[c] Chhabil Dass,[d] Peter J. Houghton[b] and Kuntebommanahalli N. Thimmaiah[b]

[a]*Department of Biochemistry and Molecular Biology, Georgetown University Medical Center, 3900 Reservoir Road, NW, Washington DC 20007-219, USA*
[b]*Department of Molecular Pharmacology, St. Jude Children's Research Hospital, Memphis, TN 38105-2794, USA*
[c]*Department of Studies in Chemistry, University of Mysore, Mysore-570 006, India*
[d]*Department of Chemistry, University of Memphis, Memphis, TN 38152, USA*

MDR has posed a major threat to the clinicians for the treatment of cancer. In an attempt to identify clinically useful modulators, 19 acridones have been synthesized and evaluated for anti-MDR activity. Five compounds were able to completely reverse the resistance of the cancer cells to vinblastine and the modulators seem to be working in a P-gp dependent manner.



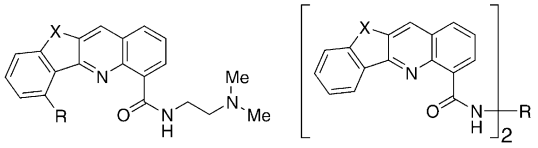
Bioorg. Med. Chem. 10 (2002) 2381

Synthesis and Cytotoxic Activity of *N*-(2-Diethylamino)ethylcarboxamide and Other Derivatives of 10*H*-Quindoline

Junjie Chen,[a] Leslie W. Deady,[a] Anthony J. Kaye,[a] Graeme J. Finlay,[b] Bruce C. Baguley[b] and William A. Denny[b]

[a]*Chemistry Department, La Trobe University, Victoria 3086, Australia*
[b]*Auckland Cancer Society Research Centre, Faculty of Medical and Health Sciences, The University of Auckland, Private Bag 92019, Auckland 1000, New Zealand*

Mono- and dimeric *N*-methylquindoline carboxamides were prepared and shown to have moderate cytotoxic potency.

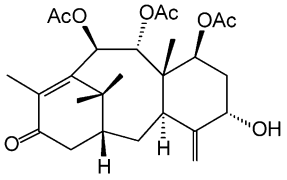


Bioorg. Med. Chem. 10 (2002) 2387

Design and Syntheses of Putative Bioactive Taxanes

Anastasia Nikolakakis,[a] Jian Hui Wu,[b] Gerald Batist,[b] Françoise Sauriol,[c] Orval Mamer[d] and Lolita O. Zamir[a,b]

[a]*Human Health Research Center, INRS-Institut Armand-Frappier, Université du Québec, 531 Boulevard des Prairies, Laval, Québec, Canada, H7V 1B7*
[b]*McGill Center for Translational Research in Cancer, Sir Mortimer B. Davis-Jewish General Hospital, 3755 Côte Ste. Catherine Rd., Suite D-127, Montréal, Québec, Canada, H3T 1E2*
[c]*Department of Chemistry, Queen's University, Kingston, Ontario, Canada, K7L 3N6*
[d]*Biomedical Mass Spectrometry Unit, McGill University, 1130 Pine Avenue west, Montreal, Québec, Canada H3A 1A3*



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Reduction with activated zinc in glacial acetic acid of taxane **1** led to unusual rearranged products. Molecular modeling and semi-syntheses of these compounds with a docetaxel side chain are discussed.

Bioorg. Med. Chem. 10 (2002) 2397

Synthesis and Evaluation of Taxol–Folic Acid Conjugates as Targeted Antineoplastics

Jae Wook Lee, June Y. Lu, P. S. Low and P. L. Fuchs

Department of Chemistry, Purdue University, West Lafayette, IN 47907, USA

Synthesis
Hydrolytic stability
In vitro cytotoxicity
In vivo cytotoxicity