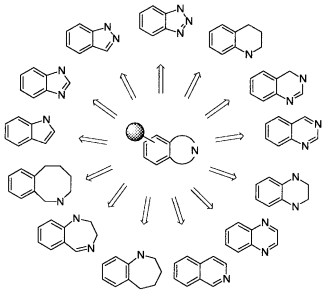
Bioorg. Med. Chem. 10 (2002) 2415

The Recent Impact of Solid-Phase Synthesis on Medicinally Relevant Benzoannelated Nitrogen Heterocycles

Stefan Bräse, Carmen Gil and Kerstin Knepper

Kekulé-Institut für Organische Chemie und Biochemie der Rheinischen Friedrich-Wilhelms-Universität Bonn, Gerhard-Domagk-Strasse 1, D-53121 Bonn, Germany



Bioorg. Med. Chem. 10 (2002) 2439

Hydrazinocurcumin, a Novel Synthetic Curcumin Derivative, Is a Potent Inhibitor of Endothelial Cell Proliferation

Joong Sup Shim,[a] Dong Hoon Kim,[a] Hye Jin Jung,[a] Jin Hee Kim,[a] Dongyeol Lim,[b] Seok-Ki Lee,[c] Kyu-Won Kim,[c] Jong Woong Ahn,[d] Jong-Shin Yoo,[e] Jung-Rae Rho,[f] Jongheon Shin[f] and Ho Jeong Kwon[a]

[a]*Department of Bioscience and Biotechnology, Institute of Bioscience, Sejong University, 98 Kunja-dong, Kwangjin-gu, Seoul 143-747, Republic of Korea*

[b]*Department of Applied Chemistry, Institute of Bioscience, Sejong University, 98 Kunja-dong, Kwangjin-gu, Seoul 143-747, Republic of Korea*

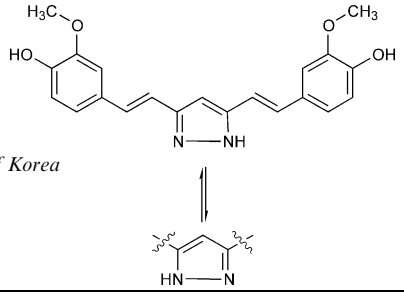
[c]*Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, Seoul 151-742, Republic of Korea*

[d]*Korea Research Institute of Chemical Technology, PO Box 41, Yusong, Daejon, 305-600, Republic of Korea*

[e]*Korea Basic Science Institute, PO Box 107, Yusong, Daejon, 305-333, Republic of Korea*

[f]*Marine Natural Products Laboratory, Korea Ocean Research and Development Institute, Ansan 425-600, Republic of Korea*

The synthesis, structural analysis, and biological activities of hydrazinocurcumin are described.



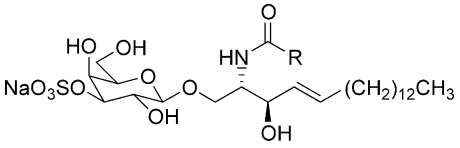
Bioorg. Med. Chem. 10 (2002) 2445

Studies on Scavenger Receptor Inhibitors. Part 1: Synthesis and Structure–Activity Relationships of Novel Derivatives of Sulfatides

Kazuya Yoshiizumi, Fumio Nakajima, Rika Dobashi, Noriyasu Nishimura and Shoji Ikeda

R & D Laboratories, Nippon Organon K.K., 1-5-90, Tomobuchi-cho, Miyakojima-ku, Osaka 534-0016, Japan

The structure–activity relationships of sulfatides as a scavenger receptor inhibitor is described. Novel scavenger receptor inhibitors with synthetic easiness are reported.



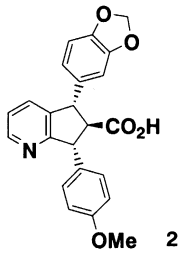
Bioorg. Med. Chem. 10 (2002) 2461

6-Carboxy-5,7-diarylcyclopenteno[1,2-*b*]pyridine Derivatives: A Novel Class of Endothelin Receptor Antagonists

Kenji Niiyama, Toshiaki Mase, Hirobumi Takahashi, Akira Naya, Kasumi Katsuki, Toshio Nagase, Satoshi Ito, Takashi Hayama, Akihiro Hisaka, Satoshi Ozaki, Masaki Ihara, Mitsuo Yano, Takahiro Fukuroda, Kazuhito Noguchi, Masaru Nishikibe and Kiyofumi Ishikawa

Tsukuba Research Institute, Banyu Pharmaceutical Co. Ltd., 3 Okubo, Tsukuba, Ibaraki 300-2611, Japan

A novel endothelin receptor antagonist **2** was identified. The detailed structure–activity relationships of **2** and related compounds were investigated.



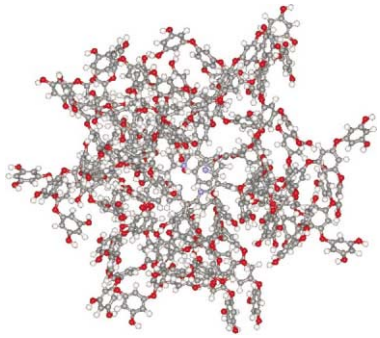
Bioorg. Med. Chem. 10 (2002) 2471

Computer-Aided Simulation of a Dendrimer with a Protoporphyrinic Core as Potential, Novel Hemoprotein Mimic

Maurizio Fermeglia, Marco Ferrone and Sabrina Pricl

Computer-aided Systems Laboratory, Department of Chemical Engineering—DICAMP, University of Trieste, Piazzale Europa 1, 34127 Trieste, Italy

In this work we report the results obtained by applying computer-aided simulations to a class of synthetic, dendrimeric macromolecules with a protoporphyrinic core, which can bind oxygen stably.



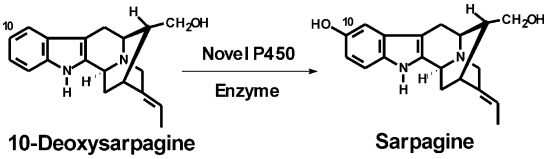
Bioorg. Med. Chem. 10 (2002) 2479

Deoxysarpagine Hydroxylase — A Novel Enzyme Closing a Short Side Pathway of Alkaloid Biosynthesis in *Rauvolfia*

Bingwu Yu, Martin Ruppert and Joachim Stöckigt

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

10-Deoxysarpagine is transformed to sarpagine by 10-deoxysarpagine hydroxylase, which is a novel cytochrome P450 enzyme.



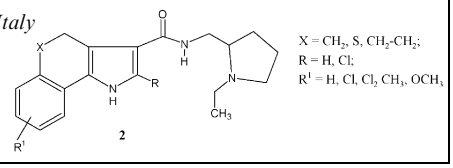
Bioorg. Med. Chem. 10 (2002) 2485

Synthesis and D_2-Like Binding Affinity of New Derivatives of *N*-(1-Ethyl-2-pyrrolidinylmethyl)-4,5-dihydro-1*H*-benzo[*g*]indole-3-carboxamide and Related 4*H*-[1]Benzothiopyrano-[4,3-*b*]pyrrole and 5,6-Dihydro-4*H*-benzo[6,7]cyclohepta[*b*]pyrrole-3-carboxamide Analogues

Gérard A. Pinna,[a] Maria A. Pirisi,[a] Giorgio Chelucci,[b] Jean M. Mussinu,[a] Gabriele Murineddu,[a] Giovanni Loriga,[a] Paolo S. D'Aquila[c] and Gino Serra[c]

[a]*Dipartimento Farmaco Chimico Tossicologico, Università di Sassari, Via F. Muroni 23/A, 07100 Sassari, Italy*
[b]*Dipartimento di Chimica, Università di Sassari, Via Vienna 2, 07100 Sassari, Italy*
[c]*Dipartimento di Scienze del Farmaco, Università di Sassari, Via F. Muroni 23, 07100 Sassari, Italy*

A new series of 2-aminomethylpyrrolidinyl-derived 4,5-dihydrobenzo[*g*]indole-3-carboxamides and related compounds **2** were synthesized and evaluated for their ability to bind to dopamine D_2-like receptors in vitro. Among these compounds **2k** (X = CH_2–CH_2, R = Cl, R^1 = H), in behavioural tests in rats, has shown reduced hyperactivity at a dose which failed to induce catalepsy.

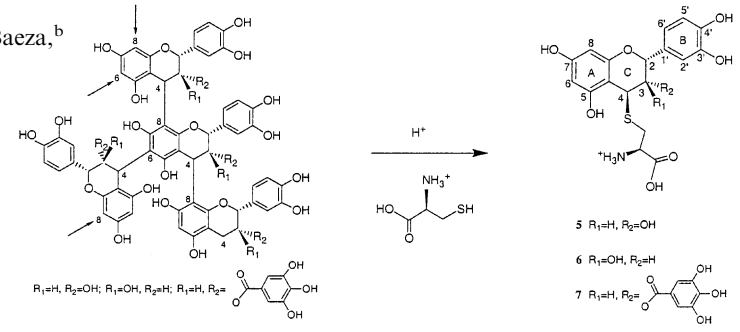


Bioorg. Med. Chem. 10 (2002) 2497

Cysteinyl-flavan-3-ol Conjugates from Grape Procyanidins. Antioxidant and Antiproliferative Properties

J. L. Torres,[a] C. Lozano,[a,c] L. Julià,[b] F. J. Sánchez-Baeza,[b] J. M. Anglada,[b] J. J. Centelles[c] and M. Cascante[c]

[a]*Department of Peptide and Protein Chemistry, Institute for Chemical and Environmental Research (IIQAB-CSIC), Jordi Girona 18-26, 08034 Barcelona, Spain*
[b]*Department of Biological Organic Chemistry, Institute for Chemical and Environmental Research (IIQAB-CSIC), Jordi Girona 18-26, 08034 Barcelona, Spain*
[c]*Department of Biochemistry and Molecular Biology, University of Barcelona, Martí i Franquès 1-11, 08028 Barcelona, Spain*

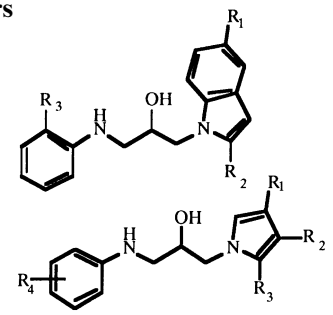


Bioorg. Med. Chem. 10 (2002) 2511

Design, Synthesis and QSAR Studies on *N*-Aryl Heteroarylisopropanolamines, a New Class of Non-Peptidic HIV-1 Protease Inhibitors

Roberto Di Santo,[a] Roberta Costi,[a] Marino Artico,[a] Silvio Massa,[b] Rino Ragno,[c] Garland R. Marshall[d] and Paolo La Colla[e]

[a]*Istituto Pasteur-Fondazione Cenci Bolognetti, Dipartimento di Studi Farmaceutici, Università degli Studi di Roma 'La Sapienza', P.le A. Moro 5, I-00185 Roma, Italy*
[b]*Dipartimento Farmaco Chimico Tecnologico, Università degli Studi di Siena, Via A. Moro 5, San Miniato, I-53100 Siena, Italy*
[c]*Dipartimento di Studi di Chimica e Tecnologia delle Sostanze Biologicamente Attive, Università degli Studi di Roma 'La Sapienza', P.le Aldo Moro 5, I-00185 Roma, Italy*
[d]*Center for Molecular Design, Washington University, St. Louis, MO 63110, USA*
[e]*Dipartimento di Biologia Sperimentale, Sezione di Microbiologia, Università degli Studi di Cagliari, Cittadella Universitaria, I-09042 Monserrato, Cagliari, Italy*



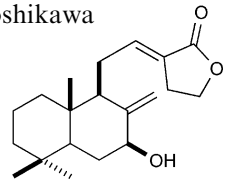
Bioorg. Med. Chem. 10 (2002) 2527

Labdane-type Diterpenes with Inhibitory Effects on Increase in Vascular Permeability and Nitric Oxide Production from *Hedychium coronarium*

Hisashi Matsuda, Toshio Morikawa, Yasuko Sakamoto, Iwao Toguchida and Masayuki Yoshikawa

Kyoto Pharmaceutical University, 1 Shichono-cho, Misasagi, Yamashina-ku, Kyoto 607–8412, Japan

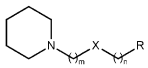
The methanolic extract from the rhizome of *Hedychium coronarium* was found to inhibit the increase in vascular permeability induced by AcOH in mice and NO production in lipopolysaccharide-activated mouse peritoneal macrophages. From the methanolic extract, three new labdane-type diterpenes, hedychilactones A, B, and C, were isolated together with six known diterpenes. The structures of hedychilactones were elucidated on the basis of chemical and physicochemical evidence. The diterpene constituents showed inhibitory effects on the increase in vascular permeability, NO production, and iNOS induction.



hedychilactone A

Bioorg. Med. Chem. 10 (2002) 2535

Piperidino-Hydrocarbon Compounds as Novel Non-Imidazole Histamine H_3-Receptor Antagonists



X = -CH_2-, -CH=CH-, -C≡C-
m = 2 - 8
n = 0 - 3
R = H, CH_3, Ph

Galina Meier,[a] Xavier Ligneau,[b] Heinz H. Pertz,[a] C. Robin Ganellin,[c] Jean-Charles Schwartz,[d] Walter Schunack[a] and Holger Stark[e]

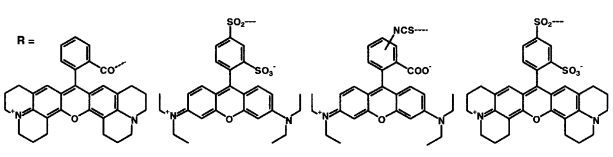
[a]*Institut für Pharmazie, Freie Universität Berlin, Königin-Luise-Strasse 2+4, 14195 Berlin, Germany*
[b]*Laboratoire Bioprojet, 30 rue des Francs-Bourgois, 75003 Paris, France*
[c]*Department of Chemistry, Christopher Ingold Laboratories, University College London, 20 Gordon Street, London WC1H 0AJ, UK*
[d]*Unité de Neurobiologie et Pharmacologie Moléculaire (U. 109), Centre Paul Broca de l'INSERM, 2ter rue d'Alésia, 75014 Paris, France*
[e]*Johann Wolfgang Goethe-Universität, Biozentrum, Institut für Pharmazeutische Chemie, Marie-Curie-Strasse 9, 60439 Frankfurt am Main, Germany*

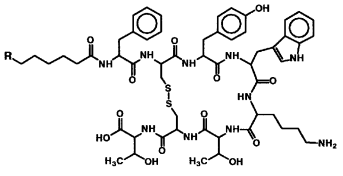
Bioorg. Med. Chem. 10 (2002) 2543

Fluorescent Somatostatin Receptor Probes for the Intraoperative Detection of Tumor Tissue with Long-Wavelength Visible Light

Walter Mier, Barbro Beijer, Keith Graham and William E. Hull

Universitätsklinikum Heidelberg, Department of Nuclear Medicine, 69120 Heidelberg, Germany



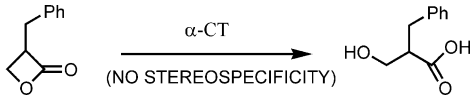


Bioorg. Med. Chem. 10 (2002) 2553

Cleavage of β-Lactone Ring by Serine Protease. Mechanistic Implications

Dong H. Kim, Jeong-il Park, Sang J. Chung, Jung Dae Park, No-Kyung Park and Jong Hoon Han

Division of Molecular and Life Sciences, Center for Integrated Molecular Systems, National Research Laboratory for Advanced Technology and Biomedical Microinstrumentation, Pohang University of Science and Technology, San 31 Hyojadong, Pohang, South Korea 790-784



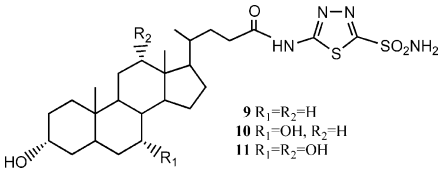
Bioorg. Med. Chem. 10 (2002) 2561

Bile Acid Derivatives of 5-Amino-1,3,4-thiadiazole-2-sulfonamide as New Carbonic Anhydrase Inhibitors: Synthesis and Investigation of Inhibition Effects

Metin Bülbül, Nurullah Saraçoğlu, Ö. İrfan Küfrevioğlu and Mehmet Çiftçi

Faculty of Science and Arts, Department of Chemistry, Atatürk University, 25240 Erzurum, Turkey

In order to investigate the structure–activity relationship as a series of antiglaucoma inhibitors, bile acid amides (cholan-24-amides) of 5-substituted 1,3,4-thiadiazole-2-sulfonamide were synthesized. In vitro studies of the most active compounds led to inhibition constants ranging from 66 to 190 nM for HCA-II with I_{50}. In vivo studies performed on Sprague–Dawley rats showed that especially significant inhibition efficacy ($p < 0.001$) for compounds **11** and **18**.

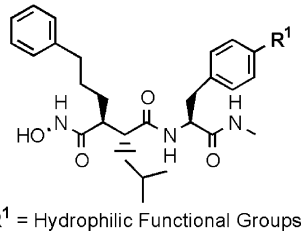


Bioorg. Med. Chem. 10 (2002) 2569

Highly Water-Soluble Matrix Metalloproteinases Inhibitors and Their Effects in a Rat Adjuvant-Induced Arthritis Model

Tetsunori Fujisawa, Katsuhiro Igeta, Shinjiro Odake, Yasuo Morita, Junko Yasuda and Tadanori Morikawa

Research Institute, Daiichi Fine Chemical Co., Ltd., 530 Chokeiji, Takaoka, Toyama 933-8511, Japan

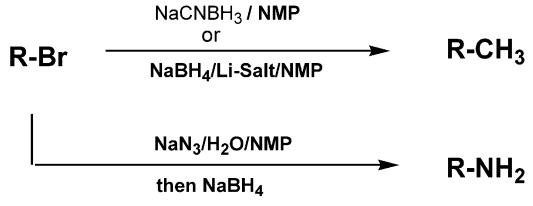


Bioorg. Med. Chem. 10 (2002) 2583

Some Aspects of $NaBH_4$ Reduction in NMP

Yasuhiro Torisawa, Takao Nishi and Jun-ichi Minamikawa

Process Research Laboratory, Second Tokushima Factory, Otsuka Pharmaceutical Co. Ltd., Kawauchi-cho, Tokushima, 771-0182 Japan



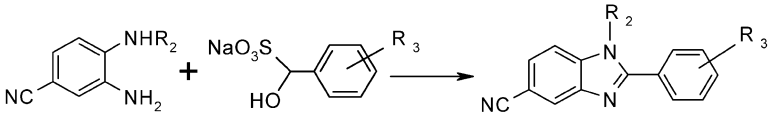
Bioorg. Med. Chem. 10 (2002) 2589

Synthesis of Some New 2-Substituted-phenyl-1H-benzimidazole-5-carbonitriles and Their Potent Activity Against *Candida* Species

Hakan Göker,[a,b] Canan Kuş,[a] David W. Boykin,[b] Sulhiye Yildiz[c] and Nurten Altanlar[c]

[a]*Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Ankara University, 06100 Tandogan, Ankara, Turkey*
[b]*Department of Chemistry, Georgia State University, Atlanta, GA 30303, USA*
[c]*Department of Microbiology, Faculty of Pharmacy, Ankara University, 06100, Tandogan, Ankara, Turkey*

New 2-substituted-phenyl-1-alkylated-5-substituted-1H-benzimidazoles were prepared and evaluated in vitro antifungal activity against *Candida* species.



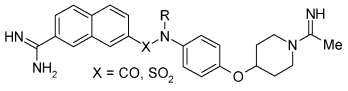
Bioorg. Med. Chem. 10 (2002) 2597

Design, Synthesis and Biological Activity of YM-60828 Derivatives: Potent and Orally-Bioavailable Factor Xa Inhibitors Based on Naphthoanilide and Naphthalensulfonanilide Templates

Fukushi Hirayama,[a] Hiroyuki Koshio,[a] Tsukasa Ishihara,[a] Susumu Watanuki,[a] Shunichiro Hachiya,[a] Hiroyuki Kaizawa,[a] Takahiro Kuramochi,[a] Naoko Katayama,[a] Hiroyuki Kurihara,[a] Yuta Taniuchi,[b] Kazuo Sato,[c] Yumiko Sakai-Moritani,[a] Seiji Kaku,[a] Tomihisa Kawasaki,[a] Yuzo Matsumoto,[a] Shuichi Sakamoto[a] and Shin-ichi Tsukamoto[a]

[a]*Institute for Drug Discovery Research, Yamanouchi Pharmaceutical Co., Ltd., 21 Miyukigaoka, Tsukuba, Ibaraki 305-8585, Japan*
[b]*Clinical Development Department, Yamanouchi Pharmaceutical Co., Ltd., 3-17-1 Hasune, Itabashi, Tokyo 174-8612, Japan*
[c]*Project Coordination Department, Yamanouchi Pharmaceutical Co., Ltd., 3-17-1 Hasune, Itabashi, Tokyo 174-8612, Japan*

7-Amidino-2-naphthoanilide and 7-amidino-2-naphthalensulfonanilide derivatives were prepared and evaluated for inhibitory activity against factor Xa in vitro and ex vivo.



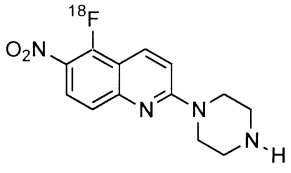
Bioorg. Med. Chem. 10 (2002) 2611

Synthesis of a Fluorine-18-labelled Derivative of 6-Nitroquipazine, as a Radioligand for the In Vivo Serotonin Transporter Imaging with PET

Mylène Karramkam,[a] Frédéric Dollé,[a] Héric Valette,[a] Laurent Besret,[a] Yann Bramoullé,[a] Françoise Hinnen,[a] Françoise Vaufrey,[a] Carine Franklin,[a] Sébastien Bourg,[a] Christine Coulon,[a] Michèle Ottaviani,[a] Marcel Delaforge,[b] Christian Loc'h,[a] Michel Bottlaender[a] and Christian Crouzel[a]

[a]*Service Hospitalier Frédéric Joliot, Département de Recherche Médicale, CEA, 4 place du Général Leclerc, F-91401 Orsay, France*
[b]*Service de Pharmacologie et d'Immunologie, Département de Recherche Médicale, CEA, F-91191 Gif-sur-Yvette, France*

5-Fluoro-6-nitroquipazine has been synthesized and labelled with fluorine-18 ($t_{1/2}$: 109.8 min) as a potential positron-emission-tomography (PET) tracer for imaging the serotonin transporter.



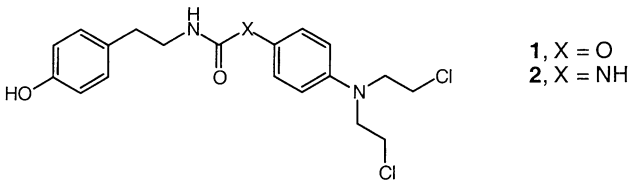
Bioorg. Med. Chem. 10 (2002) 2625

Synthesis and Analysis of Urea and Carbamate Prodrugs as Candidates for Melanocyte-Directed Enzyme Prodrug Therapy (MDEPT)

Allan M. Jordan,[a] Tariq H. Khan,[b] Hugh Malkin[a] and Helen M. I. Osborn[a]

[a]*Department of Chemistry, University of Reading, Whiteknights, Reading RG6 6AD, UK*
[b]*Department of Medical Oncology, Imperial College of Science, Technology and Medicine, Charing Cross Campus, London W6 8RP, UK*

Carbamate and urea prodrugs **1** and **2** are assessed for their suitability to act as candidates for MDEPT. Methods for synthesizing the urea prodrug **2** are also reported.



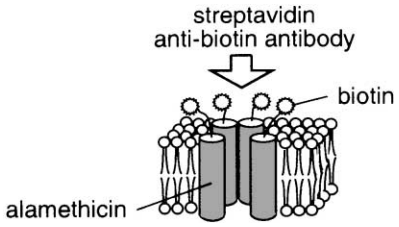
Bioorg. Med. Chem. 10 (2002) 2635

Detection of Protein–Ligand Interaction on the Membranes Using C-Terminus Biotin-Tagged Alamethicin

Y. Zhang, Shiroh Futaki, Tatsuto Kiwada and Yukio Sugiura

Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan

Interaction of the biotin-tagged alamethicin with streptavidin or the anti-biotin antibody was monitored in real time using the planar-lipid bilayer method.

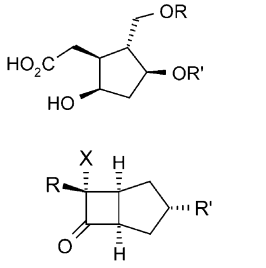


Bioorg. Med. Chem. 10 (2002) 2641

Identification of Novel Mammalian Squalene Synthase Inhibitors Using a Three-Dimensional Pharmacophore

Ian J. S. Fairlamb,[a] Julia M. Dickinson,[a] Rachael O'Connor,[b] Seamus Higson,[c] Lynsey Grieveson[c] and Veronica Marin[a,d]

[a]*Department of Chemistry and Materials, John Dalton Building, The Manchester Metropolitan University, Chester Street, Manchester M20 5GD, UK*
[b]*Department of Biological Sciences, John Dalton Building, The Manchester Metropolitan University, Chester Street, Manchester M20 5GD, UK*
[c]*Materials Science Centre, University of Manchester Institute of Science and Technology, Manchester, UK*
[d]*Departamentul de Stiinte ingineresti, Divizia Chimica Filiera Engleza, Universitatea Politechnica Bucuresti, Splaiul Independentei nr. 313, Bucuresti, Romania*



R and R' = Farnesyl Mimetics
X = H, Cl, Br or CH_3

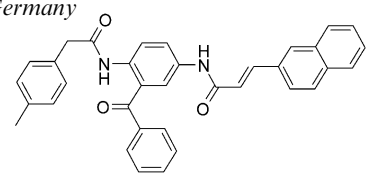
Bioorg. Med. Chem. 10 (2002) 2657

Non-Thiol Farnesyltransferase Inhibitors: Utilization of an Aryl Binding Site by 5-Arylacryloylaminobenzophenones

Andreas Mitsch,[b] Markus Böhm,[b] Pia Wißner,[b] Isabel Sattler[c] and Martin Schlitzer[a]

[a]*Department für Pharmazie, Zentrum für Pharmaforschung, Ludwig-Maximilians-Universität München, Butenandtstraße 5-13, D-81377 München, Germany*
[b]*Institut für Pharmazeutische Chemie, Philipps-Universität Marburg, Marbacher Weg 6, D-35032 Marburg, Germany*
[c]*Hans-Knöll-Institut für Naturstoff-Forschung e.V., Beutenbergstraße 11, D-07745, Jena, Germany*

The 2-naphthylacryloyl residue was developed as an appropriate substituent for our benzophenone-based AAX-peptidomimetic capable of occupying an aryl binding site of farnesyltransferase, resulting in a non-thiol farnesyl-transferase inhibitor with nanomolar activity. The activity of this inhibitor is readily explained on the basis of docking studies which show the 2-naphthyl residue fitting into the aryl binding site.



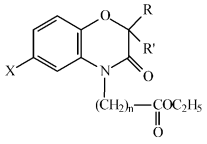
Bioorg. Med. Chem. 10 (2002) 2663

Synthesis and Vasorelaxant Activity of New 1,4-Benzoxazine Derivatives Potassium Channel Openers

Giuseppe Caliendo,[a] Elisa Perissutti,[a] Vincenzo Santagada,[a] Ferdinando Fiorino,[a] Beatrice Severino,[a] Roberta d'Emmanuele di Villa Bianca,[b] Laura Lippolis,[c] Aldo Pinto[c] and Raffaella Sorrentino[b]

[a]*Dipartimento di Chimica Farmaceutica e Tossicologica, Università di Napoli 'Federico II' Via D. Montesano 49, 80131 Naples, Italy*
[b]*Dipartimento di Farmacologia Sperimentale- Università di Napoli 'Federico II' Via D. Montesano 49, 80131 Naples, Italy*
[c]*Dipartimento di Scienze Farmaceutiche- Università di Salerno via Ponte Don Melillo, Fisciano (SA), Italy*

As part of a search for new potassium channel openers, the synthesis and vasorelaxant activity of new 1,4-benzoxazine derivatives derived from transformation of the benzopyran skeleton of cromakalim were described. Several new 1,4-benzoxazine derivatives were provided with significant vasorelaxant activity with an overall pharmacological behavior similar to CRK (**1f**, **1i**, **2d**, **2e**, **2f** and **2i**).



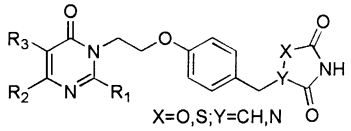
Bioorg. Med. Chem. 10 (2002) 2671

Synthesis and Biological Activity of Novel Pyrimidinone Containing Thiazolidinedione Derivatives

Gurram R. Madhavan,[a] Ranjan Chakrabarti,[b] Reeba K. Vikramadithyan,[b] Rao N. V. S. Mamidi,[b] V. Balraju,[a] B. M. Rajesh,[a] Parimal Misra,[b] Sunil K.B. Kumar,[b] Braj B. Lohray,[a] Vidya B. Lohray[a] and Ramanujam Rajagopalan[b]

[a]*Discovery Chemistry, Dr. Reddy's Research Foundation, Bollaram Road, Miyapur, Hyderabad 500 050, India*
[b]*Discovery Biology, Dr. Reddy's Research Foundation, Bollaram Road, Miyapur, Hyderabad 500 050, India*

Synthesis, SAR study and biological evaluation of a new series of 4-(3H)pyrimidinone derivatives of thiazolidinedione are reported.

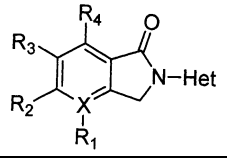


Bioorg. Med. Chem. 10 (2002) 2681

Novel Potent 5-HT_3 Receptor Ligands Based on the Pyrrolidone Structure. Effects of the Quaternization of the Basic Nitrogen on the Interaction with 5-HT_3 Receptor

Andrea Cappelli,[a] Andrea Gallelli,[a] Carlo Braile,[a] Maurizio Anzini,[a] Salvatore Vomero,[a] Laura Mennuni,[b] Francesco Makovec,[b] M. Cristina Menziani,[c] Pier G. De Benedetti,[c] Alessandro Donati[d] and Gianluca Giorgi[e]

[a]*Dipartimento Farmaco Chimico Tecnologico, Università degli Studi di Siena, Via A. Moro, 53100 Siena, Italy*
[b]*Rotta Research Laboratorium S.p.A., Via Valosa di Sopra 7, 20052 Monza, Italy*
[c]*Dipartimento di Chimica, Università degli Studi di Modena e Reggio Emilia, Via Campi 183, 41100 Modena, Italy*
[d]*Dipartimento di Scienze e Tecnologie Chimiche e dei Biosistemi, Università degli Studi di Siena, Via A. Moro, 53100 Siena, Italy*
[e]*Centro Interdipartimentale di Analisi e Determinazioni Strutturali, Università degli Studi di Siena, Via A. Moro, 53100 Siena, Italy*



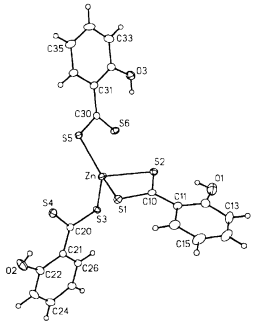
Bioorg. Med. Chem. 10 (2002) 2693

Synthesis, Characterization and Antitumor Studies of Transition Metal Complexes of *o*-Hydroxydithiobenzoate

Anuraag Shrivastav,[a] Nand K. Singh[a] and Geeta Srivastava[b]

[a]*Department of Chemistry, Banaras Hindu University, Varanasi 221005, India*
[b]*Alberta Research Council, Edmonton, Alberta, Canada T6N 1E4*

o-Hydroxydithiobenzoate (*o*-HOdtb) complexes of 3d-metals were prepared and characterized by various physico-chemical techniques. The single crystal X-ray structure of Zn(II) monomeric complexes shows that one ligand is conventionally bidentate whereas, the other two are formally unidentate. The therapeutic implication of *o*-HOdtb and its metal complexes in tumor regression and tumor growth associated immunosuppression were studied.



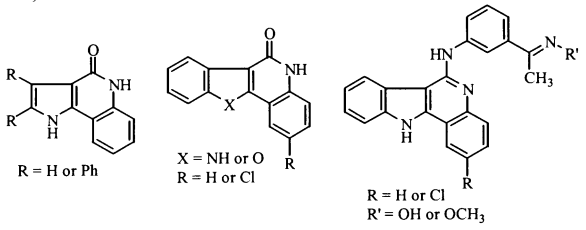
Bioorg. Med. Chem. 10 (2002) 2705

Synthesis and Cytotoxic Activity Evaluation of Indolo-, Pyrrolo-, and Benzofuro-Quinolin-2(1*H*)-Ones and 6-Anilinoindoloquinoline Derivatives

Yeh-Long Chen, Chao-Ho Chung, I.-Li Chen, Po-Hsu Chen and Haw-Yaun Jeng

School of Chemistry, Kaohsiung Medical University, Kaohsiung City 807, Taiwan

Certain indolo-, benzofuro-, and pyrrolo-quinolin-2(1*H*)-ones and 6-anilinoindoloquinoline derivatives were synthesized and evaluated for cytotoxicity against 60 human cancer cells.



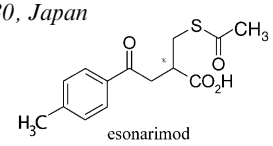
Bioorg. Med. Chem. 10 (2002) 2713

Synthesis and Antirheumatic Activity of the Metabolites of Esonarimod

Toshiya Noguchi, Akira Onodera, Kazuyuki Tomisawa, Miyuki Yamashita, Kimiyo Takeshita and Sadakazu Yokomori

Medicinal Research Laboratories, Taisho Pharmaceutical Co., Ltd., Saitama City, Saitama, 330-8530, Japan

The optically active metabolites of esonarimod were prepared.



esonarimod

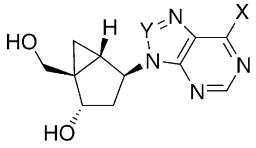
Bioorg. Med. Chem. 10 (2002) 2723

Is the Anomeric Effect an Important Factor in the Rate of Adenosine Deaminase Catalyzed Hydrolysis of Purine Nucleosides? A Direct Comparison of Nucleoside Analogues Constructed on Ribose and Carbocyclic Templates with Equivalent Heterocyclic Bases Selected to Promote Hydration

Susana Hernandez, Harry Ford, Jr. and Victor E. Marquez

Laboratory of Medicinal Chemistry, Center for Cancer Research, National Cancer Institute at Frederick, 376 Boyles St., Frederick, MD 21701, USA

Compounds **5**–**7** were synthesized and examined as adenosine deaminase substrates to study the absence anomeric effect on hydrolysis.



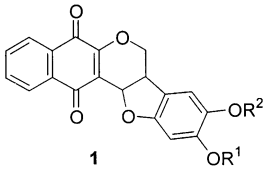
5, X = NH_2, Y = CH
6, X = F, Y = CH
7, X = NH_2, Y = N

Bioorg. Med. Chem. 10 (2002) 2731

Synthesis and Preliminary Pharmacological Evaluation of New (±) 1,4-naphthoquinones Structurally Related to Lapachol

Alcides J. M. da Silva,[a] Camilla D. Buarque,[a] Flávia V. Brito,[a] Laure Aurelian,[d] Luciana F. Macedo,[c,d] Linda H. Malkas,[d] Robert J. Hickey,[d,e] Daniele V. S. Lopes,[b] François Noël,[b] Yugo L. B. Murakami,[b] Noelson M. V. Silva,[b] Paulo A. Melo,[b] Rodrigo R. B. Caruso,[b] Newton G. Castro[b] and Paulo R. R. Costa[a]

[a]*Laboratório de Química Bioorgânica (LQB), Núcleo de Pesquisas de Produtos Naturais, Centro de Ciências da Saúde, Bloco H, Universidade Federal do Rio de Janeiro RJ 21941-590, Brazil*
[b]*Departamento de Farmacologia Básica e Clínica, Centro de Ciências da Saúde, Bloco J, Universidade Federal do Rio de Janeiro RJ 21941-590, Brazil*
[c]*Instituto de Biofísica Carlos Chagas Filho, Centro de Ciências da Saúde, Bloco G, Universidade Federal do Rio de Janeiro RJ 21941-590, Brazil*
[d]*Department of Pharmacology and Experimental Therapeutics, University of Maryland School of Medicine, Baltimore, MD 21210, USA*
[e]*Greenebaum Cancer Center, University Hospital, Baltimore, MD 21210, USA*



1

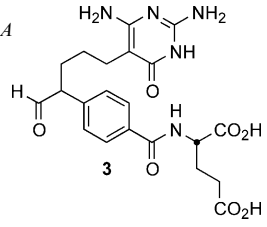
Bioorg. Med. Chem. 10 (2002) 2739

10-Formyl-5,10-dideaza-acyclic-5,6,7,8-tetrahydrofolic Acid (10-Formyl-DDACTHF): A Potent Cytotoxic Agent Acting by Selective Inhibition of Human GAR Tfase and the De Novo Purine Biosynthetic Pathway

Thomas H. Marsilje,[a] Marc A. Labroli,[a] Michael P. Hedrick,[a] Qing Jin,[a] Joel Desharnais,[a] Stephen J. Baker,[c] Lata T. Gooljarsingh,[c] Joseph Ramcharan,[c] Ali Tavassoli,[c] Yan Zhang,[b] Ian A. Wilson,[b] G. Peter Beardsley,[d] Stephen J. Benkovic[c] and Dale L. Boger[a]

[a]*Department of Chemistry, The Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA 92037, USA*
[b]*Department of Molecular Biology, The Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA 92037, USA*
[c]*Department of Chemistry, Pennsylvania State University, University Park, PA 16802, USA*
[d]*Department of Pediatrics and Pharmacology, Yale University School of Medicine, New Haven, CT 06520, USA*

The synthesis and evaluation of 10-formyl-DDACTHF (**3**) as a potential inhibitor of glycinamide ribonucleotide transformylase (GAR Tfase) and aminoimidazole carboxamide ribonucleotide transformylase (AICAR Tfase) are reported.



3

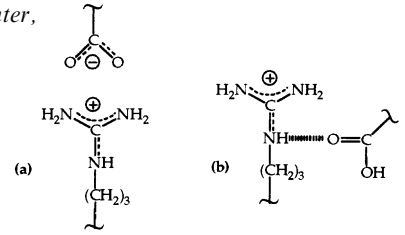
Bioorg. Med. Chem. 10 (2002) 2751

Effect of Protonation of the *N*-Acetyl Neuraminic Acid Residue of Sialyl Lewis^X: A Molecular Orbital Study with Insights into Its Binding Properties toward the Carbohydrate Recognition Domain of E-Selectin

Fabio Pichierri and Yo Matsuo

Computational Proteomics Team, Bioinformatics Group, RIKEN Genomic Sciences Center, 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama 230-0045, Japan

MO calculations have been performed on the sialyl Lewis^X molecule in order to assess whether it interacts with E-selectin in the anionic or neutral state.



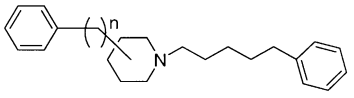
Bioorg. Med. Chem. 10 (2002) 2759

Probing the Proposed Phenyl-A Region of the Sigma-1 Receptor

Seth Y. Ablordeppey,[a] James B. Fischer,[b] Ho Law[c] and Richard A. Glennon[c]

[a]*College of Pharmacy and Pharmaceutical Sciences, Florida A&M University, Tallahassee, FL 32307, USA*
[b]*Cambridge NeuroScience Inc., Cambridge, MA 02139, USA*
[c]*Department of Medicinal Chemistry, School of Pharmacy, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298, USA*

By keeping the phenyl-B substituent as the optimum ω-phenylpentyl moiety, and varying substituents in the phenyl-A region, we have observed changes in binding potency and selectivity at the σ1-receptor subtype. SAR for the binding of these compounds at σ-2 sites was also examined.

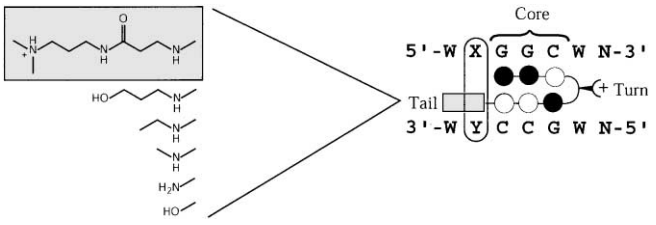


Bioorg. Med. Chem. 10 (2002) 2767

Solid-Phase Synthesis of DNA Binding Polyamides on Oxime Resin

J.M. Belitsky, D.H. Nguyen, N.R. Wurtz and Peter B. Dervan

Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA 91125, USA



Bioorg. Med. Chem. 10 (2002) 2775

Structure-Based 3-D-QSAR Analysis of Marine Indole Alkaloids

Biao Jiang,[a] Wen-Nan Xiong,[a] Cai-Guang Yang,[a] Hua-Liang Jiang,[b] Feng Cheng[b] and Kai-Xian Chen[b]

[a]*Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, 354 Fenglin Road, Shanghai 200032, China*
[b]*Shanghai Institute of Materia Medica, Chinese Academy of Sciences, Shanghai 200032, China*

A 3D-QSAR study on indole alkaloids, applying comparative molecular field analysis (CoMFA) is reported.

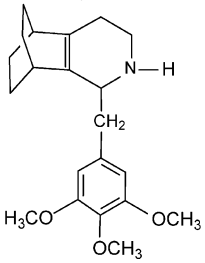
Bioorg. Med. Chem. 10 (2002) 2779

Synthesis and In Vitro Platelet Aggregation and TP Receptor Binding Studies on Bicyclic 5,8-Ethanooctahydroisoquinolines and 5,8-Ethanotetrahydroisoquinolines

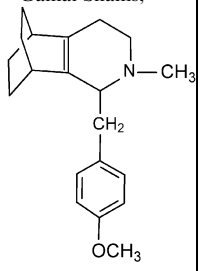
Shankar L. Saha,[a] Victoria F. Roche,[a] Kathleen Pendola,[a] Mark Kearley,[b] Longping Lei,[c] Karl J. Romstedt,[d,e] Mark Herdman,[d,e] Gamal Shams,[d] Vivek Kaisare[c] and Dennis R. Feller[c,d]

[a]*School of Pharmacy & Allied Health Professions, Creighton University, 2500 California Plaza, Omaha, NE 68005, USA*
[b]*Department of Chemistry, Creighton University, Omaha, NE 68005, USA*
[c]*Department of Pharmacology, National Center for Natural Products Research, School of Pharmacy, The University of Mississippi, University, MS 38677, USA*
[d]*Division of Pharmacology, College of Pharmacy, The Ohio State University, Columbus, OH 43210, USA*
[e]*Department of Biology, Capital University, Columbus, OH 43209, USA*

Eighteen novel bicyclic 1-substituted benzyloctahydro- and tetrahydroisoquinolines were synthesized and evaluated for human thromboxane A_2/prostaglandin H_2 (TP) receptor affinity and antagonism of TP receptor-mediated platelet aggregation. The most potent analogue **10** demonstrated nitrogen substituent SAR differences from the *p*-methoxy derivative **2**.



10



2

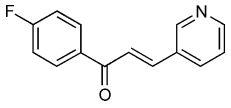
Bioorg. Med. Chem. 10 (2002) 2795

Chalcones and Flavonoids as Anti-Tuberculosis Agents

Yuh-Meei Lin,[a] Yasheen Zhou,[a] Michael T. Flavin,[a] Li-Ming Zhou,[a] Weiguo Nie[a] and Fa-Ching Chen[b]

[a]*MediChem Life Sciences, 2501 Davey Road, Woodridge, IL 60517, USA*
[b]*Department of Chemistry, National Taiwan University, Taipei, Taiwan*

The screening results of a series of chalcones, chalcone-like compounds and flavonoids against *Mycobacterium tuberculosis* are reported.



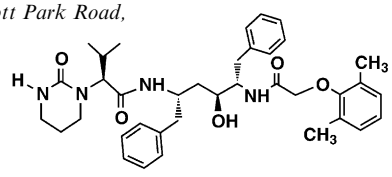
Bioorg. Med. Chem. 10 (2002) 2803

X-ray Crystallographic Structure of ABT-378 (Lopinavir) Bound to HIV-1 Protease

Vincent Stoll,[a] Wenying Qin,[a] Kent D. Stewart,[a] Clarissa Jakob,[a] Chang Park,[a] K. Walter,[a] R.L. Simmer,[b] Rosalind Helfrich,[b] Dirk Bussiere,[a] J. Kao,[a] Dale Kempf,[c] Hing L. Sham[c] and Daniel W. Norbeck[d]

[a]*Department of Structural Biology, Abbott Laboratories, 100 Abbott Park Road, Abbott Park, IL 60064, USA*
[b]*Department of Genomics and Molecular Biology, Abbott Laboratories, 100 Abbott Park Road, Abbott Park, IL 60064, USA*
[c]*Department of Anti-Infective Research, Abbott Laboratories, 100 Abbott Park Road, Abbott Park, IL 60064, USA*
[d]*Department of Pharmaceutical Discovery, Abbott Laboratories, 100 Abbott Park Road, Abbott Park, IL 60064, USA*

The crystal structure of ABT-378 (lopinavir) bound to HIV-1 protease is reported.



ABT-378, lopinavir

Bioorg. Med. Chem. 10 (2002) 2807

Synthesis of Substituted Diarylmethylenepiperidines (DAMPs), a Novel Class of Anti-HIV Agents

Guozhang Xu,[a] Arunachalam Kannan,[a] Tracy L. Hartman,[b] Heather Wargo,[b] Karen Watson,[b] Jim A. Turpin,[b] Robert W. Buckheit, Jr.,[b] Allison A. Johnson,[c] Yves Pommier[c] and Mark Cushman[a]

[a]*Department of Medicinal Chemistry and Molecular Pharmacology, School of Pharmacy and Pharmacal Sciences, Purdue University, West Lafayette, IN 47907, USA*
[b]*Infectious Disease Research Department, Southern Research Institute, 431 Aviation Way, Frederick, MD 21701, USA*
[c]*Laboratory of Molecular Pharmacology, Center for Cancer Research, National Cancer Institute, Bethesda, MD 20892-4255, USA*