

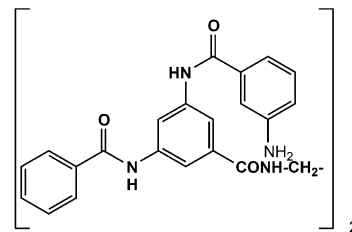
DNA Cleavage by Aromatic Amines

Bioorg. Med. Chem. Lett. 12 (2002) 1

Philip M. Warner,^{a,*} Jiwei Qi, Bin Meng, Gang Li, Longfei Xie, Ahmed El-Shafey and Graham B. Jones

Department of Chemistry, Northeastern University, 360 Huntington Ave., Boston, MA 02115, USA

A series of dimeric aryl amines was found to induce cleavage of DNA. Initial investigations suggest this to be a novel mode for DNA cleavage.



Phthalazine PDE4 Inhibitors. Part 3: The Synthesis and In Vitro Evaluation of Derivatives with a Hydrogen Bond Acceptor

Bioorg. Med. Chem. Lett. 12 (2002) 5

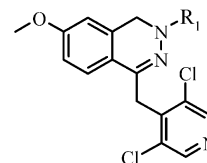
Mauro Napoletano,^{a,*} Gabriele Norcini,^c Franco Pellacini,^a Francesco Marchini,^b Gabriele Morazzoni,^a Raimondo Fattori,^a Pierpaolo Ferlenga^b and Lorenzo Pradella^b

^aInpharzam Ricerche, Zambon Group, Via Ai Soi, 6807 Taverna, Switzerland

^bR&D, Zambon Group SpA, Via Lillo Del Duca 10, 20091 Bresso, Milan, Italy

^cLamberti SpA, Fine Chemical Lab., Via Piave 18, 21041 Albizzate, Italy

This communication describes the synthesis and in vitro evaluation of a novel and potent series of phthalazine phosphodiesterase type (IV) (PDE4) inhibitors. The interaction with two distinct polar binding sites allowed us to eliminate the cyclopentyloxy substitution from rolipram-like analogues.



Design, Synthesis and Pharmacological Evaluation of Novel Pyrazolo[3,4-*b*]thieno[2,3-*d*]pyridine Acid Derivatives: a New Class of Anti-inflammatory and Anti-platelet Agents

Bioorg. Med. Chem. Lett. 12 (2002) 9

Carla R. Cardoso,^b Fernanda C. F. de Brito,^a Kelli C. M. da Silva,^a Ana L. P. de Miranda,^a Carlos A. M. Fraga^{a,b} and Eliezer J. Barreiro^{a,b,*}

^aLASSBio, Faculdade de Farmácia, Universidade Federal do Rio de Janeiro, PO Box 68006, Rio de Janeiro, 21944-970, RJ, Brazil

^bInstituto de Química, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 21949-900, RJ, Brazil

A series of pyrazolo[3,4-*b*]thieno[2,3-*d*]pyridine alcanoic acid derivatives has been synthesized and evaluated as thromboxane synthetase inhibitors and leukotriene D₄ receptor antagonists. The glutaric acid derivative LASSBio341 (**6**) was shown to be active in arachidonic acid-induced platelet aggregation (IC₅₀=0.14 μM) and inhibition of the contraction of guinea pig tracheal strip induced with LTD₄ (IC₅₀=43.7 μM), displaying still in vivo anti-inflammatory profile.

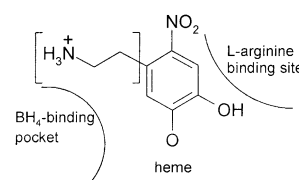
Nitrocatechols versus Nitrocatecholamines as Novel Competitive Inhibitors of Neuronal Nitric Oxide Synthase: Lack of the Aminoethyl Side Chain Determines Loss of Tetrahydrobiopterin-Antagonizing Properties

Bioorg. Med. Chem. Lett. 12 (2002) 13

Anna Palumbo,^a Alessandra Napolitano^b and Marco d'Ischia^{b,*}

^aLaboratory of Biochemistry, Zoological Station "Anton Dohrn", Villa Comunale I-80121 Naples, Italy

^bDepartment of Organic Chemistry and Biochemistry, University of Naples "Federico II", Via Cinthia 4, I-80126 Naples, Italy



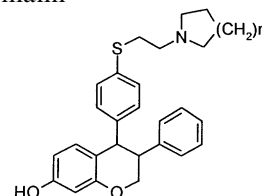
Synthesis and Biological Evaluation of Novel Thio-Substituted Chromanes as High-Affinity Partial Agonists for the Estrogen Receptor

Bioorg. Med. Chem. Lett. 12 (2002) 17

Lise B. Christiansen,* Martin Wenckens, Paul S. Bury, Birgitte Gissel, Birgit S. Hansen, Susan M. Thorpe, Poul Jacobsen, Anders Kanstrup, Anker S. Jørgensen, Lars Nærum and Karsten Wassermann

Health Care Discovery & Preclinical Development, Novo Nordisk A/S,
Novo Nordisk Park, DK-2760 Måløv, Denmark

The synthesis and in vitro pharmacological evaluation of the novel partial estrogen agonists, (±)-*cis*-7-hydroxy-3-phenyl-4-(4-(2-piperidinoethanethio)phenyl)chromane and (±)-*cis*-7-hydroxy-3-phenyl-4-(4-(2-pyrrolidinoethanethio)phenyl)chromane, are described.



Minimal Structural Requirements for Agonist Activity of PAR-2 Activating Peptides

Bioorg. Med. Chem. Lett. 12 (2002) 21

Vincenzo Santagada,^a Giuseppe Caliendo,^a Beatrice Severino,^a Elisa Perissutti,^a Ferdinando Fiorino,^a Carla Cicala,^b Vincenzo De Filippis^{c,*} and Giuseppe Cirino^b

^aDepartment of Pharmaceutical Chemistry, University of Naples 'Federico II', Via D. Montesano 49, 80131 Naples, Italy

^bDepartment of Experimental Pharmacology, University of Naples 'Federico II', Via D. Montesano 49, 80131 Naples, Italy

^cDepartment of Pharmaceutical Sciences and CRIBI Biotechnology Center, University of Padua, Via F. Marzolo 5, 35131 Padua, Italy

In this study we have shown that it is possible to shorten the sequence of rat PAR-2 activating hexapeptide Ser-Leu-Ile-Gly-Arg-Leu-NH₂ down to the dipeptide derivative *N*^ε-(*p*-trifluoromethoxy)benzoyl-Arg(NO₂)-Leu-NH₂ (**10**), displaying an agonist potency comparable (EC₅₀ = 20 ± 10 μM) to that of the full-length hexapeptide (EC₅₀ = 4 ± 1 μM).

Nonpeptide α_vβ₃ Antagonists. Part 2: Constrained Glycyl Amides Derived from the RGD Tripeptide

Bioorg. Med. Chem. Lett. 12 (2002) 25

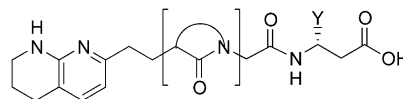
Robert S. Meissner,^{a,*} James J. Perkins,^a Le T. Duong,^b George D. Hartman,^a William F. Hoffman,^a Joel R. Huff,^a Nathan C. Ihle,^a Chih-Tai Leu,^b Rose M. Nagy,^b Adel Naylor-Olsen,^c Gideon A. Rodan,^b Sevgi B. Rodan,^b David B. Whitman,^a Gregg A. Wesolowski^b and Mark E. Duggan^a

^aDepartment of Medicinal Chemistry, Merck Research Laboratories, West Point, PA 19486, USA

^bDepartment of Bone Biology and Osteoporosis Research, Merck Research Laboratories, West Point, PA 19486, USA

^cDepartment of Molecular Design and Diversity, Merck Research Laboratories, West Point, PA 19486, USA

Mimetics of the RGD tripeptide are described that are potent, selective antagonists of the integrin receptor α_vβ₃. The use of the 5,6,7,8-tetrahydro[1,8]naphthyridine group as a potency-enhancing N-terminus is demonstrated. Two 3-substituted-3-amino-propionic acids previously contained in α_{IIb}β₃ antagonists were utilized to enhance binding affinity and functional activity for the targeted receptor.



Non-Peptide α_vβ₃ Antagonists. Part 3: Identification of Potent RGD Mimetics Incorporating Novel β-Amino Acids as Aspartic Acid Replacements

Bioorg. Med. Chem. Lett. 12 (2002) 31

Paul J. Coleman,^{a,*} Karen M. Brashear,^a Cecilia A. Hunt,^a William F. Hoffman,^a John H. Hutchinson,^a Michael J. Breslin,^a Carol A. McVean,^a Ben C. Askew,^a George D. Hartman,^a Sevgi B. Rodan,^b Gideon A. Rodan,^b Chih-Tai Leu,^b Thomayant Prueksaritanont,^c Carmen Fernandez-Metzler,^c Bennett Ma,^c Laura A. Libby,^c Kara M. Merkle,^c Gary L. Stump,^d Audrey A. Wallace,^d Joseph J. Lynch,^d Robert Lynch^d and Mark E. Duggan^a

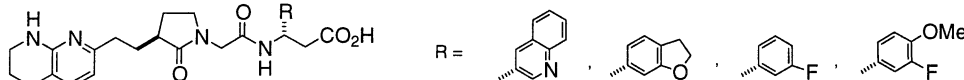
^aDepartment of Medicinal Chemistry, Merck Research Laboratories, West Point, PA 19486, USA

^bDepartment of Bone Biology and Osteoporosis Research, Merck Research Laboratories, West Point, PA 19486, USA

^cDepartment of Drug Metabolism, Merck Research Laboratories, West Point, PA 19486, USA

^dDepartment of Pharmacology, Merck Research Laboratories, West Point, PA 19486, USA

Potent non-peptidic α_vβ₃ antagonists have been prepared incorporating various β-amino acids as aspartic acid mimetics. Modification of the β-alanine 3-substituents alters the potency and physicochemical properties of these receptor antagonists and in some cases provides orally bioavailable α_vβ₃ inhibitors.



Synthesis of Bis-spermine Dimers that are Potent Polyamine Transport Inhibitors

Bioorg. Med. Chem. Lett. 12 (2002) 35

Gerard F. Graminski,^{a,*} C. Lance Carlson,^a Josh R. Ziemer,^a Feng Cai,^b Nicolaas M. J. Vermeulen,^c Scott M. Vanderwerf^d and Mark R. Burns^a

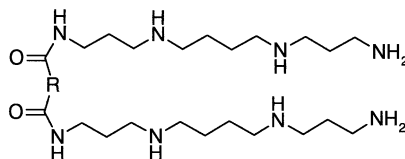
^aOridigm Corporation, 4010 Stone Way North, Suite 220, Seattle, WA 98103, USA

^bCorixa Corporation, 1124 Columbia Street, Suite 200, Seattle, WA 98104, USA

^cEpoch Biosciences, Inc., 21720-23rd Dr., Suite 150, Bothell, WA 98021, USA

^dOregon Health & Science University, Biochemistry and Molecular Biology, L224, Portland, OR 97201, USA

A series of potent bis-spermine polyamine transport inhibitors is reported.



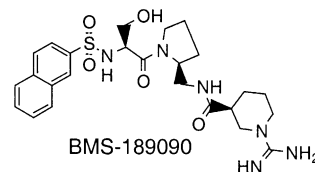
Thrombin Active Site Inhibitors: Chemical Synthesis, In Vitro and In Vivo Pharmacological Profile of a Novel and Selective Agent BMS-189090 and Analogues

Bioorg. Med. Chem. Lett. 12 (2002) 41

Jagabandhu Das,* S. David Kimball, Joyce A. Reid, Tammy C. Wang, Wan F. Lau, Daniel G. M. Roberts, Steven M. Seiler, William A. Schumacher and Martin L. Ogletree

Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ 08543-4000, USA

A novel series of human α -thrombin inhibitors was prepared to elucidate their SAR relationships, selectivity, and activity in vivo. BMS-189090 is identified as a potent, selective and orally active inhibitor which is efficacious in vivo.



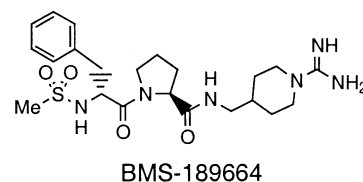
Molecular Design and Structure-Activity Relationships Leading to the Potent, Selective, and Orally Active Thrombin Active Site Inhibitor BMS-189664

Bioorg. Med. Chem. Lett. 12 (2002) 45

Jagabandhu Das,* S. David Kimball,* Steven E. Hall, Wen-Ching Han, Edwin Iwanowicz, James Lin, Robert V. Moquin, Joyce A. Reid, John S. Sack, Mary F. Malley, Chiehying Y. Chang, Saeho Chong, David B. Wang-Iverson, Daniel G. M. Roberts, Steven M. Seiler, William A. Schumacher and Martin L. Ogletree

Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ 08543-4000, USA

A novel series of human α -thrombin inhibitors was prepared to elucidate their SAR relationships, selectivity, and activity in vivo. BMS-189664 is identified as a potent, selective, and orally active inhibitor which is efficacious in vivo.



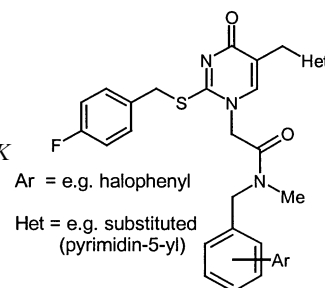
Potent, Orally Active Inhibitors of Lipoprotein-Associated Phospholipase A₂: 1-(Biphenylmethylamidoalkyl)-pyrimidones

Bioorg. Med. Chem. Lett. 12 (2002) 51

Helen F. Boyd, Stephen C. M. Fell, Deirdre M. B. Hickey, Robert J. Iff, Colin A. Leach, Colin H. Macphee, Kevin J. Milliner, Ivan L. Pinto, D. Anthony Rawlings, Stephen A. Smith,* Ian G. Stansfield, Steven J. Stanway, Colin J. Theobald and Caroline M. Whittaker

GlaxoSmithKline, Medicines Research Centre, Gunnell's Wood Road, Stevenage SG1 2NY, UK

A series of 1-(biphenylmethylamidoalkyl)-pyrimidones has been designed as nanomolar inhibitors of recombinant lipoprotein-associated phospholipase A₂ with high potency in whole human plasma. Selected derivatives demonstrate excellent pharmacodynamic profiles which correlate well with their pharmacokinetic effects.



Copper(II)/H₂O₂-Mediated DNA Cleavage: Involvement of a Copper(III) Species in H-Atom Abstraction of Deoxyribose Units

Bioorg. Med. Chem. Lett. 12 (2002) 57

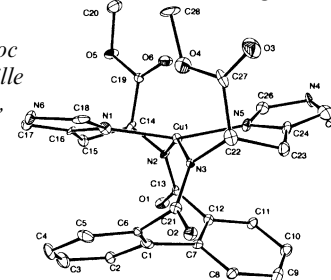
Amina Amine,^{a,c} Zidane Atmani,^a Abdelila El Hallaoui,^b Michel Giorgi,^c Marcel Pierrot^c and Marius Réglier^{c,*}

^aUniversité Moulay Ismail, Faculté des Sciences de Meknès, Meknès, Maroc

^bUniversité Mohamed Benabdellah, Faculté des Sciences et Techniques de Fès Sais, Fès, Maroc

^cChimie, Biologie et Radicaux Libres, UMR-CNRS 6517, case 432, Universités d'Aix-Marseille 1 et 3, Faculté des Sciences et Techniques de Saint Jérôme, av. Escadrille Normandie-Niemen, F-13397 Marseille Cedex 20, France

A new bis-amido-copper(II) complex **2** has been prepared. In the presence of hydrogen peroxide, complex **2** exhibited interesting nuclease activities in the 1–10 μM concentration range. For explaining its reactivity, we proposed the occurrence of a bis-amido-copper(III) intermediate and an oxidation mechanism involving a H-atom abstraction of deoxyribose moieties of DNA.



3-D QSAR Studies on New Dibenzyltin(IV) Anticancer Agents by Comparative Molecular Field Analysis (CoMFA)

Bioorg. Med. Chem. Lett. 12 (2002) 61

Purnima M. Samuel,^a Dick de Vos,^b D. Raveendra,^c J. A. R. P. Sarma^{c,*} and Sujit Roy^{d,*}

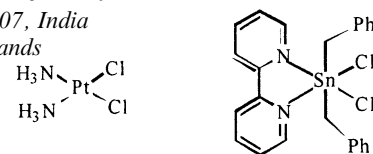
^aMetallo-Organic Laboratory, Indian Institute of Chemical Technology, Hyderabad 500007, India

^bMedical Department, Pharmachemie BV, PO Box 552, 2003 RN Haarlem, The Netherlands

^cMolecular Modeling Group, Organic Division-I, Indian Institute of Chemical Technology, Hyderabad 500007, India

^dOrganometallics & Catalysis Laboratory, Chemistry Department, Indian Institute of Technology, Kharagpur 721302, India

Dibenzyltin(IV) derivatives with N,S-donor ligands show significant cytotoxicity against human cancer cell lines. CoMFA PLS study on 21 complexes show good correlation with high r^2 and r_{CV}^2 values.



MCF-7	IC ₅₀ (μM)	467
In vivo	LD ₅₀ (mg/Kg)	31

2.3
960

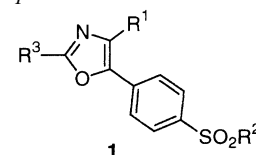
4-Aryl/cycloalkyl-5-phenyloxazole Derivatives as Selective COX-2 Inhibitors

Bioorg. Med. Chem. Lett. 12 (2002) 65

Hiromasa Hashimoto,^{*} Kimiya Maeda, Koichi Ozawa, Jun-ichi Haruta and Korekiyo Wakitani

Central Pharmaceutical Research Institute, JT, Inc., 1-1 Murasaki-cho, Takatsuki, Osaka 569-1125, Japan

A series of 4-aryl/cycloalkyl-5-phenyloxazole derivatives **1** were synthesized and evaluated for their human cyclooxygenase-2 and cyclooxygenase-1 inhibitory activities.



New Readily Accessible Peroxides with High Anti-Malarial Potency

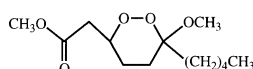
Bioorg. Med. Chem. Lett. 12 (2002) 69

Nobutoshi Murakami,^a Motoyuki Kawanishi,^a Sawako Itagaki,^b Toshihiro Horii^b and Motomasa Kobayashi^{a,*}

^aGraduate School of Pharmaceutical Sciences, Osaka University, 1-6 Yamada-oka, Suita, Osaka 565-0871, Japan

^bResearch Institute for Microbial Diseases, Osaka University, 3-1 Yamada-oka, Suita, Osaka 565-0871, Japan

Exploration for new anti-malarial substances using the methyl esters of peroxyplakoric acids A₃ and B₃ as scaffolds led to a new readily accessible peroxide, 6-carbomethoxymethyl-3-methoxy-3-pentyl-1,2-dioxane.



2'-O,4'-C-Ethylene-Bridged Nucleic Acids (ENA): Highly Nuclease-Resistant and Thermodynamically Stable Oligonucleotides for Antisense Drug

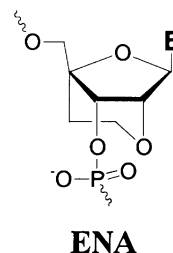
Bioorg. Med. Chem. Lett. 12 (2002) 73

Koji Morita,^a Chikako Hasegawa,^a Masakatsu Kaneko,^a Shinya Tsutsumi,^b Junko Sone,^b Tomio Ishikawa,^b Takeshi Imanishi^c and Makoto Koizumi^{a,*}

^aExploratory Chemistry Research Laboratories, Sankyo Co., Ltd., Tokyo 140-8710, Japan

^bBiomedical Research Laboratories, Sankyo Co., Ltd., Tokyo 140-8710, Japan

^cGraduate School of Pharmaceutical Sciences, Osaka University, Osaka 565-0871, Japan



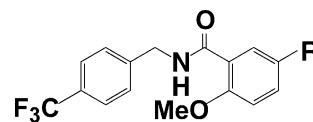
Design, Synthesis and Evaluation of Substituted Phenylpropanoic Acid Derivatives as Peroxisome Proliferator-Activated Receptor (PPAR) Activators: Novel Human PPAR α -Selective Activators

Bioorg. Med. Chem. Lett. 12 (2002) 77

Hiroyuki Miyachi,^{*} Masahiro Nomura, Takahiro Tanase, Yukie Takahashi, Tomohiro Ide, Masaki Tsunoda, Koji Murakami and Katsuya Awano

Discovery Research Laboratories, Kyorin Pharmaceutical Co., Ltd., 2399-1 Mitarai, Nogi-machi, Shimotsuga-gun, Tochigi 329-0114, Japan

A series of substituted phenylpropanoic acid derivatives was prepared as part of a search for subtype-selective human peroxisome proliferator-activated receptor (PPAR) activators.



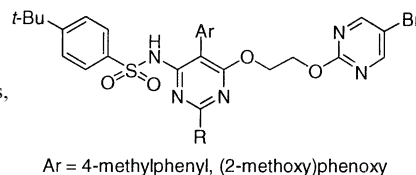
Modifications and Structure–Activity Relationships at the 2-Position of 4-Sulfonamidopyrimidine Derivatives as Potent Endothelin Antagonists

Bioorg. Med. Chem. Lett. 12 (2002) 81

Hiroshi Morimoto, Hideshi Shimadzu, Toshihiro Hosaka, Yasushi Kawase, Kosuke Yasuda, Kohei Kikkawa, Rikako Yamauchi-Kohno and Koichiro Yamada^{*}

Discovery Research Laboratory, Tanabe Seiyaku Co. Ltd., 2-2-50 Kawagishi, Toda, Saitama 335-8505, Japan

Modifications at the 2-position of the nucleus pyrimidine of a series of potent ET_A antagonists, which showed extremely high affinity for ET_A receptor in porcine aortic membrane, were performed by efficient synthetic methods to examine structure–activity relationship.



Synthesis and Antinephritic Activities of Quinoline-3-carboxamides and Related Compounds

Bioorg. Med. Chem. Lett. 12 (2002) 85

Kiyoshi Tsuji,^{a,*} Glen W. Spears,^a Katsuya Nakamura,^a Takashi Tojo,^a Nobuo Seki,^c Aiko Sugiyama^b and Masaaki Matsuo^b

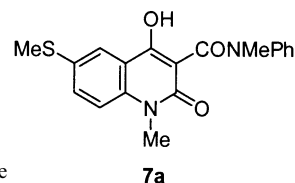
^aMedicinal Chemistry Research Laboratories, Fujisawa Pharmaceutical Co., Ltd, 1-6,

Kashima 2-chome, Yodogawa-ku, Osaka 532-8514, Japan

^bResearch Information Management, Fujisawa Pharmaceutical Co., Ltd, 1-6, Kashima 2-chome, Yodogawa-ku, Osaka 532-8514, Japan

^cExploratory Research Laboratories, Fujisawa Pharmaceutical Co., Ltd, 2-3, Tokodai 5-chome, Tsukuba, Ibaraki 300-2698, Japan

A series of linomide-related quinoline-3-carboxamides and their analogues was prepared and evaluated for antinephritic activities. The 6-MeS derivative **7a** was highly effective in both chronic graft-versus-host disease and autoimmune MRL/1 mice.



Versatile Synthesis of Phenoxydiazirine-Based Fatty Acid Analogues and Photoreactive Galactosylceramide

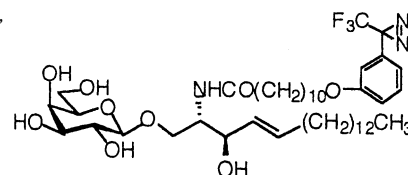
Bioorg. Med. Chem. Lett. 12 (2002) 89

Makoto Hashimoto,^{a,*} Yasumaru Hatanaka^b and Kensuke Nabeta^a

^aDepartment of Bioresource Science, Obihiro University of Agriculture and Veterinary Medicine, Inada-cho, Obihiro 080-8555, Hokkaido, Japan

^bFaculty of Pharmaceutical Sciences, Toyama Medical and Pharmaceutical University, 2360 Sugitani, Toyama 930-0194, Japan

The synthesis of the phenoxydiazirinyl fatty acids and galactosylceramide are reported.



Combinatorial Synthesis of 3-(Amidoalkyl) and 3-(Aminoalkyl)-2-arylindole Derivatives: Discovery of Potent Ligands for a Variety of G-protein Coupled Receptors

Bioorg. Med. Chem. Lett. 12 (2002) 93

Christopher A. Willoughby,^{a,*} Steven M. Hutchins,^a Keith G. Rosauer,^a Madhumeeta J. Dhar,^a Kevin T. Chapman,^a Gary G. Chicchi,^b Sharon Sadowski,^b David H. Weinberg,^c Smita Patel,^d Lorraine Malkowitz,^b Jerry Di Salvo,^c Stephen G. Pacholok^b and Kang Cheng^c

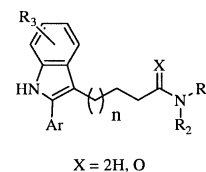
^aDepartment of Medicinal Chemistry, Merck Research Laboratories, Rahway, NJ 07065, USA

^bDepartment of Immunology, Merck Research Laboratories, Rahway, NJ 07065, USA

^cDepartment of Biochemistry and Physiology, Merck Research Laboratories, Rahway, NJ 07065, USA

^dDepartment of Biochemistry, The Neuroscience Research Centre, Merck Research Laboratories, Terlings Park, Harlow, Essex CM20 2QR, UK

The synthesis of a combinatorial library of indole derivatives is reported. Several compounds were discovered to have high affinity/selectivity for various G-protein coupled receptors. These compounds serve as potential leads for further drug development.



X = 2H, O

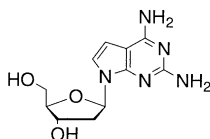
2-Amino-7-deazaadenine Forms Stable Base Pairs with Cytosine and Thymine

Bioorg. Med. Chem. Lett. 12 (2002) 97

Akimitsu Okamoto, Kazuo Tanaka and Isao Saito*

Department of Synthetic Chemistry and Biological Chemistry, Faculty of Engineering, Kyoto University, and CREST, Japan Science and Technology Corporation, Kyoto 606-8501, Japan

2-Amino-7-deazaadenine (^{ADA}) was incorporated into oligodeoxynucleotides and their base-pairing properties with natural nucleobases were investigated. ^{ADA} acts as a superior degenerate base to form a stable base pair with both cytosine and thymine.



Potent P1' Biphenylmethyl Substituted Aggrecanase Inhibitors

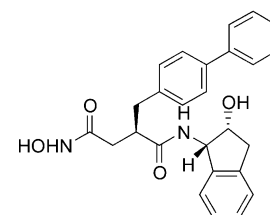
Bioorg. Med. Chem. Lett. 12 (2002) 101

Wenqing Yao,^{a,*} Michael Chao,^a Zelda R. Wasserman,^a Rui-Qin Liu,^b Maryanne B. Covington,^b Robert Newton,^b David Christ,^c Ruth R. Wexler^a and Carl P. Decicco^a

^aDepartment of Chemistry, Bristol-Myers Squibb Pharma Company, Experimental Station, Wilmington, DE 19880-0500, USA

^bInflammatory Diseases Research, Bristol-Myers Squibb Pharma Company, Experimental Station, Wilmington, DE 19880-0500, USA

^cDrug Metabolism and Pharmacokinetics Division, Bristol-Myers Squibb Pharma Company, Experimental Station, Wilmington, DE 19880-0500, USA



Synthesis of Highly Functionalised Dibenzylglycine Derivatives Via the Suzuki–Miyaura Coupling Reaction

Sambasivarao Kotha,* Manoranjan Behera and Ramanatham Vinod Kumar

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

