

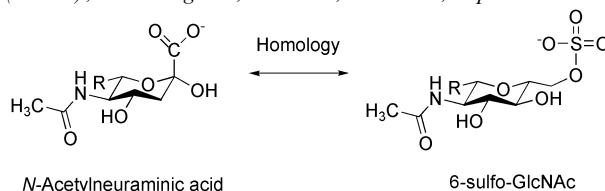
***N*-Acetyl-6-sulfo-D-glucosamine as a Promising Mimic of *N*-Acetyl Neuraminic Acid**

Bioorg. Med. Chem. Lett. 13 (2003) 2821

 Kenji Sasaki,^{a,c} Yoshihiro Nishida,^{a,c,*} Hirotaka Uzawa^b and Kazukiyo Kobayashi^{a,c,*}
^a*Department of Molecular Design and Engineering, Graduate School of Engineering, Nagoya University, Chikusa-ku, Nagoya 464-8603, Japan*
^b*National Institute of Advanced Industrial Science and Technology (AIST), 1-1-1 Higashi, Tsukuba, 305-8565, Japan*
^c*CREST, Japan Science and Technology Corporation (JST).*

4-1-8 Hon-cho, Kawaguchi, Saitama 332-0012, Japan

6-Sulfo-D-GlcNAc with a molecular geometry close to that of *N*-acetylneuraminic acid (Neu5Ac) was hypothesized to serve as a simple mimic of Neu5Ac. The hypothesis was evidenced by substantial activity to inhibit neuraminidase.

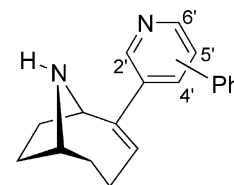


Synthesis and Nicotinic Binding of Novel Phenyl Derivatives of UB-165. Identifying Factors Associated with $\alpha 7$ Selectivity

Bioorg. Med. Chem. Lett. 13 (2003) 2825

 Gunter Karig,^a Jonathan M. Large,^a Christopher G. V. Sharples,^b Andrew Sutherland,^a Timothy Gallagher^{a,*} and Susan Wonnacott^{b,*}
^a*School of Chemistry, University of Bristol, Bristol BS8 1TS, UK*
^b*Department of Biology and Biochemistry, University of Bath, Bath BA2 7AY, UK*

Four phenyl substituted analogues of UB-165 have been synthesised and evaluated as nicotinic ligands. The 2'-phenyl derivative shows no activity at these major receptor subtypes, while the 4'-phenyl analogue shows an enhanced level of $\alpha 7$ selectivity.

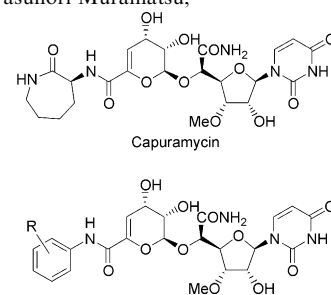


Synthesis and Antimycobacterial Activity of Capuramycin Analogues. Part 1: Substitution of the Azepan-2-one Moiety of Capuramycin

Bioorg. Med. Chem. Lett. 13 (2003) 2829

 Hitoshi Hotoda,^{a,*} Miyuki Furukawa,^a Makiko Daigo,^a Kazuhiro Murayama,^a Masakatsu Kaneko,^a Yasunori Muramatsu,^b Michiko Miyazawa Ishii,^b Shun-ichi Miyakoshi,^b Toshio Takatsu,^b Masatoshi Inukai,^b Masayo Kakuta,^c Tomomi Abe,^c Tamako Harasaki,^c Takashi Fukuoka,^c Yukio Utsui^c and Satoshi Ohya^c
^a*Exploratory Chemistry Research Laboratories, Sankyo Co., Ltd., 1-2-58 Hiromachi, Shinagawa-ku, Tokyo 140-8710, Japan*
^b*Biomedical Research Laboratories, Sankyo Co., Ltd., 1-2-58 Hiromachi, Shinagawa-ku, Tokyo 140-8710, Japan*
^c*Biological Research Laboratories, Sankyo Co., Ltd., 1-2-58 Hiromachi, Shinagawa-ku, Tokyo 140-8710, Japan*

Capuramycin analogues with a variety of substituents in place of the azepan-2-one moiety were synthesized from A-500359E and were tested for their translocase I inhibitory activity and in vitro antimycobacterial activity. Phenyl-type moieties were found to be effective substituents for capuramycin analogues.

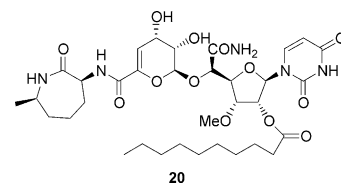


Synthesis and Antimycobacterial Activity of Capuramycin Analogues. Part 2: Acylated Derivatives of Capuramycin-Related Compounds

Bioorg. Med. Chem. Lett. 13 (2003) 2833

 Hitoshi Hotoda,^{a,*} Makiko Daigo,^a Miyuki Furukawa,^a Kazuhiro Murayama,^a Chikako Akiyama Hasegawa,^a Masakatsu Kaneko,^a Yasunori Muramatsu,^b Michiko Miyazawa Ishii,^b Shun-ichi Miyakoshi,^b Toshio Takatsu,^b Masatoshi Inukai,^b Masayo Kakuta,^c Tomomi Abe,^c Takashi Fukuoka,^c Yukio Utsui^c and Satoshi Ohya^c
^a*Exploratory Chemistry Research Laboratories, Sankyo Co., Ltd., 1-2-58 Hiromachi, Shinagawa-ku, Tokyo 140-8710, Japan*
^b*Biomedical Research Laboratories, Sankyo Co., Ltd., 1-2-58 Hiromachi, Shinagawa-ku, Tokyo 140-8710, Japan*
^c*Biological Research Laboratories, Sankyo Co., Ltd., 1-2-58 Hiromachi, Shinagawa-ku, Tokyo 140-8710, Japan*

Acylated derivatives of capuramycin and A-500359A were synthesized and tested for antimycobacterial activity. Compound **20** having a decanoyl group showed very potent antimycobacterial activity.



QSAR Study on the Affinity of Some Arylpiperazines towards the 5-HT_{1A}/α₁-Adrenergic Receptor Using the E-State Index

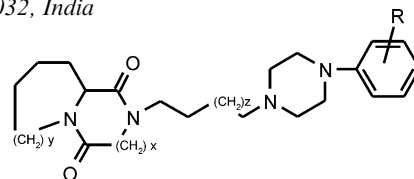
Bioorg. Med. Chem. Lett. 13 (2003) 2837

Bikash Debnath,^a Soma Samanta,^a Sudip Kumar Naskar,^b Kunal Roy^a and Tarun Jha^{a,*}

^aDepartment of Pharmaceutical Technology, PO Box 17020, Jadavpur University, Kolkata 700 032, India

^bDepartment of Computer Science & Engineering, Jadavpur University, Kolkata 700 032, India

QSAR study was performed using the E-state index on some arylpiperazines as 5-HT_{1A}/α₁-adrenergic receptor antagonistic activities to find out pharmacophoric requirements.



MMPs Inhibitors: New Succinylhydroxamates with Selective Inhibition of MMP-2 over MMP-3

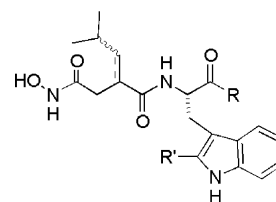
Bioorg. Med. Chem. Lett. 13 (2003) 2843

Valérie Marcq,^a Catherine Mirand,^{a,*} Martine Decarme,^b Hervé Emonard^b and William Hornebeck^b

^aIFR 53, UMR/CNRS 6013, Faculté de Pharmacie, 51 rue Cognacq-Jay, 51096 Reims Cedex, France

^bIFR 53 FRE/CNRS 2534, Faculté de Médecine, 51 rue Cognacq-Jay, 51096 Reims Cedex, France

Some ilomastat analogues featuring an isobutyridene group or a 2-substituted indole nucleus were synthesized to evaluate their inhibitory activities against gelatinase A and stromelysin-1.



Aggregation of RecA-Derived Peptides on Single-Stranded Oligonucleotides Triggered by Schiff Base-Mediated Crosslinking

Bioorg. Med. Chem. Lett. 13 (2003) 2847

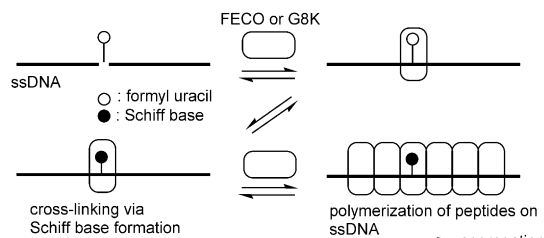
Toru Sugiyama,^{a,*} Atsushi Kittaka,^{b,*} Hiroaki Takayama,^b Mitsugu Tomioka,^c Yoshiteru Ida^c and Reiko Kuroda^{a,*}

^aDepartment of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, 3-8-1 Komaba, Meguro-ku, Tokyo 153-8902, Japan

^bFaculty of Pharmaceutical Sciences, Teikyo University, Sagamiko, Kanagawa 199-0195, Japan

^cSchool of Pharmaceutical Sciences, Showa University, 1-5-8 Hatanodai, Shinagawa-ku, Tokyo 142-8555, Japan

Schiff base-triggered aggregation of RecA-derived peptides onto fdU-containing ssDNA is reported.



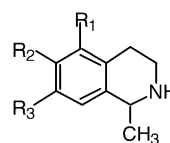
Neuroprotective or Neurotoxic Activity of 1-Methyl-1,2,3,4-tetrahydroisoquinoline and Related Compounds

Bioorg. Med. Chem. Lett. 13 (2003) 2853

Katsuhiro Okuda, Yaichiro Kotake and Shigeru Ohta^{*}

Graduate School of Biomedical Sciences, Hiroshima University, Kasumi 1-2-3, Minami-ku, Hiroshima 734-8551, Japan

We synthesized various 1-methyl-1,2,3,4-tetrahydroisoquinoline (1MeTIQ) derivatives, evaluated their neurotoxicity using SH-SY5Y cells, and tested the neuroprotective activity of 1MeTIQ and hydroxyl-substituted 1MeTIQs against salsolinol toxicity.



	R ₁	R ₂	R ₃	LD ₅₀ (mM)
1	H	H	H	3.59
2a	OMe	H	H	2.45
2b	OH	H	H	3.38
3a	H	OMe	H	2.79
3b	H	OH	H	3.63
4a	H	H	OMe	1.39
4b	H	H	OH	4.15
5a	H	OMe	OMe	2.73
5b	H	OH	OH	0.034

Carbonic Anhydrase Inhibitors: Inhibition of Human and Murine Mitochondrial Isozymes V with Anions

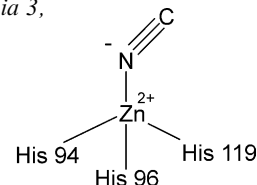
Bioorg. Med. Chem. Lett. 13 (2003) 2857

Marco Franchi,^a Daniela Vullo,^b Enzo Gallori,^a Jochen Antel,^c Michael Wurl,^c Andrea Scozzafava^b and Claudiu T. Supuran^{b,*}

^aUniversità degli Studi di Firenze, Dipartimento di Biologia Animale e Genetica, Via Romana 17-19, 50122 Firenze, Italy

^bUniversità degli Studi di Firenze, Laboratorio di Chimica Bioinorganica, Rm. 188, Via della Lastruccia 3, I-50019 Sesto Fiorentino, Firenze, Italy

^cSolvay Pharmaceuticals GmbH, Hans Böckler-Allee 20, D-30173 Hannover, Germany



Synthesis of N-Alkylated Derivatives of Imidazole as Antibacterial Agents

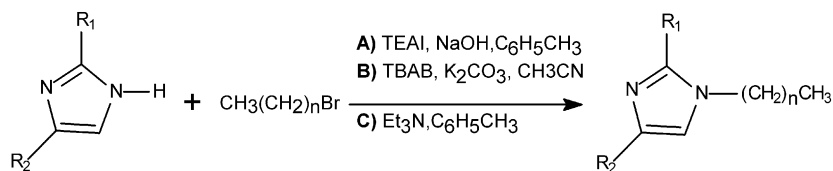
Bioorg. Med. Chem. Lett. 13 (2003) 2863

S. Khahnadideh,^{a,*} Z. Rezaei,^a A. Khalafi-Nezhad,^b R. Bahrinajafi,^a R. Mohamadi^a and A. A. Farrokhroza

^aDepartment of Medicinal Chemistry, School of Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran

^bDepartment of Chemistry, College of Science, Shiraz University, Shiraz 71454, Iran

Alkylated derivatives of imidazole have been synthesized as antibacterial agents. Antibacterial effects of 1-alkylimidazole derivatives increase as the number of carbons in alkyl chain increase up to nine carbons. Also substitution of 2-methyl and 2-methyl-4-nitro groups on imidazole ring increase the antibacterial activity.



Carbonic Anhydrase Inhibitors: Topically Acting Antiglaucoma Sulfonamides Incorporating Esters and Amides of 3- and 4-Carboxybenzamide

Bioorg. Med. Chem. Lett. 13 (2003) 2867

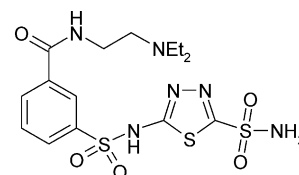
Angela Casini,^a Andrea Scozzafava,^a Francesco Mincione,^b Luca Menabuoni,^c Michele Starnotti^d and Claudiu T. Supuran^{a,*}

^aUniversità degli Studi, Laboratorio di Chimica Inorganica e Bioinorganica, Via della Lastruccia 3, Rm. 188; 50019 Sesto Fiorentino, Florence, Italy

^bU.O. Oculistica Az. USL 3, Val di Nievole, Ospedale di Pescia, Pescia, Italy

^cCasa di Cura Villa Donatello, Piazza Donatello, 14, 50100 Florence, Italy

^dClinica Oculistica, Viale Morgagni 85, I-50134 Florence, Italy



Prolylisoxazoles: Potent Inhibitors of Prolyl oligopeptidase with Antitrypanosomal Activity

Bioorg. Med. Chem. Lett. 13 (2003) 2875

Gunther Bal,^a Pieter Van der Veken,^a Dimitri Antonov,^a Anne-Marie Lambeir,^b Philippe Grellier,^c Simon L. Croft,^d Koen Augustyns^a and Achiel Haemers^{a,*}

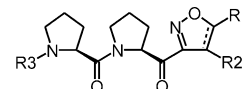
^aDepartment of Medicinal Chemistry, University of Antwerp, Belgium

^bDepartment of Medical Biochemistry, University of Antwerp, Belgium

^cMuséum National d'Histoire Naturelle, USM 0504 Biologie Fonctionnelle des Protozoaires, Paris, France

^dDepartment of Infectious and Tropical Diseases, London School of Hygiene & Tropical Medicine, London, UK

A series of prolylprolylisoxazoles and prolylprolylisoxazolines are synthesized through an 1,3 dipolar cycloaddition reaction. They are potent (K_i : low nM) inhibitors of prolyl oligopeptidase and show antitrypanosomal activity in vitro (ED_{50} : low μ M).



Isolation of Bisindole Alkaloids that Inhibit the Cell Cycle from Myxomycetes *Arcyria ferruginea* and *Tubifera casparyi*

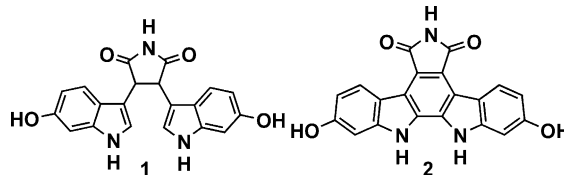
Bioorg. Med. Chem. Lett. 13 (2003) 2879

Satomi Nakatani,^a Ayano Naoe,^a Yukinori Yamamoto,^b Tomohiro Yamauchi,^a Naoto Yamaguchi^a and Masami Ishibashi^{a,*}

^aGraduate School of Pharmaceutical Sciences, Chiba University, 1-33 Yayoi-cho, Inage-ku, Chiba 263-8522, Japan

^bKochi Kita Highschool, 160 Higashiishidate, Kochi 780-8039, Japan

From a myxomycete *Arcyria ferruginea*, dihydroarcyriarubin C (**1**), a new bisindole alkaloid, has been isolated, and arcyriflavin C (**2**), a known bisindole alkaloid isolated from *Tubifera casparyi*, exhibited cell-cycle inhibition effect at G1 and G2/M stage at 10 and 100 ng/mL, respectively.



Differentially Functionalized Diamines as Novel Ligands for the NPY₂ Receptor

Bioorg. Med. Chem. Lett. 13 (2003) 2883

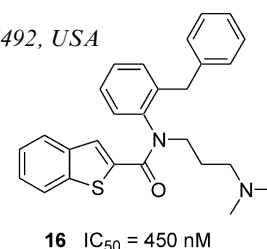
Charles J. Andres,^a Ildiko Antal Zimanyi,^{b,*} Milind S. Deshpande,^c Lawrence G. Iben,^a Katharine Grant-Young,^{a,*} Gail K. Mattson^a and Weixu Zhai^a

^aBristol-Myers Squibb Pharmaceutical Research Institute, 5 Research Parkway, Wallingford, CT 06492, USA

^bBristol-Myers Squibb Pharmaceutical Research Institute, Pennington-Rocky Hill Road, Hopewell, NJ 08525, USA

^cAchillion Pharmaceuticals Inc., 300 George Street, New Haven, CT 06511, USA

Novel ligands for the NPY₂ receptor have been synthesized using both solution phase parallel synthesis and solid phase split pool synthesis methodologies.



Cage Amines as the Stopper Inhibitors of Cholinesterases

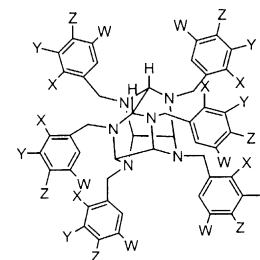
Bioorg. Med. Chem. Lett. 13 (2003) 2887

Gialih Lin,^{a,*} Hou-Jen Tsai^b and Yi-Hon Tsai^a

^aDepartment of Chemistry, National Chung-Hsing University, Taichung, Taiwan

^bDepartment of Applied Chemistry, National Chung Cheng Institute of Technology, Ta-Shi, Tao-Yuan, Taiwan

The relationship between cholinesterases and cage amines mimics that between bottles and stoppers.



Antitumor Agents. Part 226: Synthesis and Cytotoxicity of 2-Phenyl-4-quinolone Acetic Acids and Their Esters

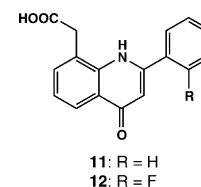
Bioorg. Med. Chem. Lett. 13 (2003) 2891

Yi Xia,^a Zheng-Yu Yang,^a Peng Xia,^a Kenneth F. Bastow,^a Yuka Nakanishi,^a Priya Nampoothiri,^b Ernest Hamel,^b Arnold Brossi^a and Kuo-Hsiung Lee^{a,*}

^aNatural Products Laboratory, School of Pharmacy, University of North Carolina, Chapel Hill, NC 27599, USA

^bScreening Technologies Branch, Developmental Therapeutics Program, Division of Cancer Treatment and Diagnosis, National Cancer Institute at Frederick, National Institutes of Health, Frederick, MD 21702, USA

2-Phenyl-4-quinolone acetic acids and their esters were synthesized and evaluated for cytotoxicity against a panel of human tumor cell lines. 2-Phenyl- and 2-(2'-fluorophenyl)-4-quinolone-8-acetic acids (**11** and **12**) displayed potent cytotoxicity with ED₅₀ values at nanomolar concentrations.



Identification of a Novel Class of Orally Active

Bioorg. Med. Chem. Lett. 13 (2003) 2895

Pyrimido[5,4-3][1,2,4]triazine-5,7-diamine-Based Hypoglycemic Agents with Protein Tyrosine Phosphatase Inhibitory Activity

Kevin R. Guertin,* Lina Setti, Lida Qi, Rachel M. Dunsdon, Brian W. Dymock, Philip S. Jones, Hilary Overton, Mathew Taylor, Glyn Williams, Joseph A. Sergi, Karen Wang, Ying Peng, Marcia Renzetti, Rogely Boyce, Fiorenza Falcioni, Ralph Garippa and Andrée R. Olivier

Roche Research Center, Hoffmann-LaRoche Inc., 340 Kingsland St., Nutley, NJ 07110, USA

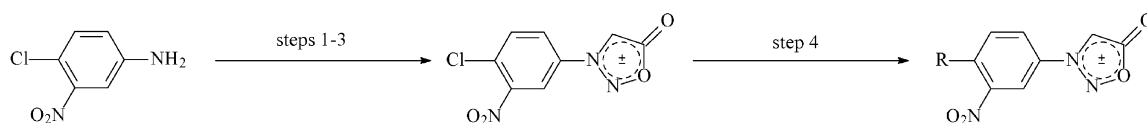
A novel class of orally active pyrimido[5,4-3][1,2,4]triazine-5,7-diamine hypoglycemic agents is described. The compounds show inhibitory properties across a panel of tyrosine phosphatases. Compounds **12** and **13** are orally active in *ob/ob* mice.

Synthesis and Biological Evaluation of a Novel Phenyl Substituted Sydnone Series as Potential Antitumor Agents

Bioorg. Med. Chem. Lett. 13 (2003) 2899

Christopher S. Dunkley and Charles J. Thoman*

Department of Chemistry and Biochemistry, University of the Sciences in Philadelphia, 600 S. 43rd St., Philadelphia, PA 19104, USA



1. Condensation with chloroacetic acid, 2. Nitrosation, 3. Ring closure using Ac₂O, 4. Nucleophilic aromatic substitution with appropriate substrate

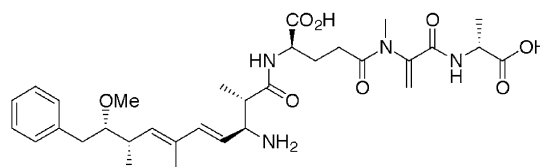
Linearized and Truncated Microcystin Analogues as Inhibitors of Protein Phosphatases 1 and 2A

Bioorg. Med. Chem. Lett. 13 (2003) 2903

Brian M. Gullledge, James B. Aggen and A. Richard Chamberlin*

Department of Chemistry, University of California at Irvine, Irvine, CA 92697, USA

A series of acyclic, truncated microcystin analogues containing Adda and between one to four additional amino acids characteristic of the parent toxin was synthesized and screened for activity as inhibitors of the protein phosphatases 1 and 2A.



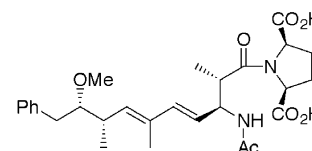
Microcystin Analogues Comprised Only of Adda and a Single Additional Amino Acid Retain Moderate Activity as PP1/PP2A Inhibitors

Bioorg. Med. Chem. Lett. 13 (2003) 2907

Brian M. Gullledge, James B. Aggen, Hugo Eng, Khuloud Sweimeh and A. Richard Chamberlin*

Department of Chemistry, University of California at Irvine, Irvine, CA 92697, USA

A series of greatly simplified microcystin analogues was synthesized and screened for inhibition of the protein phosphatases 1 and 2A, with several of the analogues shown to be mid-nanomolar inhibitors of the enzymes.



Synthesis of ^{13}C -Labeled Iodoacetanilide and Application to Quantitative Peptide Analysis by Isotope Differential Mass Spectrometry

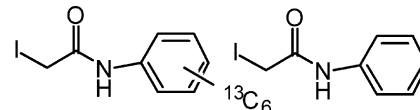
Bioorg. Med. Chem. Lett. 13 (2003) 2913

Satomi Niwayama,^{a,*} Sadamu Kurono^b and Hiroyuki Matsumoto^{b,*}

^aDepartment of Chemistry, Oklahoma State University, Stillwater, OK 74078-3071, USA

^bDepartment of Biochemistry and Molecular Biology, NSF EPSCoR Oklahoma Biotechnology Network Laser Mass Spectrometry Facility, University of Oklahoma Health Sciences Center, Oklahoma City, OK 73190, USA

^{13}C -Labeled and unlabeled iodoacetanilides have been synthesized for covalent modification of cysteine residues in proteins and applied to quantitative analysis of peptides.



Quaternary Ammonium 3-(Aminoethoxy)pyridines as Antinociceptive Agents

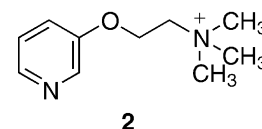
Bioorg. Med. Chem. Lett. 13 (2003) 2917

Rahime Simsek,^a Jean Chang-Fong,^a Mase Lee,^a Malgorzata Dukat,^a M. Imad Damaj,^b Billy R. Martin^b and Richard A. Glennon^{a,*}

^aDepartment of Medicinal Chemistry, School of Pharmacy, Virginia Commonwealth University, Richmond, VA 23298, USA

^bDepartment of Pharmacology, School of Medicine, Virginia Commonwealth University, Richmond, VA 23298, USA

Compound **2** ($K_i = 0.5$ nM) was one of several quaternary amines shown to bind at nicotinic acetylcholinergic receptors with high affinity. Antinociceptive action (mouse tail-flick assay) was evident following either subcutaneous or intrathecal administration of **2**.



1H-Pyrazolo-[3,4-c]cyclohepta[1,2-c]thiophenes: A Unique Structural Class of Dopamine D₄ Selective Ligands

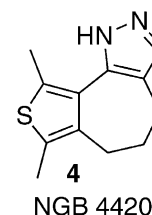
Bioorg. Med. Chem. Lett. 13 (2003) 2921

Andrew Thurkauf,^a Xi Chen,^a Suoming Zhang,^a Yang Gao,^a Andrzej Kieltyka,^a Jan W. F. Wasley,^a Robbin Brodbeck,^a William Greenlee,^b Ashit Ganguly^b and He Zhao^{a,*}

^aNeurogen Corporation, 35 Northeast Industrial Road, Branford, CT 06405, USA

^bSchering-Plough Research Institute, 2015 Galloping Hill Road, Kenilworth, NJ 07033, USA

A series of novel 1H-pyrazolo-[3,4-c]cyclohepta[1,2-c]thiophenes was prepared and screened at selected dopamine receptor subtypes. Compound **4** (NGB 4420) displayed high affinity and selectivity (>100-fold) for the D₄ over D₂ and other CNS receptors. This compound was identified as a D₄ antagonist via its attenuation of dopamine agonist-induced GTPγ³⁵S binding at the D₄ receptor.



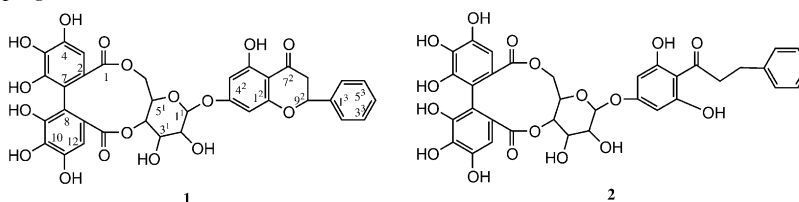
Two Antiviral Compounds from the Plant *Stylogne cauliflora* as Inhibitors of HCV NS3 Protease

Bioorg. Med. Chem. Lett. 13 (2003) 2925

Vinod R. Hegde,^{*} Haiyan Pu, Mahesh Patel, Pradip R. Das, Nancy Butkiewicz, Gladys Arreaza, Vincent P. Gulloand and Tze-Ming Chan

Schering-Plough Research Institute, 2015 Galloping Hill Road, Kenilworth, NJ 07033, USA

The 70% aq methanolic extract of the Peruvian plant *Stylogne cauliflora* was found to contain two novel oligophenolic compounds SCH 644343 (**1**) and SCH 644342 (**2**), which were identified as inhibitors of HCV NS3 protease. The structure of **1** and **2** was established based on high-resolution NMR studies. Compound **1** inhibited HCV NS3 protease with an IC_{50} of 0.3 μM , while compound **2** showed an IC_{50} of 0.8 μM .

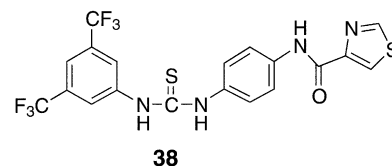


**Thiourea Inhibitors of Herpes Viruses. Part 1:
Bis-(aryl)thiourea Inhibitors of CMV**

Bioorg. Med. Chem. Lett. 13 (2003) 2929

Jonathan D. Bloom,* Martin J. DiGrandi, Russell G. Dushin, Kevin J. Curran, Adma A. Ross,
Emily B. Norton, Eugene Terefenko, Thomas R. Jones, Boris Feld and Stanley A. Lang
Wyeth Research, 401 N. Middletown Rd., Pearl River, NY 10965, USA

Bis-(aryl)thioureas were found to be potent and selective inhibitors of cytomegalovirus (CMV) in cultured HFF cells. Of these, the thiazole analogue **38** was investigated as a potential development candidate.



**Synthesis and Evaluation of Methyl Ether Derivatives of the
Vancomycin, Teicoplanin, and Ristocetin Aglycon Methyl Esters**

Bioorg. Med. Chem. Lett. 13 (2003) 2933

Casey C. McComas, Brendan M. Crowley, Inkyu Hwang and Dale L. Boger*

*Department of Chemistry and the Skaggs Institute for Chemical Biology,
The Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA 92037, USA*

A series of methyl ether derivatives of the vancomycin, teicoplanin, and ristocetin aglycon methyl esters was synthesized and their antimicrobial activity was established. These derivatives exhibit increased activity against VanB resistant strains of bacteria equipotent with that observed with sensitive bacteria.

