Bioorg. Med. Chem. **1997**, *5*, 2111

Synthesis and Antiplatelet, Antiinflammatory, and Antiallergic Activities of 2-Substituted 3-Chloro-1,4-naphthoquinone Derivatives

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[a]*Graduate Institute of Pharmaceutical Chemistry, China Medical College, Taichung, Taiwan*

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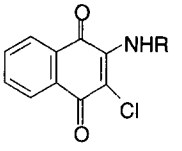
[d]*Natural Products Laboratory, Division of Medicinal Chemistry and Natural Products, School of Pharmacy, University of North Carolina, Chapel Hill, NC 27599, U.S.A.*

Synthesis and antiplatelet, antiinflammatory, and antiallergic activities of 2-alkyl(aryl)-carboxamido- and 2-alkyl(aryl)amino-3-chloro-1,4-naphthoquinones are described.



Bioorg. Med. Chem. **1997**, *5*, 2121

Quantitative Structure–Activity Studies of Octopaminergic 2-(Arylimino)thiazolidines and Oxazolidines against the Nervous System of *Periplaneta americana* L.

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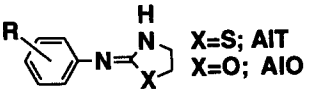
[a]*Department of Agricultural Chemistry, Kyushu University, Fukuoka 812-81, Japan*

[b]*Miyakonojo National College of Technology, 473-1 Yoshio-cho, Miyakonojo 885, Japan*

The quantitative structure–activity relationship (QSAR) of octopaminergic 2-(arylimino)thiazolidines (AITs) and 2-(arylimino)oxazolidines (AIOs) against the thoracic nerve cord of American cockroach, *Periplaneta americana L.*, was analysed using reported physicochemical parameters and regression analysis.



Bioorg. Med. Chem. **1997**, *5*, 2129

2,3-Dihydro-6,7-dichloro-pyrido[2,3-*b*]pyrazine-8-oxide as Selective Glycine Antagonist with In Vivo Activity

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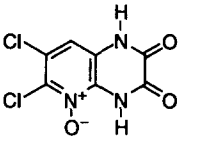
[b]*Universita' degli Studi di Urbino, Istituto di Chimica Farmaceutica, 61029 Urbino, Italy*



Bioorg. Med. Chem. **1997**, *5*, 2133

Anti-AIDS Agents—XXVII. Synthesis and Anti-HIV Activity of Betulinic Acid and Dihydrobetulinic Acid Derivatives

F. Hashimoto,[a,f] Y. Kashiwada,[b,f] L. M. Cosentino,[c] C.-H. Chen,[d] P. E. Garrett[e] and K.-H. Lee[f,*]

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[b]*Niigata College of Pharmacy, Niigata, 950-21, Japan*

[c]*Biotech Research Laboratories, Rockville, MD 20850, U.S.A.*

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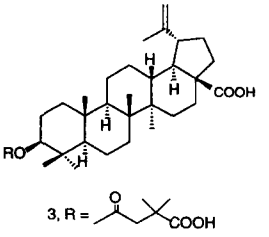
[e]*Boston Biomedica, Inc., West Bridgewater, MA 02379, U.S.A.*

[f]*School of Pharmacy, University of North Carolina, Chapel Hill, NC 27599-7360, U.S.A.*

Derivatives of betulinic acid dihydrobetulinic acid were synthesized and evaluated for anti-HIV activity. 3-*O*-(3′,3′-dimethylsuccinyl)-betulinic acid (**3**) had a remarkable EC_{50} value of $<3.5 \times 10^{-4}$ μM and a TI of 20,000.



Bioorg. Med. Chem. **1997**, *5*, 2185

Anti-Plasmodial and Anti-Trypanosomal Activity of Synthetic Naphtho[2,3-*b*]thiophen-4,9-quinones

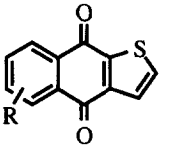
Carlos L. Zani,[a,*] Egler Chiari,[b] Antoniana U. Krettli,[a] Silvane M. F. Murta,[a] Mark L. Cunningham,[c] Alan. H. Fairlamb[c] and Alvaro J. Romanha[a]

[a]*Centro de Pesquisas René Rachou—Fundação Oswaldo Cruz (FIOCRUZ), Av. Augusto de Lima, 1715 CEP 30190-002, Belo Horizonte, MG, Brazil*

[b]*Departamento de Parasitologia, Instituto de Ciências Biológicas, Universidade Federal de Minas Gerais, Belo Horizonte, MG, Brazil*

[c]*Department of Medical Parasitology, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT, U.K.*

Naphthothiophenquinones (NTQs) were prepared using Friedel–Crafts or tandem *ortho*-lithiation methodologies. These quinones were tested against *Plasmodium falciparum* and *Trypanosoma cruzi*. Some of them showed potent in vitro activity against these parasites. The in vitro trypanocidal effect does not correlate with the inhibition of the enzyme trypanothione reductase. Furthermore, despite reaching blood concentrations of 40 μM in mice after a single 500 mg/kg oral dose, the parent compound (R = H) was not active against *P. berghei* in infected mice.



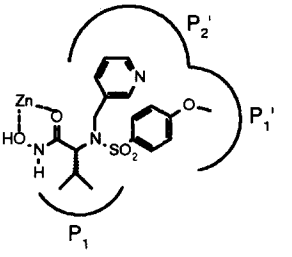
Bioorg. Med. Chem. **1997**, *5*, 2193

Bioactive Conformation of a Potent Stromelysin Inhibitor Determined by X-nucleus Filtered and Multidimensional NMR Spectroscopy

Nina C. Gonnella,* Yu-Chin Li, Xiaolu Zhang and C. Gregory Paris

Novartis Pharmaceuticals Corp., 556 Morris Ave., Summit, NJ 07901, U.S.A.

The bioactive conformation of a potent, nonpeptidic stromelysin inhibitor was determined using NMR methods. This study established the enzyme–inhibitor binding mode and provided a structural template for the design of more potent stromelysin inhibitors.



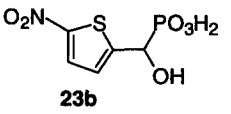
Bioorg. Med. Chem. **1997**, *5*, 2203

Nitroarylhydroxymethylphosphonic Acids as Inhibitors of CD45

Scott A. Beers,* Elizabeth A. Malloy, Wei Wu, Michael P. Wachter, Uma Gunnia, Druie Cavender, Crafford Harris, Janet Davis, Ruth Brosius, J. Lee Pellegrino-Gensey and John Siekierka.

The R.W. Johnson Pharmaceutical Research Institute, 1000 Route 202, Raritan NJ 08869, U.S.A.

Compound **23b** is a member of a new class of phosphonic acids that inhibit CD45 with IC_{50} values from 2–20 μM. Both nitro and hydroxy groups are essential for potency. Lineweaver–Burk kinetics have shown these to be competitive inhibitors of CD45.



23b

Bioorg. Med. Chem. **1997**, *5*, 2213

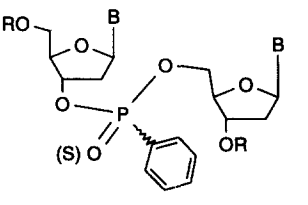
Synthesis and Binding Properties of Oligodeoxynucleotides Containing Phenylphosphon(othio)ate Linkages

Matthias Mag,[a] Jochen Muth,[b] Kerstin Jahn,[a] Anusch Peyman,[a] Gerhard Kretzschmar,[a] Joachim W. Engels[b,*] and Eugen Uhlmann[a]

[a]*Hoechst Aktiengesellschaft, G 838, D-65926 Frankfurt am Main, Germany*

[b]*Institut für Organische Chemie, Johann Wolfgang Goethe-Universität, D-60439 Frankfurt am Main, Germany*

Novel oligodeoxynucleotides containing phenylphosphonate and phenylphosphonothioate linkages, and their synthesis and binding properties to complementary nucleic acids are described.

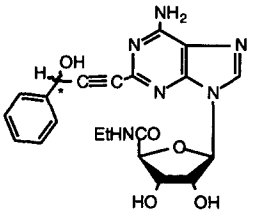


Bioorg. Med. Chem. **1997**, *5*, 2267

Adenosine Receptor Agonists: Synthesis and Biological Evaluation of the Diastereoisomers of 2-(3-Hydroxy-3-phenyl-1-propyn-1-yl)NECA

Emidio Camaioni, Emanuela Di Francesco, Sauro Vittori, Rosaria Volpini and Gloria Cristalli*
Dipartimento di Scienze Chimiche, Università di Camerino, 62032 Camerino, Italy.

A very potent inhibitor of rabbit platelet aggregation was obtained by diastereoisomer separation of a 2-alkynyl derivative of NECA.

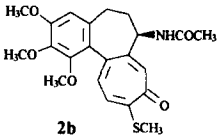


Bioorg. Med. Chem. **1997**, *5*, 2277

Antitumor Agents—CLXXV. Anti-tubulin Action of (+)-Thiocolchicine Prepared by Partial Synthesis

Qian Shi,[a] Pascal Verdier-Pinard,[b] Arnold Brossi,[a,*] Ernest Hamel[b] and Kuo-Hsiung Lee [a,*]
[a]*Natural Products Laboratory, Division of Medicinal Chemistry and Natural Products, School of Pharmacy, University of North Carolina at Chapel Hill, North Carolina 27599*
[b]*Laboratory of Drug Discovery Research and Development, Developmental Therapeutics Program, Division of treatment, Diagnosis and Centers, National Cancer Institute, Frederick Cancer Research and Development Center, Frederick, MD 21702, U.S.A.*

(+)-Thiocolchicine (**2b**) is 15-fold and 29-fold less potent for tubulin polymerization and inhibiting growth of lymphoma cells than (−)-thiocolchicine, suggesting that the proper configuration of colchicine-related compounds is important for their anti-tubulin action.



2b