Anti-DNA Autoantibodies: the Other DNA-binding Proteins

Bioorg. Med. Chem. **1997**, *5*, 467

Roslyn M. Bill, Neal B. Blatt and Gary D. Glick*
Department of Chemistry, University of Michigan, 930 North University Avenue, Ann Arbor, MI 48109-1055, U.S.A.

We review some common approaches that have been used to examine the specificity, affinity, and mode of binding of lupus anti-DNA for DNA antigens. We highlight the recent use of biophysical methods that have been used to study DNA-binding proteins, such as transcription factors, and demonstrate their utility when used in the study of lupus anti-DNA.

Combinatorial Chemistry in Drug Research from a New Vantage Point

Bioorg. Med. Chem. **1997**, *5*, 473

Hubert Maehr
Roche Research Center, Hoffmann–La Roche Inc., Nutley, New Jersey 07110, U.S.A.

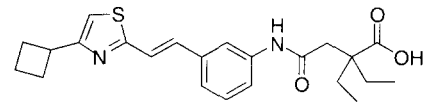
The application of set theory to combinatorial processes provides valuable tools for the planning, description, execution, and evaluation of combinatorial events.

Structure Optimization of a Leukotriene D_4 Antagonist by Combinatorial Chemistry in Solution

Bioorg. Med. Chem. **1997**, *5*, 493

Hubert Maehr* and Roxana Yang
Roche Research Center, Hoffmann–La Roche Inc., Nutley, NJ 07110, U.S.A.

The optimum structural features were deduced by the introduction of molecular diversity at three sites followed by the evaluation of a library containing 700 compounds.

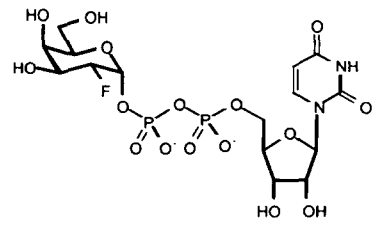


Ro24-5913

A Chemoenzymatic Synthesis of UDP-(2-deoxy-2-fluoro)-galactose and Evaluation of its Interaction with Galactosyltransferase

Bioorg. Med. Chem. **1997**, *5*, 497

Takashi Hayashi, Brion W. Murray, Ruo Wang and Chi-Huey Wong*
Department of Chemistry, The Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA 92037, U.S.A.

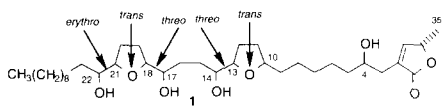


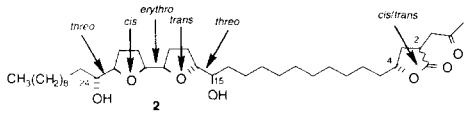
Additional Bioactive Annonaceous Acetogenins from *Asimina triloba* (Annonaceae)

Bioorg. Med. Chem. **1997**, *5*, 501

Kan He, Geng-Xian Zhao, Guoen Shi, Lu Zeng, Jin-Feng Chao, and Jerry L. McLaughlin*
Department of Medicinal Chemistry and Molecular Pharmacology, School of Pharmacy and Pharmacal Sciences, Purdue University, West Lafayette, Indiana 47907, U.S.A.

Trilobalicin (**1**), a new nonadjacent bis-THF ring Annonaceous acetogenin, 2,4-*cis*- (**2**) and 2,4-*trans*-trilobacinone (**3**), the ketolactones of trilobacin, an adjacent bis-THF ring acetogenin, were isolated from the stem bark of *Asimina triloba* (L.) Dunal (Annonaceae).



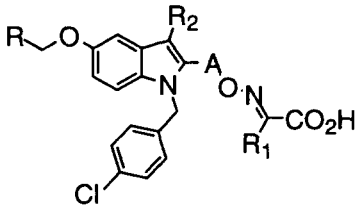


Synthesis of Indolylalkoxyiminoalkylcarboxylates as Leukotriene Biosynthesis Inhibitors

Bioorg. Med. Chem. **1997**, *5*, 507

Teodozyj Kolasa,* Pramila Bhatia, Clint D. W. Brooks, Keren I. Hulkower, Jennifer B. Bouska, Richard R. Harris and Randy L. Bell
Immunoscience Research, D-47K, Abbott Laboratories, 100 Abbott Park, IL 60064-3500, U.S.A.

A series of quinolylmethoxyindolylalkyliminoxycarboxylates were synthesized and evaluated for inhibition of leukotriene biosynthesis.



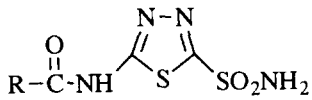
R = 2-quinolyl, 2-pyridyl, 4-thiazolyl, 2-benzothiazolyl; R_1 = H, CH_3; R_2 = H S-tBu or S-2-quinolylmethyl; A = CH_2, CHR_3, $CH_2C(Me_2)CH_2$; R_3 = allyl, n-butyl, benzyl and cyclohexyl.

Synthesis and Investigation of Inhibition Effects of New Carbonic Anhydrase Inhibitors

Bioorg. Med. Chem. **1997**, *5*, 515

Oktay Arslan, Ö. İ. Küfrevioğlu and Barbaros Nalbantoğlu*
Department of Chemistry, Faculty of Science and Arts, Atatürk University, Erzurum, Turkey

Three new carbonic anhydrase (CA) inhibitors (**1**), (**2**) and (**3**) have been synthesized. The inhibition effect of (**1**) on CA II has shown that (**1**) is more a potent inhibitor than acetazolamide.



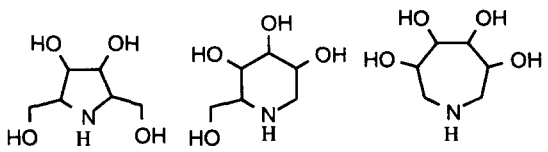
(1) $ClCH_2$-CH_2–
(2) Cl_2CH–
(3) Ph-CH_2-CH_2–

Synthesis of Azasugars as Potent Inhibitors of Glycosidases

Bioorg. Med. Chem. **1997**, *5*, 519

Yves Le Merrer,* Lydie Poitout, Jean-Claude Depezay,[a] Isabelle Dosbaa, Sabine Geoffroy and Marie-José Foglietti[b]
[a]*Université René Descartes, Laboratoire de Chimie et Biochimie Pharmacologiques et Toxicologiques, associé au CNRS, 45 rue des Saints-Pères, 75006 Paris Cedex 06, France*
[b]*Université René Descartes, Laboratoire de Biochimie et de Glycobiologie, 4 avenue de l'Observatoire, 75006 Paris Cedex 06, France*

A series of enantiomerically pure azasugars with a pyrrolidine, piperidine, or an azepane framework was synthesized from D-mannitol. Biological studies indicate, notably, that the polyhydroxylated azepanes are inhibitors of glycosidases with the K_i values in the low micromolar range.

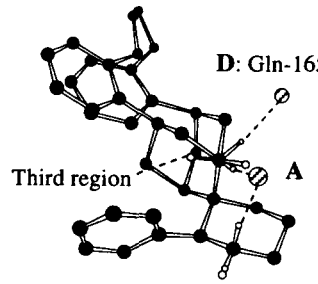


Bioorg. Med. Chem. **1997**, *5*, 535

Possible Ligand–Receptor Interactions for NK_1 Antagonists as Observed in their Crystal Structures

Gertjan J. Boks,[a,*] Jan P. Tollenaere[a] and Jan Kroon[b]
[a]*Department of Medicinal Chemistry, Utrecht Institute for Pharmaceutical Sciences, Universiteit Utrecht, Sorbonnelaan 16, NL-3584 CA Utrecht, The Netherlands*
[b]*Department of Crystal and Structural Chemistry, Bijvoet Centre for Biomolecular Research, Universiteit Utrecht, Padualaan 8, NL-3584 CH Utrecht, The Netherlands*

Interactions observed in small molecule crystal structures might well reflect interactions with a macromolecular receptor.



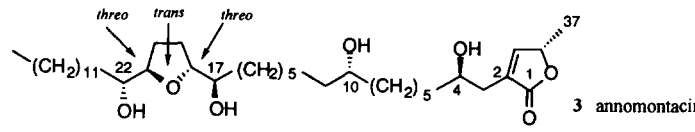
Bioorg. Med. Chem. **1997**, *5*, 549

4-Deoxyannomontacin and (2,4-*cis* and *trans*)-Annomontacinone, New Bioactive Mono-tetrahydrofuran Annonaceous Acetogenins from *Goniothalamus giganteus*

F. Alali, L. Zeng, Y. Zhang, Q. Ye, D. C. Hopp, J. T. Schwedler and J. L. McLaughlin*

Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, West Lafayette, IN 47907, U.S.A.

Two biologically active annonaceous acetogenins are related to annomontacin (**3**).

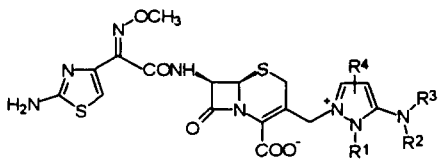


Bioorg. Med. Chem. **1997**, *5*, 557

Studies on 3′-Quaternary Ammonium Cephalosporins—III. Synthesis and Antibacterial Activity of 3′-(3-Aminopyrazolium)cephalosporins

Hidenori Ohki, Kohji Kawabata,* Yoshiko Inamoto, Shinya Okuda, Toshiaki Kamimura and Kazuo Sakane
New Drug Research Laooratones, Fujisawa Pharmaceutical Co., Ltd., 2-1-6 Kashima, Yodogawa-ku, Osaka 532, Japan

The synthesis and in vitro antibacterial activity of 7β-[(*Z*)-2-(2-aminothiazol-4-yl)-2-methoxyinunoacetamido] cephalosporins bearing *N*-mono or dialkyl and carbamoyl aminopyrazolium, and five- or six-membered rings fused to the 3-aminopyrazolium methyl groups at the 3-position, are described.

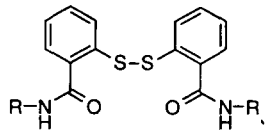


Bioorg. Med. Chem. **1997**, *5*, 569

A New Class of Anti HIV-1 Agents Targeted Toward the Nucleocapsid Protein NCp7: The 2,2′-Dithiobisbenzamides

J. M. Domagala,*[,a] J. P. Bader,[b] R. D. Gogliotti,[a] J. P. Sanchez,[a] M. A. Stier,[a] Y. Song,[a] J. V. N. Vara Prasad,[a] P. J. Tummino,[a] J. Scholten,[a] P. Harvey,[a] T. Holler,[a] S. Gracheck,[a] D. Hupe,[a] W. G. Rice[c] and R. Schultz[b]
[a]*Departments of Chemistry and Therapeutics, Parke-Davis Pharmaceutical Research, Division of Warner-Lambert Company, 2800 Plymouth Road, Ann Arbor, MI 48105, U.S.A.;* [b]*Antiviral Evaluations Developmental Therapeutics Program, Bethesda, MD 20892, U.S.A.;* [c]*The National Cancer Institute Antiviral Drug Mechanisms, SAIC, Frederick, MD 21702, U.S.A.*

Certain 2,2′-dithiobisbenzamides have demonstrated good anti HIV-1 activity (2–10 μM, cytotoxicity >100 μM) and extrude Zn from the Zn-fingers of HIV-1 nucleocapsid protein (NCp7), the putative target. A broad SAR is presented. Optimal substituents on R are acids and amides.

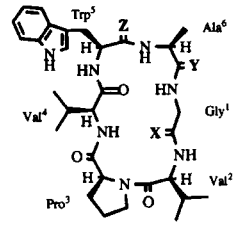


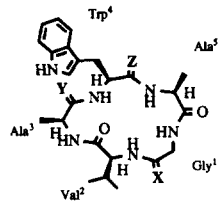
Bioorg. Med. Chem. **1997**, *5*, 631

Thionation of Segetalins A and B, Cyclic Peptides with Estrogen-like Activity from Seeds of *Vaccaria segetalis*

Hiroshi Morita,[a] Young Sook Yun,[a] Koichi Takeya,[a] Hideji Itokawa[a,*] and Osamu Shirota[b]

[a]*Department of Pharmacognosy, School of Pharmacy, Tokyo University of Pharmacy and Life Science, 1432-1 Horinouchi, Hachioji, Tokyo 192-03, Japan and* [b]*Division of Pharmacognosy and Phytochemistry, National Institute of Health Sciences, 1-18-1 Kamiyoga, Setagaya-ku, Tokyo 158, Japan*





segetalin A (**1**)	X=O	Y=O	Z=O	segetalin B (**2**)	X=O	Y=O	Z=O
thiosegetalin A1 (**3**)	X=S	Y=O	Z=S	thiosegetalin B1 (**5**)	X=S	Y=S	Z=O
thiosegetalin A2 (**4**)	X=S	Y=S	Z=O	thiosegetalin B2 (**6**)	X=S	Y=O	Z=S