GRAPHICAL ABSTRACTS

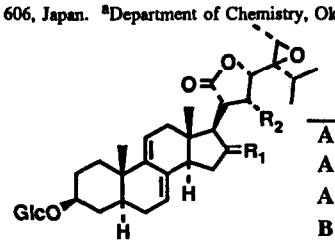
Tetrahedron, **1992**, *48*, 625

Bitter Steroid Glucosides, Vernonioside A_1, A_2, and A_3, and Related B_1 from a Possible Medicinal Plant, *Vernonia amygdalina*, used by Wild Chimpanzees.

Mitsuo Jisaka, Hajime Ohigashi, Teruyoshi Takagaki, Hiroshi Nozaki[a], Toshiji Tada[b], Mitsuru Hirota[c], Ryozo Irie[c], Michael A. Huffman[d], Toshisada Nishida[d], Mikio Kaji[e], and Koichi Koshimizu*.

Department of Food Science and Technology, Kyoto University, Kyoto 606, Japan. [a]Department of Chemistry, Okayama University of Science, Okayama 700, Japan. [b]Analytical Research Laboratories, Fujisawa Pharmaceutical Co., Ltd., Osaka 532, Japan. [c]Department of Bioscience and Technology, Shinshu University, Nagano, Japan. [d]Laboratory of Human Evolution Studies, Kyoto University, Kyoto 606, Japan. [e]The University Forest in Chichibu, University of Tokyo, Saitama 368, Japan.

Three bitter steroid glucosides, vernonioside A_1-A_3, and related B_1 were isolated from *Vernonia amygdalina*, a possible medicinal plant used by wild chimpanzees.



	R_1	R_2
A_1	β-OH, H	H
A_2	α-OH, H	H
A_3	O	H
B_1	H, H	OH

Tetrahedron, **1992**, *48*, 633

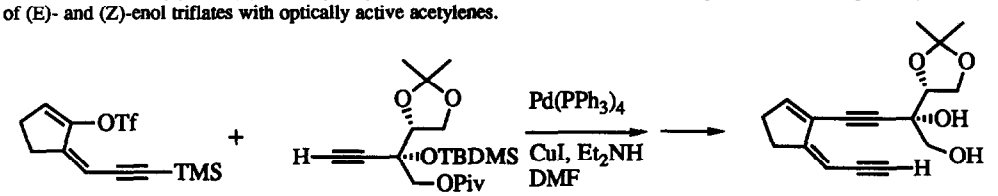
SYNTHETIC STUDIES ON THE COMPOUNDS RELATED TO NEOCARZINOSTATIN CHROMOPHORE. 1. SYNTHESIS OF THE ACYCLIC (E)- AND (Z)-DIENEDIYNE SYSTEMS

Kazuhiko Nakatani, Katsuko Arai, Noriaki Hirayama,† Fuyuhiko Matsuda, and Shiro Terashima*

Sagami Chemical Research Center, Nishi-Ohnuma, Sagamihara 229, Japan

Tokyo Research Laboratories, Kyowa Hakko Kogyo Co. Ltd., Asahi-machi, Machida 194, Japan†

The stereo-defined (E)- and (Z)-dienediyne systems related to neocarzinostatin chromophore could be prepared by the reaction of (E)- and (Z)-enol triflates with optically active acetylenes.



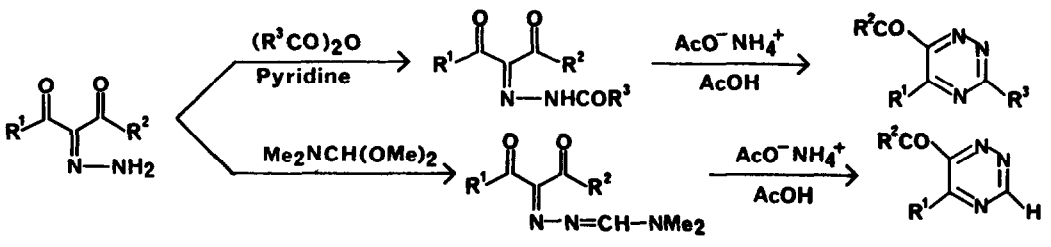
Tetrahedron, **1992**, *48*, 651

Synthesis of 1,2,4-Triazines

NEW SYNTHESIS OF 1,2,4-TRIAZINES WITH A FUNCTIONAL GROUP IN THE 6-POSITION

Tadashi Ohsumi and Hans Neunhoeffer

Institute of Organic Chemistry, Technische Hochschule, Petersenstrasse 22, 6100 Darmstadt, Germany



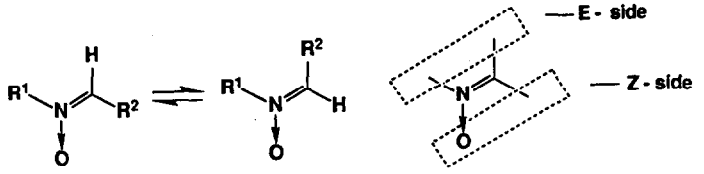
Tetrahedron, **1992**, *48*, 663

AROMATIC SOLVENT-INDUCED SHIFTS IN THE ^{1}H-NMR SPECTRA OF NITRONES

Hans Günter Aurich*, Michael Franzke and Hans Peter Kesselheim

Fachbereich Chemie, University of Marburg, Hans-Meerwein-Straße, D-3550 Marburg, FRG

The NMR proton signals at the E-side of the nitrone group are more extensively shifted to higher field by aromatic solvents than the proton signals at the Z-side.



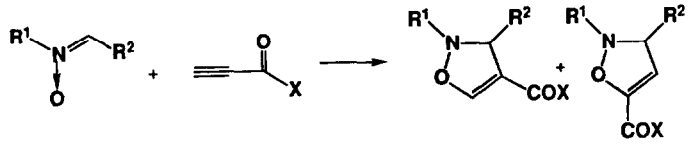
Tetrahedron, **1992**, *48*, 669

STERIC EFFECTS ON REGIOSELECTIVITY IN 1,3-DIPOLAR CYCLOADDITION OF C,N-DIALKYL NITRONES WITH ACCEPTOR-SUBSTITUTED ALKYNES

Hans Günter Aurich*, Michael Franzke, Hans Peter Kesselheim and Markus Rohr

Fachbereich Chemie, University of Marburg, Hans-Meerwein-Straße, D-3550 Marburg, FRG

In 1,3-dipolar cycloaddition reactions of C,N-dialkylnitrones with acceptor-substituted alkynes the product ratio 4-substituted/5-substituted 4-isoxazoline is affected by the steric demand of both of the alkyl groups R^1 and R^2.



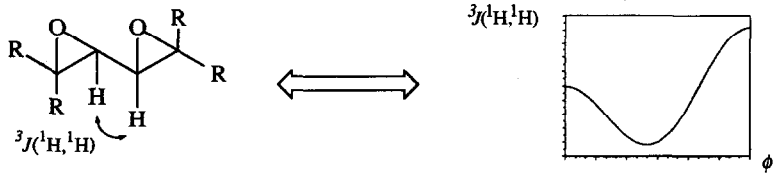
Tetrahedron, **1992**, *48*, 683

CONFORMATIONAL DEPENDENCE OF THE VICINAL ^{1}H,^{1}H COUPLING CONSTANT IN 1,2:3,4-DIEPOXIDES

Martin Nikles, Urs Séquin*

Institut für Organische Chemie, Universität Basel, St. Johanns-Ring 19, CH-4056 Basel, Switzerland

For 1,2:3,4-diepoxides a *Karplus*-like relationship between the torsional angle ϕ around the inter-epoxide bond and the vicinal coupling constant $^3J(^1H,^1H)$ was found.

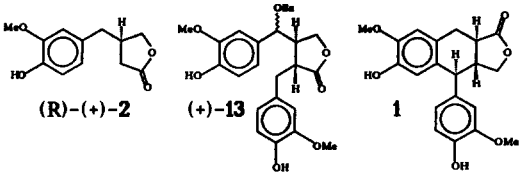


Tetrahedron, **1992**, *48*, 687

Lignans. 15. First Total Synthesis of Natural (-)-α-Conidendrin

Patrick BOISSIN, Robert DHAL* and Eric BROWN
URA CNRS 482, Faculté des Sciences, Avenue Olivier Messiaen, BP 535, F-72017 LE MANS Cedex

The α,β-trans-disubstituted γ-butyrolactone (+)-**13** was obtained in five steps from (R)-(+)-**2**. Treatment of (+)-**13** with $BF_3.Et_2O$ afforded natural (-)-α-conidendrin **1** in 94% yield.



Tetrahedron, **1992**, *48*, 695

ASSESSMENT OF COMPETING 2'→5' VERSUS 3'→5' STACKINGS IN SOLUTION STRUCTURE OF BRANCHED-RNA BY ^{1}H- AND ^{31}P-NMR SPECTROSCOPY

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Department of Bioorganic Chemistry, Box 581, Biomedical Center, University of Uppsala, S-751 23 Uppsala, Sweden

Preparation of five novel phosphorylated derivatives of adenosine, i.e. adenosine 2',3'-bis(ethylphosphate) (**11**), adenosine 2',3'-bis(phosphate) (**13**), adenosine 2',3',5'-tris(ethylphosphate) (**15**), adenosine 2',5'-bis(ethylphosphate) (**17**), and adenosine 3',5'-bis(ethylphosphate) (**19**) is reported. These compounds, along with methyl β-D-ribofuranosyl-bis-2',3'-ethylphosphate (**9**), were used as reference systems for ^{31}P and ^{1}H-NMR conformational studies on the branched RNA structures. The present use of reference compounds **9**, **11**, **13**, **15**, **17**, and **19** has led to a refined and partially revised concept for the conformational description of oligomeric branched-RNAs.

Tetrahedron, **1992**, *48*, 719

A HIGHLY ACTIVE AND STEREOSELECTIVE MONTMORILLONITE CATALYST FOR ARYLATION OF CONJUGATED ALKENES

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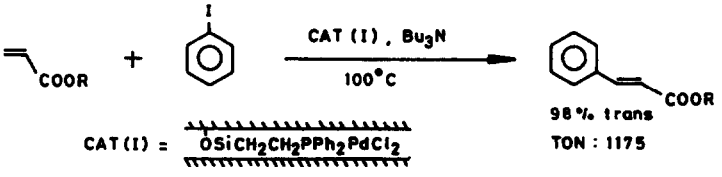
Homogeneous Catalysis Discipline, Indian Institute of Chemical Technology, Hyderabad 500 007, India

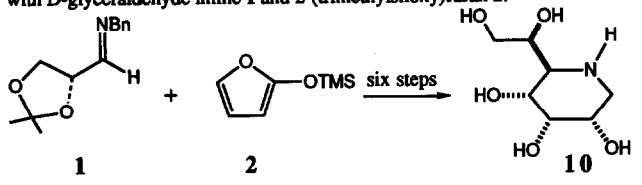


Tetrahedron, **1992**, *48*, 727

Total Synthesis of 1,5-Dideoxy-1,5-iminoalditols

Gloria Rassu,* Luigi Pinna, Pietro Spanu, Nicola Culeddu, Giovanni Casiraghi,* Giovanna Gasparri Fava, Marisa Belicchi Ferrari, and Giorgio Pelosi
Dipartimento di Chimica dell'Università and CNR, I-07100 Sassari, Italy and Istituto di Chimica Generale dell'Università and CNR, I-43100 Parma, Italy

Enantiomerically pure iminoheptitol **10** was synthesized in ca. 9% overall yield via a six-steps sequence by starting with D-glyceraldehyde imine **1** and 2-(trimethylsiloxy)furan **2**.



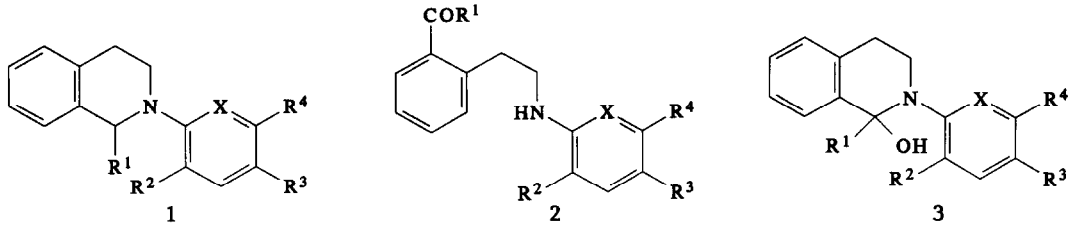
1 **2** **10**

Tetrahedron, **1992**, *48*, 743

RING-OPENING REACTIONS OF N-ARYL-1,2,3,4-TETRAHYDROISOQUINOLINE DERIVATIVES

K A Hedley and S P Stanforth*, Department of Chemical & Life Sciences, Newcastle upon Tyne Polytechnic, Newcastle upon Tyne, NE1 8ST.

Isoquinolines **1** gave carbonyl compounds **2** rather than hemi-aminals **3** when treated with NBS.



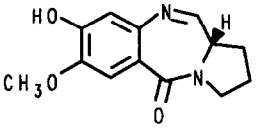
1 **2** **3**

Tetrahedron, **1992**, *48*, 751

NEW APPROACHES TO PYRROLO[2,1-c][1,4]BENZODIAZEPINES: SYNTHESIS, DNA-BINDING AND CYTOTOXICITY OF DC-81

D. Subhas Bose, Gary B. Jones, and David E. Thurston*
Division of Medicinal Chemistry, School of Pharmacy and Biomedical Sciences, Portsmouth Polytechnic, Park Building, King Henry Ist Street, Portsmouth, Hants. PO1 2DZ, UK.

Two routes to the antitumour antibiotic DC-81 (**1**) are described, one of which involves a novel cyclization method based on Amberlite IR-120(H^+) resin. The second route utilizes a new compound, 6-nitrovanillic acid, as a key intermediate. DC-81 has been evaluated for DNA-binding and cytotoxicity.



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Tetrahedron, **1992**, *48*, 759

SYNTHESIS OF YUEHCHUKENE AND SOME ANALOGUES – A GENERAL APPROACH

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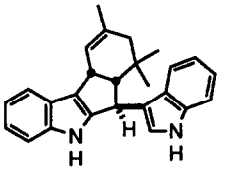
Department of Organic Chemistry, Royal Institute of Technology, S-100 44 Stockholm, SWEDEN, and
Department of Organic Chemistry, CNT, Novum Research Park, S-141 57 Huddinge, SWEDEN

Yuehchukene and a number of structural analogues were synthesized by intramolecular ring closure of α,β-unsaturated 2-acyl indoles in the key step.



Tetrahedron, **1992**, *48*, 769

TWO NEW TRITERPENE DIMERS FROM CELASTRACEAE, PARTIAL SYNTHESIS/ANTIMICROBIAL ACTIVITY.

Antonio, G. González, José S. Jiménez, Laila M. Moujir*, Angel. G. Ravelo, Javier. G. Luis, Isabel L. Bazzocchi and Angel. M. Gutiérrez*
CPNO Antonio González, *Dpto. Microbiología y Biología Celular, Univ. de La Laguna, Canary Islands, Spain.

Two new triterpene dimers with oxidized tingenone structures have been obtained from *Maytenus umbellata* from Madeira, synthesized and assayed for antimicrobial activity.