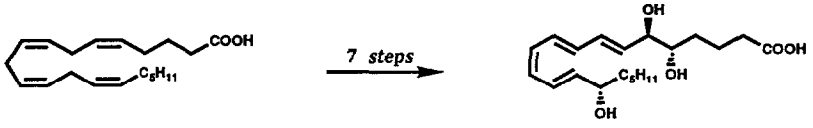
GRAPHICAL ABSTRACTS

Tetrahedron Lett.30,4181(1989)

A SIMPLE AND EFFICIENT SYNTHESIS OF (7*E*, 9*E*, 11*Z*, 13*E*)-(5*S*, 6*R*, 15*S*)-TRIHYDROXYEICOSATETRAENOIC ACID (6*R*-LIPOXIN A)

E. J. Corey, Wei-guo Su, and Martin B. Cleaver
Department of Chemistry, Harvard University, Cambridge, Massachusetts, 02138

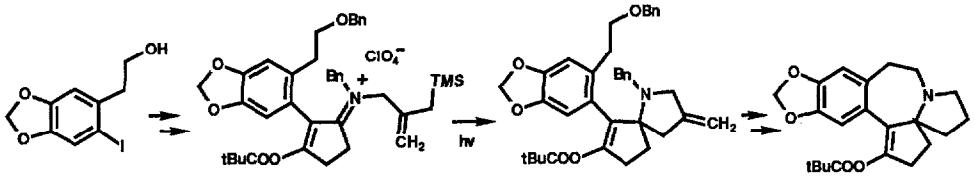


6*R*-Lipoxin A

Tetrahedron Lett.30,4185(1989)

APPLICATION OF A SET-INDUCED PHOTOSPIROCYCLIZATION METHODOLOGY TO HARRINGTONINE RING CONSTRUCTION

Robert W. Kavash and Patrick S. Mariano
Department of Chemistry and Biochemistry, University of Maryland, College Pk, MD 20742

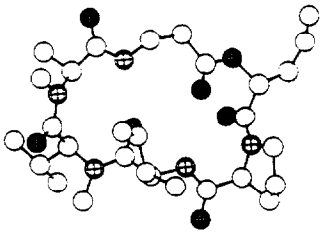


Tetrahedron Lett.30,4189(1989)

MOLECULAR CONFORMATION OF DESTRUXIN A.

S. Gupta, D. W. Roberts, J. A. A. Renwick, C-Z. Ni, and J. Clardy
Boyce Thompson Institute and Department of Chemistry, Cornell University, Ithaca, NY 14853.

The peptide backbone conformation of destruxin A in deuterated chloroform, as studied by NOESY, closely resembles its crystal conformation which was deduced by a single crystal x-ray analysis.

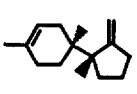


Tetrahedron Lett.30,4193(1989)

A Diastereoselective Synthesis of Trichodiene

John C. Gilbert* and Terence A. Kelly
Department of Chemistry, The University of Texas at Austin, Austin ,Texas 78712-1167 USA

Abstract: A route to the total synthesis of the title compound (shown below) is described. The key step involves the *[3,3] sigmatropic of the silyl keteneacetal of an allylic β-ketoester derivative.*

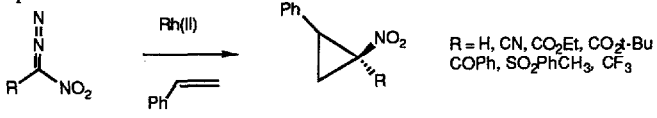


Tetrahedron Lett.30,4197(1989)

THE SYNTHESIS OF NITROCYCLOPROPANES FROM NITRODIAZOMETHANES

P. E. O'Bannon and William P. Dailey*, Department of Chemistry, University of Pennsylvania, Philadelphia, Pennsylvania 19104-6323

The synthesis of novel 1-substituted nitrocyclopropanes using the rhodium(II) acetate catalyzed cyclopropanation reaction of several nitrodiazomethanes with electron rich alkenes is described.

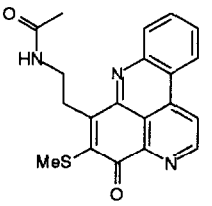


Tetrahedron Lett.30,4201(1989)

DIPLAMINE, A CYTOTOXIC POLYAROMATIC ALKALOID FROM THE TUNICATE DIPLOSOMA SP.

Geeta A. Charyulu, Tawnya C. McKee and Chris M. Ireland*
Department of Medicinal Chemistry,
College of Pharmacy
University of Utah, Salt Lake City,
Utah 84112

A novel cytotoxic alkaloid, diplamine was isolated from the tunicate *Diplosoma* sp. The structure was established by interpretation of spectral data and chemical analysis.

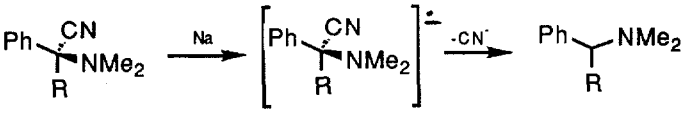


Tetrahedron Lett.30,4203(1989)

ON THE REDUCTION OF α-AMINONITRILES WITH SODIUM

William H. Bunnelle* and Charles G. Shevlin
Department of Chemistry
University of Missouri, Columbia, MO 65211

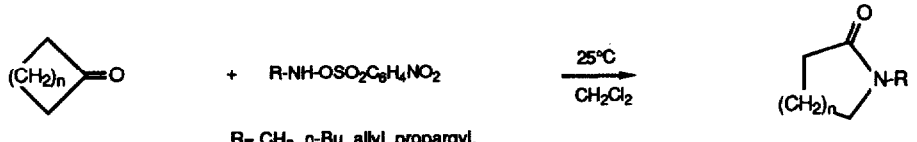
The title reaction proceeds by direct electron transfer to the aminonitrile, followed by fragmentation to the α-aminoradical. Initial dissociation to the iminium ion is not required.



Tetrahedron Lett.30,4207(1989)

EFFICIENT SYNTHESIS OF N-SUBSTITUTED LACTAMS FROM (N-ARYLSULFONYLOXY) AMINES AND CYCLIC KETONES

Robert V. Hoffman* and James M. Salvador
Department of Chemistry, New Mexico State University
Las Cruces, NM 88003-0001 USA

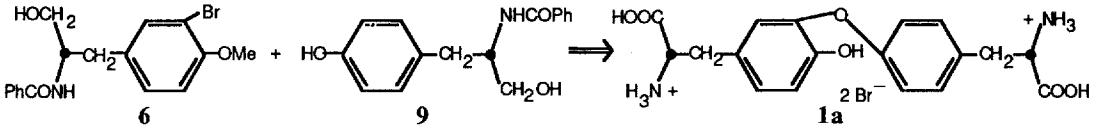


Tetrahedron Lett.30,4211(1989)

FACILE CHEMICAL SYNTHESIS OF S,S-ISODITYROSINE, A NATURALLY-OCCURRING CROSS-LINKING AMINO ACID

Michael E. Jung,* Denis Jachiet, and John C. Rohloff, Department of Chemistry, University of California, Los Angeles, CA 90024

Ullmann coupling of the two protected S-tyrosine derivatives **6** and **9** afforded the protected isodityrosine **10** which was converted into the natural bis-amino acid S,S-isodityrosine **1**, isolated as its bis-hydrobromide **1a**, in good yield.



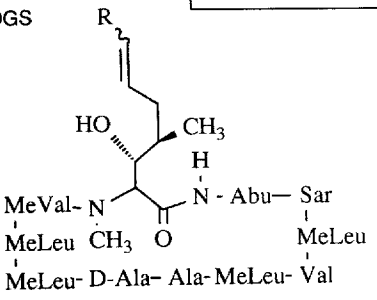
6 **9** **1a**

Tetrahedron Lett.30,4215(1989)

A SEMI-SYNTHETIC APPROACH TO OLEFINIC ANALOGS OF AMINO ACID ONE (MeBMT) IN CYCLOSPORIN A

Sang B. Park and G. Patrick Meier
Department of Medicinal Chemistry, BG-20
University of Washington
Seattle, WA 98195

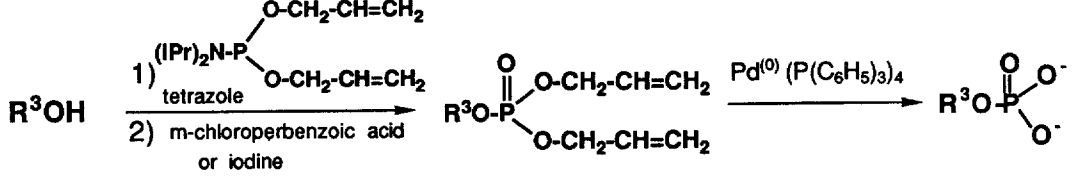
A simple, rapid semi-synthetic method for the synthesis of olefinic analogs of Cyclosporin A is described. The process allows the rapid synthesis of multigram quantities of analogs.



Tetrahedron Lett.30,4219(1989)

BIS (ALLYLOXY) (DIISOPROPYLAMINO) PHOSPHINE AS A NEW PHOSPHINYLATION REAGENT FOR THE PHOSPHORYLATION OF HYDROXY FUNCTIONS

Willi Bannwarth* and Erich Küng; *Central Research Units; F.Hoffmann-La Roche Ltd.; CH-4002 BASEL,Switzerland*

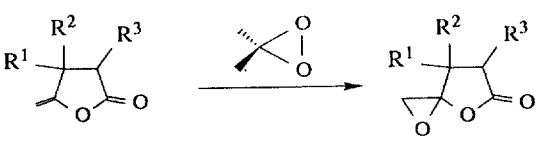


Tetrahedron Lett.30,4223(1989)

EPOXIDATION OF γ-METHYLENE-γ-BUTYROLACTONES BY DIMETHYLDIOXIRANE

Waldemar Adam, Lazaros Hadjiarapoglou, Volker Jäger*, and Bernhard Seidel*
Institute of Organic Chemistry,University of Würzburg,D-8700 Würzburg,F.R.G.

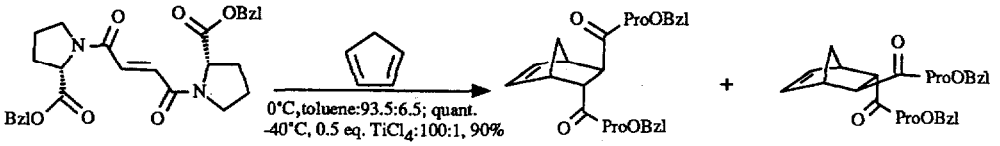
γ-Methylene-γ-butyrolactones were converted in excellent yields to their labile spiroepoxides by dimethyldioxirane (as acetone solution).



Tetrahedron Lett.30,4227(1989)

ON THE ENHANCEMENT OF STEREOSELECTION BY COOPERATION BETWEEN CHIRAL AUXILIARIES. ASYMMETRIC DIELS-ALDER REACTIONS WITH FUMARIC ACID BIS ((S)-PROLINE BENZYL ESTER) AMIDE

H. Waldmann, Inst. f. Org. Chem. and M. Dräger, Inst f. Anorg. Chem. d. Univ., D-6500 Mainz

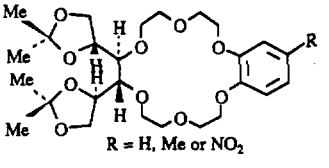


Tetrahedron Lett.30,4231(1989)

SYNTHESIS AND IMMOBILIZATION OF NEW CROWN ETHERS DERIVED FROM D-MANNITOL FOR THE RESOLUTION OF FREE AMINO ACIDS

Jean-Pierre JOLY and Bernard GROSS*
Université de Nancy I, Faculté des Sciences, Laboratoire de Chimie Organique 3, associé au CNRS, B.P. 239, 54506 VANDOEUVRE-LES-NANCY (FRANCE)

New crown ethers, derived from D-mannitol, immobilized by dynamic coating on C_{18}-silicas, provide efficient chromatographic baseline separations of racemic free phenylglycine, tryptophan and *p*-nitro-phenylalanine into their enantiomers.



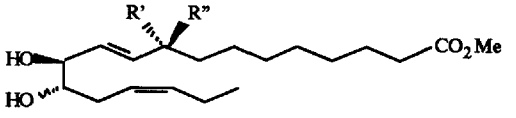
Tetrahedron Lett.30,4235(1989)

Total Synthesis of Unsaturated Trihydroxy C_{18} Fatty Acids.

B. Gossé-Kobo, P. Mosset * and R. Grée

Laboratoire de Chimie Organique Biologique, E.N.S.C.R., Av. du Gal Leclerc, 35700 Rennes, France.

The trihydroxy C_{18} fatty acid derivatives13 and14 have been prepared in chiral form starting from natural tartaric acid.



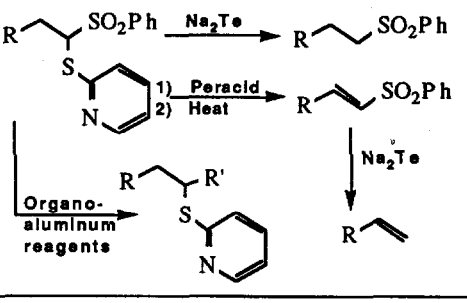
13: R' = OH ; R" = H
14: R' = H ; R" = OH

Tetrahedron Lett.30,4237(1989)

SOME FURTHER NOVEL TRANSFORMATIONS OF GEMINAL (PYRIDINE-2-THIYL) PHENYLSULPHONES.

Derek H. R. Barton[a]*, Jean Boivin[b], Jadab Sarma[a], Elisabeth da Silva[b,c], and Samir Z. Zard[b]*
a) Department of Chemistry, Texas A&M University, College Station, Texas 77843, U.S.A.; b) Laboratoire de synthèse Organique, Ecole Polytechnique, 91128 Palaiseau, France
c) Ministère de la Defense

Geminal (pyridine-2-thiyl) phenylsulphones can be easily converted into sulphones, terminal olefins or alkylated sulphides.

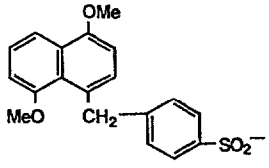


Tetrahedron Lett. 30, 4241 (1989)

A NEW AMINO PROTECTING GROUP READILY REMOVABLE WITH NEAR ULTRAVIOLET LIGHT AS AN APPLICATION OF ELECTRON-TRANSFER PHOTOCHEMISTRY

T. Hamada, A. Nishida, and O. Yonemitsu
Faculty of Pharmaceutical Sciences, Hokkaido University, Sapporo 060, Japan

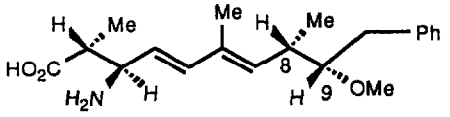
As an application of electron-transfer photochemistry, we report a new protecting group for the amino function, 4-(4,8-dimethoxynaphthylmethyl)-benzenesulfonyl (DNMBS) group, which is readily removed, *via an intra*-molecular electron-transfer followed by hydrolysis, with a high quantum efficiency on irradiation with light longer than 300 nm.



Tetrahedron Lett. 30, 4245 (1989)

THE ABSOLUTE CONFIGURATIONS AT 8 AND 9-CARBONS OF ADDA, AN AMINO ACID COMPONENT OF A HEPATOTOXIN, CYANOVIRIDIN RR

Takuo Tsukuda, Hiroshi Kakisawa*
Department of Chemistry, University of Tsukuba, Tsukuba, Ibaraki 305, Japan
Praba Painuly, Yuzuru Shimizu*
Department of Pharmacognosy and Environmental Sciences, The University of Rhode Island, Kingston, RI 02881, U. S. A.



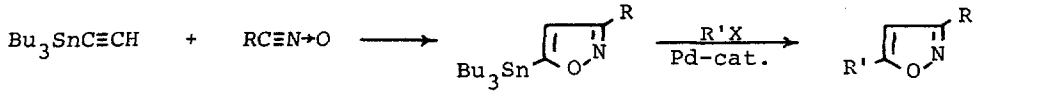
ADDA

The absolute configurations at C-8 and 9-carbons of ADDA, a component of cyanoviridin RR isolated from *Microcystis* species (cyanobacteria), have been synthetically determined as *S*, *S*.

Tetrahedron Lett. 30, 4249 (1989)

SYNTHESIS AND REACTIONS OF 5-(TRIBUTYLSTANNYL)ISOXAZOLES

Yoshinori Kondo, Daishi Uchiyama, Takao Sakamoto, and Hiroshi Yamanaka*
Pharmaceutical Institute, Tohoku University, Aobayama, Aoba-ku, Sendai 980, Japan



Tetrahedron Lett. 30, 4251 (1989)

AN EXTENSION OF MULTIPARAMETRIC KARPLUS EQUATION Keisuke Imai, and Eiji Ōsawa*

Department of Chemistry, Faculty of Science, Hokkaido University, Sapporo 060, Japan

Karplus equation was expanded to include Mullay's group electronegativity for α- and β-substituents, H-C-C valence angles, C-C bond length, through-space interaction, and corrections for non-additivity of substituent effect.

$$^3J_{HH} = A\cos\theta + B\cos 2\theta + C\cos 3\theta + D\cos^2 2\theta + W(E\cos\theta\Sigma\Delta\chi_i\cos\phi_i + F\Sigma\Delta\chi_i\cos 2\phi_i + G\Sigma\Delta\chi_i)$$

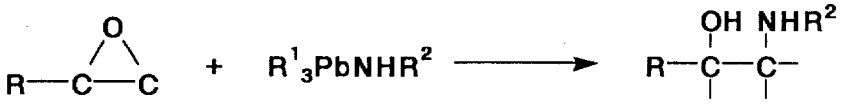
$$+ H\{(\omega_1 + \omega_2)/2 - 110\} + I(r_{C\text{-}C} - 1.5) + K\Sigma\Delta\chi^{\beta}_j\cos 2\psi_j + Lr^{-4} + M$$

Tetrahedron Lett.30,4255(1989)

AMINOLEAD COMPOUNDS AS A NEW REAGENT FOR REGIOSELECTIVE RING OPENING OF EPOXIDES

Jun-ichi Yamada, Masatoshi Yumoto, and Yoshinori Yamamoto*
Department of Chemistry, Faculty of Science, Tohoku University, Sendai 980, Japan

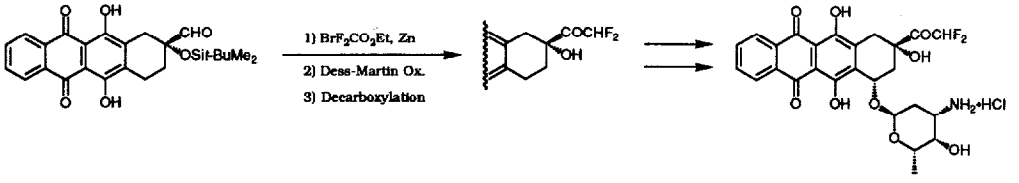
Regioselective ring opening of epoxides is accomplished by using aminolead compounds.



Tetrahedron Lett.30,4259(1989)

NOVEL SYNTHESIS AND ANTITUMOR ACTIVITY OF 14,14-DIFLUORO-4-DEMETHOXYDAUNORUBICIN

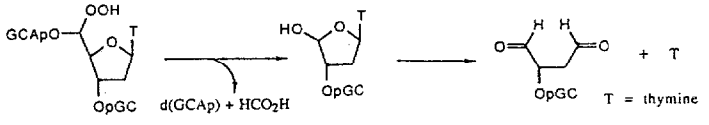
Fuyuhiko Matsuda,* Teruyo Matsumoto, Masako Ohsaki, and Shiro Terashima
Sagami Chemical Research Center, 4-4-1, Nishi-Ohnuma, Sagamihara, Kanagawa 229, Japan



Tetrahedron Lett.30,4263(1989)

CHEMISTRY OF NEOCARZINOSTATIN-MEDIATED DEGRADATION OF d(GCATGC). MECHANISM OF SPONTANEOUS THYMINE RELEASE

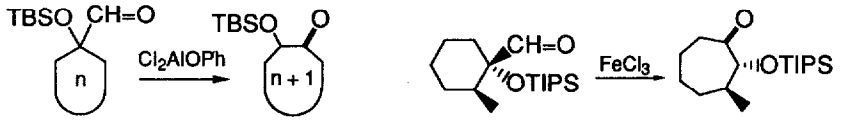
Hiroshi Kawabata, Hiroshi Takeshita, Tsuyoshi Fujiwara, Hiroshi Sugiyama, Teruo Matsuura, and Isao Saito*
Department of Synthetic Chemistry, Faculty of Engineering, Kyoto University, Kyoto 606, Japan



Tetrahedron Lett.30,4267(1989)

A SELECTIVE ONE-CARBON RING EXPANSION REACTION OF 1-SILOXYCYCLOALKANECARBALDEHYDES CATALYZED BY A LEWIS ACID

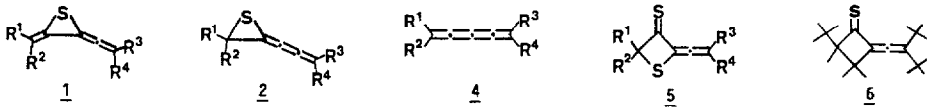
Toyoharu Matsuda, Keiji Tanino, and Isao Kuwajima*
Department of Chemistry, Tokyo Institute of Technology, Meguro, Tokyo 152, Japan



Tetrahedron Lett.30,4271(1989)

A FACILE SYNTHESIS AND NOVEL REACTIONS OF 1,2,3,4-PENTATETRAENE EPISULFIDES

N. Tokitoh, T. Suzuki, and W. Ando*
Department of Chemistry, University of Tsukuba, 1-1-1 Tennohdai, Tsukuba, Ibaraki, 305 Japan



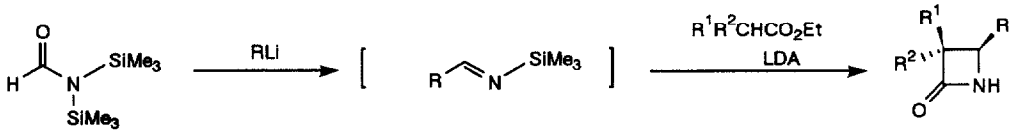
1 2 4 5 6

The title compounds(1 and 2) and 4 were synthesized readily and selectively by the alkenylidene carbene addition to thioketene. 1 and 2 were converted into novel cyclic thiones 5 and 6 via thioxyallyl-type intermediate.

Tetrahedron Lett.30,4275(1989)

A NOVEL METHOD FOR GENERATION OF ENOLIZABLE N-TRIMETHYLSILYLALDIMINES AND APPLICATION TO β-LACTAM SYNTHESIS

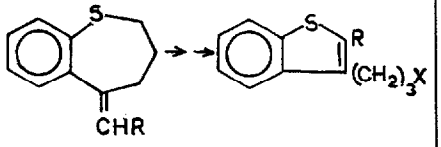
Tadao Uyehara,* Ichiro Suzuki, and Yoshinori Yamamoto*
Department of Chemistry, Tohoku University, Sendai 980, Japan



Tetrahedron Lett.30,4279(1989)

CONFORMATIONAL AND STERIC REQUIREMENTS OF THE SIDE CHAIN FOR SULPHUR PARTICIPATION IN BENZTHIEPIN DERIVATIVES

Ranjan Patra,* Rina Ghosh, Swaraj B. Maiti and Amareshwar Chatterjee ; Department of Chemistry, Jadavpur University, Calcutta - 700032, India; Attempted ring expansion of (1) with $AgNO_3$-I_2 or $Tl(ONO_2)_3$, and the bromohydrins from (1) with acid, afforded (2). A bicyclo [3.2.1] intermediate has been proposed for this interesting transformation.



(1) (2)

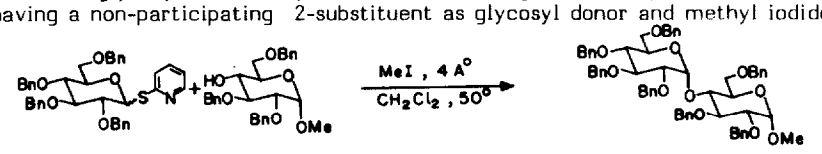
R = H , Me ; X = Cl , Br

Tetrahedron Lett.30,4283(1989)

A MILD GENERAL METHOD FOR THE SYNTHESIS OF α-LINKED DISACCHARIDES

G. Venugopal Reddy, Vinayak R. Kulkarni and Hari Babu Merelaya*
National Chemical Laboratory, Pune 411008, India.

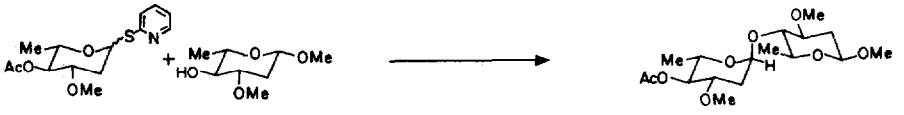
Stereoselective α-glycosylations may be achieved using stable 2-pyridyl thioglycosides (anomeric mixture) having a non-participating 2-substituent as glycosyl donor and methyl iodide as an activator.



Tetrahedron Lett. 30, 4287 (1989)

A MILD GENERAL METHOD FOR THE SYNTHESIS OF α-2-DEOXY-DISACCHARIDES: SYNTHESIS OF L-OLEANDROSYL-L-OLEANDROSE FROM D-GLUCOSE

D. Ravi, Vinayak R. Kulkarni and Hari Babu Mereyala*
National Chemical Laboratory, Pune 411008, India.

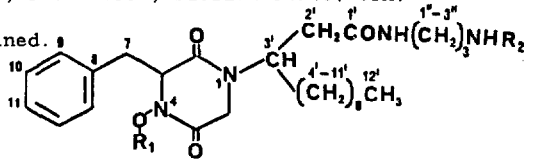


Tetrahedron Lett. 30, 4291 (1989)

ETZIONIN, A NEW METABOLITE FROM A RED SEA TUNICATE

S. Hirsch[1], A. Miroz[2], P. McCarthy[3] and Y. Kashman[1]*
1. Sackler Faculty of Exact Sciences, School of Chemistry, Tel-Aviv University, Israel 69978.
2. Underwater Observatory and Aquarium, P.O.B. 829 Eilat, ISRAEL.
3. Harbor Branch Oceanographic Institution, Ft. Pierce, Florida 34946, USA.

The structure of etzionin has been determined.

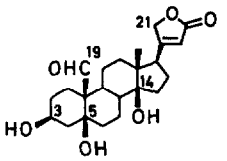


Tetrahedron Lett. 30, 4295 (1989)

SYNTHESIS OF STROPHANTHIDIN

P. Kočovský* and I. Stieborová
Institute of Organic Chemistry and Biochemistry
Czechoslovak Academy of Sciences, 16610 Prague 6, Czechoslovakia

A 16-step synthesis of strophanthidin is described starting from the commercially available 5,16-pregnadien-3β-yl-20-one. The key step is an one-pot hydroxylation in the 5β- and 14β-positions by stereocontrolled addition of 2 equivalents of HOBr to the corresponding 5,14-diene followed by Bu_3SnH reduction.

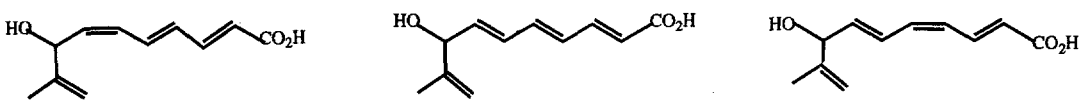


Tetrahedron Lett. 30, 4299 (1989)

SYNTHESIS OF THE (2E,4Z,6E)-, (2E,4E,6E)- and (2E,4E,6Z)-TETRAENOL STEMS OF THE HOST-SELECTIVE AF AND AK TOXINS BY HYDROMETALLATION.

Leslie Crombie, Mark A. Horsham and Sandra R. M. Jarrett. Department of Chemistry, The University of Nottingham. Nottingham, NG7 2RD

Hydrozirconation and hydrostannation, together with Pd^0 catalysed coupling, are used to make (2E,4E,6Z)-, (2E,4E,6E)- and (2E,4Z,6E)-tetraenol stems as synthetic intermediates for synthesis of the AF-IIa, and -IIc, and the AK-II, host-selective plant toxins.

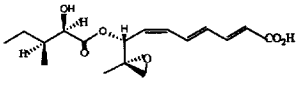
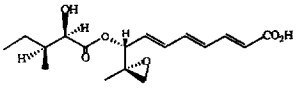
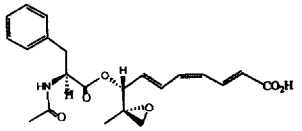


SYNTHESIS OF THE HOST-SPECIFIC PLANT TOXINS AF IIa, AF IIc and AKII, EMPLOYING SHARPLESS CHIRAL EPOXIDATION UNDER KINETIC CONTROL.

Tetrahedron Lett. 30, 4303 (1989)

Leslie Crombie and Sandra R. M. Jarrett. Department of Chemistry, The University of Nottingham, Nottingham, NG7 2RD

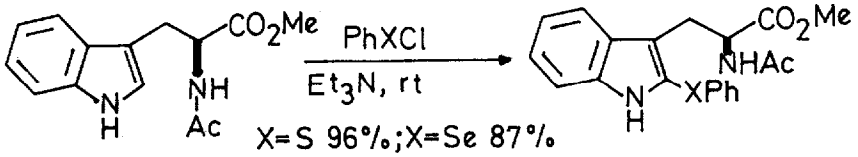
Sharpless chiral epoxidation of the ethyl esters of (2E,4E,6Z) -, (2E,4E,6E)- and (2E,4Z,6E)-8-hydroxy-9-methyldeca-2,4,6,9-tetraenoic acid gave predominantly the (8R,9S)-epoxyalcohols. These were converted into the host-specific plant toxins AF IIa, AF IIc and AK II, thereby effecting a total synthesis of these compounds.

Tetrahedron Lett. 30, 4307 (1989)

REACTION OF TRYPTOPHAN DERIVATIVES WITH PHENYLSULPHENYL CHLORIDE AND PHENYL SELENYL BROMIDE.

D. Crich and J. W. Davies, Department of Chemistry, University College London, 20 Gordon Street, London, WC1 OAJ. U.K.



Tetrahedron Lett. 30, 4309 (1989)

A DIELS-ALDER APPROACH TO FUNCTIONALISED *CIS*-HYDROISOQUINOLINES

Dennis de Oliveira Imbroisi and Nigel S. Simpkins*, Department of Chemistry, University of Nottingham, University Park, Nottingham, NG7 2RD.

ABSTRACT: A new substituted 5,6-dihydro-2(1*H*)-pyridinone participates in highly efficient Diels-Alder reactions to give functionalised *cis*-hydroisoquinolines suitable for natural product synthesis.