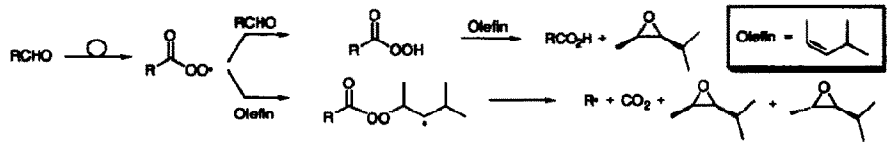
GRAPHICAL ABSTRACTS

Tetrahedron Letters, **1994**, *35*, 8077

Aldehyde/Olefin Cooxidations: Parallel Epoxidation Pathways and Concerted Decomposition of the Peroxyacyl-Olefin Adduct

Kevin R. Lassila*, Francis J. Waller, Steven E. Werkheiser, and Amy L. Wressell
Corporate Science and Technology Center, Air Products and Chemicals, Inc., Allentown, PA 18195

Aldehyde-mediated olefin epoxidations appear to proceed by not only a peracid path, but also a parallel radical addition path in which the peroxyacyl-olefin adduct decomposes concertedly to form alkyl radical, CO_2 and epoxide.

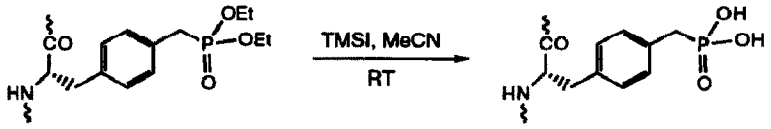


Tetrahedron Letters, **1994**, *35*, 8081

A RAPID DEALKYLATION OF PHOSPHONATE DIESTER FOR THE PREPARATION OF 4-PHOSPHONOMETHYLPHENYLALANINE-CONTAINING PEPTIDES.

O.M. Green
ARIAD Pharmaceuticals Inc., 26 Landsdowne St., Cambridge, MA 02139, U.S.A.

Phosphonomethylphenylalanine-containing peptides are rapidly and conveniently prepared from the corresponding phosphonate diesters using TMSI/MeCN.

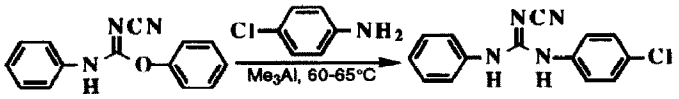


Tetrahedron Letters, **1994**, *35*, 8085

TRIMETHYLALUMINUM PROMOTED SYNTHESIS OF CYANOGUANIDINES

Karnail S. Atwal*, Francis N. Ferrara and Syed Z. Ahmed
The Bristol-Myers Squibb Pharmaceutical Research Institute,
P. O. Box 4000, Princeton, N.J. 08543-4000

The synthesis of cyanoguanidines from N-cyano-O-phenylisoureas and relatively nonbasic amines (e.g., aniline) is reported.

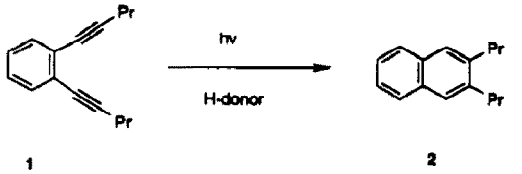


Tetrahedron Letters, **1994**, *35*, 8089

Photochemical Analogue of the Bergman Cycloaromatization Reaction.

Nicholas J. Turro and Ariella Evenzahav,
Dept. of Chemistry, Columbia University, New York, New York 10027;
K. C. Nicolaou, Scripps Research Institute, La Jolla, CA, 92037

When irradiated, 1 forms a product expected from a Bergman rearrangement reaction.



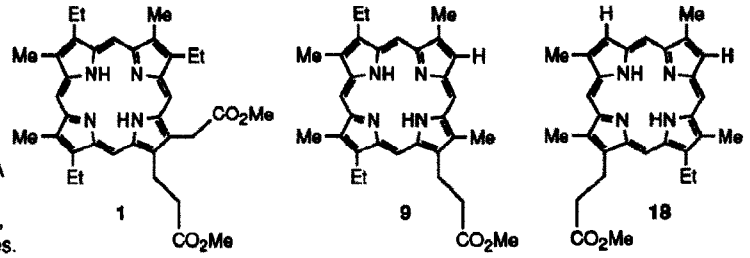
1 2

Tetrahedron Letters, **1994**, *35*, 8093

TOTAL SYNTHESES OF NEW PORPHYRINS ISOLATED FROM THE CORAL SEA DEMOSPONGE*CORALLISTES* SP.

Ravindra K. Pandey, Sam H. Leung and Kevin M. Smith, Department of Chemistry, University of California, Davis, CA 95616, USA and Department of Radiation Biology, Roswell Park Cancer Institute, Buffalo, NY 14263, USA

Syntheses, from pyrroles, of **1**, **9**, and **18**, using MacDonald and a,c-biladiene routes.

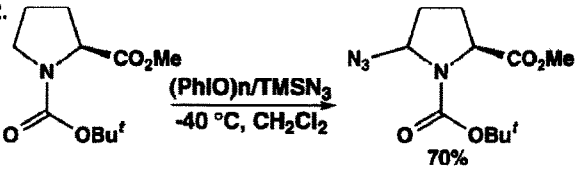


Tetrahedron Letters, **1994**, *35*, 8097

Oxidation of L-Proline Methyl Ester Derivatives with the Iodosylbenzene/Trimethylsilylazide Reagent Combination

Philip Magnus* and Christopher Hulme
Department of Chemistry and Biochemistry,
University of Texas at Austin, Austin, Texas 78712.

Treatment of a variety of L-proline derivatives with $(PhIO)_n/TMSN_3/CH_2Cl_2$ at -40 °C gave the α-azidoamides as the major product.

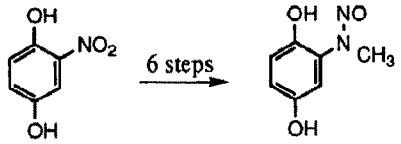


Tetrahedron Letters, **1994**, *35*, 8101

SYNTHESIS OF DEPHOSTATIN, A NOVEL PROTEIN TYROSINE PHOSPHATASE INHIBITOR.

Pierre Hamel* and Yves Girard, Merck Frosst Centre for Therapeutic Research, P.O. Box 1005 Pointe-Claire - Dorval, Québec H9R 4P8 Canada

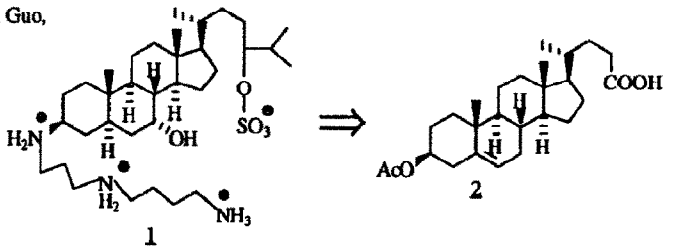
The novel protein tyrosine phosphatase inhibitor dephostatin was synthesized in 6 steps with an overall yield of 35% from 2-nitrohydroquinone



Tetrahedron Letters, **1994**, *35*, 8103

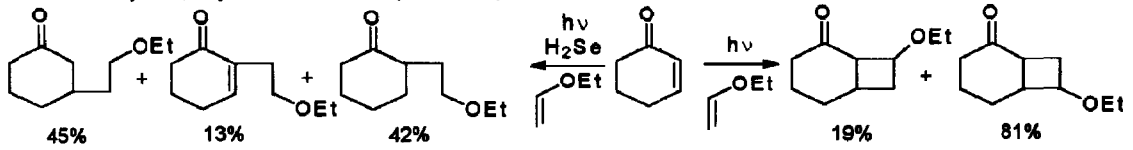
SYNTHESIS OF SQUALAMINE. A STEROIDAL ANTIBIOTIC FROM THE SHARK

Robert M. Moriarty, Sudersan M. Tuladhar, Liang Guo, and Suzanne Wehrli
Steroids, Ltd
2201 W. Campbell Park Drive,
Chicago, IL 60612
Children's Hospital of Philadelphia,
University of Pennsylvania School of Medicine,
34th & Civic Center Blvd.,
Philadelphia, PA 19104



Tetrahedron Letters, **1994**, *35*, 8107

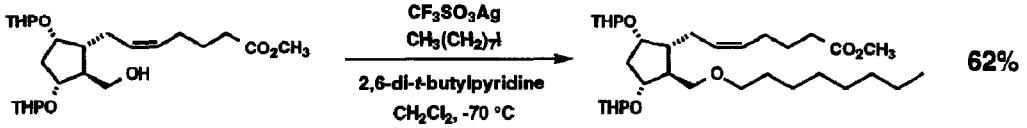
THE PHOTOCHEMICAL CYCLOADDITION REACTION OF 2-CYCLOHEXENONE WITH ALKENES: TRAPPING OF TRIPLET 1,4-BIRADICAL INTERMEDIATES WITH HYDROGEN SELENIDE. David J. Maradyn and Alan C. Weedon,* The Photochemistry Unit, Department of Chemistry, University of Western Ontario, London, Ontario, N6A 5B7, Canada.



Tetrahedron Letters, **1994**, *35*, 8111

A MILD PROCEDURE FOR ETHERIFICATION OF ALCOHOLS WITH PRIMARY ALKYL HALIDES IN THE PRESENCE OF SILVER TRIFLATE

Robert M. Burk,* Todd S. Gac and Michael B. Roof
Department of Chemical Sciences, Allergan Inc., 2525 Dupont Drive, Irvine, California 92713

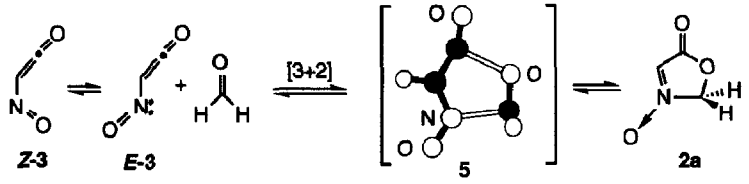


1°, 2° and even 3° alcohols were etherified with primary alkyl halides in the presence of CF_3SO_3Ag and 2,6-di-*tert*-butylpyridine in CH_2Cl_2.

Tetrahedron Letters, **1994**, *35*, 8113

AN *AB INITIO* STUDY OF THE REACTIVITY OF NITROSOKETENE WITH FORMALDEHYDE. Sihyun Ham and David M. Birney,* Department of Chemistry and Biochemistry, Texas Tech University, Lubbock, TX 79409 USA

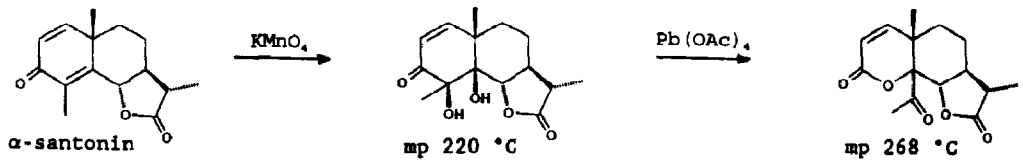
Ab initio calculations predict that E-nitrosoketene (***E*-3**) adds to formaldehyde in a concerted, pseudopericyclic [3+2] reaction (**5**) with a barrier of only 3.5 kcal/mol.



Tetrahedron Letters, **1994**, *35*, 8117

STEREOCHEMISTRY OF 4,5-DIHYDROXY-α-SANTONIN AND STRUCTURE OF A NEW SANTONIN OXIDATION PRODUCT.

S. K. Paknikar,* B. L. Malik, Department of Chemistry, Goa University, P.O. 403202, Goa, India. R. B. Bates,‡ S. Caldera and T. V. Wijayaratne, Department of Chemistry, University of Arizona, Tucson, Arizona 85721, USA

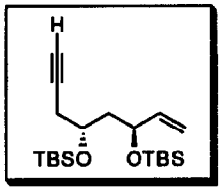


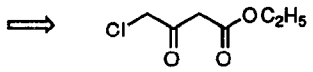
Tetrahedron Letters, **1994**, *35*, 8119

A Practical Asymmetric Synthesis of a 1,7-Enyne A-Ring Synthon En Route Toward the Total Synthesis of Vitamin D_3 Analogues

Barry M. Trost and Paul R. Hanson*
Department of Chemistry, Stanford University, Stanford, CA 94305

A new synthesis of a key A-ring synthon en route to vitamin D_3 analogues has been achieved in 8 steps (overall yield of 20.4%) starting from commercially available 4-chloroacetoacetate



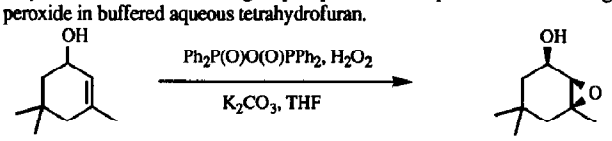


Tetrahedron Letters, **1994**, *35*, 8123

A NEW PARADIGM FOR ALKENE EPOXIDATION ACTIVATION OF HYDROGEN PEROXIDE BY ORGANOPHOSPHORUS ELECTROPHILES

Andrew S. Kende,* Philippe Delair, Benjamin E. Blass
Department of Chemistry, University of Rochester, Rochester, New York, 14627, USA.

Diphenylphosphinic anhydride and certain other organophosphorus electrophiles mediate the high-yield conversion of alkenes to epoxide by hydrogen peroxide in buffered aqueous tetrahydrofuran.



Tetrahedron Letters, **1994**, *35*, 8127

A Short Synthesis of the Tricyclo[3.3.$2^{1,4}$.0]decane Ring System

Scott McN. Sieburth* and Elena Doval Santos, Department of Chemistry,
State University of New York at Stony Brook, Stony Brook, New York 11794-3400 USA

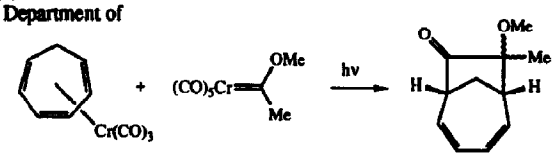
Acyloin condensation of endo, endo diester I yields the tricyclo[3.3.$2^{1,4}$.0]decane ring system II containing a 1,2-disilyloxy alkene of surprising stability.

Tetrahedron Letters, **1994**, *35*, 8131

TRANSITION METAL PROMOTED HIGHER-ORDER CYCLOADDITION REACTIONS. [6+2] CYCLOADDITION OF A FISCHER CARBENE COMPLEX WITH TRICARBONYL(CYCLOHEPTATRIENE) CHROMIUM(0)

James H. Rigby*, F. Christopher Pigge, and Mark D. Ferguson, Department of Chemistry, Wayne State University, Detroit, Michigan 48202

Photolytic reaction of pentacarbonyl [(methoxy)(methyl)carbene] chromium(0) with tricarbonyl(cycloheptatriene) chromium(0) afforded an isomeric mixture of bicyclo[4.2.1]nonanone products.

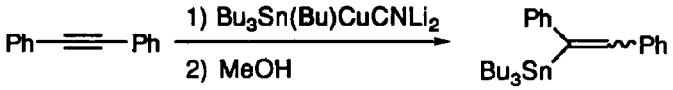


Tetrahedron Letters, **1994**, *35*, 8133

***Cis-Trans* Stereoselectivity in the Stannylmetallation of Diphenylacetylene**

Clark H. Cummins* and Eva J. Gordon, Dow Chemical Company, Bldg. 1707, Midland, MI 48674, USA

Stereospecific *cis-* or *trans-* stannylcupration of diphenylacetylene can be obtained by temperature control during vinylcuprate hydrolysis.



cis-addition: Temp = -78
39%

trans-addition: Temp = 25
61%

Tetrahedron Letters, **1994**, *35*, 8137

PALLADIUM CATALYZED INDIRECT ELECTROCHEMICAL ACETOXYLATION OF OLEFINS.

Frederick W. Hartstock*, Department of Chemistry, Wilfrid Laurier University, Waterloo, Ontario, Canada, N2L 3C5; and Danial D. M. Wayner, Steacie Institute of Molecular Sciences, National Research Council of Canada, Ottawa, Ontario, Canada, K1A 0R6.

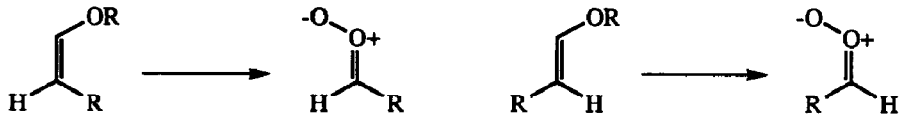
Olefins are catalytically acetoxylated by $Pd(OAc)_2/Cu(OAc)_2$ in combination with anodic re-oxidation of the catalysts.

Tetrahedron Letters, **1994**, *35*, 8141

The Stereochemistry of Carbonyl Oxides From Ozonolysis of Vinyl Ethers.

William H. Bunnelle* and Sang-gi Lee,
Department of Chemistry, University of Missouri, Columbia, Missouri 65211

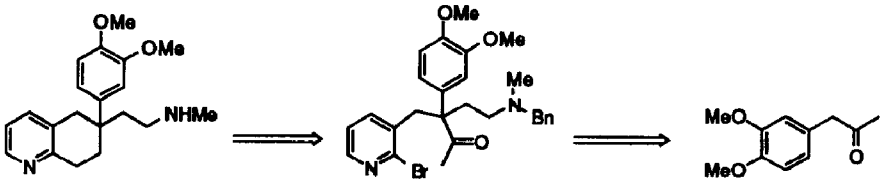
E-Vinyl ethers produce mainly syn, and Z-vinyl ethers mainly anti-carbonyl oxides, as determined by intramolecular trapping.



Tetrahedron Letters, **1994**, *35*, 8145

A SHORT SYNTHESIS OF (±)-TORTUOSAMINE

R. Richard Goehring
Department of Chemistry, North Carolina State University, Raleigh, NC 27695-8204

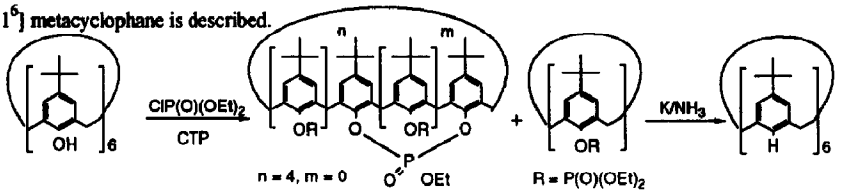


SYNTHESIS OF A FULLY OH-DEPLETED *p-tert*-BUTYL-CALIX[6]ARENE

Tetrahedron Letters, **1994**, *35*, 8147

J.-B Regnouf de Vains, S. Pellet-Rostaing, R. Lamartine; Laboratoire de Chimie Industrielle, Université Claude Bernard,69622 Villeurbanne cedex.

The synthesis of the *p-tert*-butyl-[1^6] metacyclophane is described.

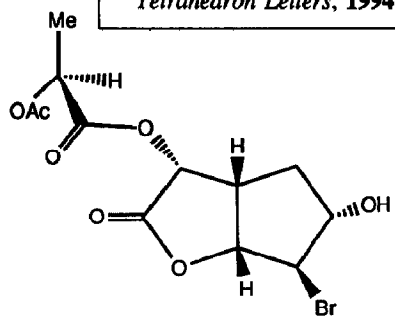


Convenient Chemical Resolution of a Bicyclic Hydroxylactone of Synthetic Interest

Tetrahedron Letters, **1994**, *35*, 8151

Fabienne Burlina, Pascale Clivio, Jean-Louis Fourrey*, Claude Riche and Martial Thomas
Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif-sur-Yvette, France.

The bicyclic lactone **1** was resolved by treatment with (S)-O-acetyllactyl chloride to give a separable pair of diastereomers (-)-**3** and (-)-**4** whose configuration was determined following X-ray crystallography performed on the bromo derivative **5**.

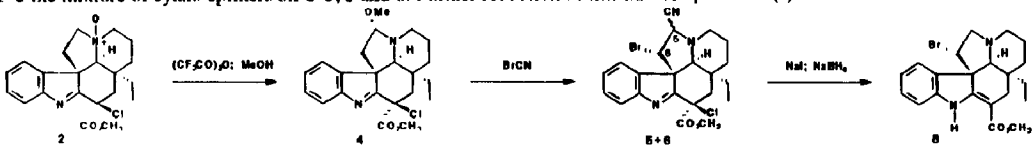


NOUVELLE FONCTIONNALISATION DE LA CHAINE TRYPTAMINE DE LA (-) VINCADIFFORMINE ALCALOIDE A SQUELETTE ASPIDOSPERMANE

Tetrahedron Letters, **1994**, *35*, 8153

Guy Lewin*, Laboratoire de Pharmacognosie, Faculté de Pharmacie, Bld Becquerel, 14032 Caen France et Jacques Poisson, Laboratoire de Chimie des Substances Thérapeutiques Naturelles, Faculté de Pharmacie, av. J.B. Clément, 92296 Châtenay-Malabry France.

Starting from 16-chloro-1-dehydrovincadifformine-N4-oxyde **2**, a two-steps sequence afforded through stereospecific bromination on C-6 the mixture of cyano epimers on C-5, **5** and **6**. Further reduction of this mixture provided (-) 6S-bromovincadifformine **8**.

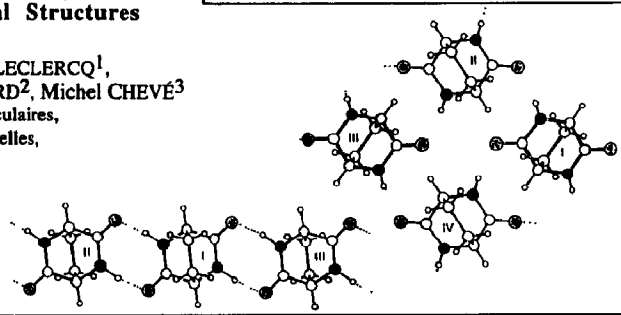


Chirality Directed Self-Assembly.— Resolution of 2,5-Diazabicyclo[2.2.2]octane-3,6-dione and Crystal Structures of its (±) Racemic and (–) Enantiomeric Forms

Tetrahedron Letters, **1994**, *35*, 8157

Marie-Josèphe BRIENNE[1], Jacqueline GABARD[1], Martine LECLERCQ[1], Jean-Marie LEHN[1]*, Michèle CESARIO[2], Claudine PASCARD[2], Michel CHEVÉ[3] and Gilles DUTRUC-ROSSET[3], [1]Chimie des Interactions Moléculaires, Collège de France, Paris, [2]Institut de Chimie des Substances Naturelles, Gif-sur-Yvette, [3]Département de Chimie Pharmaceutique, Rhône-Poulenc Rorer, Vitry-sur-Seine, France

The self-assembly of the racemic mixture (±)**1** and of the enantiomer (-)**1** of the bicyclic bis-lactam **1** generates different supramolecular architectures.



Tetrahedron Letters, **1994**, *35*, 8161

FORMATION OF RADICALS BY IRRADIATION OF ALKYL HALIDES IN THE PRESENCE OF TRIETHYLAMINE

Janine Cossy*, Jean-Luc Ranaivosata, Véronique Bellosta

Laboratoire de Chimie Organique, Associé au CNRS., ESPCI, 10 rue Vauquelin, 75231 Paris Cedex 05 - France

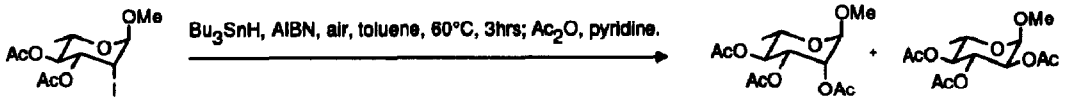
The irradiation at 254 nm of alkyl halides in the presence of triethylamine leads, with high yields, to the corresponding reduction products or to the cyclized products when an unsaturation is present.

Tetrahedron Letters, **1994**, *35*, 8163

RADICAL OXYGENATION OF 2-DEOXY-2-IODO-HEXOPYRANOSIDES WITH MOLECULAR OXYGEN.

Stéphane Moutel and Jacques Prandi*, Université d'Orléans, Laboratoire de Biochimie Structurale, associé au CNRS, BP 6759, 45067 Orléans Cedex 2, France.

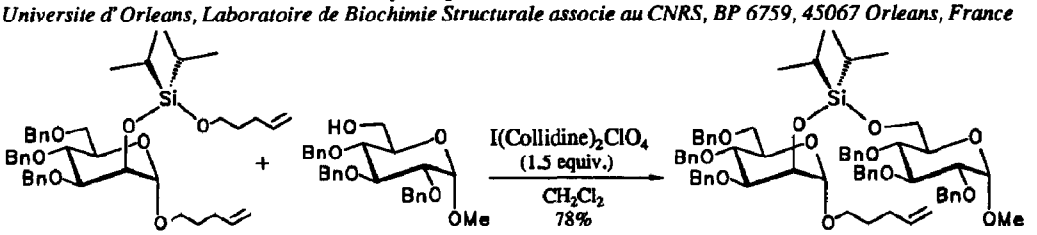
2-Deoxy-2-iodo hexopyranosides react with molecular oxygen and tributylstannane to give the epimeric C-2 alcohols in high yield and moderate selectivity.



Tetrahedron Letters, **1994**, *35*, 8167

NOVEL SILYLATING AGENTS EMPLOYING 4-PENTENYL SILYL ETHERS.

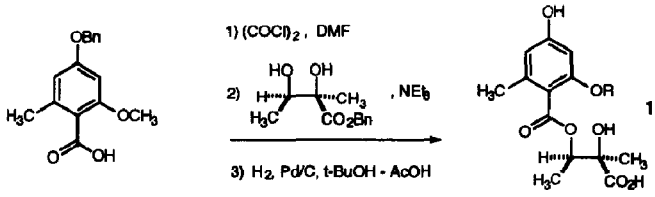
Caroline Colombier, Troels Skrydstrup* and Jean-Marie Beau,
Universite d'Orleans, Laboratoire de Biochimie Structurale associe au CNRS, BP 6759, 45067 Orleans, France



Tetrahedron Letters, **1994**, *35*, 8171

Diastereoselective Synthesis of a Methylated Derivative of Phomozin, a Phytotoxin Isolated from *Phomopsis helianthi*, a Phytopathogenic Fungus of Sunflowers

Robert Nouguier, Michèle P. Bertrand, Philippe Picon and Patricia Perfetti.- Laboratoire de Chimie Moléculaire Organique, Faculté Saint Jérôme, Av. Normandie-Niemen, 13397 Marseille cedex 20, France.

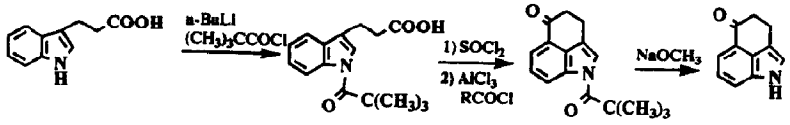


(±)-**1** (R = CH_3), a (2*R**, 3*R**)-methylated derivative of natural (+)-phomozin [(2*S*, 3*S*)-**1**, (R = H)] is synthesized in high yield.

Tetrahedron Letters, **1994**, *35*, 8173

A FACILE BIOMIMETIC SYNTHESIS OF UHLE'S KETONE BY THE REGIOSELECTIVE FRIEDEL-CRAFTS CYCLIZATION OF INDOLE-3-YLPROPIONYL CHLORIDE

Katsunori Teranishi#, Syunzi Hayashi, Shin-ichi Nakatsuka## and Toshio Goto
School of Agriculture, Nagoya University, Chikusa, Nagoya 464-01, Japan

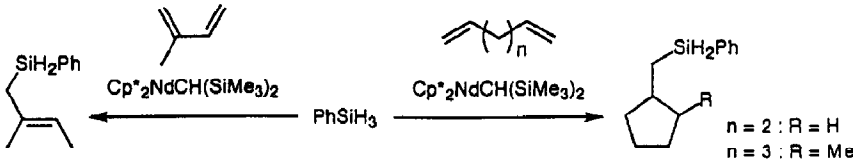


Tetrahedron Letters, **1994**, *35*, 8177

Hydrosilation of Dienes Catalyzed by $Cp^*_2NdCH(SiMe_3)_2$

Shun-ya Onozawa,[a)] Toshiyasu Sakakura*[a)] and Masato Tanaka*[a,b)]

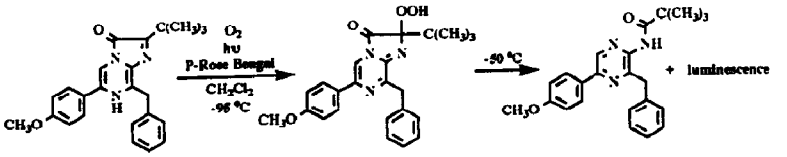
a) National Institute of Materials and Chemical Research, Higashi, Tsukuba, Ibaraki 305, Japan
b) Department of Chemistry, University of Tsukuba, Tsukuba, Ibaraki 305, Japan



Tetrahedron Letters, **1994**, *35*, 8181

SYNTHESIS OF HYDROPEROXIDE VIA PHOTOOXYGENATION FOR A MODEL AEQUORIN BIOLUMINESCENCE

Katsunori Teranishi,* Kazuo Ueda,# Hidekazu Nakao, Makoto Hisamatsu and Tetsuya Yamada
School of Bioresources, Mie University, Kamihama-chou, Tsu 514, Japan
#Aburahi Laboratories, Shionogi & Co., Ltd., Koka-cho, Koka-gun, Shiga 520-34, Japan

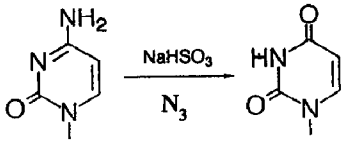


Tetrahedron Letters, **1994**, *35*, 8185

Catalysis of Diethylenetriamine for Bisulfite-Induced Deamination of Cytosine in Oligodeoxyribonucleotides

Makoto Komiyama* and Shinji Oshima
Department of Chemistry and Biotechnology, Faculty of Engineering, University of Tokyo, Hongo, Tokyo 113 Japan

Diethylenetriamine (N_3) catalyzes bisulfite ion-induced deamination of 2'-deoxycytidine in DNA to 2'-deoxyuridine at pH 5, much more efficiently than ammonia, ethylenediamine, 3,3'-diaminodipropylamine, and spermine.



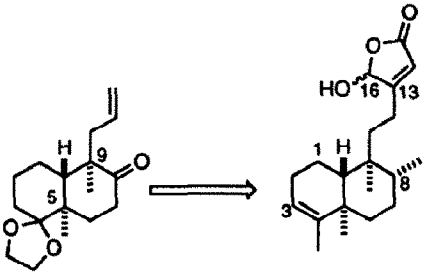
Tetrahedron Letters, **1994**, *35*, 8189

A Total Synthesis of Antibacterial Clerodane, 16-Hydroxycleroda-3,13(14)Z-dien-15,16-olide

Hisahiro Hagiwara,* Kazuhiro Inome and Hisashi Uda

Institute for Chemical Reaction Science, Tohoku University Katahira, Aoba-ku, Sendai 980, Japan

Abstract: The total synthesis of an antibacterial clerodane, 16-hydroxycleroda-3,13(14)Z-dien-15,16-olide, is described and its absolute stereochemistry has been determined.

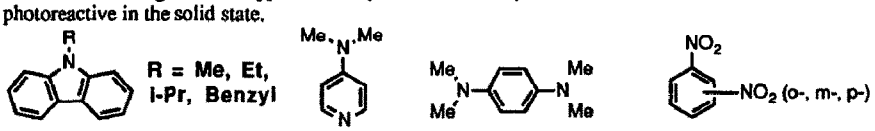


Tetrahedron Letters, **1994**, *35*, 8193

Bimolecular Solid-State Photoreactions in the Adduct Crystals of an Aromatic Nitro Compound with an Aromatic Amine

Yoshikatsu Ito,* Sadayuki Asaoka, and Isao Saito
Department of Synthetic Chemistry, Faculty of Engineering, Kyoto University, Kyoto 606, Japan
Shigeru Ohba
Department of Chemistry, Faculty of Science and Technology, Keio University, Yokohama 223, Japan

Of the twelve charge-transfer-type adduct crystals studied, only three which involve m-dinitrobenzene as the acceptor are photoreactive in the solid state.

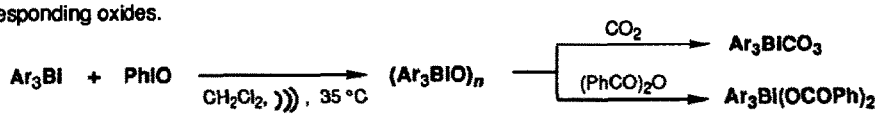


Tetrahedron Letters, **1994**, *35*, 8197

Ultrasonic Reaction of Triarylbismuthines and Triarylstibines with Iodosylbenzene. Mild Oxidizing Ability of the Organobismuth Oxide Function for Organic Substrates.

Hitomi Suzuki,* Tohru Ikegami and Yoshihiro Matano
Department of Chemistry, Faculty of Science, Kyoto University, Sakyo-ku, Kyoto 606-01, Japan

Sonochemical reaction of triarylbismuthines and triarylstibines with iodosylbenzene produces the corresponding oxides.

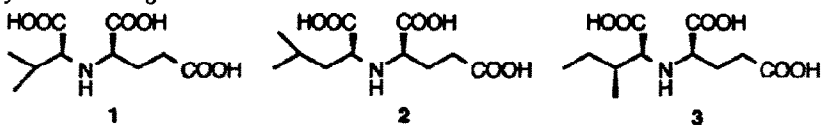


Tetrahedron Letters, **1994**, *35*, 8201

THREE NEW AMINO ACIDS FROM A POISONOUS MUSHROOM, *CLITOCYBE ACROMELALGA*.

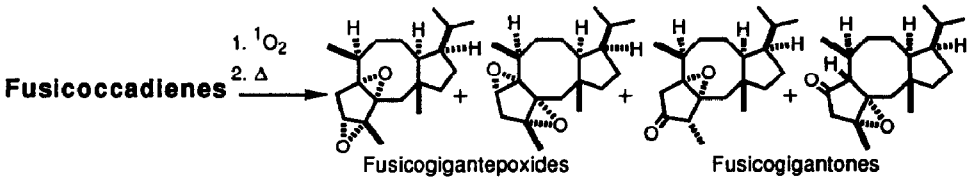
Shinji Fushiya, Shohei Yamada, Mamoru Matsuda and Shigeo Nozoe, Pharmaceutical Institute, Tohoku University, Aobayama, Aoba-ku, Sendai 980-77, Japan

Three new amino acids, valinopine (**1**), *epi*-leucinopine (**2**) and isoleucinopine (**3**), were isolated from a poisonous mushroom, *Clitocybe acromelalga*.



Tetrahedron Letters, **1994**, *35*, 8205

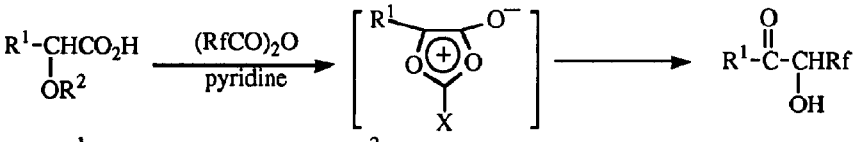
Total Synthesis of Fusicogigantones A and B and Fusicogigantepoxide via the Singlet Oxygen-Oxidation of Fusicoccadienes. "Fusicogigantepoxide B", a Missing Congener Metabolite. Nobuo Kato, Kohji Nakanishi, Xue Wu, Hideyuki Nishikawa, and Hitoshi Takeshita,* Institute of Advanced Material Study, 86, Kyushu University, Kasuga-koen, Kasuga, Fukuoka 816 Japan



Tetrahedron Letters, **1994**, *35*, 8209

A Convenient Synthesis of α-Trifluoromethylated and α-Perfluoroalkylated Acyloins from α-Hydroxy Acids

Masami Kawase *[a] **and Teruo Kurihara** [b]
Faculty of Pharmaceutical Sciences [a] and Faculty of Science,[b] Josai University, Sakado-shi, Saitama 350-02, Japan



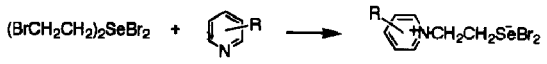
R^1=Ph, $PhCH_2$, $CH_3(CH_2)_5$; R^2=H, COMe, COPh; Rf=CF_3, C_2F_5, C_3F_7

Tetrahedron Letters, **1994**, *35*, 8213

Reactivities of Bis(2-bromoethyl)selenium Dibromide and Its Related Compounds: Formation of Hypervalent T-shaped Coordinated Selenium Compounds by Reaction with Pyridine and Its Derivatives.

Masatsugu Miura, Yoshinori Takanohashi, Yoichi Habata, and Sadatoshi Akabori*
Department of Chemistry, Faculty of Science, Toho University, Funabashi, Chiba 274, Japan

The reaction of 1 with 2 gave T-shaped coordinated comounds 3 in moderate to good yields.



1 2 3

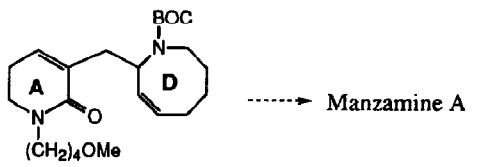
a:R=H b:R=3-Br c:R=3-CN d:R=4-CN

Tetrahedron Letters, **1994**, *35*, 8217

Synthetic Studies on Manzamine A: Construction of a Key Bicyclic AD Ring Subunit I

S. Li, S. Kosemura, and S. Yamamura
Dept. of Chemistry, Faculty of Science and Technology,
Keio University, Hiyoshi, Yokohama, Japan

Synthesis of manzamine A precursor has successfully been accomplished.



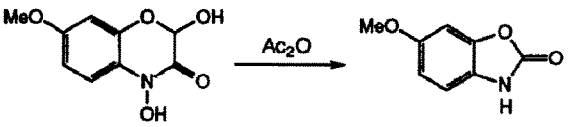
Manzamine Precursor (I)

Tetrahedron Letters, **1994**, *35*, 8221

Chemical Studies on 2,4-Dihydroxy-7-methoxy-2*H*-1,4-benzoxazin-3(4*H*)-one in Connection with 6-Methoxy-2-benzoxazolinone, an Auxin-inhibiting Substance of *Zea mays* L.

S. Kosemura , S. Yamamura,* Toyoaki Anai, and K. Hasegawa
Dept of Chem, Faculty of Science and Technology,
Keio University, Hiyoshi, Yokohama 223, Japan
Institute of Applied Biochemisty, University of Tsukuba,
Tennodai 1-1-1, Tsukuba 305, Japan

In the presence of acetic anhydride, the reaction rate of DIMBOA (1) was remarkably accelerated to afford MBOA (2) in high yield.

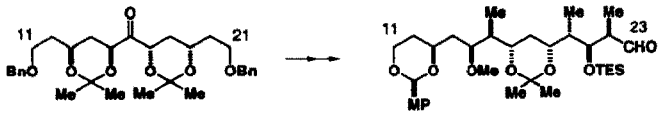


1 **2**

Tetrahedron Letters, **1994**, *35*, 8225

Synthetic Study of Marine Macrolide Swinholide A. Stereocontrolled Synthesis of the C11 - C23 Segment.

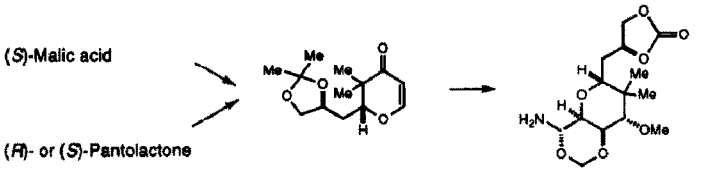
Tadashi Nakata,* Toshiya Komatsu, Kazuo Nagasawa, Haruo Yamada,† and Takashi Takahashi†
The Institute of Physical and Chemical Research (RIKEN), Wako-shi, Saitama 351-01, Japan
† *Tokyo Institute of Technology, Meguro, Tokyo 152, Japan*



Tetrahedron Letters, **1994**, *35*, 8229

SYNTHESIS OF THE RIGHT HALF OF MYCALAMIDE A. A FORMAL TOTAL SYNTHESIS

Tadashi Nakata,* Hiroko Matsukura, Dunlong Jian, and Hiroaki Nagashima
The Institute of Physical and Chemical Research (RIKEN), Wako-shi, Saitama 351-01, Japan



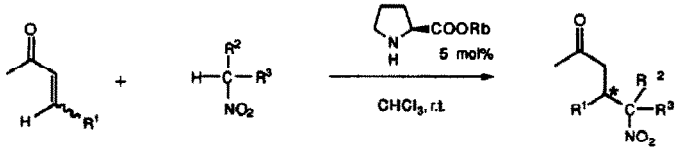
Right half of mycalamide A

Tetrahedron Letters, **1994**, *35*, 8233

Catalytic Asymmetric Michael Addition of Nitroalkane to Enone and Enal

Masahiko Yamaguchi,* Tai Shiraishi, Yoshihiro Igarashi,, and Masahiro Hirama
Department of Chemistry, Faculty of Science, Tohoku University, Aoba, Sendai, 980-77 JAPAN

L-Proline rubidium salt catalyzes the asymmetric Michael addition of nitroalkane to enone and enal.

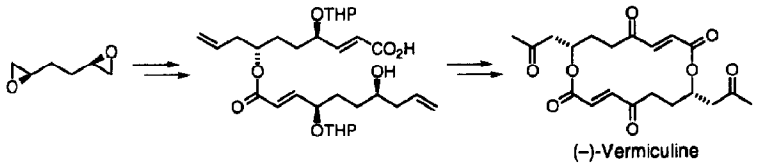


Total Synthesis of (–)-Vermiculine

Tetrahedron Letters, **1994**, *35*, 8237

Atsushi Noda, Sakae Aoyagi, Nobuo Machinaga, and Chihiro Kibayashi*
Tokyo College of Pharmacy, Horinouchi, Hachioji, Tokyo 192-03, Japan

Macrodiolide (–)-vermiculine has been synthesized via intramolecular Mitsunobu reaction utilizing a C_2 symmetrical diepoxide chiral synthon.



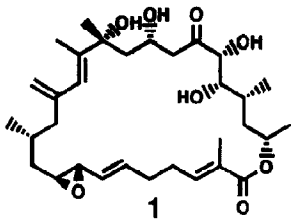
Absolute Stereochemisty of Amphidinolide B

Tetrahedron Letters, **1994**, *35*, 8241

Masami Ishibashi, Haruaki Ishiyama, and Jun'ichi Kobayashi*

Faculty of Pharmaceutical Sciences,
Hokkaido University, Sapporo 060, Japan

The absolute stereochemistry of amphidinolide B (**1**), a potent cytotoxic 26-membered macrolide isolated from the cultured marine dinoflagellate *Amphidinium* sp., has been established as 8*S*, 9*S*, 11*R*, 16*R*, 18*S*, 21*R*, 22*S*, 23*R*, and 25*S*, on the basis of enantiospecific synthesis of a degradation product.

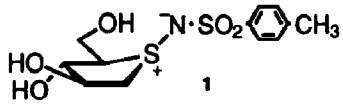


SYNTHESIS OF IMINOTHIASUGAR AS A POTENTIAL TRANSITION-STATE ANALOG INHIBITOR OF GLYCOSYL-TRANSFER REACTIONS

Tetrahedron Letters, **1994**, *35*, 8243

Hideya Yuasa,[§] Tetsuya Kajimoto,*[,§] and Chi-Huey Wong,*[,§,¶] § Frontier Research Program, The Institute of Physical and Chemical Research, 2-1 Hirosawa, Wako, 351-01, JAPAN, and ¶ The Scripps Research Institute, 10666 North Torrey Pines Road, La Jolla, CA 92037, USA

Iminothiasugar **1** was synthesized in 10 steps from D-xylose and was considered to be a potentially useful transition-state analog inhibitor of glycosidases.

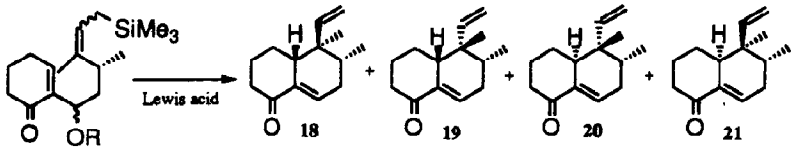


ALTERNATION OF STEREOCONTROL MODE IN THE CYCLIZATION OF 2-(3',4'-DIMETHYL-6'-TRIMETHYLSILYL-4'-HEXENYL)-2-CYCLOHEXENONES BY THE AUXILIARY CONTROLLING SUBSTITUENTS AT 1'- AND 2'-POSITIONS OF THE SIDE CHAIN.

Tetrahedron Letters, **1994**, *35*, 8247

Takashi Tokoroyama,* Masashi Kato, Takehiko Aoto, Taeko Hattori, Hideo Iio and Yoshihiko Odagaki. Faculty of Science, Osaka City University, Sumiyoshi-ku, Osaka 558 and Minase Research Institute, Ono Pharmaceutial Co. Ltd., Shimamoto-cho, Osaka 618, Japan

By the choice with respects to kinds and stereochemistry of the oxy-substituents, and Lewis acids, modes of the cyclization can be controlled so as to get one of three isomers **18**, **20** and **21** with good selectivities.

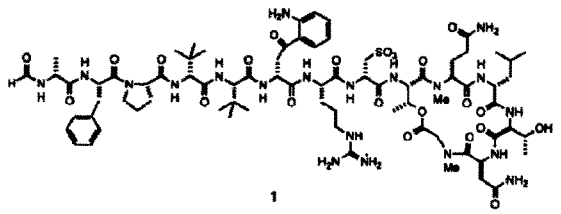


Tetrahedron Letters, **1994**, *35*, 8251

Discodermin E, a Cytotoxic and Antimicrobial Tetradecapeptide, from the Marine Sponge *Discodermia kiliensis*.

Geonseek Ryu, Shigeki Matsunaga, and Nobuhiro Fusetani,*
Laboratory of Marine Biochemistry, Faculty of Agriculture,
The University of Tokyo, Bunkyo-ku, Tokyo 113, Japan

A new cytotoxic and antimicrobial tetradecapeptide, discodermin E (1), has been isolated from the marine sponge *Discodermia kiliensis*. The structure of 1 was determined by spectral and chemical methods.

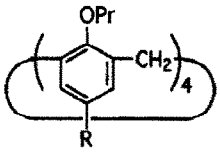


1

Tetrahedron Letters, **1994**, *35*, 8255

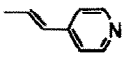
Self-Assembled Molecular Capsule Based on the Hydrogen-Bonding Interaction between Two Different Calix[4]arenes

Kwangnak Koh, Koji Araki, and Seiji Shinkai*
Department of Chemical Science & Technology, Faculty of Engineering, Kyushu University, Fukuoka 812, Japan



Intermolecularly hydrogen-bonded molecular container constructed from two calix[4]arene derivatives having carboxylic acids (1) or pyridyl groups (2) on their upper rim was designed for the first time.

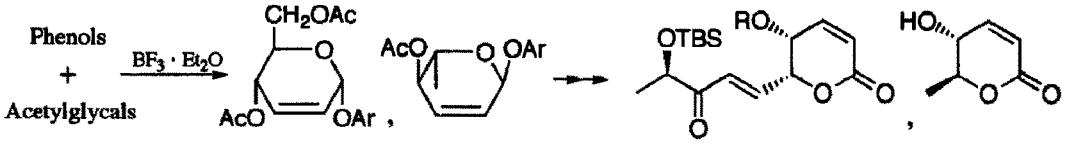
1 R = COOH

2 R = 

Tetrahedron Letters, **1994**, *35*, 8259

PHENOLIC FERRIER REACTION AND ITS APPLICATION TO THE NATURAL PRODUCT SYNTHESIS. Toshiro Noshita, Takeyoshi Sugiyama*, Yoshiharu Kitazumi, and Takayuki Oritani, Department of Applied Biological Chemistry, Faculty of Agriculture, Tohoku University, Sendai 981, Japan.

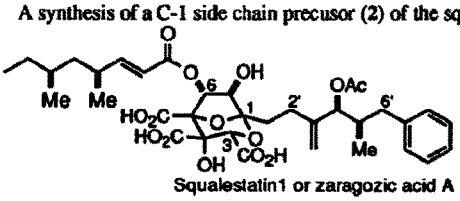
Aryl *O*- Δ^2-glycosides were synthesized by Ferrier reaction. *p*-Methoxyphenyl group was oxidatively removed with $Ag(DPAH)_2$.



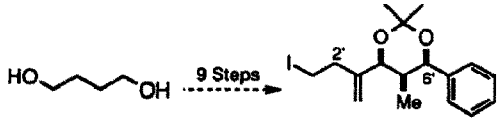
Tetrahedron Letters, **1994**, *35*, 8263

SYNTHESIS OF THE C-1 SIDECHAIN OF THE SQUALESTATINS AND ZARAGOZIC ACID A. Jack G. Parsons and Mark A. Rizzacasa*
School of Chemistry, The University of Melbourne, Parkville, Victoria 3052, Australia.

A synthesis of a C-1 side chain precusor (2) of the squalestatins and zaragozic acid A was achieved from 1,4-butanediol.



Squalestatin1 or zaragozic acid A

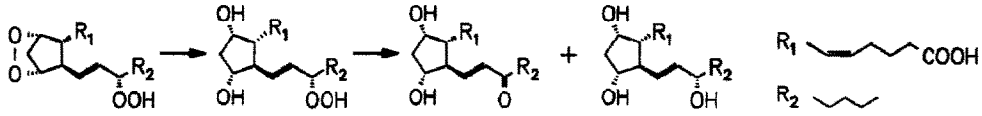


2

Tetrahedron Letters, **1994**, *35*, 8267

ENDOPEROXIDE PATHWAY IN PROSTAGLANDIN BIOSYNTHESIS IN THE SOFT CORAL *GERSEMIA FRUTICOSA* K. Varvas, R. Koljak, I. Jarving, T. Pehk[a], N. Samel', Institute of Chemistry, Akadeemia tee 15, EE0026 Tallinn, Estonia, [a]Institute of Chemical Physics and Biophysics, Rävala pst. 10, EE0100, Tallinn, Estonia.

PGG_2 has been found to be a key intermediate in the prostaglandin biosynthesis in the coral *Gersemia fruticosa*.

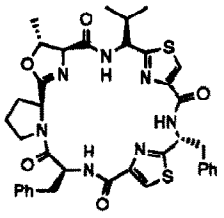


Tetrahedron Letters, **1994**, *35*, 8271

TOTAL SYNTHESIS OF LISSOCLINAMIDE 5, A CYTOTOXIC CYCLIC PEPTIDE FROM THE TUNICATE *LISSOCLINUM PATELLA*

Christopher Boden and Gerald Pattenden*
Department of Chemistry, The University, Nottingham NG7 2RD, England

A total synthesis of lissoclinamide 5, and some of its stereoisomers, shows that its stereostructure should be revised.



Tetrahedron Letters, **1994**, *35*, 8275

ALKENYLSULFENYLCHLORIDES: SYNTHESIS AND Ad_E REACTIONS OF 2-ALKOXY-2-OXO-3-R-4-CHLOROTHIO-1,2-OXAPHOSPHOL-3-ENES.

Igor V. Alabugin[a], Valery K. Brel[*a], Anatoly N. Chekhlov[a], Nikolai S. Zefirov[*a], Peter J. Stang[b].
Institute of Physiologically Active Compounds, Russian Academy of Science, Chernogolovka, Moscow Region, 142432, Russia. FAX: (095) 939 0290[a] ; Department of Chemistry, University of Utah, Salt Lake City, U84112, USA[b].