

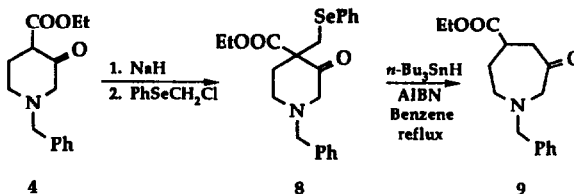
GRAPHICAL ABSTRACTS

*Tetrahedron*, 1991, 47, 4847

FREE RADICAL RING-EXPANSION LEADING TO NOVEL SIX- AND SEVEN-MEMBERED HETEROCYCLES

Paul Dowd\* and Soo-Chang Choi  
Department of Chemistry  
University of Pittsburgh  
Pittsburgh, Pennsylvania 15260

A new free radical-based method for heterocyclic ring-expansion is described.

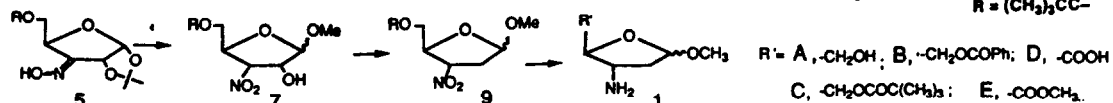


*Tetrahedron*, 1991, 47, 4861

3-AMINO-2,3-DIDEOXY-D-ERYTHRO-FURANOSE DERIVATIVES.

Minn Chang Cheng, Keekyung Kim, Yi-Tsong Lin, Janet S. Plummer, Jamil Talhouk, Yan Wang, Tian-Pa You, and Harry S. Mosher\*. Department of Chemistry, Stanford, CA. 94305

A series of amino-furanose sugar derivatives (1A - 1E) has been synthesized from D-Xylose.

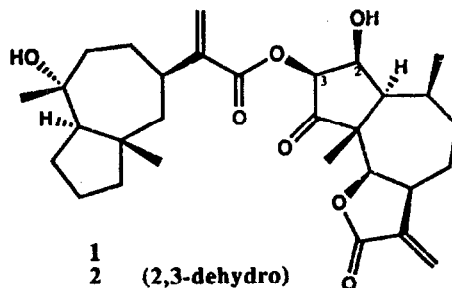


*Tetrahedron*, 1991, 47, 4869

Arrivacins, Novel Pseudoguaianolide Esters with Potent Angiotensin II Binding Activity from *Ambrosia psilostachya*

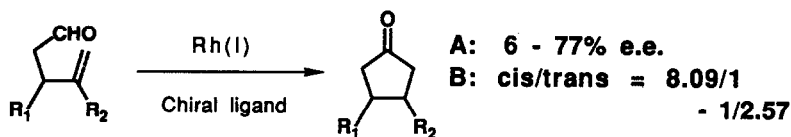
Y. Chen, M. F. Bean, C. Chambers, T. Francis, M. J. Huddleston  
P. Offen, J. W. Westley, B. N. Timmerman<sup>1</sup> and B. K. Carte\*  
SmithKline Beecham Pharmaceuticals  
PO Box 1539, King of Prussia, PA 19406-0939  
<sup>1</sup>College of Pharmacy, Dept. of Pharmaceutical Sciences  
University of Arizona, Tucson, Arizona 85721

Two novel pseudoguaianolide esters, arrivacins A (1) and B (2), have been isolated from the CH<sub>2</sub>Cl<sub>2</sub> extract of *A. psilostachya*. The structures of the arrivacins were determined by analysis of the spectral data and chemical interconversion. Arrivacins A and B show potent binding to angiotensin II receptors in bovine adrenal membranes.



**ASYMMETRIC CYCLIZATION REACTIONS.  
CYCLIZATION OF SUBSTITUTED 4-PENTENALS INTO CYCLOPENTANONE DERIVATIVES BY  
RHODIUM(I) WITH CHIRAL LIGANDS**

Yukari Taura, Masakazu Tanaka, Xiao-Ming Wu, Kazuhisa Funakoshi, and Kiyoshi Sakai\*  
Faculty of Pharmaceutical Sciences, Kyushu University, Maidashi 3-1-1, Higashi-ku, Fukuoka 812, Japan



A: R<sub>1</sub> = H, R<sub>2</sub> = n-Bu, t-Bu or Ph  
B: R<sub>1</sub> = -CH<sub>2</sub>CH<sub>2</sub>COCH<sub>3</sub>, R<sub>2</sub> = CH<sub>3</sub> or CH<sub>2</sub>CH<sub>2</sub>OCOCH<sub>3</sub>

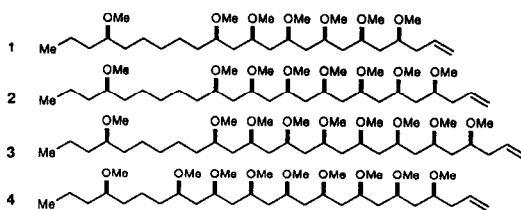
**ISOTACTIC POLYMETHOXY-1-ALKENES FROM THE TERRESTRIAL BLUE-GREEN ALGA  
Scytonema ocellatum: STRUCTURE AND SYNTHESIS**

Yuji Mori,<sup>a</sup> Yasunori Kohchi,<sup>a</sup> Hirohide Noguchi,<sup>a</sup> Makoto Suzuki,<sup>a</sup> Shumuel Carmeli,<sup>b</sup>  
Richard E. Moore,<sup>b</sup> and Gregory M. L. Patterson<sup>b</sup>

<sup>a</sup>Faculty of Pharmacy, Meijo University, Tempaku, Nagoya 468, Japan

<sup>b</sup>Department of Chemistry, University of Hawaii, Honolulu, HI 96822, USA

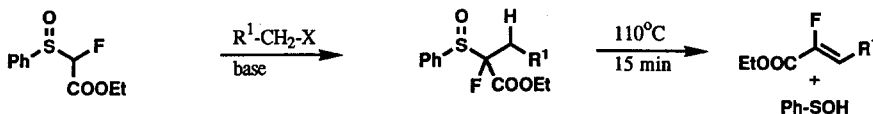
Novel isotactic polymethoxy-1-alkenes  
1-4 were isolated from blue-green alga  
*Scytonema ocellatum* and the absolute  
configurations were determined by synthesis.



**ETHYL PHENYLSULFINYL FLUOROACETATE,  
A NEW AND VERSATILE REAGENT FOR THE PREPARATION OF  
α-FLUORO-α,β-UNSATURATED CARBOXYLIC ACID ESTERS**

Thomas Allmendinger, Central Research Laboratories, Ciba-Geigy AG, CH 4002 Basel, Switzerland

The alkylative elimination of the title compound represents a new general method for the preparation of α-fluoro-α,β-unsaturated carbonyl compounds. Its scope and limitation as well as its advantages over known methods will be discussed.



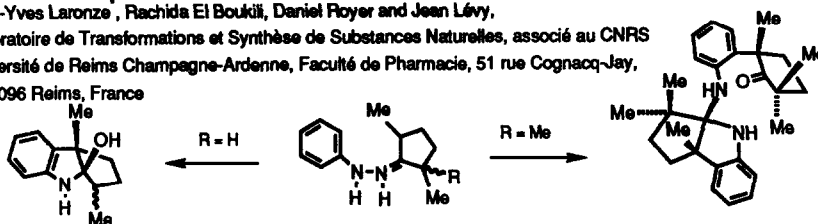
**METHYLENE-INDOLINES, INDOLENNES AND INDOLENINIUMS XXII :  
THE FISCHER INDOLIZATION OF SOME SUBSTITUTED CYCLOPENTANONES**

Jean-Yves Laronze<sup>\*</sup>, Rachida El Boukili, Daniel Royer and Jean Lévy,

Laboratoire de Transformations et Synthèse de Substances Naturelles, associé au CNRS

Université de Reims Champagne-Ardenne, Faculté de Pharmacie, 51 rue Cognacq-Jay,

F 51096 Reims, France

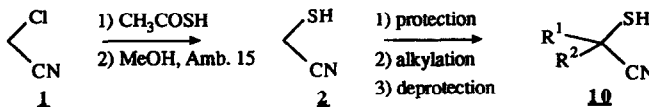


**THIOCYANOHYDRINS, A NEW CLASS OF COMPOUNDS,  
PRECURSORS OF UNSTABILIZED THIOCARBONYL DERIVATIVES.**

A.C. GAUMONT, L. WAZNEH, J.M. DENIS<sup>\*</sup>

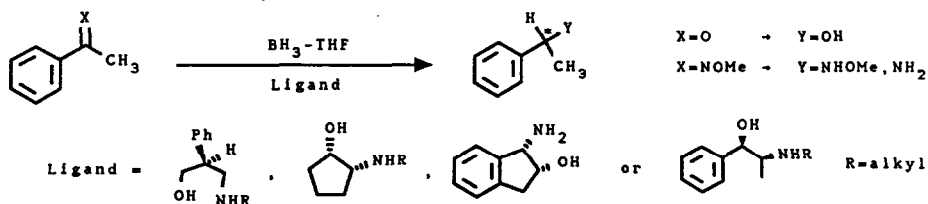
Groupe de Physicochimie Structurale, URA CNRS 704, Université de Rennes I, 35042 Rennes Cedex, FRANCE.

A preparative synthesis of thiocyanohydrin **2** is described. Mono- and dialkylated derivatives are prepared. Some examples of their reactivity are proposed.



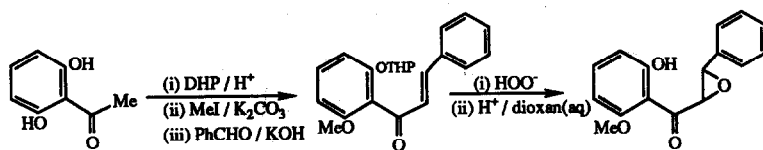
**CHEMO-ENZYMATIC SYNTHESIS OF 1,2- AND 1,3-AMINO ALCOHOLS AND  
THEIR USE IN THE ENANTIOSELECTIVE REDUCTION OF ACETOPHENONE  
AND ANTI-ACETOPHENONE OXIME METHYL ETHER WITH BORANE.**

E. Didier<sup>\*\*\*</sup>, B. Loubinoux<sup>\*\*</sup>, G.M. Ramos Tombo<sup>+</sup> and G. Rihs<sup>+</sup>, Ciba-Geigy AG<sup>+</sup>, Agric. Div. CH-4002, Basle, Switzerland and Lab. Chimie Org. 4<sup>\*\*</sup>, Faculté des Sciences, BP 239 54506 Vandoeuvre-les-Nancy, cédex France.



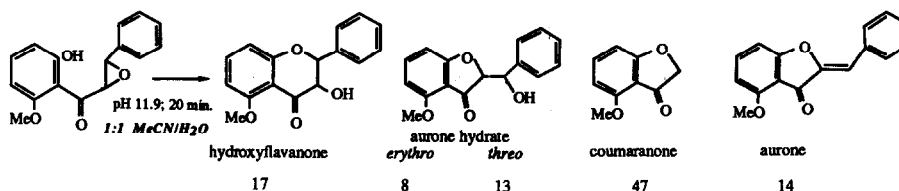
**SYNTHESIS OF 2'-HYDROXYCHALCONE EPOXIDES**

Christopher J. Adams and Lyndsay Main\*  
*Chemistry Department, University of Waikato, Hamilton, New Zealand.*



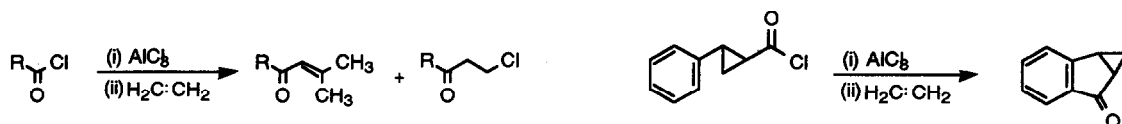
**CYCLISATION AND SUBSEQUENT REACTIONS OF 2'-HYDROXY-6'-METHOXYCHALCONE EPOXIDE AND RELATED COMPOUNDS**

Christopher J. Adams and Lyndsay Main\*  
*Chemistry Department, University of Waikato, Hamilton, New Zealand*



**THE FRIEDEL-CRAFTS REACTION OF ACID CHLORIDES WITH ETHENE ; DI-ADDITION AND MOLECULAR REARRANGEMENT**

Francis X. Bates, John A. Donnelly,\* and John R. Keegan  
 Department of Chemistry, University College, Dublin 4, Ireland

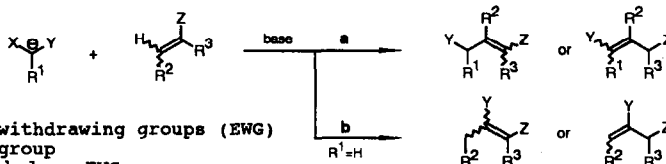


### VICARIOUS NUCLEOPHILIC SUBSTITUTION OF HYDROGEN IN ELECTROPHILIC ALKENES

Mieczysław Mąkosza and Andrzej Kwast

Institute of Organic Chemistry, Polish Academy of Sciences, PL 01-224 Warsaw, Poland.

Carbanions containing leaving groups react with strongly electrophilic alkenes giving allylic products of two types (path a and b) - depending on the substituents.



Y, Z - electronwithdrawing groups (EWG)

X - leaving group

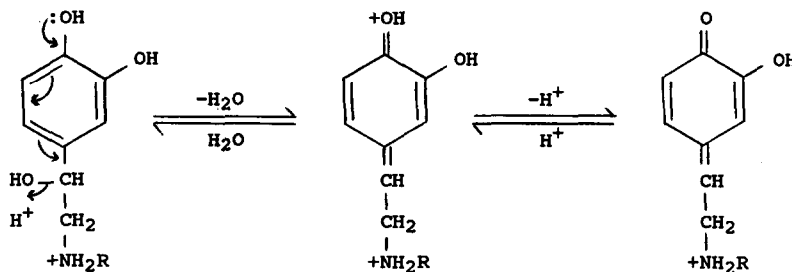
R<sup>2</sup>, R<sup>3</sup> - aryl, alkyl or EWG

path a: vicarious nucleophilic substitution of hydrogen (addition - base-promoted HX elimination)

path b: addition - cyclization - ring opening sequence

### THE ACID-CATALYSED RACEMISATION MECHANISM OF CATECHOLAMINES

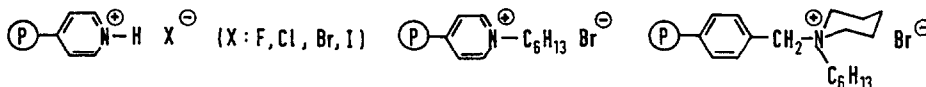
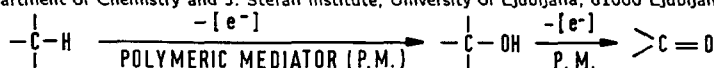
D.P. Venter Department of Pharmacology, Potchefstroom University,  
Potchefstroom 2520, South Africa



### POLYMERS AS REAGENTS AND CATALYSTS-PART 29. THE ROLE OF POLYMERIC MEDIATOR STRUCTURE ON ELECTROCHEMICAL OXIDATION

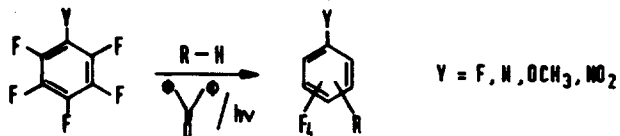
Marko Zupan and Darko Dolenc

Department of Chemistry and J. Stefan Institute, University of Ljubljana, 61000 Ljubljana, Yugoslavia



**PHOTOSUBSTITUTION REACTIONS ON AROMATIC AND HETEROAROMATIC RINGS. EVIDENCE FOR ADDITION AND SUBSTITUTION MECHANISM**

Boris Šket, Marko Zupan, Nataša Zupančič, and Barbara Pahor  
Department of Chemistry, University of Ljubljana, Ljubljana, Yugoslavia

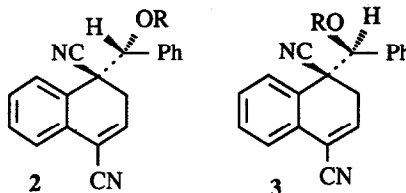


Photosubstitution reactions of fluorosubstituted compounds with cycloalkanes and alcohols are described.

**THE PHOTOCHEMICAL REACTION BETWEEN 1,4-DICYANONAPHTHALENE AND BENZYL ETHERS**

N. d'Alessandro, M.Mella, E.Fasani, L.Toma, A.Albini, Dip.Chimica Organica, Università,  
V. Taramelli 10, I-27100 Pavia, Italy.

Stereochemistry and mechanism of formation of compounds **2** and **3** from the photochemical reaction of 1,4-dicyanonaphthalene and benzyl ethers (R = Me, *t*-Menthyl) are discussed.



**A STEREOSELECTIVE SYNTHESIS OF TILIVALLINE AND ITS ANALOGS**

Shigehiro Mori, Tomoyasu Ohno, Hiroshi Harada, Toyohiko Aoyama, and Takayuki Shioiri\*  
Faculty of Pharmaceutical Sciences, Nagoya City University,  
Tanabe-dori, Mizuho-ku, Nagoya 467, Japan

