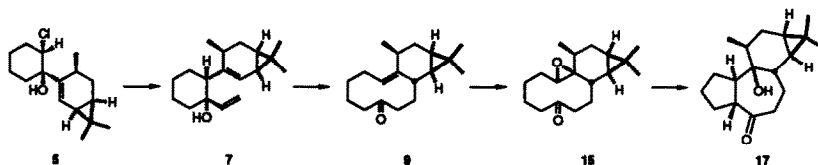# GRAPHICAL ABSTRACTS

A Concise Route to the Tetracyclic Core of Phorbol
Leo A. Paquette*, Daryl R. Sauer, Scott D. Edmondson, and Dirk Friedrich
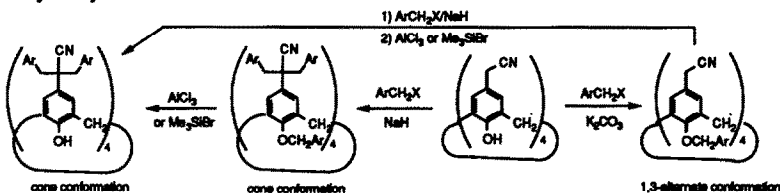*Evans Chemical Laboratories, The Ohio State University, Columbus, Ohio 43210*

The carbinol 7 derived by reaction of optically active chlorohydrin 5 with CH₂=CHMgBr undergoes smooth anionic oxy-Cope rearrangement. α-Epoxide 15 generated from the resulting cyclododecenone 9 undergoes base-promoted isomerization to deliver a product possessing the carbocyclic framework of phorbol.

Heavily-substituted Calix[4]arenes Derived from *p*-Cyanomethylcalix[4]arene
Shiv Kumar Sharma and C. David Gutsche*
Department of Chemistry, Texas Christian University, Fort Worth, TX 76129, USA

Base-induced reactions of *p*-cyanomethylcalix[4]arene with arylmethyl halides and Lewis acid-catalyzed de-arylmethylation
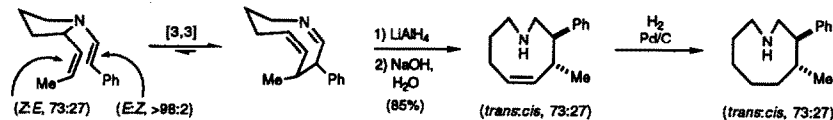

STEREOCHEMICAL CONSEQUENCES OF THE LEWIS ACID-PROMOTED 3-AZA-COPE REARRANGEMENT OF N-ALKYL-N-ALLYL ENAMINES

Gregory R. Cook and John R. Stille*
Department of Chemistry, Michigan State University, East Lansing, MI 48824-1322

The internal and relative asymmetric induction for electrophile-promoted 3-aza-Cope rearrangement was examined. In the presence of a methyl substituent at C-4 of the rearrangement framework, product formation was highly diastereoselective. The ring expansion of a five- membered ring was used to stereoselectively produce a nine-membered ring heterocycle.
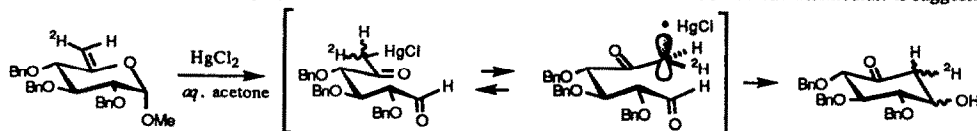

Mechanistic and Stereochemical Studies on Ferrier Reaction by Means of Chirally Deuterated Glucose

Noriaki Yamauchi, Takumi Terachi, Tadashi Eguchi and Katsumi Kakinuma*
Department of Chemistry, Tokyo Institute of Technology, O-okayama, Meguro-ku, Tokyo 152, Japan.

The mechanism of Ferrier reaction was investigated by using methyl (E)-[6-²H]-2,3,4-tri-*O*-benzyl-α-D-*xylo*-hex-5-enopyranoside and complete loss of stereochemical integrity at C-6 of substrate was observed. The involvement of radical intermediate is suggested.
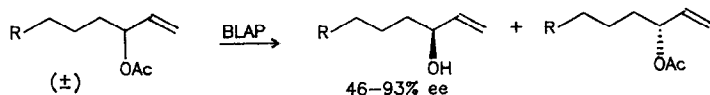
BOVINE LIVER ACETONE POWDER (BLAP)
CATALYZED SYNTHESIS OF CHIRAL C-8 ALLYL ALCOHOLS:
AN APPLICATION OF SUBSTRATE SPECIFICITY APPROACH

D. Basavaiah* and S. Bhaskar Raju
School of Chemistry, University of Hyderabad, Hyderabad,
India - 500 134.

Synthesis of chiral C-8 allyl alcohols in 46-93% enantiomeric purities
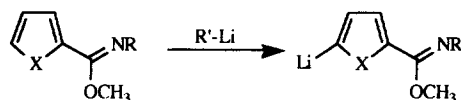using bovine liver acetone powder as biocatalyst.

R = CH_3CH_2-, $CH_2=CH-$, $HOCH_2CH_2-$, $PhCH_2OCH_2CH_2-$, $THPOCH_2CH_2-$

SYNTHESIS OF SOME NOVEL IMIDATE DERIVATIVES OF
THIOPHENE AND FURAN. INVESTIGATIONS OF THEIR METALLATION
PROPERTIES AND SOME SYNTHETIC APPLICATIONS.

Richard A. Barcock, Derek J. Chadwick, and Richard C. Storr
Department of Chemistry, University of Liverpool, P.O. Box 147, Liverpool L69 3BX, U.K.
Lance S. Fuller, and John H. Young
Synthetic Chemicals Ltd., Four Ashes, Wolverhampton, West Midlands WV10 7BP, U.K.

Imidate derivatives of thiophene
and furan have been synthesised
in excellent yields and their directing
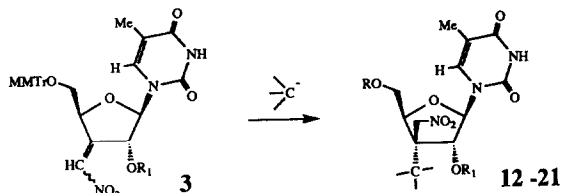metallation properties were investigated

X = S, O
R = Me or (2,4,6-trimethyl)phenyl-

NEW SYNTHESIS OF 3'-C-SUBSTITUTED-3'-NITROMETHYL-*ribo*-THYMIDINES

N. Garg. N, Hossain, J. Plavec and J. Chattopadhyaya*
Department of Bioorganic Chemistry, Box 581, Biomedical Center,
University of Uppsala, S-751 23 Uppsala, Sweden

The 3'-*exo*-nitromethylene function in ribo-thymidine in 3 has
been used for the first time as a general intermediate in the
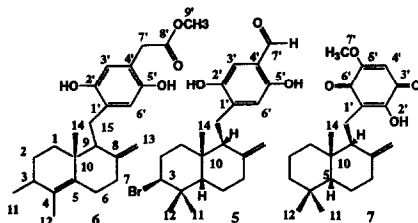Michael addition reaction to give varieties of 3'-C-substituted
nucleosides (12 - 21).

THREE NEW SESQUITERPENE HYDROQUINONES FROM
MARINE ORIGIN

YOEL KASHMAN[1], RAVIT TALPIR[1], AMIRA RUDI[1], AMNON HIZI[2] AND YOSSI LOYA[3]
[1]School of Chemistry, [2]School of Medicine, [3]Department of Zoology, Tel-Aviv University, Ramat-Aviv
69978, ISRAEL

Three new sesquiterpene hydroquinones,
peyssonols A and B (5 & 6) and
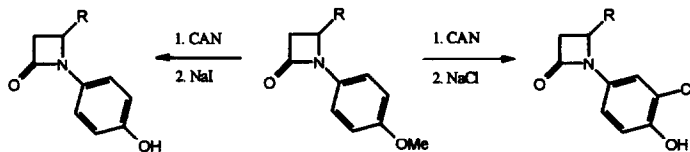hyatellaquinone (7) have been
isolated from marine sources.

SIMPLE AND CONDENSED β-LACTAMS. PART 20. REACTION OF SOME
1-(4-METHOXYPHENYL)AZETIDIN-2-ONES WITH CERIUM(IV) AMMONIUM
NITRATE: TRAPPING OF THE QUINONE IMINE INTERMEDIATE WITH CHLORIDE AND IODIDE ANIONS

J. Fetter,[a] Le Thanh Giang,[a] T. Czuppon,[a] K. Lempert,[a] M. Kajtár-Peredy[b] and G. Czira;[b]
[a]Department of Organic Chemsitry, Technical University Budapest, H-1521 Budapest, Hungary;
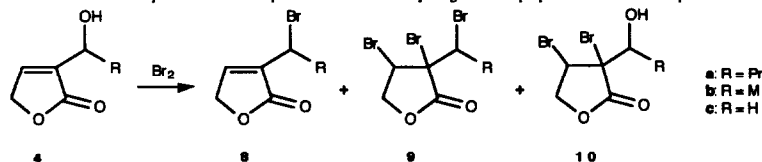[b]Central Research Institute of Chemistry of the Hungarian Academy of Sciences, H-1525 Budapest, Hungary

**SYNTHESIS OF 3-(1-HYDROXYALKYL)-5H-FURAN-2-ONES:
STUDY OF THEIR REACTION WITH HALOGENS.**

Angel Calderón, Pedro de March,* Mustafa el Arrad, and Josep Font*
Unitat de Química Orgànica. Universitat Autònoma de Barcelona. 08193 Bellaterra. Spain.

The synthesis of 3-(1-hydroxyalkyl)-5H-furan-2-ones, 4a-c, is reported. The major isolated compounds from the reactions of lactones 4a and 4b with bromine were the unexpected substitution products 8a and 8b. Only 4e gave some proportion of the addition product 10e.

a: R = Pr
b: R = M
c: R = H

A FACILE TRANSFORMATION OF SUGAR LACTONES TO AZASUGARS
Herman S. Overkleeft, Jim van Wiltenburg and Upendra K. Pandit*
Organic Chemistry Laboratory, University of Amsterdam,
Nieuwe Achtergracht 129,1018 WS Amsterdam, The Netherlands.

A stategy for the facile synthesis of tetrabenzylgluconolactam from the corresponding
gluconolactone has been developed. This has been applied to the synthesis of several
5- and 6-ring sugar lactams.

**A FACILE METHOD TO APPEND PEPTIDAL SIDE-CHAINS
ONTO STEROIDAL TEMPLATES**
David C. Horwell, Ian C. Lennon and Edward Roberts.*

Parke-Davis Neuroscience Research Centre, Addenbrookes Hospital Site,
Hills Road, Cambridge CB2 2QB, U.K.

Abstract : Side-chains corresponding to phenylalanine, tyrosine and
tryptophan are introduced onto a steroid template in a highly efficient
manner.