

Graphical Abstracts

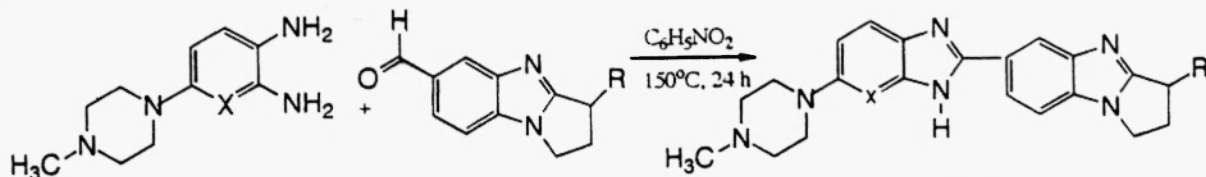
Heterocycl. Commun. 6 (2000) 199-208

DESIGN AND SYNTHESIS OF A NEW CLASS OF PYRROLOBENZIMIDAZOLE BASED AGENTS TO TARGET HUMAN TUMOR HELICASES

Yennam Satyanarayana and J. William Lown*

Department of Chemistry, University of Alberta, Edmonton, Canada T6G 2G2

The syntheses of pyrrolobenzimidazole based Hoechst 33258 analogues were carried out in conjunction with a design to explore the potential for selective inhibition of human tumor helicases.



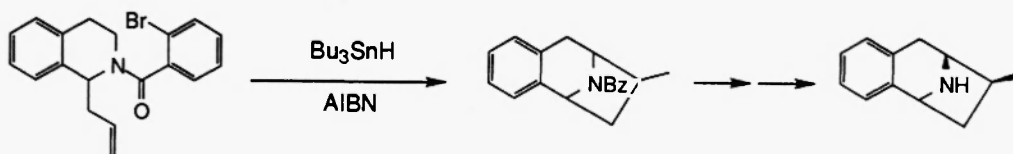
Heterocycl. Commun. 6 (2000) 209-210

Free-radical Cyclization of 2-(o-Bromobenzoyl)-1-(2-propenyl)-1,2,3,4-tetrahydroisoquinoline: Synthesis of 7-Methyl-6,7,8,9-tetrahydro-5H-benzocyclohepten-5,8-imine

John B. Bremner,^{1*} Alicia A. Monteith¹ and Reginald J. Smith²

¹University of Wollongong, Wollongong, NSW, Australia, 2522

²Phytex Australia Pty Ltd, Sydney, NSW, Australia, 2156



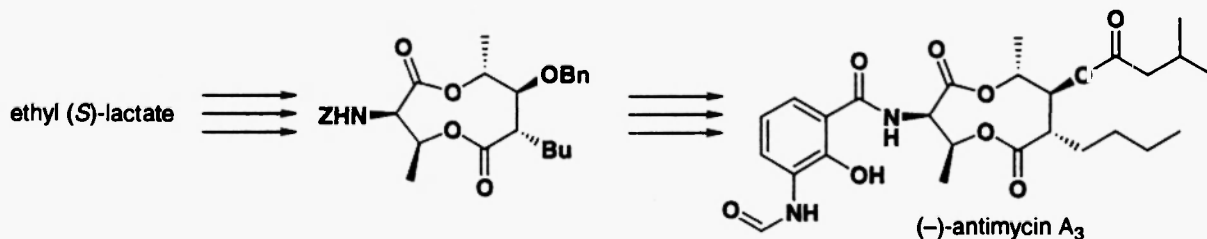
Heterocycl. Commun. 6 (2000) 211-214

SYNTHESIS AND ANTIMICROBIAL ACTIVITY OF UNNATURAL (–)-ANTIMYCIN A₃ AND ITS ANALOG

Hitoshi Kondo, Takayuki Oritani and Hiromasa Kiyota*

Graduate School of Agricultural Science, Tohoku University
1-1 Tsutsumidori-Amamiya, Aoba-ku, Sendai 981-8555 Japan

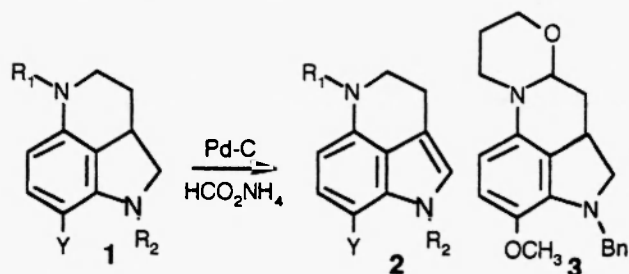
Unnatural enantiomer of a dilactone antibiotic (–)-antimycin A₃ and its deformylamidodehydroxy analog were synthesized using chelation controlled alkylation as a key step. (–)-Antimycin A₃ and its analog hardly showed antimicrobial activity compared with natural antimycin A complex. The formal synthesis of natural (+)-antimycin A₃ is also achieved.



APPROACH OF PYRROLO[4,3,2-de] QUINOLINE

ALKALOID STRUCTURE. N. Roue¹ and R. Barret^{*2}

1- UPRESA 6013-Laboratoire de Chimie Thérapeutique, Faculté de Pharmacie, 51, rue Cognacq-Jay, 51 100 Reims-France. 2-Laboratoire de Chimie Thérapeutique, Faculté de Pharmacie, 8, Avenue Rockefeller, 69373 Lyon Cedex 08 - France - e-mail : roland.barret@rockefeller-univ.lyon1.fr



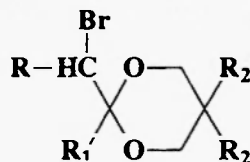
The synthesis of **2** and **3**, synthetic precursors of damirones and haematopodin is described

SYNTHESIS AND STEREOCHEMISTRY OF SOME NEW CHIRAL BROMINATED 1,3 DIOXANE DERIVATIVES

Crina Socaci^a, Ion Grosu^a, Gerard Ple^b, Heinz W. Zwanziger^c, Eugen Mesaros^a, Dragos Marginean^a, Sorin Mager^a
^aBabes-Bolyai University, Cluj-Napoca, România; ^bUniversite de Rouen et IRCOF, Mont Saint-Aignan, France
^cFachhochschule Merseburg, Merseburg, Germany

The synthesis and the stereochemistry of new brominated chiral 1,3-dioxanes are reported

R=Me, Ph
R₁=H, Ph
R₂=Me, COOEt

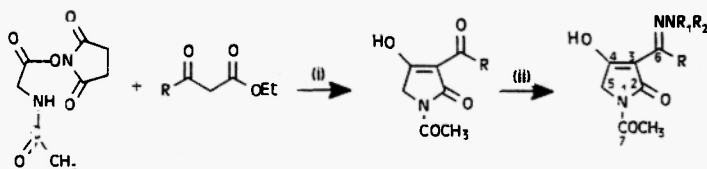


Synthesis and NMR Spectroscopic Studies of Novel N-Acetyl-3-Hydrazonoalkyl Tetramic Acids

Efstathios Gavrielatos^b, Christos Mitsos^a,
John Markopoulos^b, Margarita Petrollagi^a
Olga Igglessi-Markopoulou^{a,*}.

^a Laboratory of Organic Chemistry, Department of Chemical Engineering, National Technical University of Athens, Zografou Campus, 157 73 Athens, Greece.

^b Laboratory of Inorganic Chemistry, Department of Chemistry, University of Athens, Greece.



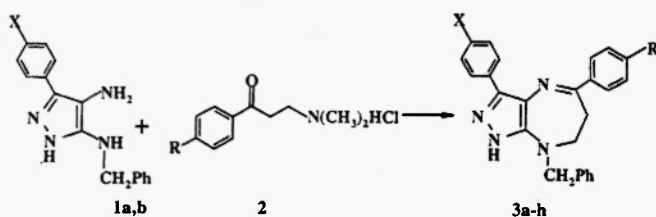
Synthesis of New 1-Benzyl-4,6-diaryl-2,3-dihydropyrazolo[3,4-b][1,4]diazepines

Braulio Insuasty¹*, Ricaurte Rodriguez¹, Jairo Quiroga¹, Rodrigo Abonía¹, Claudio Saitz^{2a} and Carolina Jullian^{2b}.

¹Grupo de Investigación de Compuestos Heterocíclicos, Departamento de Química, Universidad del Valle, A. A. 25360, Cali, Colombia.

^{2a}Departamento de Química Orgánica y Fisicoquímica, ^bCEPEDEQ, Facultad de Ciencias Químicas y Farmacéuticas, Universidad de Chile, Casilla 233, Santiago 1 - Chile

The reaction of 4-amino-3-aryl-5-benzylaminopyrazoles (**1a,b**) with 3-dimethylaminopropiophenones (**2**) in ethanol gave 1-benzyl-4,6-diaryl-2,3-dihydropyrazolo[3,4-b][1,4]diazepines (**3a-h**). The structure elucidation of the products is based on detailed nmr analysis (¹H, ¹³C and DEPT).

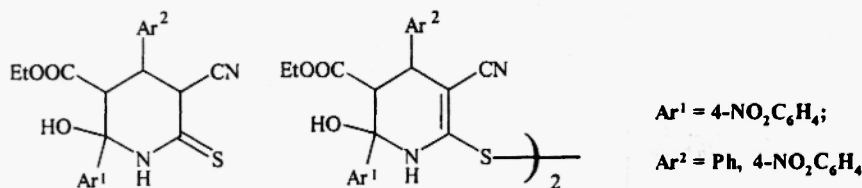


SYNTHESIS, DEHYDRATION AND OXIDATION OF 3-CYANO-4,6-DIARYL-5-ETHOXYCARBONYL-6-HYDROXYPIPERIDINE-2-THIONES

A.Krauze*, G.Duburs

Latvian Institute of Organic Synthesis, Riga, Aizkraukles 21, LV-1006, Latvia

Convenient methods of synthesis of stable 3-cyano-6-hydroxypiperidine-2-thiones and 2,2'-bis-(6-hydroxy-1,4,5,6-tetrahydropyridyl)disulfides were elaborated by the unsymmetrical condensation of ethyl 4-nitrobenzoylacetate, an aromatic aldehyde and cyanothioacetamide in the presence of piperidine with subsequent acidification or oxydation with iodine.



**AN EXTREMELY UNUSUAL REACTION OF
2,3,4-TRIPHENYL-3-AZABICYCLO-[3.2.0]
HEPTA-1,4-DIENE WITH DIMETHYL
ACETYLENEDICARBOXYLATE**

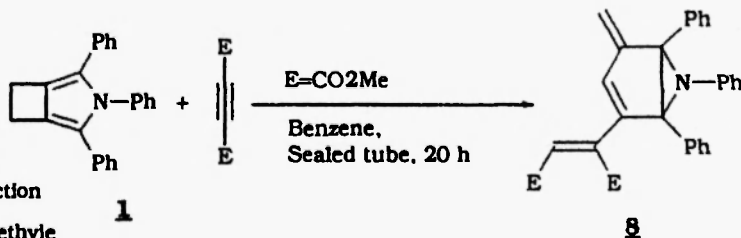
Kiyoshi Matsumoto,^{a*} Sadahiro Goto,^a Mitsuo Toda,^b and
Akikazu Kakehi^c

^a Graduate School of Human and Environmental
Studies, Kyoto University, Kyoto 606-8501, Japan

^b Faculty of Engineering, Shizuoka University,
Hamamatsu 432-8561, Japan

^c Faculty of Engineering, Shinshu University, Nagano
380-8553, Japan

2, 3, 4-Triphenyl-3-azabicyclo[3.2.0]hepta-1,4-diene
underwent, in a sealed tube, an extremely novel reaction
with dimethyl acetylenedicarboxylate to give
6-phenyl-2-[(Z)-1,2-bis(methoxycarbonyl)-vinyl]-4-methyl-
ene-1,5-diphenyl-6-azabicyclo[3.1.0]hex-2-ene **8**, in
addition to the azepine **3**. The structure was established
by an X-ray analysis.



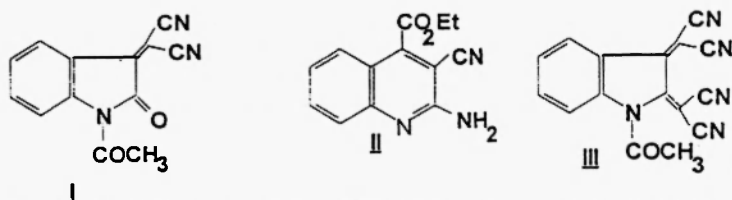
**REACTION OF 1-ACETYL-3-DICYANOMETHYLENE-1,3 -
DIHYDRO-2H- INDOL- 2-ONE WITH SOME
NUCLEOPHILIC REAGENTS : SYNTHESIS OF SOME INDOL
AND QUINOLINE DERIVATIVES .**

Moustafa F. Aly^{a)}, Aly H. Atta^{b)*} and Mansour I. Younes^{a)}

^{a)} Chemistry Department , Faculty of Science , South Valley University , Qena , Egypt .

^{b)} Chemistry Department , Faculty of Education at Suez , Suez Canal University , Suez , Egypt

Reaction of 1-acetyl-3-dicyanomethylene-1,3-dihydro-2H-indol-2-one (**I**) with
some active methylenes and amines was studied . Malononitrile with (**I**) gave
(**II**) or (**III**) depending on the reaction condition. With cyanoacetamide we
obtained a mixture of (**V**) and (**VI**)



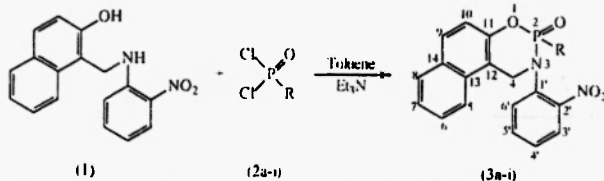
**SYNTHESIS OF 2-SUBSTITUTED-2,3-DIHYDRO-3-
(2-NITROPHENYL)-1H-NAPHTH[1,2-e][1,3,2]
OXAZAPHOSPHORINE 2-OXIDES**

M. Venugopal^a, C. Devendranath Reddy^{a*}, C. Naga Raju^a and K.D.Berlin^b

^aDepartment of Chemistry, Sri Venkateswara University, Tirupati - 517 502, India

^bDepartment of Chemistry, Oklahoma State University, Stillwater, OK 74078, USA

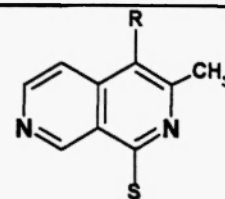
The compounds **3a-i** were synthesized by reacting 1-(2-nitroanilino)methyl-2-naphthol (**1**) with arylphosphorodichloridates (**2a-h**) and
O-2-chloroethyl phosphoryl chloride (**2i**) in presence of triethylamine in dry toluene-tetrahydrofuran mixture.



A METHOD FOR THE SYNTHESIS OF 3-METHYL-2,7-NAPHTHYRIDINE DERIVATIVES

Eugen Barbu and Flavian Cuiban

Organic Chemistry Department, University of Ploiești, Bd. București 39, Ploiești 2000, Romania



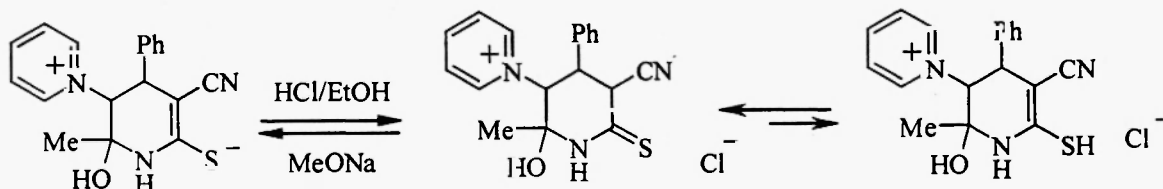
A synthetic route to 3-methyl-2,7-naphthyridine derivatives, used for pharmacological studies, is reported.

SYNTHESIS AND PROPERTIES OF 4,5-trans-4-ARYL-3-CYANO-6-HYDROXY-6-METHYL-5-PYRIDINIO -1,4,5,6-TETRAHYDROPYRIDINE-2-THIOLATES

Aivars Krauze*, Gunārs Duburs

Latvian Institute of Organic Synthesis, 21 Aizkraukles str., Riga, LV-1006, Latvia

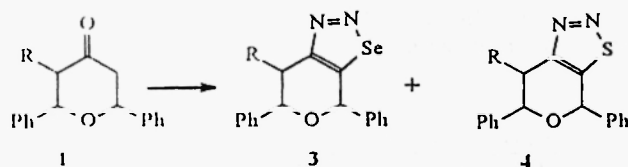
Stable 4,5-trans-4-Aryl-3-cyano-6-hydroxy-6-methyl-5-pyridinio-1,4,5,6-tetrahydropyridine-2-thiolates and corresponding hydrogenated 6-hydroxy-6-methyl-4-phenyl-5-pyridiniopyridine-2-thione chlorides were obtained. Their dehydration and dehydrogenation were studied.

**SYNTHESIS OF 5,7-DIPHENYL(-4-ALKYL)TRIHYDRO PYRANO[3,4-d] [1,2,3]SELENADIAZOLES AND 5,7-DIPHENYL (-4-ALKYL) TRIHYDROPYRANO [3,4-d] [1,2,3]THIADIAZOLES**

D. Bhaskar Reddy*, A. Somasekhar Reddy V. Padmavathi and N. Chandrasekhar Bahu

Department of Chemistry, S.V. University, Tirupati - 517 502, India.

The synthesis of title compounds has been described.



SYNTHESIS OF 5-CYANO-4,7-DIHYDROPYRAZOLO[3,4-b]PYRIDIN-4-ONES AND 5-CYANOPYRAZOLO[3,4-b]PYRIDIN-4-ONES IN ONE-STEP BY THE REACTION OF 5-AMINOPYRAZOLONE WITH BENZALDEHYDE AND BENZOYLACETONITRILE IN ETHANOL AND BY MICROWAVE RADIATION IN DRY MEDIA.

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