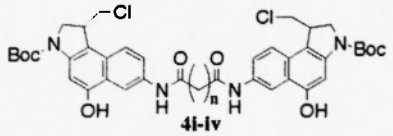
# Graphical Abstracts

Heterocycl. Commun. 5 (1999) 497-502

**Design and Synthesis of 1,2,9,9a-Tetrahydrocyclopropa[*c*]benz[*e*]indole-4-one (CBI) Dimers**

Guofeng Jia, Hirokazu Iida and J. William Lown*

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

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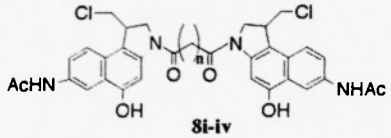


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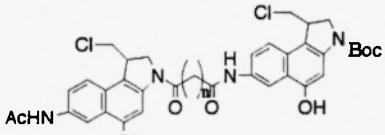


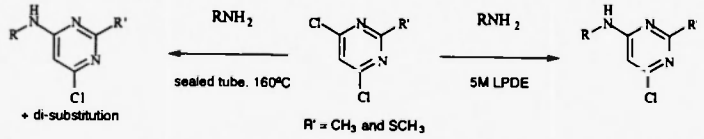

11i-iv

Heterocycl. Commun. 5 (1999) 503-508

**Regiocontrolled Amination of Dichloropyrimidines in $LiClO_4$ - $Et_2O$ Solutions.**

James Garner and Adam McCluskey* *Department of Chemistry, The University of Newcastle, University Drive, Callaghan, NSW, Australia 2308*

Treatment of dichloropyrimidine with amines in 5M LPDE yields only the mono-aminated product allowing for the selective introduction of a second amine in subsequent synthetic steps.

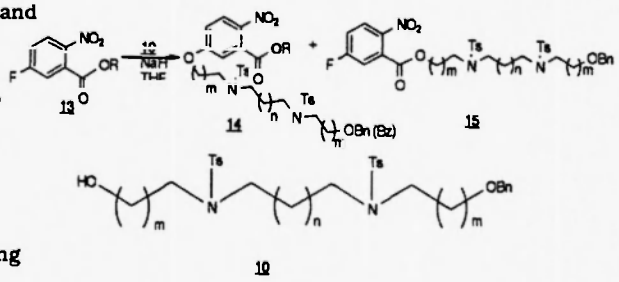



Heterocycl. Commun. 5 (1999) 509-514

**$S_NAr$ REACTIONS OF METHYL AND ETHYL 2-NITRO-5-FLUOROBENZOATES IN THE SYNTHESIS OF PYRRO-[2,1-C][1,4]BENZODIAZEPINE PRECURSORS**

Hirokazu Iida,[1] Yukihiro Misumi,[1] Kiyoshi Matsumoto,*[1] and J. William Lown,*[2]

1 Graduate School of Human and Environmental Studies, Kyoto University, Kyoto 606-8501, Japan
2 Department of Chemistry, University of Alberta, Edmonton, AB, Canada, T6G 2G2

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The title reaction was investigated as part of an effective synthesis of pyrrolo[2,1-c][1,4]-benzodiazepines possessing a long alkylamino unit at position 7.

Heterocycl. Commun. 5 (1999) 515-520

## SYNTHESIS AND NMR SPECTROSCOPIC STUDIES OF NOVEL N-ACETYL-3-AMINOALKYL TETRAMIC ACIDS

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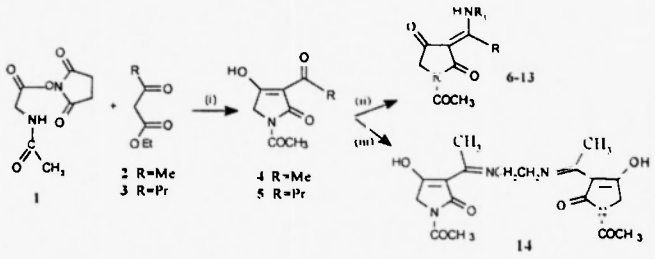
[b] *Laboratory of Inorganic Chemistry, Department of Chemistry, University of Athens, GREECE.*



**Scheme 1.** (i) NaH, PhH, r.t., (ii) $H_2NR_1$, absolute ethanol, reflux 2.5 h. (iii) $H_2NCH_2CH_2NH_2$, absolute ethanol, reflux 2.5 h

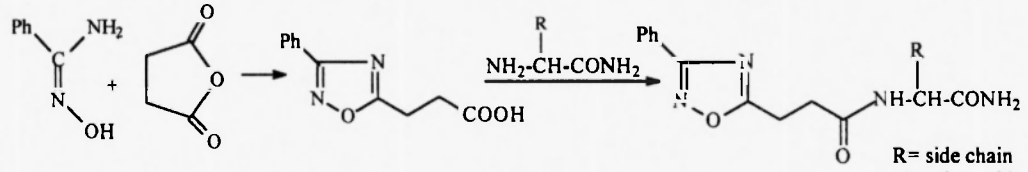
Heterocycl. Commun. 5 (1999) 521-524

## SYNTHESIS OF NEW 1,2,4-OXADIAZOLES-DERIVED DIPEPTIDOMIMETICS, A POTENTIAL CLASS OF ANTIINFLAMMATORY DRUGS

R. F. Vieira[1], D. J. Brondani[1], A. R. de Faria[1], R. M. Srivastava[2] & A. C. Lima Leite[1]*

[1]Laboratorio de Planejamento, Avaliação e Sintese de Farmacos - LABSINFA, Laboratorio de Tecnologia Químico-Farmaceutica - Departamento de Farmacia - CCS Universidade Federal de Pernambuco - Rua Prof. Artur Sa S/N, CDU, 50740-520, Recife-PE-Brasil [2] Departamento de Quimica Fundamental – CCEN – UFPE - e-mail:aclb02@elogica.com.br

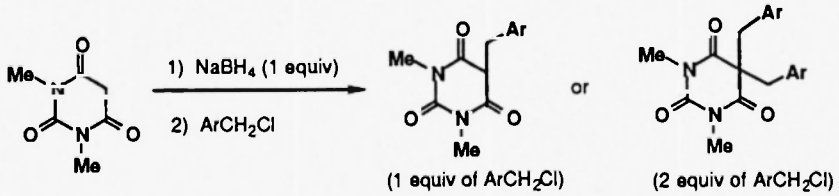
A new series of 1,2,4-oxadiazoles containing pseudopeptide moiety as the side chain has been synthesized in good yield using a strategy of peptide synthesis.




Heterocycl. Commun. 5 (1999) 525-528

## SODIUM BOROHYDRIDE MEDIATED BENZYLATION OF 1,3-DIMETHYLBARBITURIC ACID

Lucjan Strekowski* and Mohamed A. Ismail, Department of Chemistry, Georgia State University, Atlanta, Georgia 30303, USA; Hanafi H. Zoorob, Faculty of Science, Al-Mansoura University, Al-Mansoura, Egypt



Heterocycl. Commun. 5 (1999) 529-532

## STEREOCHEMICAL EFFECTS IN THE EFFICIENT CYCLISATION OF *N*-(1-CYANO-3-METHOXY-BUT-3-ENYL)-4-PHENYLOXAZOLIDINE

David J. Aitken,* Laure Besson, Karolin Partogyan-Halim, Henri-Philippe Husson

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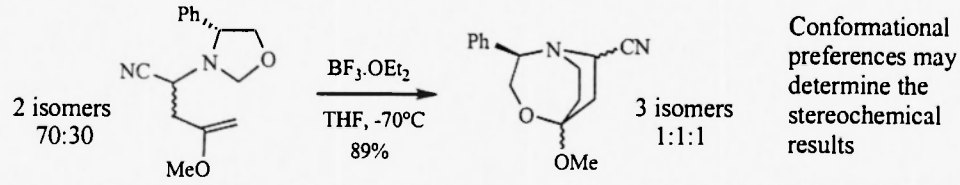
Laboratoire SEESIB-CNRS, Département de Chimie, Université Clermont-Ferrand II, 24 avenue des Landais, 63177 Aubière cedex, France

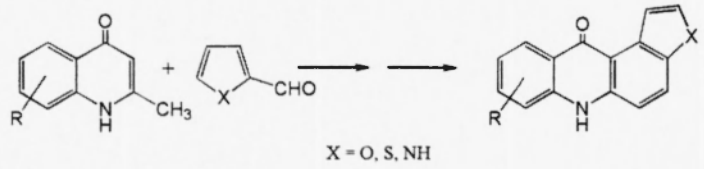



Conformational preferences may determine the stereochemical results

Heterocycl. Commun. 5 (1999) 533-538

## SYNTHESIS OF FURO- THIENO- AND PYRROLO- [3,2-a]ACRIDONES

S. Thamarai Selvi and P.S.Mohan, Department of Chemistry, Bharathiar University, Coimbatore-641 046, INDIA




Heterocycl. Commun. 5 (1999) 539-542

## MULTIPLE LID STABILIZATION OF THE DNA THREE-WAY JUNCTION. INSERTION OF $N^3$-(1-PYRENYLMETHYL)THYMIDINE.

Sherif A. El-Kafrawy and Erik B. Pedersen*
*Department of Chemistry, University of Southern Denmark, Odense University, DK-5230 Odense M, Denmark.*

The DNA three-way junction is stabilized when stacking moieties cover the inclined arm at the branch point and the free ends of the duplex arms. $N^3$-(1-pyrenylmethyl)thymidine, used as the stacking moiety, is easily synthesized by $N^3$-alkylation of adequately protected thymidine.

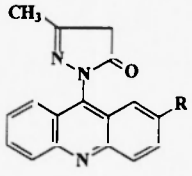
Heterocycl. Commun. 5 (1999) 543-548

## 1-(ACRIDIN-9'-YL)-PYRAZOLIN-3 AND 5-ONES. A NEW CLASS OF HETEROCYCLES WITH POTENTIAL BIOLOGICAL ACTIVITY.

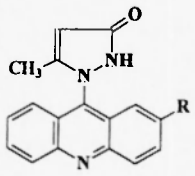
**Ioan Cristea*[a], Mariana M. Popovici, Maria T. Mendel[b], Ioan Silaghi-Dumitrescu[a] and Erika Kozma[a]**

[a]*Department of Organic Chemistry, "Babeş-Bolyai" University, Str. Arany Janoş 11, 3400 Cluj-Napoca, Romania*
[b]*Chemical and Pharmaceutical Research Institute, Str. Fabricii 126, 3400 Cluj-Napoca, Romania*

1-(Acridin-9'-yl)-3-methylpyrazolin-5-ones **3 a-c** were synthesised by cyclocondensation of 9-hydrazinoacridine derivatives and 1-(acridin-9'-yl)-5-methylpyrazolin-3-ones **4a-c** respectively, by arylation of 3-methyl-5-pyrazolone with 9-chloroacridine derivatives.



3a-c



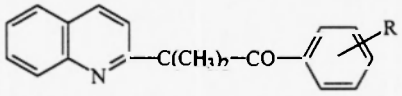
4a-c

Heterocycl. Commun. 5 (1999) 549-554

## SYNTHESIS AND NMR SPECTRA OF 2-METHYL-2-QUINOLIN-2-YL-PROPIOPHENONES

Ryszard Gawinecki,*[a] Erkki Kolehmainen,[b] Borys Osmialowski,[a] Peter Palkovič[c] and Maija Nissinen[b]

[a] Department of Chemistry, Technical and Agricultural University, Seminaryjna 3, PL-85-326 Bydgoszcz, Poland;
[b] Department of Chemistry, University of Jyväskylä, P.O. Box 35, FIN-40351 Jyväskylä, Finland;
[c] Department of Chemistry, Comenius University, Mlynská dolina CH 2, SK-842 15 Bratislava, Slovakia



R = 4-$CF_3$, 3-$CF_3$, 3-Cl, 3-F, 4-Cl, 4-Br, 3-OMe, 4-F, H, 3-Me, 4-Me, 4-OMe

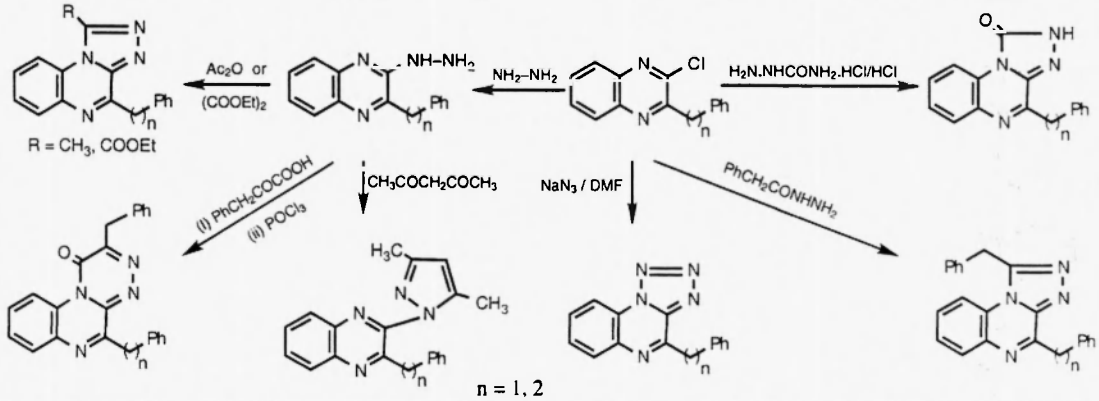
A series of 2-methyl-2-quinolin-2-yl-propiophenones was synthetized. Structure of these compounds was studied by IR, $^1H$, $^{13}C$ and $^{15}N$ NMR and X-ray methods.

Heterocycl. Commun. 5 (1999) 555-563

## SYNTHESIS AND ANTIMICROBIAL ACTIVITY OF CONDENSED AND UNCONDENSED QUINOXALINES

**A. M. El Massry**

**Chemistry Department, Faculty of Science, Alexandria University, Alexandria 21321, Egypt.**

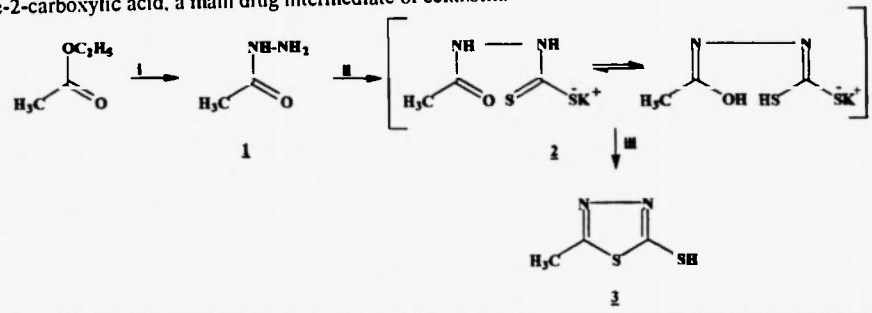


## A SIMPLE AND ECONOMICAL METHOD FOR THE SYNTHESIS OF INTERMEDIATES OF CEFAZOLIN.

Heterocycl. Commun. 5 (1999) 565-568

Ran esh Chandra* and Narendra N. Ghosh
Dr. B.R. Ambedkar Center for Biomedical Reaserch, University of Delhi, Delhi-110007, India.

A simple convenient method of synthesis of 2-mercapto-5-methyl-1,3,4-thiadiazole (MMTD) is described which was then converted into 7-Amino-3-{[(5-methyl-1,3,4-thiadiazole-2-yl)thio]methyl}-8-oxo-5-thia-1-azabicyclo[4.2.0]-oct-2-ene-2-carboxylic acid, a main drug intermediate of cefazolin.

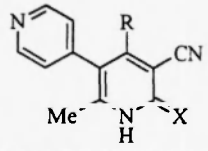


## SYNTHESIS OF 4-SUBSTITUTED PYRIDIN-2(1H)-ONES, PYRIDINE-2(1H)-THIONES, RELATED DERIVATIVES AS ANALOGUES OF CARDIOTONIC DRUG OF MILRINONE

Heterocycl. Commun. 5 (1999) 569-576

A.Krauze*[a], R.Vītoliņa[a], V.Garalene[b], H.-J.Jänsch[c], G.Dubursa[a]
[a]Latvian Institute of Organic Synthesis, Riga, Aizkraukles 21, LV-1006, Latvia
[b]Lithuanian Institute of Cardiology, Kaunas, Lithuania LT-3007
[c]Arzneimittelwerk Dresden, Stadtbetrieb des Pharmazeutischen kombinats Germed, Dresden, BRD

A convenient method of synthesis of 4-substituted 5-(4'-pyridyl)pyridine-2(1H)-ones and -thiones was elaborated by Michael reaction of 4-pyridylacetone and 2-cyano-3-R-acrylamides (thioamides) with subsequent heterocyclization, dehydration and dehydrogenation. Their cardiovascular activity in vitro was screened.



**X = O; R = 2-$F_2HCOC_6H_4$; 4-$ClC_6H_4$; 4-Pyridyl;**
**X = S; R = 4-Pyridyl**

Heterocycl. Commun. 5 (1999) 577-584

## Synthesis of substituted quinolines and heterocyclo[x,y-c]quinolines by the nucleophilic substitution and rearrangements of 4-chloro-2-methyl-3-nitroquinolines

*A. I. khodair, M. M. A. Abbasi*, El-Sayed I. Ibrahim, A. H. Soliman and El-Sayed H. El-Ashry** Chemistry Department, Faculty of Science, Suez Canal University, *Tanta University, and **Alexandria university, Egypt.*