ELSEVIER

EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY

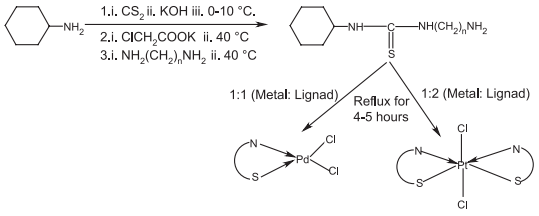
http://www.elsevier.com/locate/ejmech

European Journal of Medicinal Chemistry Vol 42, No 10, 2007

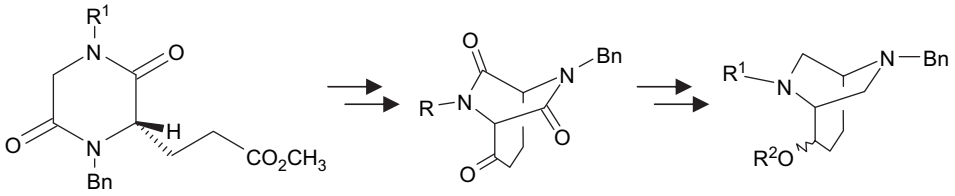
Contents

ORIGINAL ARTICLES

Synthesis, characterization, cytotoxicity, antibacterial and antifungal evaluation of some new platinum (IV) and palladium (II) complexes of thiodiamines pp. 1239–1246
A.K. Mishra* and N.K. Kaushik**

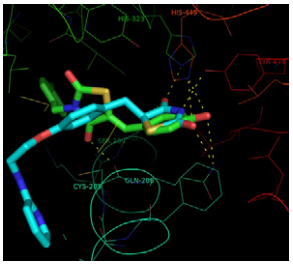


Synthesis of bridged piperazines with σ receptor affinity pp. 1247–1262
Manuela Weigl and Bernhard Wünsch*



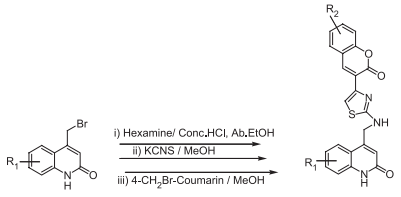
Synthesis, biological evaluation and molecular modeling studies of arylidene-thiazolidinediones with potential hypoglycemic and hypolipidemic activities pp. 1263–1271
Lúcia Fernanda C. da Costa Leite, Rosa Helena Veras Mourão, Maria do Carmo Alves de Lima, Suely Lins Galdino, Marcelo Zaldini Hernandes, Francisco de Assis Rocha Neves, Stéphanie Vidal, Jacques Barbe and Ivan da Rocha Pitta*

New arylidene-thiazolidinediones were synthesized and evaluated (hypoglycemic and hypolipidemic activities). The molecular targets used for docking were PPAR-α and γ, and the molecular origins of the biological activities were discussed in terms of binding energies, using rosiglitazone as the reference crystallographic ligand.



Synthesis of novel triheterocyclic thiazoles as anti-inflammatory and analgesic agents **pp. 1272–1276**
R.G. Kalkhambkar, G.M. Kulkarni*, H. Shivkumar and R. Nagendra Rao

Triheterocyclic thiazoles containing coumarin and carbostyril (1-aza coumarin) have been synthesized by the reaction of the *in situ* generated 4-thioureidomethyl carbostyril and 3-bromoacetyl coumarins. The new compounds have been tested for their *in vivo* analgesic and anti-inflammatory activities. They were found to possess considerable analgesic and anti-inflammatory activity. All the compounds were characterized by IR, ^{1}H NMR, ^{13}C NMR and mass spectra.

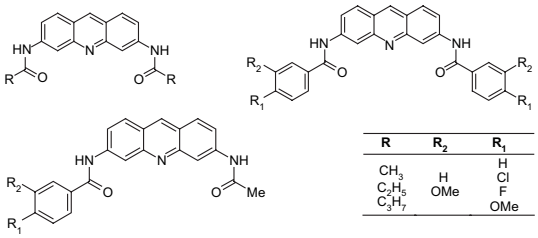


R_1 = 6-Cl, 7-Cl, 8-CH_3 ; R_2 = H, 6'- Br, 6' 8'- dibromo.

SHORT COMMUNICATIONS

Synthesis and antileishmanial activity of 6-mono-substituted and 3,6-di-substituted acridines obtained by acylation of proflavine **pp. 1277–1284**
Carole Di Giorgio*, Kamal Shimi, Gérard Boyer, Florence Delmas and Jean-Pierre Galy

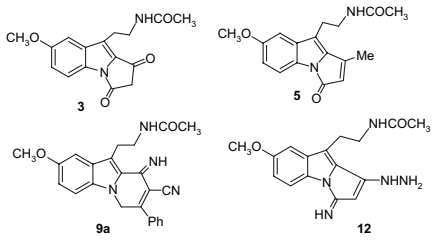
Two new series of diaminoacridinic derivatives obtained from proflavine and *N*-(6-amino-3-acridinyl)acetamide were synthesised and assessed for their cytotoxic and antileishmanial activities. Two compounds, *N*-[6-(acetylamino)-3-acridinyl]acetamide and *N*-[6-(benzoylamino)-3-acridinyl]benzamide demonstrated highly specific antileishmanial properties against the intracellular amastigote form of the parasite.



R	R_2	R_1
CH_3	H	H
C_2H_5	OMe	Cl
C_3H_7		F
		OMe

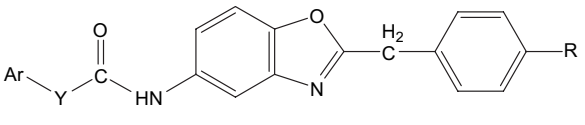
Evaluation of the anti-inflammatory and anti-nociceptive activities of novel synthesized melatonin analogues **pp. 1285–1292**
Gamal A. Elmegeed*, Ayman R. Baiuomy and Omar M.E. Abdel-Salam

A straightforward and efficient synthesis of novel melatonin analogues containing fused pyrrole or pyridine nucleus was investigated. The pyrrolo[1,2-*a*]indole derivatives **3**, **5**, **12**, **14** and pyrido[1,2-*a*]indole derivatives **9a**, **b** were synthesized and their structures were established based on the analytical and spectral data. The potential role of the novel synthesized melatonin analogues **3**, **5**, **9a** and **12** as anti-inflammatory and anti-nociceptive agents in comparison with melatonin was studied. Compound **5** has the strongest anti-inflammatory activity which exceeds that of the parent reference, melatonin, followed by compounds **9a** and **12**, at the first 2 h of administration. Effects of melatonin analogues **3**, **5**, **9a** and **12** on thermal pain, acetic acid-induced writhing and gastric lesions caused by indomethacin were also investigated in comparison with melatonin. Compounds **5** and **12** were more potent as anti-nociceptive drugs; they are more potent in this respect than melatonin.



Synthesis and *in vitro* antimicrobial activity of new 2-[*p*-substituted-benzyl]-5-[substituted-carbonylamino]benzoxazoles **pp. 1293–1299**
Betul Tekiner-Gulbas, Ozlem Temiz-Arpaci, Ilkay Yildiz* and Nurten Altanlar

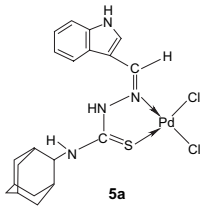
In this study, a new series of 2-(benzyl/*p*-chlorobenzyl]-5-[substituted-thienyl/phenyl/phenylthiomethyl/benzyl)carbonylamino]benzoxazole derivatives (**3**–**12**) has been synthesized as the target compounds in order to examine their *in vitro* microbiological activity against various Gram-positive, Gram-negative bacteria and the different fungi in comparison with several control drugs, including their structure–activity relationship (SAR) studies.



Ar = 5-methy-2-thienyl, 2,5-dimethylphenyl, 3-nitro-4-chlorophenyl, 3,4-dimethylphenyl, phenyl, 4-nitrophenyl
Y = —, CH_2, SCH_2
R = H, Cl

Synthesis, characterization and antiamoebic activity of new indole-3-carboxaldehyde thiosemicarbazones and their Pd(II) complexes **pp. 1300–1308**
Kakul Husain, Mohammad Abid and Amir Azam*

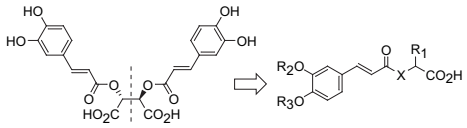
A new series of indole-3-carboxaldehyde thiosemicarbazones (TSC) **1–7** were prepared by condensing indole-3-carboxaldehyde with cycloalkyl-aminothiocarbonyl hydrazines. Their palladium(II) complexes of the $[Pd(TSC)Cl_2]$ type, were synthesized upon coordination with $[Pd(DMSO)_2Cl_2]$. Among all the compounds evaluated for antiamoebic activity using *HM1:IMSS* strain of *Entamoeba histolytica*, all palladium complexes were found to be more active than their respective ligands. Moreover, ligand **5** and complexes **1a–3a, 5a** and **7a** showed antiamoebic activity, at lower IC_{50} doses when compared to the reference drug metronidazole **5a** with $IC_{50} = 1.81$ μM.



5a

Caffeoylglycolic and caffeoylamino acid derivatives, halfmers of L-chicoric acid, as new HIV-1 integrase inhibitors **pp. 1309–1315**
Seung Uk Lee, Cha-Gyun Shin, Chong-Kyo Lee and Yong Sup Lee*

Caffeoylglycolic and caffeoylamino acid derivatives and halfmeric structures of L-chicoric acid, were synthesized for HIV-1 integrase inhibitors. Compounds **2c** and **3f** showed comparable HIV-1 IN inhibitory activities with IC_{50} values of 10.5 and 12.0 μM, respectively, to parent compound L-chicoric acid ($IC_{50} = 15.7$ μM).



1, L-Chicoric acid

2, X = O
3, X = NH

COVER

a) Views of the CoMFA steric field contour maps for the model VI, the steric field was contoured at 0.075 and −0.075 levels. Compound **36** is superimposed in the map. **b)** Views of the CoMFA electrostatic field contour maps for the model VI, the electrostatic field was contoured at 0.075 and −0.075 levels. Compounds **36** is superimposed in the maps.

* Corresponding authors

Cited/Abstracted in : Biological Abstracts, Chemical Abstracts, CABS, CNRS/Pascal, Current Contents (Life Sciences), EMbase, Index Medicus/Medline, Science Citation Index. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®.

ISSN 0223-5234

ELSEVIER