Synthesis of novel naptho[2,1-b]furo-pyrimidine derivatives

2-Acyl-3-aminonaphtho[2,1-b]furans 2a-e, obtained from 2-hydroxy-1-naphthonitrile 1, are converted into 2-chloromethyl-4-alkyl/aryl naphtho[2,1-b]furo[3,2-d]pyrimidine-3-oxides 4a-c, via corresponding oximes. 2-Acyl-3-acylamidonaphtho[2,1-b]furans 5a-f on reaction with hydrazine hydrate give 2-alkyl/aryl-3,4-dihydro-3-amino-4-hydroxy-4-alkyl/aryl-naphtho[2,1-b]furo[3,2-d]pyrimidines 6a-f, which on treatment with formic acid provide 2-acyl-3-(3'-alkyl/aryl-1',2',4'-triazol-4'-yl) naptho[2,1-b]furans 7a-f.

K M Mahadevan, V P Vaidya* & H M Vagdevi

Synthesis of indoloquinolones, triazoloindoloquinoline and its derivatives

A facile synthesis of 3-chloro-1'-[1H-indolo[3,2-c]quinolin-6'-yl-amino]-4-(4'-nitrophenyl)azetidin-2-ones 7a-e, 1-phenyl-8H-indolo[3,2-c]quinolin[3',4':1,2]triazoles 8a-e and 3-chloro-1'-[4'-quinolin-4'-yl-amino]-4-(4'-nitrophenyl)azetidin-2-ones 10a-e from 1H, 2H-2-oxo-4-hydroxyquinolines.

V V Mulwad* & M V Lohar
1943  Kinetics of addition of thiophenol to para-substituted \( \beta \)-nitrostyrenes and \( \beta \)-methyl-\( \beta \)-nitrostyrenes

Kinetic studies on nucleophilic addition of thiophenol to para-substituted \( \beta \)-nitrostyrenes and \( \beta \)-methyl-\( \beta \)-nitrostyrenes in 50\%(v/v) acetonitrile-water mixture at four different temperatures are reported. On the basis of kinetic results, mechanism has been proposed for the addition of thiophenol to \( \beta \)-nitrostyrene and \( \beta \)-methyl-\( \beta \)-nitrostyrene. The effect of substituents on the reactivity is discussed.

\[
\begin{align*}
\text{C}_6\text{H}_5-\text{CH}=\text{C} & \rightarrow \text{C}_6\text{H}_5-\text{CH} \quad (\text{H}) \\
\text{C}_6\text{H}_5-\text{CH}=\text{C} & \rightarrow \text{C}_6\text{H}_5-\text{CH} \quad (\text{H}) \\
\end{align*}
\]

K Ananthakumar, A Sarathi, C Gnanasekaran & A Shunmugasundaram*

1950  Synthesis of novel heterocyclic compounds: Routes to pyrazolyl 1,2,3-triazoles and their biological activity evaluation

A series of 5-amino-4-(5-arylpyrazol-3-yl)-1-(3/4-nitrophenyl)-1,2,3-triazoles have been synthesized by the base-catalysed condensation of 3/4-nitrophenyl azides with 5-aryl-3-cyanomethylpyrazoles and their potential as antiinvasive and antinocytic bacterial agents has been evaluated.


1958  Synthetic, biocatalytic acetylation and anti-tuberculosis activity evaluation studies on (\( \pm \))-4-alkyl-3,4-dihydro-3-\( \alpha \)-hydroxyalkyl-2\( \text{H} \)-1,3-benzoxazines

Porcine pancreatic lipase in tetrahydrofuran exhibit enantioselectivity during acetylation of novel (\( \pm \))-4-alkyl-3,4-dihydro-3-\( \alpha \)-hydroxyalkyl-2\( \text{H} \)-1,3-benzoxazines. Three out of the five benzoxazines show significant activity against \textit{Mycobacterium tuberculosis} in vitro.

Najam A Shakil, Ashish Dhawan, Nawal K Sharma, Vijayendra Kumar, Sujeet Kumar, Mrudula Bose, Hanumantharao G Raj, Carl E Olsen, Ashok L Chollu, Lynne A Samuelson, Jayanti Kumar, Arthur C Waterson, Virinder S Parmar & Ashok K Prasad*

* Corresponding author.
1970 Synthesis, antiinflammatory and antibacterial activity of some new flavonoidal derivatives

Several new flavones/flavanones and 5'-substituted-2'-hydroxy chalcones have been synthesised from 5-chloromethyl-2-hydroxy acetophenone 1 by condensing with various aromatic aldehydes followed by cyclisation. 1 has also been reacted with o-toluidine to give the o-toluyl derivative, which on condensing with different aromatic aldehydes yields the corresponding chalcones/flavanones. All the compounds have been tested for their antiinflammatory and antibacterial activity. The compounds having methoxyl or methylenedioxy group have been found to exhibit good antiinflammatory and antibacterial activity.

M S Y Khan* & S M Hasan

1975 Synthesis and biological activity of some fused benzazocinones

Synthesis of oxadiazolo, pyrazolo and triazolo annelated benzazocinones is reported.

Venkateswarlu Peesapati* & Sreelakshmi Ponnuru

1979 Synthesis and anti-inflammatory, analgesic, ulcerogenic and cyclooxygenase activity of novel quinazolinyl-1-pyrazolines

Syntheses of 2-(o-chloroacetyl)-3-substitutedphenyl-6-halo/6,8-dihalo quinazolin-4(3H)-ones 6-10, 2-(o-hydrazoneacetoxyl)-3-substitutedphenyl-6-halo/6,8-dihaloquinazolin-4(3H)-ones 11-15 and 1'-[3-substitutedphenyl-6-halo/6,8-dihaloquinazolin-4(3H)-one-2- acetonyl]-3'-aryl-5'-(2-substituted indol-3-yl)-1-pyrazolines 16-30 are described and assayed for their anti-inflammatory, analgesic, ulcerogenic and cyclooxygenase activities.

Ashok Kumar*, Shalabh Sharma, Kiran Bajaj, Deepti Bansal, Shipra Sharma, K K Saxena, S Lata, B Gupta & V K Srivastava

INDIAN J CHEM, 42B (8) 2003
1985  Synthesis of novel tricyclic heterocyclic compounds as potential anticancer agents using chromanone and thiochromanone as synths

Abou El-Fotooh G Hammam*, A F M Fahmy, Abdel-Gall E Amr & Ashraf M Mohamed

Notes

1994  Michael additions on isoxazole derivatives under solvent-free conditions

Knoevenagel condensation of 3,5-dimethyl-4-nitroisoxazole 1 with aromatic aldehydes in solid state in the presence of piperidine gives 3-methyl-4-nitro-5-styrylisoxazoles 2 in excellent yields within few minutes. Michael addition of active methylene compounds 3 to 2 in piperidine affords β-diketones 4. Similarly 1 reacts with chalcones 5 in piperidine very efficiently to give Michael adducts 6, in excellent yields with substantial reduction in reaction time under solvent-free conditions.

E Rajanarendar*, P Ramesh & D Karunakar

1997  Synthesis of 3-aryl-5-N-(3-methyl-5-styryl-4-isoxazolyl)-4,6-dioxopyrrolo[3,4-d]-7,8-dihydroisoxazoles

A series of cycloadducts, namely 3-aryl-5-N-(3-methyl-5-styryl-4-isoxazolyl)-4,6-dioxopyrrolo[3,4-d]-7,8-dihydroisoxazoles 2a-h have been prepared by cycloadition of benzonitrile oxides generated in situ with N-(3-methyl-5-styryl-4-isoxazolyl)maleimides 2. All the compounds are characterised by IR, 1H NMR and mass spectral data.

E Rajanarendar*, M Srinivas & D Karunakar
2000 Reductive cleavage of the Se-Se bond in diselenides by the CeCl3/Sm system: A novel method for the synthesis of selenoesters

\[
\text{ArSeSe/Ar} \xrightarrow{\text{CeCl}_3/\text{Sm}} [\text{ArSe}^-] \xrightarrow{\text{R}_2\text{COCl}} \text{ArSeCOR}_1 \xrightarrow{\text{(R}_3\text{CO)}_2\text{O}} \text{ArSeCOR}_2
\]

Xue Li, Songlin Zhang*, Yulu Wang & Yongmin Zhang


The synthesis of 9-ethyl dihydrothiazolo[3',2':2,3]-az-triazino[5,6-b]indole hydrobromide 4 and 11-ethylquinoxalino[2',3':4,5]thiazolo[3,2-b]indolo[2,3-e]-az-triazine 6 and their angular isomers 3 and 5 have been accomplished. The antibacterial and antifungal activity of the synthesized compounds have also been evaluated.

\[
\text{i KOH; ii BrCH}_2\text{CH}_2\text{Br; iii 2,3-Dichloroquinoline, NaOAc}
\]

Jag Mohan* & Anupama

2006 Synthesis of antifungal organomercurials in dry media conditions under microwave irradiation.

Mercurial derivatives of substituted thiobarbituric acid have been synthesised using dry media conditions under microwave irradiation.

Mazaahir Kidwai*, Richa Mohan, Bhavesh Dave & R Venkataramanan
2010 Synthesis and biological activity of some bis-triazoles and their derivatives

The synthesis and antibacterial activity of Schiff bases 9 and bis-triazolothiadiazoles 5 and 7 derived from bis-1,2,4-triazoles have been described.

B Shivarama Holla*, B Veerendra, M K Shivananda & N Sucheta Kumari


Synthesis of substituted 10-acetyl-pyrido[3,2-b][1,4]benzo[b]thiazines 4 and substituted 10H-pyrido[3,2-b][1,4]benzo[b]thiazines 5 have been reported. Oxidation of 5 with \( \text{H}_2\text{O}_2 \) in acetone-ethanol and condensation with sugar afford 5-oxide 6 and ribofuranoside 7 derivatives, respectively.

Neeraj Kumar, Girwar Singh, Shabana Khatoon & Ashok K Yadav*

INDIAN J CHEM, 42B (8) 2003
2019  Synthesis of pyrazoline and isoxazole derivatives bearing chloroquinoline nucleus as potential antimicrobial agents.

The titled compounds 3a-j and 4a-k have been synthesised from chalcones 2 and evaluated for their antimicrobial assay.

A V Dobaria, J R Patel & H H Parekh*


The indole derivatives have been prepared from 1-p-acetanilido-3-acetyl-2-methylindole-5-xyloxyacetic acid hydrazide and screened for their anti-inflammatory activity.

G S Gadaginamath*, S R Pujar & R R Kavali

2028  Screening of natural products for new leads as inhibitors of β-amyloid production: 2-Hydroxy-4-methoxy-3-prenyl-6-styrylbenzoic acid from Cajanus cajan.

2-Hydroxy-4-methoxy-3-prenyl-6-styrylbenzoic acid 1 has been isolated from the methylene chloride extract of the twigs of Cajanus cajan, and found to inhibit β-amyloid synthesis with an IC50 of 70 µM.

N V S Ramakrishna*, E K S Vijayakumar, A S Kulkarni, R G Bhat, S Parikh, N Deuskar & B S Kalakoti

INDIAN J CHEM, 42B (8) 2003
Two pentacyclic triterpenes from the stem of *Calotropis procera*

Two saponins 1 and 2 have been isolated from the stem of *Calotropis procera*.

Aditi Gupta*, Rachana Singh, Chhavi Purwar, Deepa Chauhan & J Singh

Authors for correspondence are indicated by (*)