

Current Research and Information on Pharmaceutical Sciences

EDITORIAL

1

REVIEW ARTICLES

Computational Analysis of Alzheimer's Disease Drug Targets

2

Voltage Gated Sodium Channel Blockers: Potential Treatment for Neuropathic Pain

11

CRIPS Digest

17

New breakthrough in tuberculosis research

Neurogenesis now can trigger in stroke damaged brain

Tetrahydrobiopterin (BH4): New hope for diastolic heart failure therapeutics

Alzheimer's memory: now beyond from amyloid plaques

A Cellular Immunotherapy for Men with Advanced Prostate Cancer

CXCR4: A New Drug Target in Lung Cancer

NIPER NEWS

19

EDITORIAL

Multiple etiologies are thought to contribute to the neurodegenerative process of the Alzheimer's disease (AD). Molecules that modulate the activity of a single protein target are unable to significantly modify the progression of the disease. It is well established that AChE and BACE-1 are the key enzymes that involved in initiation and aggregation of amyloid A β . Considering these facts, a strategy to identify novel dual inhibitors of AChE and BACE-1 enzyme was developed. Multi-target directed drugs have been to be found effective in controlling complex CNS diseases. Docking study on dual binding site of AChE inhibitors and comparative ADMET analysis with the existing drugs and lead molecules have been performed. Three-dimensional QSAR models for 43 hydroxyethylamine derivatives of BACE-1 inhibitors were developed using CoMFA and CoMSIA techniques. The selectivity of the BACE-1 inhibitors with respect to other aspartic proteases also emerged from the study. Information gathered from the 3D-QSAR contribution maps, and the developed pharmacophore model shed some light on the effects of the substitution pattern related to the biological activity within this series of anti-Alzheimer compounds. This analysis could broadly support the rational design of potential drug candidates with improved BACE-1 inhibitory activity. Review article "Computational Analysis of Alzheimer's disease drugs targets" discusses about various computational approaches applied to discover and design safer compounds on AD drug targets. Another article entitled "Voltage gated sodium channel blockers: Potential treatment for neuropathic pain" describe about various voltage gated sodium channels which are involved in neuropathic pain as well as about sodium channel blockers which are in preclinical and clinical developments.

EDITOR

Dr. S. S. Sharma

EDITORIAL ASSISTANCE

Dr. Prabha Garg
Mr. Santosh Sohgaure

Mr. Jang Bahadur

EDITORIAL TEAM

Dr. Arvind Bansal
Dr. Rahul Jain
Dr. Sanjay Jachak

Mr. Ashutosh Kumar
Mr. Ashok K. Datusalia

Mr. Geeta Negi
Mr. Nandkishore Mole

LAYOUT & DESIGN

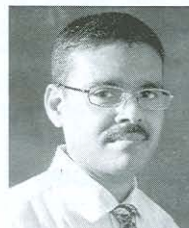
Mr. Promod Kumar



Dr. S. S. Sharma



Dr. Arvind Bansal



Dr. Rahul Jain



Dr. Sanjay Jachak

Editorial Office

National Institute of Pharmaceutical Education and Research
Sector 67, S.A.S. Nagar - 160062 (Punjab), INDIA
Fax : 0172-2214692, Tel. : 0172-2214682-87
E-mail : crips@niper.ac.in, sssharma@niper.ac.in
web : www.niper.gov.in

Business Correspondence

Enquiries concerning advertisements should be addressed to the Editorial Office CRIPS.

Published by National Institute of Pharmaceutical Education and Research (NIPER), S.A.S. Nagar (Pb.)

The opinions & views expressed by the authors in CRIPS are not necessarily those of publishers and, while every care has been taken in the preparation of CRIPS, the publishers are not responsible for such opinions and views or for any inaccuracy in the articles.

No part of this publication may be reproduced, copied or transmitted in any form without prior permission of the publisher.