AIMS AND SCOPE

ANNALS OF PHYTOMEDICINE

An International Journal

Print ISSN: 2278-9839 Online ISSN: 2393-9885

International Scientific Indexing
Impact Factor: 1.021

Annals of Phytomedicine (AP), is an international, peer-reviewed scientific journal, dedicated to publishing cutting edge research in all areas of phytomedicine. It will publish significant and outstanding developments in all phases of phytomedicine, thus ensuring its scientific priority. The manuscripts intended for publication shall be rigorously refereed and selected on the basis of quality and originality of the work. The journal is aimed at publishing and disseminating the innovative findings in the field of pharmacognosy, phytopharmacology, phytotherapy, chemistry of natural products, phytopharmaceuticals, biological activity of plant extracts and isolated compounds, clinical studies of standardized phytopreparations, phytotoxicity and standardization of drugs and also other related aspects within a single publication.

ANNALS OF PHYTOMEDICINE: An International Journal

BOARD OF EDITORS

Editor-in-Chief: Dr. Irfan Ali Khan Managing Editor: Dr. Atiya Khanum

Associate Editors

Professor Syed Ibrahim Rizvi : Allahabad, Uttar Pradesh, India

Dr. Suaib Luqman: Lucknow, Uttar Pradesh, India

Professor Anupama Koneru: Hyderabad, Telangana State, India

Dr. K. Nagaiah: Hyderabad, Telangana State, India

Dr. Sayeed Ahmed: New Delhi, India

Coordinating Editors

Dr. Narayan Prasad Yadav: Lucknow, Uttar Pradesh, India Dr. Kanti Bhooshan Pandey: Bhavnagar, Gujarat, India Dr. M. Salman Khan: Lucknow, Uttar Pradesh, India Dr. V.V. Asha: Thiruvananthapuram, Kerala, India Dr. Satyendra Kumar: Ghaziabad, Uttar Pradesh, India

Editorial Board

Dr. Mansoor Alam: Lucknow, Uttar Pradesh, India Professor Sunil K. Khare: New Delhi, India Professor Asna Urooj : Mysore, Karnataka, India Professor Raman Dang : Bengaluru, Karnataka, India Professor Paramjyothi Swamy : Kalaburgi, Karnataka, India Professor Mohammed Ibrahim: Hyderabad, Telangana State, India Professor Samiullah Khan: Aligarh, Uttar Pradesh, India Professor Usha Mukundan : Mumbai, Maharashtra, India Dr. Nayeemullah Khan: Bengaluru, Karnataka, India Professor Archana Giri: Hyderabad, Telangana State, India Professor Syed Sadat Ali: Saharanpur, Uttar Pradesh, India Professor N. Geetha: Kodaikanal, Tamilnadu, India Professor Syed Mohiuddin: Hyderabad, Telangana State, India Professor B. Andallu: Anantapur, Andhra Pradesh, India Dr. Wamik Azmi: Shimla, Himachal Pradesh, India Professor B. Prathibha Devi : Hyderabad, Telangana State, India Dr. Farhat Khanum: Mysore, Karnataka, India

Senior Editors

Professor Wajahat Husain : Aligarh, Uttar Pradesh, India Professor Kaisar Jamil : Hyderabad, Telangana State, India Professor N. Udupa : Manipal, Karnataka, India Professor S.Y. Anwar : Hyderabad, Telangana State, India

Professor Mohd Iqbal: New Delhi, India Professor P.B. Kavi Kishor: Hyderabad, Telangana State, India

Professor Mohammed Anis : Aligarh, Uttar Pradesh, India

Professor B. Dashavantha Reddy: Hyderabad, Telangana State, India Professor M. Lakshmi Narasu: Hyderabad, Telangana State, India

Dr. M.A.A. Khan: New Delhi, India

Professor Anil Kumar: Indore, Madhya Pradesh, India Professor Najmul Islam: Aligarh, Uttar Pradesh, India Professor P. Venkatachalam: Salem, Tamilnadu, India

Professor B. Madhava Reddy: Hyderabad, Telangana State, India

Professor Srinath Rao : Kalaburgi, Karnataka, India

Foreign Editors

Professor Stanley P. Azen: California, United States of America Professor Rand R. Wilcox: California, United States of America Professor Munir Ozturk: Izmir, Turkey Professor Ngatu Nlandu Roger: Nankoku, Kochi, Japan

Professor Zahra Emam Djoeh : Tehran, Iran

Professor Aruni Weerasinghe : Arunadhapura, Sri Lanka

Professor Darab Yazdani: Tehran, Iran

Professor Zora Dajic Stevanovic: Belgrade, Republic of Servia

Professor Nazim Sekeraglu: Analya, Turkey

Professor Christina Ramirez Kitchen: California, United States of America

Professor Jamila Kathoon Adam: Durban, South Africa

Professor S.A. Farooq: Muscat, Oman

Dr. Mastura Binti Montar: Kepong, Selangor Darul Ehsan, Malaysia Dr. Adnan Ahmad Khan: Kansas City, United States of America Dr. Getha Krishnasamy: Kepong, Selangor Darul Ehsan, Malaysia

Professor Ufuk Cakatay : Istanbul, Turkey Dr. Rizwana Mubeen : Al.Khobar, Saudi Arabia

Advisory Board

Professor Ameenah Gurib-Fakim: Managing Director, CEPHYR, BioPark Mauritius, Socoto Phoenicia, Phoenix, Mauritius Presently Her Excellency Professor Ameenah Gurib-Fakim: President of Mauritius.

Padma Shri Dr. E. A. Siddiq: Former DDG (ICAR), New Delhi Presently Honorary Director, Institute of Biotechnology, Acharya N.G. Ranga Agriculture University, Rajendra Nagar, Hyderabad-500030, Telangana State, India

Padma Shri Dr. P. Pushpangadan: Former Director, Tropical Botanic Garden and Research Institute, Thiruvananthapuram-695562, Kerala, India Presently Director General, Amity Institute for Herbal and Biotech Products Development, 3-Ravi Nagar, Peroorkada P.O., Thiruvananthapuram-695 005, Kerala, India

Padma Shri Dr. Seyed E. Hasnain : Former V.C., Hyderabad Central University, Hyderabad-500046, Telangana State, India

Presently Professor IIT Delhi, Hauz Khas, New Delhi-110016, India

Professor Habil Akos Mathe : President: International Council for Medicinal and Aromatic Plants, Hungary

Dr. Abd. Latif Mohmod : Director General of FRIM, Forest Research Institute Malaysia, 52109 Kepong, Selangor Darul Ehsan, Malaysia

Professor P.K. Abdul Azis: Former V.C., Cochin University of Science and Technology, Kerala, India

Former V.C., Aligarh Muslim University, Aligarh, Uttar Pradesh, India Presently V.C., University of Science and Technology, Meghalaya, India

Dr. G.N. Qazi: V.C., Hamdard Univeristy, New Delhi-110062, India Professor Raja Sab: V.C., Tumkur University, Tumkur-572101,

Karnataka, India Professor G. Bhagyanarayana: V.C., Palamuru University,

Mahabubnagar-504001, Telangana State, India Professor Mohammad Yunus : V.C., Mohammed Ali Jauhar

University, Rampur-244901, Uttar Pradesh, India

Dr. Ahmad Kamal: Outstanding Scientist, IICT, Hyderabad-500007, Telangana State, India
Professor Rais-Ur-Rahman: Director General, Department of

AYUSH, Ministry of Health and Family Welfare, Government of India, AYUSH Bhawan, 'B'-Block. G.P.O. Complex, I.N.A., New Delhi-110023, India

Dr. A. Subramoniam : Former Director, Tropical Botanic Garden and Research Institute, Thiruvananthapuram-695562, Kerala, India

Professor C. Manohara Chary: Emeritus Scientist, Department of Botany, Osmania University, Hyderabad-500007, Telangana State, India

ANNALS OF PHYTOMEDICINE

An International Journal

Print ISSN: 2278-9839 Online ISSN: 2393-9885

ABSTRACTING AND INDEXING

International Scientific Indexing Impact Factor : 1.021 Chemical Abstract Services (CAS Database), USA: International Scientific Indexing (ISI), Dubai: Scientific Indexing Services (SIS), USA: CiteFactor; J-Gate, Bengaluru, India; Google Scholar and ResearchGate. The journal is also covered by abstracting services of Medicinal and Aromatic Plants Abstracts (MAPA) and Indian Science Abstracts (ISA): New Delhi India and Indian Citation Index: New Delhi India

A BIANNUAL RESEARCH JOURNAL OF PHYTOMEDICINE

Print ISSN : ISSN : 2278-9839 Online ISSN : ISSN : 2393-9885

Frequency : HALF YEARLY: Annals of Phytomedicine is a six

monthly research journal, publish two times a year,

i.e., in June and December.

Copyright

Submission of a manuscript to **Annals of Phytomedicine** implies that authors have certified that the scientific work described has neither been published nor is under consideration for publication anywhere else. It also implies that the content of the manuscript has been approved by all coauthors or otherwise by competent authority of the organization where the work was carried out.

The corresponding author signs and accepts all responsibility on behalf of any and all coauthors. Transfer of copyright to Annals of Phytomedicine of Ukaaz Publications, becomes effective if and when the article is accepted for publication.

Membership: Subscriptions are available on a calendar year basis.

Annual subscription	India	Foreign	SAARC Countries
Individual	Rs. 1500/-	US \$ 100	US \$ 100
Institutional	Rs. 2000/-	US \$ 200	US \$ 150

Printing charges

All the papers submitted for the publication in "Annals of Phytomedicine" will be charged at the rate of Rs. 200/- (\$15) per typed page of the manuscript. The authors are advised to prepare the manuscript typed in double space on one side of A4 size white paper with 10 font size in Page Maker format / MS-Word, keeping proper margin on each side.

Payments are accepted only through demand draft (DD) in favour of "Annals of Phytomedicine"- Ukaaz Publications, payable at Hyderabad, Telangana State, India.

Instructions for preparation of manuscript is given on next page

Any enquiry relating to subscription should be sent to the **Managing Editor** for orders, claims, product enquries and other related matters of the article.

All rights are reserved, no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means-electronic, mechanical, photocopying, recording, without the prior written permission of the publisher.

Copyright : Ukaaz Publications, Hyderabad, India Publisher : Editor-in-Chief: Dr. Irfan Ali Khan Circulation : Managing Editor: Dr. Atiya Khanum

Technical support : A. Rajkumar

Distribution : National and International

National : Managing Editor: Dr. Atiya Khanum

International : Contact: Export Division

UBS Publishers' Distributors Pvt. Ltd. First Floor, Mpl No. 4948, Plot No. 47, Daryaganj, New Delhi 110002, India Telephone: 011 - 23266646-47 011 - 23274846

Fax: +91 11 23276593 E-mail: ubspd@ubspd.com

Editor-in-Chief Managing Editor Editorial Office Dr. Irfan Ali Khan Dr. Atiya Khanum

16-11-511/D/408, Shalivahana Nagar,

Moosarambagh, Hyderabad-500036,

Telangana State, India

Tel.: 040-24547392, 040-65704477,

Mobiles

Editor-in-Chief : +91-09246509453 Managing Editor : +91-09246584140

E-mail: ukaaz@yahoo.com

Website: www.ukaazpublications.com

Print ISSN : 2278-9839 Online ISSN : 2393-9885

While utmost care is taken in presenting accurate information, Annals of Phytomedicine assumes no responsibility for the statements, opinions, subject matter and also errors or omissions. All material published in Annals of Phytomedicine is covered under copyright. Unauthorized reproduction is prohibited.

ANNALS OF PHYTOMEDICINE: An International Journal

Print ISSN : 2278-9839 Online ISSN : 2393-9885

International Scientific Indexing Impact Factor : 1.021

A BIANNUAL RESEARCH JOURNAL OF PHYTOMEDICINE

Volume 4, Number 1, June 2015

Table of contents

Invited commentary

1. Medicinal plants and phytomedicines

D.P. Biradar

Review

6. Malaysian plants with potential in vitro trypanocidal activity

Abd. Latif Mohmod, Getha Krishnasamy and Mohd. Ilham Adenan

Review

17. Plant based anti-inflammatory secondary metabolites

P. Pushpangadan, T.P. Ijinu and V. George

Review

37. Herbal medicinal plants as an anticancer agents

Picheswararao Polu, Udupa Nayanabhirama and Saleemulla Khan

46. Salacia as an avurvedic medicine with multiple targets in diabetes and obesity

K.G.K. Deepak, P. Rathna Giri, P.B. Kavi Kishor and Ch. Surekha

54. Pleiotropic role of lycopene in protecting various risk factors mediated atherosclerosis

Sahir Sultan Alvi, Irfan A. Ansari and M. Salman Khan

- 61. Phytochemical investigations and characterization of antimicrobial activity of bioguided fractionated leaves of Agave americana L. M.P. Babu, Raman Dang and Kuntal Das
- 68. Validated UPLC-Q-TOF-MS method for quantitative determination of emodin in rhizome of *Rheum emodi* Wall. ex Meissn. and its traditional polyherbal formulation using three different extraction techniques

Wasim Ahmad, Syed Mohammad Arif Zaidi and Sayeed Ahmad

74. Production of secondary metabolites from callus cultures of Centella asiatica (L.) Urban

Srinath Rao, K. Usha and Arjun

79. Assessment of genetic and biochemical diversity of Stevia rebaudiana Bertoni by DNA fingerprinting and HPLC analysis M. Thiyagarajan and P. Venkatachalam

86. Mirabilis antiviral protein studies and its potential applications

Dipti Kumar Chandraprabha Kale, Usha Mukundan and Himanshu Dawada

90. Analgesic and anti-inflammatory potential of three new topical polyherbal formulations in wistar rats

Mohammad Ahmed Khan, Satyendra Kumar, J.L.N. Sastry, Arun Gupta and Sayeed Ahmad

94. Evaluation of phytochemical investigation and immunomodulatory activity of four different plant species of vidari by carbon clearance test on wister rats

V.K. Shilpashree, Raman Dang and Kuntal Das

99. Pharmacognostic and physicochemical evaluation of Cymbopogan citratus (DC) Stapf leaves

T.S. Geetha and N. Geetha

105. In vitro antiurolithiatic activity of Butea monosperma Lam. and Nigella sativa Linn. seeds

Sumayya Sikandari and Pratima Mathad

108. Phytomedicine for the diabetes: A traditional approach

Ruby Tiwari and C.S. Rana

Case report

111. Sacran, a natural skin barrier enhancer, improves atopic and contact eczema: Case report

Nlandu Roger Ngatu, Ryoji Hirota, Maiko Kaneko Okajima, Tatsuo Kaneko, Kaj Francoise Malonga and Narufumi Suganuma

Cover photograph: Analgesic and anti-inflammatory potential of three new topical polyherbal formulations in wistar rats

Mohammad Ahmed Khan, Satyendra Kumar, J.L.N. Sastry, Arun Gupta and Sayeed Ahmad