Indian Journal of Traditional Knowledge

Chief Editor Dr H R Nagendra
Chancellor

S-VYASA Yoga University

Bengaluru, India

E-mail: chancellor@svyasa.edu.in; hrnagendra1943@gmail.com

Executive Editor Prof Pulok Mukherjee

Director

Institute of Bioresources and Sustainable Development

Imphal, India

E-mail: director.ibsd@nic.in

Subject Editors

Dr Sanjay K Uniyal Chief Scientist CSIR-IHBT Palampur, India

E-mail: suniyal@ihbt.res.in

Dr Abdul Kareem Associate Professor and Head, Centre for Conservation of Natural Resources

The University of Trans-Disciplinary Health Sciences and Technology,

Bengaluru, India

E-mail: abdul.kareem@tdu.edu.in

Dr Simone F Teixeira Universidade de Pernambuco Pernambuco, Brazil

E-mail: teixeirasf.upe@gmail.com

Ar Sanjay Bhandari Assistant Professor

School of Planning and Architecture

Vijayawada

E-mail: sanjaybhandari@spav.ac.in

Dr Sharad Srivastava Chief Scientist

Pharmacognosy, Phytochemistry & Product

Development Division

CSIR-National Botanical Research Institute

Lucknow, India

E-mail: sharad@nbri.res.in

Dr P Rammanohar Research Director

Amrita School of Ayurveda Amrita University, Kollam, India E-mail: rammanoharp@gmail.com

Dr Vivek Kumar Professor

Centre for Rural Development IIT Delhi, New Delhi, India E-mail: vivekk@iitd.ac.in

Dr Mamoni Das Principal Scientist

College of Community Science Assam Agricultural University, Jorhat E-mail: mamoni.das@aau.ac.in

Dr Ramesh K Saini Associate Professor

Department of Bio resource &

Food Science Konkuk University Seoul-143701 Korea

E-mail: saini1997@konkuk.ac.kr

Dr S V Amitha C R Mithra

Senior Scientist

ICAR-National Institute of Plant

Biotechnology New Delhi, India

E-mail: amithamithra.nrcpb@gmail.com

Dr C K Katiyar

CEO Health Care (Technical)

Emami Ltd., 687, Anandpur, EM Bypass

Kolkata-700107, India

E-mail: ck.katiyar@emamigroup.com

Dr. Mrinal Kanti Bhattacharyya Professor and Former Head Department of Biochemistry University of Hyderabad Gachibowli, Hyderabad, India E-mail: mkbsl@uohyd.ac.in

Dr Jyoti Prakash Tamang

Professor

Deptartment of Microbiology

Sikkim University, Gangtok, Sikkim, India E-mail: jyoti tamang@hotmail.com

Editorial Board

Prof Rabinarayan Acharya Direcor General Central Council for Research in Ayurvedic Sciences (CCRAS), New Delhi, India E-mail: drrnacharya@gmail.com, rabi dravyaguna@yahoo.co.in

Dr K Haridasan Former Joint Director Foundation for revitalization of Local Health Traditions, (FRLHT) Consultant, Green Ahalia, Ahalia International Foundation, Palakkad, Kerala E-mail: haridasank9@gmail.com

Prof Rainer W Bussmann
Principal Scientist
Department of Ethnobotany,
Institute of Botany Ilia State University,
1 Botanical Street 0105, Tbilisi, Republic of Georgia
E-mail: rainer.bussmann@iliauni.edu.ge

Prof B Ravishankar Division of Phramacology Institute of Teaching and Research in Ayurveda, Jamnagar, India E-mail: gravishankar2000@yahoo.com

Prof Jamuna Prakash (Retd.), Dept. of Food Science and Nutrition University of Mysore Manasagangotri, Mysore, India E-mail: jampr55@hotmail.com 404

Prof Asim Ali Khan Former Director-General CCRUM, 61-65 Industrial Area Janakpuri, New Delhi-110 058, India E-mail: aakhan.jhu@gmail.com

Dr N Zaheer Ahmed Director-General

CCRUM, 61-65 Industrial Area Janakpuri, New Delhi-110 058 E-mail: unanimedicine@gmail.com; drnzaheer@gmail.com

Dr Ugur Cakilcioglu Associate Professor Munzur University Pertek-Tunceli, Turkey

E-mail: ucakilcioglu@yahoo.com

Dr Wend Wendland

Director

Traditional Knowledge Division, WIPO E-mail: wend.wendland@wipo.int

Dr Saroj K Barik Professor Dept of Botany NEHU, Shillong, India E-mail: sarojkbarik@gmail.com

Dr Indah Widiastuti, ST, MT

Associate Professor

History, Theory, and Critic of Architecture, School of Architecture, Planning, and

Policy Development Institut Teknologi Bandung

Labtek IX B Gedung Arsitektur Jalan Ganeca No.10 Bandung 40132, Indonesia

E-mail: indahwidiastuti71@gmail.com

Dr Subhash C Mandal

Secretary

Society for Ethnopharmacology Jadavpur, Kolkata 700032, India E-mail: subhash.mandaldr@gmail.com

Dr Pardeep K Bhardwaj

Scientist

Institute of Bioresources and Sustainable

Development

Takyerlpat, Imphal 795001, India E-mail: pardeep2128@gmail.com

Dr Amit Kar Project Scientist

Institute of Bioresources and Sustainable

Development

Takyerlpat, Imphal 795001, India E-mail: amit.kar2@gmail.com

Prof Marco Leonti

Professor

Department of Biomedical Sciences,

University of Cagliari, Italy

E-mail: mleonti@unica.it; marcoleonti@hotmail.com

Dr A K Singh, Vice Chancellor

Rani Lakshmi Bai Central Agricultural University, Jhansi 284003, India E-mail: aksicar@gmail.com; vcrlbcau@gmail.com

Prof Motlalepula G Matsabisa

Professor & Director IKS lead Program

Department of Pharmacology University of the Free State,

Bloemfontein, SA

E-mail: MatsabisaMG@ufs.ac.za

Prof Virendra Kumar Paul

Professor of Building Engineering and

Management

School of Planning and Architecture Delhi,

India

E-mail: vk.paul@spa.ac.in

Prof Nomesh Bolia

Department of Mechanical Engineering Indian Institute of Technology Delhi

New Delhi, India

E-mail: nomesh@mech.iitd.ac.in

Director, CSIR-NIScPR (Ex-Officio)

Scientific Editor: Dr Charu Lata (charulata@niscpr.res.in)

Associate Scientific Editor: Dr Paramananda Barman (param@niscpr.res.in)

Editorial Assistant: Shri Hashim Ali (hashimali@niscpr.res.in)

Published by the National Institute of Science Communication and Policy Research, CSIR Dr K S Krishnan Marg, New Delhi 110 012, India

E-mail: ijtk@niscpr.res.in; Phones: 011-26964473; 25846304-7, Ext. 251; Website:https://niscpr.res.in/

The Indian Journal of Traditional Knowledge is published monthly.

The Institute assumes no responsibility for the statements and opinions advanced by the contributors. The editorial staff in its work of examining papers received for publication is assisted, in an honorary capacity, by a large number of distinguished scientists. Communications regarding contributions for publication in the journal should be addressed to the Editor, Indian Journal of Traditional Knowledge, National Institute of Science Communication and Policy Research, Dr K S Krishnan Marg, New Delhi 110 012. Payments in respect of subscriptions may be made through NEFT/RTGS, payable to NIScPR, New Delhi. The details of Bank Account for NEFT/RTGS transactions are as follows:

Bank name: CANARA BankAddress: NPL Campus, New Delhi 110012, IndiaBranch: NPL Campus, New DelhiAccount No: 110003874485Beneficiary Name: CSIR-NIScPR, New Delhi 110012IFSC Code: CNRB0019100MICR Code: 110015428Branch Code: 9029SWIFT Code: CNRBINBBBFD

All correspondence regarding subscription, renewal, claims for missing numbers and advertisements should be addressed to the Head, Business Development Group & Industry, CSIR-National Institute of Science Communication and Policy Research., Vigyan Sanchar Bhawan, Dr K S Krishnan Marg, New Delhi 110 012.

Phone: 25843359 (Subscription Complaint)/25846301, 25846304-07 Extn 287, 288. E-mail: sales@niscpr.res.in

E-mail: ijtk@niscpr.res.in, Website: www.niscpr.res.in; http://nopr.niscpr.res.in

Claim for missing number(s) of the journal(s) will be allowed only if received within 3 months of the date of issue of the journal plus the time normally required for postal delivery of the journal(s) and the claim.

#Annual Subscription (12 issues): Rs 5760.00 \$ 780.00* #Single Copy: Rs 576.00 \$ 78.00*

For inland outstation cheques add Rs. 50.00. For foreign cheques add \$ 10.00.

CSIR-NIScPR Policy on Plagiarism

The system of formal communication in science through publication in primary journals is based on originality and quality of information, being the only criteria for publication. However, there have been tendencies to misuse the system and vitiate the process of science communication for personal benefits. One of the ills, afflicting science communication, is plagiarism. Attempts at plagiarism may range from verbatim copying of extensive material of other authors, misappropriating results/data of others with minor changes in language/presentation without giving credit to original source, and to publishing essentially the same information more than once.

As the premier institution of publishing primary scientific journals in various disciplines of science and technology in India, CSIR-NIScPR strongly reiterates its policy of discouraging plagiarism of all kinds. All efforts are made to detect and frustrate attempts at plagiarism through editorial screening and rigorous peer review in respect of communications received for publication in the CSIR-NIScPR publications. Cooperation of the scientific community is sought in our efforts to frustrate all attempts at plagiarism.

In case, any attempt of plagiarism is brought to our attention accompanied with convincing evidence, following steps would be taken:

- (a) After consulting the respective Editorial Board Members, authors guilty of plagiarism will be debarred from publishing their papers in CSIR-NIScPR journals.
- (b) Heads of the Departments/Institutes of the offending authors will be intimated of such incidences of plagiarism.
- (c) Such incidents of plagiarism will be publicized through the concerned CSIR-NIScPR journals in consultation with the respective Editorial Board Members.

^{*}Subject to Revision

^{*}Inclusive of first class mail

^{© 2024} CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR), New Delhi 110 012