ANNALS OF PHYTOMEDICINE

An International Journal

A BIANNUAL RESEARCH JOURNAL OF PHYTOMEDICINE

Volume 1, Number 2, July/December 2012

AUTHOR INDEX

Asema Mehveen	14	Suvarchala Reddy, N.V.L	45
Atiya Rehana	14	Syed Asad Bakhtiary	88, 97
Chauhan, D.K.	23	Syed Ibrahim Rizvi	9, 52
Dileep Kumar	9	Syed Mohammed Kazim	39
Farhath Khanum	67	Therasilin Louis	74
Ganga Raju, M.	56	Vandana Mishra	23
Kanti Bhooshan Pandey	52	Vinita Puranik	23
Kuldeep Singh Yadav	62	Waheed, M.A.	14
Kusuma Priyanka, A.Y.	45	Wamik Azmi	1
Lakshmi Narasu, M.	74	Yuvaraj, P.	74
Madhavachandran, V.	74		
Manisha Gautam	1		
Md. Liyakat Ahmed	105		
Meenakshi Chandel	1		
Mohammed Fazil Ahmed	88		
Mohammed Ibrahim	30, 39, 88, 97		
Mohammed Majid Iqbal	30, 97		
Mohd Abdul Irfan	88		
Molly Antoney	74		
Nagaiah, K.	14		
Narayan P. Yadav	62		
Naveen Kumar	62		
Paramjyoti Swamy	93		
Raghavendra, N.M.	45		
Rai, G.K.	23		
Rajeswari Satapathy	93		
Rasheed, N.M.A	14		
Sakina Razack	67		
Sanjay Chaudhari	56		
Sanjeev Gupta	30		
Shanti Sagar	30		
Shareef, M.A.	14		
Sneha Anarthe	56		
Suaib Luqman	62		
Subramoniam, A.	74		

ANNALS OF PHYTOMEDICINE

An International Journal

A BIANNUAL RESEARCH JOURNAL OF PHYTOMEDICINE

Notes on the preparation of paper

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 phytotherapy (clinical trials), phytopharmacology, pharmacognosy, phytopharmaceuticals, molecularbiological studies, natural product chemistry, biological activity of plant extracts and isolated compounds, pharmacological applications and traditional medicine, pharmacokinetic and bioavailability studies, clinical studies of standardized phytopreparations, phytotoxicity and standardization of drugs and also other related aspects within a single publication.

Annals of Phytomedicine (AP) "An International Journal" is dedicated to increasing the depth of the subject across disciplines with the ultimate aim of expanding knowledge of phytomedicine. AP aims to publish original, peer-reviewed, papers encompassing all aspects of phytomedicine. The journal welcomes submission of manuscripts that meet the general criteria of significance and scientific excellence. This Journal will provide a forum for the publication of following types of contributions:

• Regular articles • Short communications • Invited reviews

We invite you to submit your manuscripts to AP which aims at rapid publication of high quality research articles while maintaining rigorous but simple peer-review process. The manuscripts intended for publication shall be rigorously refereed and selected on the basis of quality and originality of the work.

Editorial policy

Research papers submitted to AP must be original and not published or submitted for publication elsewhere. The corresponding author of the paper is responsible for ensuring that the manuscript has been approved by all the coauthors. It is also the responsibility of the corresponding author to ensure that the papers emanating from a particular institution are submitted with the necessary approval of that institution. Authors must note that plagiarism of any sort of is not acceptable. Even after acceptance of the paper, if it is found to have been plagiarized, it will not be published.

Manuscripts should be addressed to the Editor-in-Chief, Annals of Phytomedicine. Authors are advised to submit their manuscripts online at ukaaz@yahoo.com. If there is any difficulty in submitting the manuscript online, they can send the hardcopy along with a softcopy of CD in Page Maker format / MS-Word. However, it is mandatory to send a hardcopy along with the CD in either of the cases.

Membership of the journal

Annual India		Foreign SAARC	
subscription		Countries	
Individual	Rs. 600/-	US \$ 120	US \$ 80
Institution	Rs. 1200/-	US \$ 200	US \$ 150

Payments are accepted only through demand draft in favour of "Annals of Phytomedicine", payable at Hyderabad, Andhra Pradesh, India.

Note : Journal membership is open to anyone, interested in the area of phytomedical research. Individual and institutional membership will be available. However, annual membership is the policy of the journal.

Publication

The corresponding author must be member of this journal at the time of submission of the manuscript. All the papers submitted for the publication in "Annals of Phytomedicine" will be charged at the rate of Rs. 150/-(\$10) 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 11 font size in Page Maker format / MS-Word, keeping proper margin on each side.

Three types of manuscripts may be submitted for publication in this journal.

Regular articles

These articles should describe new findings and experimental procedures in sufficient detail for the editorial board and the other reviewers to verify the work. These articles should not be more than 15 manuscript pages.

Short communications

A short communication is suitable for recording the results in brief or giving details of new models or hypotheses, besides inventing new formula, compound, molecule, innovative methods or new techniques *etc.* It should not be more than 6 manuscript pages in length.

Invited reviews

Publication of reviews will only be through invitation, however authors may approach the Editor-in-Chief with a proposal.

Authors are advised to concentrate more on their work and to review the same keeping into consideration the significant recent contributions by other authors. Invited reviews will also be subjected to peer-review. Reviews should be concise and conform to the limit of 20-25 manuscript pages including tables and figures.

Advertisement

Annals of Phytomedicine is an effective and easy medium for advertisement of conferences, seminars, symposia and workshops on phytomedicine and other related fields. Interested persons/ organizations may contact the Editor-in-Chief for the rates and other related informations.

Peer-review

Annals of Phytomedicine aims at rapid publication of high quality research work. The manuscripts will be peer-reviewed by two experts in this field to maintain international standard of the journal. Manuscripts with significant results will be reviewed and published with the highest priority and speed. Referees of the journal have to give possible decisions on a manuscript, such as:

- Accepted as it is
- Accepted after minor revision
- Accepted after major revision Rejected

Note : Authors are requested to return the manuscripts with minor revision within 48 hours and major revision within 72 hours otherwise the publication of the same will be delayed and would appear in next or subsequent issues.

Copyrights and permissions

The Editor-in-Chief and the editorial board will not be responsible for the statements and opinions expressed by the authors in their articles and reviews including short communications. No part of Annals of Phytomedicine may be reproduced in any form without the written permission from the Editor-in-Chief. Submission of the manuscript implies that the work done has not been published before or it is not under consideration for publication elsewhere and if and when the manuscript is accepted for publication, the copyright of the articles and reviews is automatically assigned to AP or the authors agree to automatic transfer of the copyright to the publisher.

Guidelines for submission of manuscripts

General

Manuscripts submitted for publication in Annals of Phytomedicine must be original and should not be published earlier in any journal. The corresponding author must be member of this journal at the time of submission of the manuscript.

Manuscripts should be double spaced throughout with enough margins on all sides on white A4 size paper. One set of high quality original figure(s) and photograph(s) must be submitted along with the manuscript. However, corresponding author is advised to keep a copy of the manuscript for checking against proofs.

Title

The title of the paper should be brief, specific and informative. Title is to be followed by the name (s) of the author (s). Address of the institution should follow the next. The name and the address including e-mail, phone and fax numbers of the corresponding author should be indicated.

Abstract

A brief abstract not exceeding 250 words of the principal points and important conclusions should be typed after the address without additional paragraph indentation.

Key words

There should be 3-5 key words indicating the contents of the paper.

Text

The text of the paper should be divided into sections starting with "Introduction" and ending with "Results and Discussion". Introduction should be brief and limited to the statement of the problem and the experiment. The literature reviewed should be pertinent to the problem under study. Materials and methods should include relevant details on the nature of material, experimental design and the statistical methods used. However, results and discussion should preferably be combined to avoid repetition. If in case, the author feels inconvenient to do so, he/she can give a separate heading. The discussion should briefly attempt at relating author's result (s) to other work on the subject and give authors conclusions. Numerical results should be shown in the tables and same may be repeated in the text.

Tables

Tables should be short and typed on separate sheets. They must be numbered in arabic numerals and cited in the text accordingly. However, the preferred position of tables in the running text should be indicated.

Figures

Figures should be numbered in arabic numerals and cited in the text with the same number.

Figures should be supplied in JPEG or TIFF formats suitable for reproduction. Hard copies of the figures should be clear, well contrasted and glossy prints. The original drawing should be made in black on a good quality paper and preferably on A4 size white paper or tracing paper.

Photographs

Photographs should be of high contrast on glossy paper and should not be folded or creased. They should be cited in the text in arabic numerals. A separate type written double spaced explanation of plates and photographs transparencies should be supplied, giving legends for each photograph.

Units

The following units should be used: length (m, cm, mm, μ m, nm, Å), mass (kg, g, mg, μ g, ng, pg, mol, mmol), volume (l, ml, μ l), time

(s, min, h, d), temperature ($^{\circ}C$, K), radiation (Bq, Ci, dpm, Gy, rad), and concentration (M, mM, mol/l, mmol/ml, mg/ml, μ g/ml, %, % (v/v), % (w/v), ppm, ppb).

Acknowledgements

It should be brief and meaningful. One should mention the guidance or assistance received in real terms and financial grant provided by an agency.

References

References should be arranged alphabetically by author's name followed by initials(s), year, title, journal, volume, number of the volume if any and the pages of the paper. References should be cited in the text by authors name and years, *i.e.*, Khan (1983), Aradhana and Manoj Kumar (2010) and Johnson *et al.* (1955) *etc.* Contributors are advised to follow the pattern given below:

RESEARCH PAPER: Khan, Irfan Ali (1983). Mutation studies in mung bean (*Phaseolus aureus* Roxb). V. Induced polygenic variability after seed irradiation. Canadian J. Genet. Cytol., **25**(3): 298-303.

Rizvi, S. I. and Maurya, P. K. (2007). Alterations in antioxidant enzymes during aging in humans. Mol. Biotechnol., 37 (1): 58 - 61.

Johson, H.W.; Robinson, H.F and Comstock, R.E.(1955). Estimates of genetic and environmental variability in soybean. Agron. J.,46 : 314 - 315.

BOOK: Falconer, D.S.(1960). Introduction to quantitative genetics. The Ronal Press Co., New York, U.S.A, pp: 365.

Khan, Irfan Ali and Khanum, Atiya (1994). Fundamentals of Biostatistics. Ukaaz Publications, Hyderabad, India, pp: 594.

EDITED BOOK : Susan Eapen (2007). Plant biotechnology in aid of AIDS. In: Herbal therapy for AIDS (ed. Khan, Irfan Ali and Khanum, Atiya), Ukaaz Publications, Hyderabad, India, pp:129-124.

Ph.D. THESIS: Chandra, A.(2002). Pulses, the protein plants and their biochemical investigations. Ph.D. Thesis, University of Rajasthan, Jaipur.

PROCEEDINGS: Burton, G.W. (1952). Quantitative inheritance in grass. Proc. 6th Int. Grassland Cong., 1. 227-283.

Page proof

The proofs will be sent to the corresponding author only unless until specified clearly. These should be corrected and returned as per the policy as specified earlier.

Reprints

Editor-in-Chief of the journal would like to inform all the contributors that the policy of the journal is not to give reprints to the authors. However, the corresponding author will get two copies of the journal, free of cost. Additional copies of the journal can be purchased by ordering when the proofs are returned.

Editor-in-Chief	: Dr. Irfan Ali Khan
Managing Editor	: Dr. Atiya Khanum
Editorial Office	: 16-11-511/D/408, Shalivahana Nagar, Moosarambagh, Hyderabad-500036, Andhra Pradesh, India Tel. : 040-24547392, 040-65704477, Mobiles Editor-in-Chief : +91-9246509453 Managing Editor : +91-9246584140 E-mail : ukaaz@yahoo.com

Dr. Irfan Ali Khan

UKAAZ PUBLICATIONS

16-11-511/D/408, Shalivahana Nagar, Moosarambagh, Hyderabad-500036, Andhra Pradesh, India Tel. : 040-24547392, 040-65704477, 9246509453, E-mail: ukaaz@yahoo.com **For any query or order, contact : Dr. Irfan Ali Khan**

LIST OF BOOKS AUTHORED/EDITED

91	OF D	JOOKS AUTHORED/EDITED
	Boo	sks Authored Series 1: Biostatistics
	1.	FUNDAMENTALS OF BIOSTATISTICS: Fourth Revised Edition
		ISBN 81-900441-0-9: 2009, Pages XXXII + 533 Crown Size
	2.	BIOSTATISTICS FOR PHARMACY
		ISBN 81-88279-45-5: 2007, Pages VIII + 456 Crown Size
	3.	BIOSTATISTICAL METHODS IN AGRICULTURE, BIOLOGY AND MEDICINE
		ISBN 81-88279-49-8: 2007, Pages XXVI + 635 Crown Size
	Boo	ks Edited Series 2: Medicinal and Aromatic Plants
	4.	ROLE OF BIOTECHNOLOGY IN MEDICINAL AND AROMATIC PLANTS: VOLUME-1
		VOLUMES: 1-22, HARDBOUND WITH ISBN NUMBER, CROWN SIZE
	5.	MEDICINAL AND AROMATIC PLANTS OF INDIA
		ISBN 81-88279-24-2 YEAR : 2005 HARDBOUND PAGES: VIII + 295 DEMI SIZE
	Ser	ies 3: Bioinformatics
	6.	EMERGING TRENDS IN BIOINFORMATICS
		ISBN 81-900441-4-1 YEAR : 2002 HARDBOUND PAGES: VIII + 297 CROWN SIZE
	7.	FUNDAMENTALS OF BIOINFORMATICS
		ISBN 81-88279-06-4 YEAR : 2003 HARDBOUND PAGES: VIII + 229 CROWN SIZE
	8.	ESSENTIALS OF BIOINFORMATICS
		ISBN 81-88279-12-9 YEAR : 2003 HARDBOUND PAGES: VIII + 279 CROWN SIZE
	9.	RECENT ADVANCES IN BIOINFORMATICS
		ISBN 81-88279-02-1 YEAR : 2003 HARDBOUND PAGES: VIII + 350 CROWN SIZE
	10.	INTRODUCTORY BIOINFORMATICS
		ISBN 81-88279-13-7 YEAR : 2004 HARDBOUND PAGES: VIII + 348 CROWN SIZE
	11.	BASIC CONCEPTS OF BIOINFORMATICS
		ISBN 81-88279-01-3 YEAR : 2005 HARDBOUND PAGES: VIII + 303 CROWN SIZE
	12.	BIOINFORMATICS (1)
		ISBN 81-88279-62-5 YEAR : 2010 PAPERBACK PAGES: XVI + 352 CROWN SIZE
	13.	BIOINFORMATICS (2)
		ISBN 81-88279-63-3 YEAR : 2010 PAPERBACK PAGES: XVI + 359 CROWN SIZE
	14.	BIOINFORMATICS (3)
		ISBN 81-88279-64-1 YEAR : 2010 PAPERBACK PAGES: XVI + 367 CROWN SIZE
	15.	BIOINFORMATICS (4)
		ISBN 81-88279-65-X YEAR : 2010 PAPERBACK PAGES: XVI + 408 CROWN SIZE
	16.	FUNDAMENTALS OF INFORMATION TECHNOLOGY: THEORY AND PRACTICALS
		ISBN 81-88279-61-7 YEAR : 2009 PAPERBACK PAGES: XVI + 494 CROWN SIZE
	17.	COMPUTER APPLICATIONS IN PHARMACEUTICAL SCIENCES
	C	ISBN 81-88279-68-4 YEAR : 2010 PAPERBACK PAGES: XXIV + 499 CROWN SIZE
		ies 4: Herbal Medicine for Human Diseases
	18.	HERBAL MEDICINE FOR HUMAN DISEASES: VOLUME-I
	C	VOLUMES: 1-4, HARDBOUND WITH ISBN NUMBER, CROWN SIZE
		ies ⁵ : Herbal Therapy for Diabetes
	19.	HERBAL THERAPY FOR DIABETES: VOLUME-I
	20	ISBN 81-88279-21-8 YEAR : 2005 HARDBOUND PAGES: VIII + 318 CROWN SIZE MODERN AND ALTERNATIVE MEDICINE FOR DIABETES
	20.	ISBN 81-88279-27-7 YEAR : 2005 HARDBOUND PAGES: VIII + 288 CROWN SIZE
	21	ANTIDIABETIC PLANTS OF INDIA
	41.	ISBN 81-88279-03-X YEAR : 2005 HARDBOUND PAGES: VIII + 265 DEMI SIZE
	Sor	ison 81-88279-05-X TEAK : 2003 HARDBOUND PAGES: VIII + 203 DEMI SIZE
		ETHNOMEDICINE AND HUMAN WELFARE: VOLUME-I
		VOLUMES: 1-4, HARDBOUND WITH ISBN NUMBER, CROWN SIZE
		TOLENES. T., IMAPPOOLD WITH ISBN TOMBER, CROWN SIZE

Series 7: Herbal Therapy for Different Human Diseases

- 23. HERBAL THERAPY FOR HUMAN DISEASES
- ISBN 81-88279-28-5 YEAR : 2007 HARDBOUND PAGES: VIII + 237 DEMI SIZE 24. HERBAL THERAPY FOR AIDS
- ISBN 81-88279-47-1 YEAR : 2007 HARDBOUND PAGES: VIII + 348 DEMI SIZE 25. HERBAL THERAPY FOR DIABETES
- ISBN 81-88279-46-3 YEAR : 2007 HARDBOUND PAGES: VIII + 430 DEMI SIZE 26. HERBAL THERAPY FOR ASTHAMA
- ISBN 81-88279-50-1 YEAR : 2008 HARDBOUND PAGES: VIII + 416 DEMI SIZE 27. HERBAL THERAPY FOR CANCER
- ISBN 81-88279-54-4 YEAR : 2008 HARDBOUND PAGES: VIII + 417 DEMI SIZE 28. HERBAL THERAPY FOR AGEING
- ISBN 81-88279-58-7 YEAR : 2009 HARDBOUND PAGES: VIII + 248 DEMI SIZE 29. HERBAL THERAPY FOR DIARRHOEA AND DYSENTERY
- ISBN 81-88279-56-0 YEAR : 2009 HARDBOUND PAGES: VIII + 162 DEMI SIZE 30. HERBAL THERAPY FOR SKIN AFFLICTIONS
- ISBN 81-88279-59-5 YEAR : 2009 HARDBOUND PAGES: VIII + 304 DEMI SIZE **Series 8: Biotechnology**
- **31. BIOTECHNOLOGY IN THE WELFARE OF MANKIND: VOLUME-I** VOLUMES: 1-4, HARDBOUND WITH ISBN NUMBER, CROWN SIZE
- 32. MEDICAL BIOTECHNOLOGY ISBN 81-88279-31-5 YEAR : 2006 HARDBOUND PAGES: VIII + 340 DEMI SIZE ISBN 81-88279-31-5 YEAR : 2006 PAPERBACK PAGES: VIII + 340 DEMI SIZE
- 33. BASIC CONCEPTS OF BIOTECHNOLOGY
- ISBN 81-88279-33-1 YEAR : 2006 PAPERBACK PAGES: VIII + 292 DEMI SIZE 34. ESSENTIALS OF BIOTECHNOLOGY
- ISBN 81-88279-32-3 YEAR : 2006 PAPERBACK PAGES: VIII + 299 DEMI SIZE 35. ADVANCES IN BIOTECHNOLOGY
- ISBN 81-88279-34-X YEAR : 2006 PAPERBACK PAGES: VIII + 298 DEMI SIZE 36. MODERN CONCEPTS IN BIOTECHNOLOGY
- ISBN 81-88279-36-6 YEAR : 2006 PAPERBACK PAGES: VIII + 289 DEMI SIZE 37. EMERGING TRENDS IN BIOTECHNOLOGY
- ISBN 81-88279-35-8 YEAR : 2006 PAPERBACK PAGES: VIII + 290 DEMI SIZE 38. NEW FRONTIERS IN BIOTECHNOLOGY
- ISBN 81-88279-37-4 YEAR : 2006 PAPERBACK PAGES: VIII + 290 DEMI SIZE **Series 9: Molecular Genetics**
- **39.** FUNDAMENTALS OF BIOTECHNOLOGY, FORENSIC SCIENCE AND GENETIC ENGINEERING ISBN 81-88279-04-8 YEAR : 2004 HARDBOUND PAGES: VIII + 390 CROWN SIZE
- 40. FUNDAMENTALS OF MOLECULAR BIOLOGY, GENETIC ENGINEERING AND BIOTECHNOLOGY ISBN 81-88279-10-2 YEAR : 2004 HARDBOUND PAGES: VIII + 365 CROWN SIZE
- FUNDAMENTALS OF GENE, GENOMICS AND GENETIC ENGINEERING ISBN 81-88279-05-6 YEAR : 2004 HARDBOUND PAGES: VIII + 465 CROWN SIZE
 Series 10: Limnology
- 42. LIMNOLOGY IN THE INDIAN SUBCONTINENT
- ISBN 81-88279-19-6 YEAR : 2005 HARDBOUND PAGES: XVI + 327 DEMI SIZE 43. LIMNOLOGY IN THE INDIAN SUBCONTINENT
- ISBN 81-88279-19-6 YEAR : 2005 PAPERBACK PAGES: XVI + 327 DEMI SIZE
- Series 11: Fruits, Vegetables and Spices
- 44. LEAFY VEGETABLES

ISBN 81-88279-20-X YEAR : 2005 PAPERBACK PAGES: IV + 177 DEMI SIZE

- **45. PHARMACEUTICAL WEALTH OF FRUITS, VEGETABLES AND SPICES** ISBN 81-88279-44-7 YEAR : 2007 HARDBOUND PAGES: VIII + 266 DEMI SIZE
- Series 12: General Books
- 46. GENETIC IMPROVEMENT OF OILSEED CROPS
- ISBN 81-900441-1-7 YEAR : 1996 HARDBOUND PAGES: VIII + 374 DEMI SIZE 47. ROLE OF BIOTECHNOLOGY IN PULSE CROPS
- ISBN 81-900441-2-5 YEAR : 1996 HARDBOUND PAGES: VIII + 223 DEMI SIZE 48. GENETICS AND BREEDING STRATEGIES IN THE IMPROVEMENT OF PULSE CROPS ISBN 81-900441-3-3 YEAR : 1998 HARDBOUND PAGES: VIII + 353 DEMI SIZE
- **49.** FRONTIERS IN PLANT SCIENCE YEAR : 1997 HARDBOUND PAGES: VIII + 1043 CROWN SIZE