The Dhaka University Journal of Pharmaceutical Sciences

(Dhaka Univ. J. Pharm. Sci.)

June, 2021

This publication is covered by CAS, HINARI, EmbaseTM, Embase-Elsevier, SCIENCE, ROAD, CROSSREF, MEDIA, SCIMAGO, ADAT, Directory of Research Journals Indexing, ResearchGate, JournalTOCs, Internetchemistry, Academic Accelerator, Microsoft Academic and several other abstracting systems.

In addition all papers of each issue are available in </www.dujps.com> and </www.banglajol.info/index.php>

EDITORIAL BOARD

Editor

Emeritus Prof. Dr. A. K. Azad Chowdhury

Department of Clinical Pharmacy and Pharmacology University of Dhaka

Associate Editors

Prof. Dr. S. M. Abdur RahmanProf. Dr. Md. Abdur RashidDean, Faculty of PharmacyDepartment of Pharmaceutical ChemistryUniversity of DhakaUniversity of Dhaka

Members

Prof. Dr. Sitesh Chandra Bachar Department of Pharmacy University of Dhaka

Professor Dr. Md. Khalid Hossain Department of Pharmaceutical Chemistry University of Dhaka

Professor Dr. Reza-ul-Jalil Department of Pharmaceutical Technology University of Dhaka

Professor Dr. Monira Ahsan Department of Pharmaceutical Chemistry University of Dhaka

Professor Dr. Abu Shara Shamsur Rouf Department of Pharmaceutical Technology University of Dhaka

Prof. Dr. Md. Liaquat Ali Former Vice Chancellor University of Health Sciences, Dhaka

Prof. Dr. Md. Sayedur Rahman Department of Pharmacology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka **Prof. Dr. S. M. Abdur Rahman** Chairman, Department of Clinical Pharmacy and Pharmacology University of Dhaka

Professor Dr. Md. Elias Al-Mamun Chairman, Department of Pharmaceutical Technology University of Dhaka

Professor Dr. Nazmul Qais Department of Clinical Pharmacy and Pharmacology University of Dhaka

Professor Dr. Md. Saiful Islam Department of Clinical Pharmacy and Pharmacology University of Dhaka

Professor Dr. Mohammad Mehedi Masud Department of Pharmaceutical Chemistry University of Dhaka

Dr. Munirul Alam Senior Scientist, Infectious Diseases Division, International Centre for Diarrheal Disease and Research (icddr,b), Dhaka

Published by: Emeritus Prof. Dr. A. K. Azad Chowdhury, Editor, *The Dhaka University Journal of Pharmaceutical Sciences*, Faculty of Pharmacy, University of Dhaka, Dhaka-1000, Bangladesh on behalf of the Editorial Board.

Impact Factor: GIF = 0.835 (2015); RG = 0.67 (2018); Citeschore = 0.38 (2017)

Vol. 20, No. 1

EDITORIAL ADVISORY BOARD

Prof. Dr. Claire Anderson School of Pharmacy The University of Nottingham, UK

Prof. Dr. Colin N A Palmer Chair of Pharmacogenomics, School of Medicine University of Dundee, UK

Prof. Dr. Muhammad Ilias

Research Institute of Pharmaceutical Sciences The University of Mississippi, USA

Prof. Dr. Satyajit Dey Sarker

Director of School of Pharmacy and Biomolecular Sciences, Liverpool John Moores University, UK

Prof. Dr. Panna Thapa

KU School of Science Kathmandu University (KU), Nepal

Prof. Dr. Pulok Kumar Mukherjee

Director, School of Natural Product Studies Jadavpur University, India

Prof. Dr. Dennis Ross

Harvard Medical School Harvard University, USA

Prof. Dr. Abu Serajuddin

College of Pharmacy and Health Sciences St. John's University, New York, USA

Prof. Dr. Muhammad Jamil Habib

College of Pharmacy, Howard University Washington DC, USA

Prof. Dr. Muhammad Delwar Hussain College of Pharmacy

California Health Sciences University, USA

Dr. Omar Faruk Khan

Associate Dean for Academic Affairs University of Charleston, West Virginia, USA

All communications regarding the journal should be addressed to: Emeritus Prof. Dr. A. K. Azad Chowdhury, Editor, *The Dhaka University Journal of Pharmaceutical Sciences*, Faculty of Pharmacy, University of Dhaka, Dhaka-1000, Bangladesh. Phone: 9661920-73/8157, 8137; Fax: 880-2-9667222, E-mail: dujps_du@yahoo.com, editor.dujps@du.ac.bd, r.pchem@yahoo.com; Web: www.dujps.com

Printed by: SRI Printing Press, 8/12 Babupura, Nilkhet, Dhaka-1205, Bangladesh

The Dhaka University Journal of Pharmaceutical Sciences

(Dhaka Univ. J. Pharm. Sci.)

Vol. 20	No. 1	lune, 2021	
CONTENTS			
	biha Chowdhury, Amlan Ganguly and A.B.M. Faroque f Newly Established Model Pharmacies in Bangladesh 329/dujps.v20i1.50852	- 1-10	
	d Uhumwangho Uwumagbe Michael - Formulation of Nor ge Form of Metronidazole using Sintering and Sublimatio 329/dujps.v20i1.50853		
	Ahire and Sanjay J. Kshirsagar - Formulation Development an ng Tablet of Aspirin by Using QbD Approach 329/dujps.v20i1.50854	nd 1929	
Atoyegbe, Olutayo Ademol		of	
	Hossain, Md. Aslam Hossain and Md. Shah Amran - A Study of Bangladesh to Ensure Health for All 329/dujps.v20i1.50856	on 41-48	
John Olabanji Daodu and	mo, Elizabeth Ayodele Popoola, Oluyemisi Adebowale Bamiro Olatunde James Olaitan - Physicochemical Characteristics an oha-Tocopherol in Eighteen Edible Vegetable Oils Marketed i /dujps.v20i1.54032	ıd	
Abdur Rahman Ripon and		m	
Onyinye Okoye and Anth		of	

Theophilus K. Udeani, Linus O. Ugwu, Charles O. Nnadi and Chukwugozie N. Okwuosa - Evaluation of Anti-Microbial Activity and Proximate Composition of Alkaloids from <i>Vitex doniana</i> Seed DOI: https://doi.org/10.3329/dujps.v20i1.54035	81-86
Nazmul Ahsan, Monzilur Rahman, Md. Nazrul Islam and Anwarul Azim Akhand - Isolation and Characterization of Multidrug Resistant Enterobacteriaceae in Urine Sample of Patients Suffering from Urinary Tract Infection with Diabetes and Nephropathy DOI: https://doi.org/10.3329/dujps.v20i1.54036	87-93
Poushali Saha, Shejuti Rahman Brishty and S.M. Abdur Rahman - Pharmacological Screening of Substituted Benzimidazole Derivatives DOI: https://doi.org/10.3329/dujps.v20i1.54037	95-102
Shifat-E-Ferdous, Mamunur Rahman, Firoj Ahmed and Md. Abdul Muhit - Phytochemical Analysis, Antioxidant and Cytotoxic Activities of <i>Mucuna pruriens</i> Leaves DOI: https://doi.org/10.3329/dujps.v20i1.54038	103-109
Piyali Chowdhury, Mohammed Ibrahim, Sarrin Shahadat, Md. Ruhul Kuddus and Mohammad A. Rashid - <i>In vitro</i> and <i>in vivo</i> Evaluation of Pharmacological Potential of <i>Lasia spinosa</i> Linn. DOI: https://doi.org/10.3329/dujps.v20i1.54039	111-119
 Md. Anisul Islam, Md. Mahbubul Alam, K. M. Yasif Kayes Sikdar, A. S. M. Monjur-Al-Hossain and Abu Shara Shamsur Rouf - Development and Characterization of a Combination Tablet Dosage Form Containing Sofosbuvir and Ribavirin Using Design of Experiments (DoE) Approach DOI: https://doi.org/10.3329/dujps.v20i1.54040 	121-133
Short communication Farjana Rahman Chaity, Mohammad A. Rashid and Mohammad Sharifur Rahman - Biological Investigations of the Whole Plant of Argemone mexicana (L.) DOI: https://doi.org/10.3329/dujps.v20i1.54041	135-138

INSTRUCTIONS TO AUTHORS

The following instructions must be followed during preparation of manuscripts intended for publication in the *Dhaka University Journal of Pharmaceutical Sciences*:

The Dhaka University Journal of Pharmaceutical Sciences, **a peer reviewed journal**, invites and publishes full papers, short communications and review articles that make substantial and scholarly contributions to any areas of pharmaceutical sciences. Manuscripts should be written in English, preferably composed with a computer, in double space with wide margins on 29.21×21.59 cm good quality bond or A4 (29.7×21.0 cm) offset paper and should not exceed 16 pages in case of full papers and 8 pages in case of short communications, including tables and figures.

Title page. The title should appear on a separate page and should be followed by the author names and the institution name and address. The title, author name(s), and affiliations should all appear on their own respective line of text. Place an asterisk after the name of the author to whom enquiries regarding the paper should be directed and include that author's telephone and fax numbers and e-mail address.

Abstract. The abstract, detailing, in one paragraph, the problem, experimental approach, major findings, and conclusions, should appear on the second page. It should be double-spaced and should not exceed 150 words for full papers.

Key words. Author(s) must give 3 to 10 "key words" or phrases, which identify the most important subjects covered by the paper. These should be placed at the end of the abstract.

Introduction. The manuscript should include a brief introduction stating the purpose of the investigation and relating the manuscripts to similar research previously or currently being conducted. Only information essential to the arguments should be presented.

Materials and Methods. This section should contain some specific details about the materials studied, instruments used, sources of specialized chemicals and related experimental details to allow other workers to reproduce the results. Separate paragraphs with sub-headings may be used to describe the experimental details.

Results and Discussion. The results should be presented concisely. Tables and figures should be designed to maximize the presentation and

comprehension of the experimental data. The discussion should interpret the results and relate them to existing knowledge in the field as clearly and briefly as possible.

Acknowledgements. The Acknowledgments section should include credits for assistance, financial support, and other appropriate recognition.

References. References to the literature, regardless of their nature, should be numbered in order of appearance in the manuscript and cited in the text with superscript numbers. References should follow the format shown:

- Khan, S., Jabbar, A., Hasan, C.M. and Rashid, M.A. 2000. Nasimaluns A and B: *neo*-clerodane diterpenoids from *Barringtonia racemosa*. J. Nat. Prod. 63, 410-411.
- Rashid, M.A., Gustafson, K.R., Crouch, R.C., Groweiss, A., Pannell, L.K., Van, Q.N. and Boyd, M.R. 2002. Application of high-field NMR and cryogenic probe technologies in the structure elucidation of poecillastrin A, a new antitumor macrolide lactam from the sponge *Poecillastra* species. *Org. Lett.* 4, 3293-3296.
- Harborne, J.B. and Williams, C.A. 2000. Advances in flavonoid research since 1992. *Phytochemistry* 55, 481-504
- 4. Mabry, T., Markham, K.R. and Thomas, M.B. 1971. *The Systematic Identification of Flavonoids*. Springer Verlag, New York, p. 43.
- 5. Harborne, J.B. 1983. In: *Chemistry and Chemical Taxonomy of the Rutales* (Waterman, P.G. and Grundon, M.F., Eds.), Academic Press, London, Chapter 2, pp. 147-173.
- 6. Hasan, C.M. 1982. Phytochemical studies on some African Annonaceae. Ph.D. Thesis, University of Strathclyde, U.K., p. 35.
- 7. Davis, R. 1998. US Patent 5, 708, 591.

Abbreviations. Abbreviations are used without periods. Standard abbreviations should be used throughout the manuscript. The preferred forms of some of the more commonly used abbreviations are mp, bp, $^{\circ}$ C, K, s, min, h, ml, µl, kg, g, mg, µg, cm, mm, nm, mol, mmol, µmol, ppm, TLC, GC, NMR, MS, UV, and IR.

Structural drawings. The quality of the illustrations printed depends on the quality of the originals provided. The pages of the *Dhaka University Journal of Pharmaceutical Sciences* are produced completely electronically. Tracing paper or textured "artist" papers should be avoided. Structures of compounds should be produced with the use of a drawing

program such as ChemDraw (according to the format of ACS Document 1996) or ISIS Draw.

Tables. These should be numbered consecutively with Arabic numerals and should be grouped at the end of the paper. Each table should be provided with a descriptive heading, which, together with the individual column headings, should make the table as nearly as possible, and self-explanatory.

Figures. Figures should be constructed carefully. All illustrations should be numbered as "Figures", with Arabic numerals. Blocks of chemical structures should not be designated as "Figures". Each figure must be identified outside the frame of the figure. The figure number (Arabic) and legend must be typed clearly.

Short communications. Short communication should not contain any abstract. The list of references should not exceed 10. The presentation of Short Communications should be continuous and paragraphed but should not contain any headings such as Introduction, Results and Discussion, etc.

Electronic manuscript submission. The final accepted version of the manuscript should be submitted in electronic form. The disk should accompany the final accepted version of the manuscript and MUST exactly match the final accepted version in hardcopy. Label the disk with the manuscript number and the corresponding author name. Provide the platform, version of software used, and filenames on the Media Description form. It is best to use the fonts "Times New Roman" and "Symbol". Tables may be created using a word processor's text mode or table format feature. The table format feature is preferred. Ensure each data entry is in its own table cell. If the text mode is used,

separate columns with a single tab and use a line feed (return) at the end of each row.

Proofs. Galley proofs will be sent to the corresponding author, which s/he is requested to correct and return as soon as possible. No new matter be inserted in the text and **no changes be made in the title or author name(s) at the time of proof reading.**

Declaration. All authors are requested to sign a declaration that the work described in the manuscript was carried out by them and the contents of the paper have not been published before or submitted elsewhere for publication. When the number of authors/co-authors is more than one, the corresponding author is required to mention the exact contribution of each co-author and also indicate his/her percentage of contribution.

Corrections. If errors of consequence are detected in a published paper, the author(s) should send a correction to the Editor for publication as an Addition and Correction.

Editorial Office. Manuscripts should be submitted in triplicate to the Editor, *Dhaka University Journal of Pharmaceutical Sciences*, Faculty of Pharmacy, University of Dhaka, Dhaka-1000, Bangladesh. The journal also welcomes electronic submissions of manuscripts. Correspondences regarding any submitted or accepted papers and proofs should be directed to the editorial office.

Phone: 9661920-73/8157, 8137; Fax: 880-2-9667222; E-mail: dujps_du@yahoo.com, r.pchem@yahoo.com; Web: www.dujps.com