

ISSN: 1816-1820 (Print version)
1816-1839 (Online version)

The Dhaka University Journal of Pharmaceutical Sciences

(*Dhaka Univ. J. Pharm. Sci.*)

Vol. 19, No. 1

June, 2020

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

In addition all papers of each issue are available in
<www.dujps.com> <www.pharmadu.net> <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 Editor

Prof. Dr. Md. Abdur Rashid

Department of Pharmaceutical Chemistry
University of Dhaka

Members

Prof. Dr. S. M. Abdur Rahman

Dean, Faculty of Pharmacy
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. Sitesh Chandra Bachar

Chairman, Department of Pharmacy
University of Dhaka

Professor Dr. Syed Shabbir Haider

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

Professor Dr. Choudhury Mahmood Hasan

Department of Pharmaceutical Chemistry
University of Dhaka

Professor Dr. Md. Saiful Islam

Department of Clinical Pharmacy and Pharmacology
University of Dhaka

Prof. Dr. Md. Selim Reza

Department of Pharmaceutical Technology
University of Dhaka

Professor Dr. Mohammad Shawkat Ali

Department of Clinical Pharmacy and Pharmacology
University of Dhaka

Professor Dr. Md. Khalid Hossain

Chairman, Department of Pharmaceutical Chemistry
University of Dhaka

Dr. Munirul Alam

Senior Scientist, Infectious Diseases Division
International Centre for Diarrheal Disease and Research (icddr), 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); Citescore = 0.38 (2017)

EDITORIAL ADVISORY BOARD

Prof. Dr. Claire Anderson

School of Pharmacy
The University of Nottingham, UK

Prof. Dr. Dennis Ross

Harvard Medical School
Harvard University, USA

Prof. Dr. Colin N A Palmer

Chair of Pharmacogenomics, School of Medicine
University of Dundee, UK

Prof. Dr. Abu Serajuddin

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

Prof. Dr. Muhammad Ilias

Research Institute of Pharmaceutical Sciences
The University of Mississippi, USA

Prof. Dr. Muhammad Jamil Habib

College of Pharmacy, Howard University
Washington DC, USA

Prof. Dr. Satyajit Dey Sarker

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

Prof. Dr. Muhammad Delwar Hussain

College of Pharmacy
California Health Sciences University, USA

Prof. Dr. Panna Thapa

KU School of Science
Kathmandu University (KU), Nepal

Dr. Omar Faruk Khan

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

Prof. Dr. Pulok Kumar Mukherjee

Director, School of Natural Product Studies
Jadavpur University, India

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; www.pharmadu.net

The Dhaka University
Journal of
Pharmaceutical Sciences

(Dhaka Univ. J. Pharm. Sci.)

Vol. 19

No. 1

June, 2020

CONTENTS

- Seagufta Afrin, Md. Abdul Muhit, Md. Hossain Sohrab, Choudhury Mahmood Hasan and Monira Ahsan** - Antioxidant, Thrombolytic, Antimicrobial and Cytotoxic Activities of Flavonoids Isolated from the Root Bark of *Pongamia pinnata* 1
DOI: <https://doi.org/10.3329/dujps.v19i1.47812>
- Md. Sakhawat Hossain, Md. Mostafizur Rahaman, Md. Atikur Rahman, Jalal Uddin and Firoj Ahmed** - Phytochemical and Biological Investigation of *Curcuma amada* leaves 9
DOI: <https://doi.org/10.3329/dujps.v19i1.47813>
- Tabinda Islam, Nusrat Hossain, Mohsina Rahman, Sadia Shabnam, Eyasmin Chowdhury, Syeda Tahsin Nahar, Zarin Tasnim Gias and Hasan Mahmud Reza** - Study of Release-Retardant Polymers in Formulation Development of Cinnarizine-HCl Sustained-release Oral Suspension Using Raft Technology 15
DOI: <https://doi.org/10.3329/dujps.v19i1.47814>
- Suciati and Lusiana Arifianti** - *In vitro* Anticancer Activity of Marine Sponges Against T47D and HeLa Cell Lines 25
DOI: <https://doi.org/10.3329/dujps.v19i1.47815>
- Charles O. Nnadi, Ndidiamaka H. Okorie and Chika J. Mbah** - Disruption of Lipid Bilayers of Stratum Corneum by Transdermal Delivery of Glipizide in Microemulsion and Binary Co-solvent Systems 29
DOI: <https://doi.org/10.3329/dujps.v19i1.47816>
- Shejuti Rahman Brishty, Poushali Saha, Zobaer Al Mahmud and S. M. Abdur Rahman** - Synthesis and Evaluation of Analgesic and Antioxidant Activities of Substituted Benzimidazole Derivatives 37
DOI: <https://doi.org/10.3329/dujps.v19i1.47817>
- Sudipta Baroi, Achintya Saha, Ritesh Bachar and Sitesh C Bachar** - Cannabinoid as Potential Aromatase Inhibitor through Molecular Modeling and Screening for Anti-Cancer Activity 47
DOI: <https://doi.org/10.3329/dujps.v19i1.47818>
- Sirajis Salekin, Tasnuva Sharmin And Md Shahidur Rahman** - Synthesis, Characterization and Analgesic Activity of Cadmium(II) Complex of Tolfenamic Acid 59
DOI: <https://doi.org/10.3329/dujps.v19i1.47819>
- Tushar Saha, Nusrat Ahmed, Ikramul Hasan and Md. Selim Reza** - Preparation, Characterization and Optimization of Mucoadhesive Domperidone Tablets by Box Behnken Design 65
DOI: <https://doi.org/10.3329/dujps.v19i1.47820>

Shamweel Ahmad, Muslih A. Alotaibi and Mohammed S. Alamri - Antibiotic Sensitivity Pattern of Clinical Isolates of *Pseudomonas aeruginosa* at a Tertiary Care Hospital in Saudi Arabia 77
DOI: <https://doi.org/10.3329/dujps.v19i1.47821>

Review paper

Mohammad Kaisarul Islam, Animesh Chandra Barman and Nazmul Qais - Anti-Cancer Constituents from Plants: A Brief Review 83
DOI: <https://doi.org/10.3329/dujps.v19i1.47823>

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 and short communications 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:

1. 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.
2. 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.
3. 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, °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 Chem Draw (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; www.pharmadu.net