

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

The Dhaka University Journal of Pharmaceutical Sciences

(Dhaka Univ. J. Pharm. Sci.)

Vol. 17, No. 1

June, 2018

This publication is covered by SCOPUS, CAS, HINARI, Embase™, Embase-Elsevier, SCIENCE MEDIA, SCIMAGO, ADAT, Directory of Research Journals Indexing, ResearchGate, JournalTOCs, Internetchemistry, Scopus 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

Chairman, Department of Pharmaceutical

Technology, University of 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

Chairman, Department of Clinical Pharmacy and

Pharmacology, University of Dhaka

Professor Dr. Md. Khalid Hossain

Chairman, Department of Pharmaceutical Chemistry

University of 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.

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, rashidma@du.ac.bd, Web: www.dujps.com; www.pharmadu.net

Printed by: Hasib Computers & Printing, 62/1, Purana Paltan, Dhaka-1000, Bangladesh
Phone: 01552-388130, 9016429 (Res.), E-mail: hasibprinting@gmail.com

The Dhaka University Journal of Pharmaceutical Sciences

(Dhaka Univ. J. Pharm. Sci.)

Vol. 17

No. 1

June, 2018

CONTENTS

- A.R. Puspaningtyas, S. Riyanto, E.N. Solikhah and P. Astuti** - Bioactivity Screening of *Erechtites valerianifolia* (Link Ex Wolf.) Less. Extracts as Antiplasmodium, Antibacterial, Antifungal and Cytotoxic Agents 1
- Md. Mokaram Hossain, Reza-ul Jalil and Mohammad A. Rashid** - Studies of Stress Degradation of Ramosetron Hydrochloride, A 5-HT₃ Antagonist 9
- Philip F. Uzor, Charles O. Nnadi, Joshua E. Ahiabuikwe and Helen N. Ani** - Antidiabetic Studies and Dereplication of the Bioactive Constituents of *Anthocleista nobilis* G. Don by UHPLC/ESI-QTOF-MS 19
- Mohammad Shahriar, Mohiuddin Ahmed Bhuiyan and Md. Sohel Rana** - Characterization of Phytoconstituents and Exploration of Antioxidant and Free Radical Scavenging Activities of *Citrus assamensis* Leaf 29
- Priyanka Chakraborty, Nripendra Nath Bala and Sudipta Das** - Analgesic Activity of Methanolic Extract of Tubers of *Arisaema tortuosum* (Wall.) Schott. in Swiss Albino Mice 37
- Sherejad Sanam, Sharmin Nahar, Nazmus Saqueeb and S.M. Abdur Rahman** - A Validated RP-HPLC Method and Force Degradation Studies of Fexofenadine Hydrochloride in Pharmaceutical Dosage Form 43
- Sayee V. Aher and Yogesh V. Pore** - Physicochemical Characterization of Febuxostat Microcomplexes with Parent and Modified Cyclodextrins 51
- Uwakwe S. Onoja, Cynthia C. Ugwu, Philip F. Uzor, Innocent E. Nweze, Edwin O. Omeje, Petra O. Nnamani, Ekere Nwachukwu, Ivoke Njoku and Eyo J. Effiong** - Effect of *Anogeissus leiocarpus* Guill and Perr Leaf on Hyperglycaemia and Associated Dyslipidaemia in Alloxan-induced Diabetic Rats 65
- Mohammed Ibrahim, Md. Aslam Hossain, Md. Shafiullah Shajib and Mohammad A. Rashid** - Preliminary Phytochemical and Pharmacological Screenings of *Plumbago indica* L. and *Alpinia conchigera* Griff. 73
- Md. Rajdoula Rafe, Rayhanus Salam, Md. Monir Hossain and Mohammad Mehedi Masud** - Phytochemical Screening and Acetylcholinesterase and Butyrylcholinesterase Inhibitory and Thrombolytic Activities of *Grewia abutilifolia* Vent. & Juss. Leaf 81
- Sidi Mohammed Ammar Selles, Mokhtaria Kouidri, Yuva Bellik, Amar Ait Amrane, Belkacem Tahar Belhamiti, Ahmed Redha Benia Si Mohamed Hammoudi and Laid Boukraa** - Chemical Composition, Antioxidant and *In vitro* Antibacterial Activities of Essential Oils of *Mentha spicata* Leaf from Tiaret Area (Algeria) 87

Nur Faezah Syahirah, L., Muhammad Umar Lutfi, M.Y., Atika, A., Muhammad Hafiz, R., Muhammad Zulhelmi, O.A., Mohd Ariff Adzhan, O. and Khor P.Y. - A Comparative Analysis of <i>Clitoria ternatea</i> Linn. (Butterfly Pea) Flower Extract as Natural Liquid pH Indicator and Natural pH Paper	97
Nasim Rahmani Kukia, Ardeshir Abbasi and Seyyed Maysam Abtahi Froushani - Copper Oxide Nanoparticles Stimulate Cytotoxicity and Apoptosis in Glial Cancer Cell Line	105
Zahir Uddin Babar, Abul Kalam Azad, Wan Mohd Azizi Wan Sulaiman, Jalal Uddin and Zubair Khalid Labu - Neuroprotective Properties of <i>Nigella sativa</i> (L.) Seeds Extract in Sprague Dawley Rats models	113
Sharifa Sultana, Md. Shahadat Hossain, Md. Samiul Islam and Abu Shara Shamsur Rouf - Quantitation of Sitagliptin in Drug Product by Validated Reversed Phase Liquid Chromatographic Technique	123
A K Lutful Kabir, Mst. Marium Begum and Tahiya Islam - Study of Bioactivities of <i>Holarrhena pubescence</i> Growing in Bangladesh	131
Review paper	
Nazmul Qais, Sadia Jahan and Md. Shafiullah Shajib - A Review on Anti-Diabetic Plants	139

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, rashidma@du.ac.bd;

Web: www.dujps.com; www.pharmadu.net