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# BANGLADESH PHARMACEUTICAL JOURNAL

Vol. 20, No. 2

July 2017

## CONTENTS

<b>Preparation and <i>In vitro</i> Evaluation of Mucoadhesive Tablets of Montelukast Sodium</b> Farzana Akter Bithi, Tushar Saha, Nusrat Ahmed, Ikramul Hasan and Md. Selim Reza	123
<b>Pharmacist Intervention and Quality of Life of HIV-Infected Patients in Nigeria</b> Shakirat I. Bello	132
<b>Pharmacological and Biological Activities of Different Fractional Extracts of <i>Gardenia coronaria</i> Buch. - Ham. Leaves</b> Abdullah Al Faruq, M. Mohi Uddin Chowdhury, Mohammed Ibrahim, Mohammad R. Haque, Mohammad A. Rashid	139
<b>Formulation and <i>In vitro</i> Evaluation of Unfolding Type Expandable Gastroretentive Film of Enalapril Maleate</b> Md. Bashir Ullah, Md. Rezaul Karim, Md. Shamsul Alam, Md. Rajib Hassan, Mohiuddin Ahmed Bhuiyan and Md. Sohel Rana	149
<b>Cardiovascular Activities of an Ayurvedic Preparation Amalaki Rasayan in Rat Model</b> Md. Taimuzzaman Sharif, Shahana Jahan, Kamrun Nahar, Most. Shammi Rahman, Md. Musfequr Rahman Shajjad, Abu Asad Chowdhury, Mohammad A. Rashid and Mohammad Shah Amran	158
<b>Anti-nociceptive and Anti-inflammatory Activities of <i>Crotalaria pallida</i> Aiton (Fam: Fabaceae) Leaves</b> Israt Jahan Bulbul, Sumaiya Binta Fashiuddin, Mohammad R. Haque, Md. Zakir Sultan and Mohammad A. Rashid	166
<b>Isolation, Characterization and Antimicrobial Activities of the Metabolites from Different Sources of Bangladesh</b> Md. Masud Rana and Md. Anwar Ul Islam	173
<b>Hospital Pharmacy Management System and Future Development Approaches in Bangladeshi Hospital</b> Tushar Saha, Robiul Hasan Bhuiya, Zia Uddin Masum, Muhammad Rashedul Islam and Jakir Ahmed Chowdhury	181
<b>Antibacterial and Cytotoxic Activities of Crude Ethyl Acetate Extract of <i>Streptomyces</i> sp. FEAI-1 Isolated From Soil Samples of Rajshahi, Bangladesh</b> Most. Farida Khatun, Md. Uzzal Haque and Md. Anwar Ul Islam	189
<b>Studies of Interactions of Valsartan, Glimepiride and Ciprofloxacin HCl by DSC and HPLC</b> Mohammad Farhadur Rahman, Md. Abdus Salam, Asma Rahman and Md. Zakir Sultan	195
<b><i>In vitro</i> Bioactivities of Aerial Parts of <i>Dioscorea alata</i></b> Md. Akbar Hossain, Md. Enamul Haque, Md. Hassan Kawsar and Md. Sohel Rana	201
<b>Evaluation of Analgesic and Central Nervous System Depressant Effects of <i>Holarrhena antidysenterica</i> Stem on Swiss Albino Mice Model</b> Md. Anamul Haque, Md. Anwarul Haque and Md. Anwar Ul Islam	206
<b>Current health news</b>	215
<b>New Drug Approval</b>	216
<b>New Application Approval</b>	217
<b>Herbal and Alternative Medicine News</b>	219

# BANGLADESH PHARMACEUTICAL JOURNAL

Vol. 20, No. 1

January 2017

## CONTENTS

<b>Evaluation of the Knowledge and Perceptions about Pharmacovigilance Activities among Pharmacy Students in Nigeria: A Cross-Sectional Study</b> Osemene Kanayo Patrick and Afolabi Margaret Olubunmi	1
<b>The Effects of Acute Stress on Memory, Attention and Cognition in Healthy Human Volunteers</b> Md. Monir Hossain, Shahnaz Naznin, Dolly Sen and Mahnaz Hossain Fariba	14
<b>Identification and Quantification of Sodium Benzoate in Different Brands of Mango Juices Available in Tangail Region, Bangladesh</b> Shamoli Akter, Md. Abu Zubair, Md. Shahinul Haque Khan, Luthfunnesa Bari, Md. Azizul Huq and Mohammad A. Rashid	20
<b>Isolation and Biochemical Characterization of <i>Lactobacillus</i> species from Yogurt and Cheese samples in Dhaka Metropolitan Area</b> Sultana Juhara Mannan, Refaya Rezwana and Kohinur Begum	27
<b>Evaluation of Physical Properties of Selected Excipients for Direct Compressible Tablet</b> S. M. Moshir Rahman, Tushar Saha, Zia Uddin Masum and Jakir Ahmed Chowdhury	34
<b><i>In vivo</i> CNS Depressant and Antinociceptive Studies of <i>Microcos paniculata</i> Stem Extracts on Animal Model</b> Md. Anamul Haque, Md. Anwarul Haque and Md. Anwar Ul Islam	39
<b>Measuring the Impacts of Quality of Work Life Indicators on the Marketing Representatives of Pharmaceutical Industries</b> Kazi Nazmul Huda	46
<b>Release Kinetics Study of Azithromycin from Bi-layered tablets</b> F.M. Shah Noman Ul Bari, Muhammad Rashedul Islam, Md. Mizanur Rahman Mogha and Israt Jahan Ira	54
<b>Formulation Development and Characterization of Levosalbutamol Sulphate Oral Thin Film using Propylene glycol as a Plasticizer</b> Md. Masud Morshed, Jewel Mallick, Fahamida Islam, Md. Kamrul Islam, Md. Didaruzzaman Sohel and Md. Hassan Kawsar	64
<b><i>In Silico</i> Virulence and Resistance Profile Analysis of <i>Staphylococcus</i></b> Nusrat Nahar, Ridwan Bin Rashid and Mohammad Sharifur Rahman	71
<b>Pharmacological Investigation on Ethanol Extract of <i>Scindapsus hederaceus</i> Miq.</b> Md. Mazharul Islam, Mohammed Ibrahim, Mohiminul Adib, Syed Mohammed Tareq, Mohammad Rashedul Haque and Mohammad A. Rashid	85
<b>Improving Micromeritic Properties of Ibuprofen: An Agglomeration Approach</b> Md. Sazzadul Islam and Md. Saiful Islam Pathan	90
<b>Applications of Aptamers in Medicine: A Mini Review</b> Nusrat Nahar, Ridwan Bin Rashid and Mohammad Sharifur Rahman	99

<b>Review on Pharmacovigilance Practice for Safety of Medication System in Bangladesh</b> Nusrat Jahan, Md. Akter Hossain, Md. Aslam Hossain and Md. Shah Amran	105
<b>Recent Health Issues</b>	115
<b>FDA Approved Recent Pharma News</b>	117
<b>FDA Alert</b>	118
<b>Herbal and Alternative Medicine News</b>	119
<b>New Drug Approval by FDA</b>	121

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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.

Mabry, T., Markham, K.R. and Thomas, M.B. 1971. *The Systematic Identification of Flavonoids*. Springer Verlag, New York, p. 43.

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.

Hasan, C.M. 1982. Phytochemical studies on some African Annonaceae. Ph. D. Thesis, University of Strathclyde, U.K., p. 35.

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