

International Journal of Natural and Social Sciences

ISSN: 2313-4461



Editorial Board

Editor in Chief

Prof. Dr. Mahbub Mostofa Department of Pharmacology Bangladesh Agricultural University Mymensingh-2202 Bangladesh

Executive Editor

Dr. Md. Shahiduzzaman Department of Parasitology Bangladesh Agricultural University Mymensingh-2202, Bangladesh

Managing Editor

Dr. Sharifuzzaman Department of Parasitology Bangladesh Agricultural University Mymensingh-2202, Bangladesh

Editors

Dr. Yasuhiro Takashima Dep. Veterinary Parasitology Faculty of Applied Biological Science Gifu University, Japan

Prof. Dr. Khandakar Shariful Islam Department of Entomology Bangladesh Agricultural University Mymensingh-2202, Bangladesh

Prof. Dr. Md. Solaiman Ali Fakir Department of Crop Botany Bangladesh Agricultural University Mymensingh-2202, Bangladesh

Prof. Dr. Arwid Daugschies Institute of Parasitology University of Leipzig Germany Dr. Antonio Barragan Infectious Diseases Karolinska Institutet, Sweden

Prof. Dr. M. A. M. Yahia Khandoker Department of Animal Breeding & Genetics Bangladesh Agricultural University Mymensingh-2202, Bangladesh

Prof. Dr. A. K. M. Nowsad Alam Department of Fisheries Technology Bangladesh Agricultural University Mymensingh-2202, Bangladesh

Dr. Touhidul Islam
Department of Medicine
Bangladesh Agricultural University
Mymensingh-2202, Bangladesh



International Journal of Natural and Social Sciences



ISSN: 2313-4461

Prof. Dr. Baha Lotif Department of Parasitology Faculty of Medicine Universiti Teknologi MARA Shah Alam, Selangor, Malaysia

Prof. Dr. Zakir Hossain Department of Crop Botany Bangladesh Agricultural University Mymensingh-2202, Bangladesh

Dr. Md. Abdullal Al Mamun School of Applied Sciences and Engineering Monash University Gippsland Campus Churchill, Victoria 3842, Australia

Dr. Md. Moizur Rahman
Department of Animal Husbandary and
Veterinary Science
University of Raishahi, Bangladesh

Prof. Dr. A.K.M. Saifuddin Department of Physiology Biochemistry & Pharmacology Chittagong Veterinary and Animal Sciences University, Khulshi, Chittagong, Bangladesh

Md. Rokonuzzaman Dr. Wazed Research Institute Begum Rokeya University Rangpur, Bangladesh

Dr. Munawar Sultana Department of Microbiology University of Dhaka Bangladesh

Prof. Dr. Stefan Magez
VIB Department of Molecular and Cellular
Interactions
Laboratory for Cellular and Molecular
Immunology
Brussels, Belgium

Prof. Dr. Kevin Coombs
Department of Medical Microbiology
Faculty of Medicine
University of Manitoba
Winnipeg, Canada

Dr. Md. Liaquat Ali

Director Production
Department of Livestock Services
Farmgate, Dhaka and
Principal
Jhenidah Government Veterinary College
Jhenidah, Bangladesh

Dr. Mohammed Ziaur Rahman Associate Scientist Virology laboratory ICDDR, Dhaka, Bangladesh

Prof. Dr. Khondoker Md. Nasiruddin Department of Biotechnology Bangladesh Agricultural University Mymensingh-2202, Bangladesh

Dr. Mohammed Rohul Amin Dept of physiology and Pharmacology Potuakhali Science and Tecnology University Potuakhali, Bangladesh

Md. Bazlar Rashid
Department of Physiology and
Pharmacology
Faculty of Veterinary and Animal Science
Hajee Mohammad Danesh Science &
Technology University (HSTU)
Dinajpur, Bangladesh

Dr. Idriss TALIBI Phytopathologiste Faculté des sciences, Université Ibn Zohr, Agadir Maroc