

International Conference on Biotechnology in Sustainable Development 2023

INAUGURAL CEREMONY

October 7, 2023 (Saturday)

Venue: Journalist Liakat Ali Auditorium, Khulna University

Time: 09:00 AM – 10:30 AM

- 09:00 – 09:05 : Guests take their seats
- 09:05 - 09:10 : Recitation from the Holy Qur'an
- 09:10 - 09:15 : Recitation from the Bhagavad Gita
- 09:15 – 09:20 : Welcome Address **Professor Dr. Md. Morsaline Billah**
Secretary, Conference Organizing Committee
- 09:20 - 09:30 : Address by Special Guests **Muhammad Zahidul Hoque**
Founder & CEO, Bio-Xin Cosmeceuticals
- Professor Dr. Abul kalam Azad**
Dean, Life Science School, Khulna University
- 09:30 – 10:10 : Plenary Talk **Professor Dr. Md. Tofazzal Islam**
Institute of Biotechnology and Genetic Engineering
Bangabandhu Sheikh Mujibur Rahman Agricultural University
- 10:10 – 10:20 : Address by Chief Guest **Professor Dr. Mahmood Hossain**
Honorable Vice-Chancellor, Khulna University
- 10:20 - 10:30 : Vote of Thanks **Professor Dr. Sheikh Julfikar Hossain**
Chairman, Conference Organizing Committee
- 10:30 – 10:55 : Refreshment**

International Conference on Biotechnology in Sustainable Development 2023

October 7, 2023 (Saturday)

Venue: Journalist Liakat Ali Auditorium, Khulna University

Technical Session I: Agricultural Biotechnology

Time: 11 AM – 1 PM

Session Chair : Prof. Dr. Tanzima Yeasmin

Department of Biochemistry and Molecular Biology, University of Rajshahi

Session Co-Chair : Dr. Helena Khatoon

Department of Aquaculture, Chattogram Veterinary and Animal Sciences University

Speakers :

- 11:00-11:20 Invited Talk on 'Application of immobilized enzymes in seedbed to prevent fungal invasion' by **Prof. Dr. Keshab Chandra Mondal**, Microbiology Department, Vidyasagar University **(IT-08)**
- 11:20-11:30 **Meher Nahid**: Chemical constituents of *Zingiber purpureum* Roxb: leaf and rhizome essential oil from Bangladesh **(OA-14)**
- 11:30-11:40 **Anik Roy**: Potential of Phosphate Solubilizing Bacteria for Sustainable Agriculture **(OA-15)**
- 11:40-11:50 **Md. Ariful Islam**: Unveiling Hydrogen Rich Water's (HRW) Diverse Roles: Elevating Wheat (*Triticum aestivum* L.) Growth, Physiology, and Drought Resilience **(OA-30)**
- 11:50-12:00 **Md Ekhtiar Rahman**: Genome-wide investigation, characterization and expression profiling reveals OsAMN24 and OsAMN42 play a direct role in regulating stress-responsive gene expression in rice **(OA-44)**
- 12:00-12:10 **Farzana Akter**: A baseline study on the abundance of late embryogenesis abundant (LEA) genes in the oilseed Indian mustard to support their effects in abiotic resistance **(OA-43)**
- 12:10-12:20 **Tamima Sultana**: Genome editing approach to develop climate smart potato variety in Bangladesh **(OA-52)**
- 12:20-12:30 **Mahadia Faiza Shifa**: Molecular characterization in spring wheat genotypes in Bangladesh **(OA-55)**
- 12:30-12:40 **Imran Parvez**: Molecular identification and phylogenetic relationship of the fish species under the genus *Mystus* (Bagridae) from northwest Bangladesh **(OA-58)**
- 12:40-12:50 **Bikash Kundu**: Morpho-physiological analysis of Keteki joha - an aromatic rice (*Oryza sativa* L.) of Assam, India under low and high nitrogen concentrations to unravel the nitrogen use efficiency **(OA-12)**
- 12:50-1:00** **A Presentation from Bio-Xin Cosmeceuticals**
- 1:00-2:30** **Lunch and Prayer Break**

International Conference on Biotechnology in Sustainable Development 2023

October 7, 2023 (Saturday)

Venue: Journalist Liakat Ali Auditorium, Khulna University

Technical Session II: Medical and Pharmaceutical Biotechnology (Parallel Session I)

Time: 2:30 PM – 6:10 PM

Session Chair : Prof. Dr. Kazi Mohammed Didarul Islam

Biotechnology and Genetic Engineering Discipline, Khulna University

Session Co-Chair : Prof. Dr. Md. Nazmul Hasan

Department of Genetic Engineering and Biotechnology, Jashore University of Science and Technology

Speakers :

2:30-2:40 **Md. Taufiqul Islam**: Prognosticating the Etiology of Autism Spectrum Disorder in Bangladesh: Insights from Socio-demographic and Selected Genetic Factors **(OA-17)**

2:40-3:00 Invited Talk on 'MicroRNA-mediated colorectal cancer development and migration' by **Dr. Milladur Rahman**, Associate Professor at the Department of Clinical Science, Malmö, Faculty of Medicine, Lund University **(IT-03)**

3:00-3:10 **Prof. Dr. Mohammad Jakir Hosen**: Genetic Disorders and Reproductive Consequences of Consanguinity: Observations from Bangladesh **(OA-11)**

3:10-3:20 **A Presentation From Diamed**

3:20-3:30 **Mehnaz Mithila**: Fruits of *Sonneratia apetala* (Buch:-Ham:) ameliorate iron overload and iron-induced oxidative stress in mice **(OA-03)**

3:30-3:40 **Dr. Saifullah**: Deciphering novel muscle atrophic factor in SOD1-positive ALS **(OA-20)**

3:40-3:50 **Asfia Ruhama**: Genetic Profiling and Frequency Analysis of Beta Thalassemia Carrier among University Students in Bangladesh **(OA-21)**

3:50-4:00 **Md Al Saber**: Manipulation of thymus aging in 3D human thymus epithelial system using Wnt4 exosomes **(OA-23)**

4:00-4:20 Invited Talk on 'Can *Ruta chalepensis* from Libya treat cancer?' by **Prof. Dr. Satyajit Sarker**, Centre for Natural Products Discovery, School of Pharmacy and Biomolecular Sciences, Liverpool John Moores University **(IT-02)**

4:20-4:50 **Tea and Prayer Break; Inauguration of Poster Session**

4:50-5:10 Invited Talk on 'Ethnopharmacological Evaluation of Sundarban Plants: A Treasure of Natural Bioactive Molecules' by **Prof. Dr. Shaikh Jamal Uddin**, Pharmacy Discipline, Khulna University **(IT-04)**

5:10-5:20	A Presentation from Rural Reconstruction Foundation
5:20-5:30	Muhammad Shamim Al Mamun: Melamine-AuNPs cross-link as a probe for the glucose detection (OA-51)
5:30-5:40	Mohammad Raziul Haque: Application of silver nanoparticle incorporated hydroxyapatite-chitosan-collagen scaffold in rabbit model (OA-53)
5:40-5:50	Tawfiq Alam: Association of FTO Gene SNP rs9939609 with Polycystic Ovary Syndrome and Infertility in the Bangladeshi Population (OA-18)
5:50-6:00	Dr. Md Abu Reza: In search of gene mutation as genetic marker for early prognosis of DCM patients in Bangladesh (OA-31)
6:00-6:10	Shahanaz Khatun: Pharmacological Investigation of <i>Boerhavia diffusa</i> L. for anti-inflammatory and thrombolytic activity in mice (OA-08)
6:10-6:20	Prayer Break
6:30-7:00	Closing of Poster Session
7:30-9:00	Conference Dinner (Khulna University Guest House, Khulna)

International Conference on Biotechnology in Sustainable Development 2023

October 7, 2023 (Saturday)

Venue: BGE Conference Room, Khulna University

Technical Session III: Bioenergy, Toxicology and Environmental Biotechnology (Parallel Session II)

Time: 2:40 PM – 4:20 PM

Session Chair : Prof. Dr. Md. Abu Reza

Department of Genetic Engineering and Biotechnology, University of Rajshahi

Session Co-Chair : Prof. Dr. Md Shahidul Islam

Department of Biotechnology, Faculty of Agriculture, Bangladesh Agricultural University

Speakers :

2:40-3:00 Invited Talk on ‘Utilization of Agro-industrial and Municipal Residual Biomass for Achieving Sustainable Development Goals’ by **Prof. Dr. Md Abul Kalam Azad**, Department of Genetic Engineering & Biotechnology, Shahjalal University of Science and Technology (**IT-06**)

3:00-3:10 **Sadhon Chandra Swarnokar:** Assessing the level of fecal contamination on soil and water from pit and septic tank latrine system - the case of Khulna city, Bangladesh (**OA-02**)

3:10-3:20	Mohammad Tofazzal Hossain Howlader: Mode of Action of the CRY protein from <i>Bacillus thuringiensis</i> sub sp. <i>israelensis</i> and its prospects for mosquito control in Bangladesh (OA-10)
3:20-3:30	Md. Rasel Rana: Effect of Pesticides and Herbicides on Nitrification Activities, Heavy Metal Concentrations, and Antibiotic Resistance Genes (ARGs) in Capsicum annum Soils with Manure and Chemical Fertilizer (OA-39)
3:30-3:40	Md. Anisul Kabir: High salt tolerance Rhizosphere bacteria can be used to withstand the detrimental effect of salt stress in rice plant (OA-42)
3:40-3:50	Al Noman: Decolorization of textile dyes by <i>Pseudomonas</i> sp. characterization and potential for environmental remediation (OA-56)
3:50-4:00	Prof. Dr. Sheikh Md. Enayetul Babar: Production of chitosan and evaluation of its antimicrobial activity (OA-57)
4:00-4:10	Sukanya Acharyya: Montane trapping induced extreme mercury tolerance and bioremediation potential in bacterial strains of Darjeeling hills, India (OA-06)
4:10-4:20	Sumedha Saha: Phosphate solubilizing bacterial strains of <i>Staphylococcus hominis</i> with high tolerance against pesticides and heavy metals – promising candidates for reclamation of biodegraded land (OA-05)
4:20-5:50	Tea and Prayer Break; Inauguration of Poster Session
5:50-6:30	Prayer Break
6:30-7:00	Closing of Poster Session
7:30-9:00	Conference Dinner (Khulna University Guest House, Khulna)

International Conference on Biotechnology in Sustainable Development 2023

October 8, 2023 (Sunday)

Venue: Journalist Liakat Ali Auditorium, Khulna University

Technical Session IV: Microbial and Industrial Biotechnology

Time: 9:00 AM – 1:30 PM

Session Chair : Prof. Dr. Md Masuder Rahman

Dept. of Biotechnology and Genetic Engineering, Mawlana Bhashani Science and Technology University

Session Co-Chair : Palash Kumar Sarker

Principal Scientific Officer (CC), National Institute of Biotechnology, Savar, Dhaka

Speakers :

- 9:00-9:20 Invited Talk on 'Mosquito Control: Science base Strategy is Needed' by **Prof. Dr. Muhammad Morshed**, Department of Pathology and Laboratory Medicine, University of British Columbia **(IT-01)**
- 9:20-9:40 Invited Talk on 'Utilization of Medicinal Plants for future anthelmintic medicine in India and Bangladesh' by **Prof. Dr. Emdad Hossain**, Jadavpur University **(IT-10)**
- 9:40-9:50 **Hasan Mohammad Tarique**: Characterization of entomopathogenic fungi (EPFs) from Bangladesh for biopesticide development **(OA-16)**
- 9:50-10:00 **Kazi Mohimen Alam Arnop**: Virulence and antibiogram profiling of uropathogenic E: coli: a tertiary care hospital based cross sectional study **(OA-13)**
- 10:00-10:10 **Md. Saddam Hossain**: Antimicrobial Activity and Genome Analysis of Biosynthetic Gene Clusters of five *Pseudomonas sp.*: from Marine Soil Sediments **(OA-41)**
- 10:10-10:20 **Rehana Parvin**: Echinococcus immunoinformatics: Epitope-based peptide vaccine development targeting the Ag5 antigen having serodiagnostic potential **(OA-50)**
- 10:20-10:30 **Md. Ahad Hossain**: Synthesis and potential antimicrobial activity of nucleoside derivatives for pharmaceutical use **(OA-46)**
- 10:30-10:50 Refreshment**
- 10:50-11:00 **Dr. Helena Khatoon**: Mass production and utilization of microalgae **(OA-09)**
- 11:00-11:20 Invited Talk on 'Challenges in carbohydrate synthesis: Applications in medical chemistry' by **Prof. Dr. S. M. Abe Kawsar**, Department of Chemistry, University of Chittagong **(IT-05)**
- 11:20-11:30 **Nripendra Nath Biswas**: Investigation of bacterial quorum sensing and biofilm inhibitory potentials of *Phoenix paludosa* leaf extracts **(OA-25)**
- 11:30-11:40 **Farhana Tasnim Promi**: Production of crude glucoamylase from different fungal species isolated from soil containing rice mill waste in Bangladesh **(OA-28)**
- 11:40-11:50 **Md. Atikur Rahman**: In search of pesticide degrading bacteria: Whole genome sequencing and a comprehensive study on their pesticide degradation ability **(OA-37)**
- 11:50-12:00 **Basrat Tasnim Era**: Molecular characterization of multi-drug resistant *Escherichia coli* O157:H7 isolated from meat samples in Kushtia, Bangladesh **(OA-38)**
- 12:00-12:10 **Md. Rabiul Islam**: Isolation and Characterization of Salt-tolerant Phosphate Solubilizing Soil Bacteria from the South-Western Regions of Bangladesh **(OA-47)**
- 12:20-12:30 **Tahrira Arman Tusty**: Molecular modeling, gene cloning and expression of α -amylase of *Bacillus subtilis* S108 in *Escherichia coli* **(OA-40)**
- 12:40-12:50 **Zebunnahar Yasmin**: Comparison of fecal microbiome of diarrheic and nondiarrheic calves revealed unique community structure of the calf intestine through metagenomics approach **(OA-48)**

1:00-1:10 **Dr. Debadin Bose:** Impact of Shiga toxin-producing E: coli strains on the public healthcare system in and around Murarai, West Bengal, India –A case study **(OA-07)**

1:10-1:20 **Prof. Dr. Arnab Sen:** Phytocompounds in the management if recent viral out-brakes **(OA-01)**

1:20-1:30 **Dr. Harekrishna Jana:** Isolation and application of metal resistant bacteria from tata metallic industrial soil for sustainable crops **(OA-45)**

1:30 – 2:30 **Lunch and Prayer Break**

International Conference on Biotechnology in Sustainable Development 2023

October 8, 2023 (Sunday)

Venue: Journalist Liakat Ali Auditorium, Khulna University

Technical Session V: Bioinformatics and Computational Biology (Parallel Session I)

Time: 2:30 PM - 5:20 PM

Session Chair : Prof. Dr. Arnab Sen

Department of Botany, University of North Bengal

Session Co-Chair : Prof. Dr. Mohammad Jakir Hosen

Department of Genetic Engineering & Biotechnology, Shahjalal University of Science and Technology

Speakers :

2:30-2:50 Invited Talk on 'Fungal Endophytes of the Sundarbans: Untapped Resource for Antibacterial and Anticancer Drug Discovery' by **Prof. Dr. Jamil Ahmad Shilpi**, Pharmacy Discipline, Khulna University **(IT-07)**

2:50-3:00 **Anika Bushra Lamisa:** Whole transcriptome analysis identifies potential biomarkers and repurposable therapeutics against Alzheimer's disease **(OA-04)**

3:00-3:10 **Md Nur Kabidul Azam:** Identification of Antidiabetic Inhibitors from *Allophylus villosus* and *Mycetiasinensis* by Targeting α -Glucosidase and PPAR- γ : *In Vitro*, *In Vivo*, and Computational Evidence **(OA-22)**

3:10-3:20 **A Presentation from ESCO**

3:20-3:30 **Ishtiaque Ahammad:** Development of a sustainable machine learning framework for unmasking distinctive gene signatures associated with Alzheimer's disease **(OA-24)**

3:30-3:40	Dr. Mohammad Nazrul Islam: Next generation sequencing and bioinformatic analysis of mitogenome of featherback fish (<i>Chitala chitala</i>): Valuable insights into codon usage bias and mutation pressure (OA-26)
3:40-3:50	K. M. Salim Andalib: Immunoinformatics-Based Development of a Novel Subunit Vaccine for Human Cytomegalovirus (OA-27)
3:50-4:00	Tabassum Binte Jamal: Microarray based blood gene signatures with machine learning models elucidate non-Invasive Parkinson's Disease detection (OA-32)
4:00-4:10	Shuvo Saha: <i>In-silico</i> Mutational Analysis of Human Norovirus Virulence Protein VP1 and Computer-aided Designing of the Cyclic Peptide as an Inhibitor: A Subtractive Genomics and Peptidophylaxis based Approach (OA-33)
4:10-4:20	Bushrat Jahan: Genome-wide identification and expression profiling of DEAD-BOX helicase family of Brassica U Triangle (OA-54)
4:20-4:50	Tea and Prayer Break; Inauguration of Poster Session
4:50-5:00	Prof. Dr. Md. Shahidul Islam: Genetic structure of hilsa shad, <i>Tenualosa ilisha</i> revealed by SNP analysis (OA-60)
5:00-5:10	Prof. Dr. Md. Nazmul Hasan: Secondary metabolites of <i>Crotalaria quinquefolia</i> L: revealed anti-diabetic property in <i>in vitro</i> , <i>in vivo</i> and <i>in silico</i> approaches (OA-19)
5:10-5:20	Farazi Abinash Rahman: Core drug targets are revealed by pangenome analysis of <i>Porphyromonas gingivalis</i> , and promising lead compounds are screened for drug discovery (OA-34)
5:20-6:00	Closing of Poster Session
6:00-7:30	Concluding Session and Cultural Events
8:00 – 9:00	Conference Dinner (Khulna University Guest House, Khulna)

CLOSING OF THE CONFERENCE

International Conference on Biotechnology in Sustainable Development 2023

October 8, 2023 (Sunday)

Venue: BGE Conference Room, Khulna University

Technical Session VI: Food and Nutraceutical Biotechnology (Parallel Session II)

Time: 2:30 PM - 4:10 PM

Session Chair : Prof. Dr. Sheikh Julfikar Hossain

Biotechnology and Genetic Engineering Discipline, Khulna University

Session Co-Chair : Dr. Malay Bhattacharya,

Department of Tea Science, University of North Bengal

Speakers :

2:40-3:00 Invited Talk on 'Food Safety and Bacterial Biofilms: A major concern of Food Industry' by **Dr. Md. Furkanur Rahaman Mizan**, Assistant Professor, Department of Food Science and Technology (IT-09)

3:00-3:10 **Most. Farhana Afroz**: Fibroblast cell line developed from buffalo ear skin for reproductive cloning (OA-59)

3:10-3:20 **Sk. Md. Atiqur Rahman**: Green synthesis of silver nanoparticles (AgNPs) using a native variety of green tea extract and molecular proof of its anticancer activity (OA-29)

3:20-3:30 **Tawhida Akter**: Phytochemical Screening and Evaluation of Antioxidant, Antidiabetic and Antimicrobial Effects of Methanol Extract and Four Fractions of *Caesalpinia digyna* Bark: *In vitro* and *In silico* Studies (OA-35)

3:30-3:40 **Prof. Dr. Md Masuder Rahman**: Isolation and characterization of probiotics from local yogurt and evaluation their defensive effect against multidrug resistance pathogenic bacteria using *C. elegans* model (OA-36)

3:40-3:10 **Md. Eram Hosen**: Synthesis of silver nanoparticles using *Camellia sinensis* leaf extract: promising particles for the treatment of bacterial infections, cancer and diabetes (OA-49)

4:20-4:50 Tea and Prayer Break; Inauguration of Poster Session

5:20-6:00 Closing of Poster Session

6:00-7:30 Concluding Session and Cultural Events

8:00 – 9:00 Conference Dinner (Khulna University Guest House, Khulna)

CLOSING OF THE CONFERENCE

International Conference on Biotechnology in Sustainable Development 2023

October 7, 2023 (Saturday)

Venue: 3rd Floor, Acharya Jagadish Chandra Bose Academic Building, Khulna University

Poster Session I: Agricultural Biotechnology

Tanjina Rafiq Rasni: Effects of bap and iba on micropropagation of cardamom (*Elettaria cardamomum* Maton) (PA-09)

Kazi Sabrina Rahman: Effects of growth regulators on *in vitro* organogenesis of cardamom (*Elettaria cardamomum* Maton) (PA-11)

Jeba Faizah Rahman: Agrobacterium-mediated transformation of OsSUB1A1 gene in indica rice (*Oryza sativa* L.) to improve submergence tolerance (PA-13)

Ashfia Tasnim: *Hibiscus sabdariffa* L: Underutilized plant as food products to medicine (PA-16)

Sumya Rahman Synthia: Micropropagation of wood apple (*Aegle marmelos* L) using shoot tips and nodal segments (PA-17)

Nigar Fatima: Comparative genomic insights into the plant growth promoting, pesticide tolerant traits of *Enterobacter roggenkampii* BbS7 and *Klebsiella quasipneumoniae* TgR5, isolated from rice rhizosphere in Bangladesh (PA-18)

Faria Tasnim: Exploration of Endophytic and Rhizospheric Bacteria of Mulberry Plants from Bangladesh for Potential Application in Agriculture (PA-53)

Shabiha Tasbir Rahman: Variation of nitrification activity, heavy metals concentrations, ARGs and nitrifying bacteria/archaea in relation between different crops rotation and long-term tobacco field soils (PA-63)

Nandiny Ghosh: Improvement of fiber quality of jute through CRISPR-Cas9 genome editing (PA-83)

Arpita Kundu Kanta: Construction of EXOCYST70A3-RNAi Vector for Developing Drought Tolerant Rice (*Oryza sativa* L.) Variety (PA-85)

Abida Anjum: Alteration of fatty acid biosynthesis pathway to reduce erucic acid in mustard (*Brassica rapa* L.) by genome editing approach (PA-87)

Mahadia Faiza Shifa: Evaluate the micro-propagation nature of two strawberry (*fragaria* × *ananassaduch*) Cultivars through runner culture (PA-90)

Mahadia Faiza Shifa: Micropropagation and field evaluation of three strawberry genotypes adaptable to agro-climatic condition of Bangladesh (PA-91)

Md. Monirul Islam: Low and high temperature induced sugar accumulation in Pui vegetable (*Basella alba*) (PA-97)

Md. Tanzim Ahmed: Development of High Yielding Salinity Tolerant Rice (*Oryza sativa* L.) Variety through CRISPR-Cas9 Mediated Genome Editing (PA-98)

Shahadeb Sarkar: Study on CTC manufacturing waste as organic fertilizer and identification its metabolite for enhancing plant growth (PA-04)

Md. Mahfujur Rahman: Characterization of *Bacillus thuringiensis* from Bangladesh for bio-pesticide development (PA-19)

International Conference on Biotechnology in Sustainable Development 2023

October 7, 2023 (Saturday)

Venue: 3rd Floor, Acharya Jagadish Chandra Bose Academic Building, Khulna University

Poster Session II: Medical and Pharmaceutical Biotechnology

Darimi Hasin: Prevalence of the $\Delta F508$ Mutation in Cystic Fibrosis Patients of Bangladesh (PA-10)

H. M. Shadid Hossain Snigdha: Neuroprotective and Hepatoprotective Screening of Sundarban Plant Extracts and Isolation and Structural Elucidation of Novel Bioactive Compounds from the Active Extracts (PA-14)

Dr. S.M. Khaledur Rahman: High-Fat Diet-Induced Hepatic Lipid Accumulation is decreased in PLAAT1-Deficient Mouse (PA-21)

Md. Enamul Kabir Talukder: Multi-target-directed natural neuroprotection: *Argemonemexicana* L. *in vitro* and *in silico* activity modulating cholinergic, amyloidogenic, and neurofibrillary tangle pathways to combat AD (PA-23)

Shabnoor Binte Dayem: Finding Etiological Factors for the Onset of Neonatal Sepsis Diagnosed in Tertiary Care Hospitals in Bangladesh (PA-24)

Anik Das: Biological assessment of synthesized azo-heterocyclic sulphanilic acid derivative compound (PA-31)

Anika Maharin Roza: Isolation, Partial Purification and Characterization of Protease Enzyme from Bacteria for Tannery use (PA-32)

Arittra Bhattacharjee: Shotgun metagenomics unravels higher antibiotic resistome profile in Bangladeshi gut microbiome (PA-33)

Sadia Islam Mou: Integration of bioinformatics and laboratory-based analysis for the identification and validation of prognostic gene expression signatures of bladder cancer (PA-52)

Nazia Nawer: Evaluation of antimicrobial effect of secondary metabolites of endophytic fungi associated with *Hibiscus tiliaceus*, a mangrove plant of Sundarbans (PA-55)

Nazmun Nahar: Pharmacognostic profiling, *in vitro*, *in vivo* and computational-based identification of bioactive anti-inflammatory agents from *Crotalaria quinquefolia* L. (PA-62)

Samira Akter Pinky: Effect of chromium (vi) on growth performance, hematology and histopathology of vital organs in Swiss Albino mice (PA-66)

Tasnim Mahmuda: Bangladeshi medicinal plant *Crotalaria quinquefolia* L. revealed Anti-Alzheimer's effect in *in vitro*, *in vivo* and *in silico* approaches (PA-68)

Tamanna Sultana: Investigating the prevalence and clinical impact of somatic mutations in the selected oncogenes in Bangladeshi bladder cancer patients (PA-71)

Md. Murshid Alom: Evaluating the pharmacological safety of gastrointestinal tract herbal drugs: A comprehensive hepatotoxicity and nephrotoxicity analysis (PA-76)

Md. Sojiur Rahman: Assessment of Antibacterial Properties of *Adenantha pavonina* Leaf Extract: Examination through *in vitro* and Computational Approaches (PA-79)

Shamima Afrose: Phytochemical profiling, *in vitro* biological activities and *in silico* anticancer potentials against explored prognostic biomarker of colorectal cancer of rice husk extracts (PA-80)

Maria Kiftia Mysha: Phytochemical Screening and Assessment of Pharmacological Potentials of *Mikania micrantha* Leaf Extracts along with the Evaluation of *in silico* Anticancer Properties **(PA-82)**

Rejwana Parvin Bonna: Exploring the *in vitro*, *in vivo* and *in silico* Therapeutic Potential of *Clerodendrum infortunatum* Vent., Methanolic Extract: Phytochemical Profiling and Assessment of bioactive compounds **(PA-84)**

Md. Sarowar Jahan: Evaluation of Phytoconstituents, Cytotoxic Activity and Anti-cancer Potentials through EAC Cell Growth Inhibition of *Lasia spinosa* leaf and Stem Extract **(PA-86)**

Arindam Ghosh: Natural alkanes from *Cassia siamea* as possible bioactive molecules against inflammatory disorders: a metabolomics and *in silico* perspective **(PA-05)**

Shahanaz Khatun: *In vitro* antioxidant, thrombolytic activities, and phytochemical evaluation of ethanolic extracts of *Morus alba* L. fruits **(PA-08)**

Utpal Kumar Karmakar: Assessment of Antibiotic Prescription Behavior in Khulna Region **(PA-75)**

International Conference on Biotechnology in Sustainable Development 2023

October 7, 2023 (Saturday)

Venue: 3rd Floor, Acharya Jagadish Chandra Bose Academic Building, Khulna University

Poster Session III: Bioenergy, Toxicology and Environmental Biotechnology

Imran Chowdhury Sakib: Application of agro-waste based hydrochar as soil amendments and its utilization for lead adsorption **(PA-07)**

Sabiha Sultana Preety: A Gestational Quantification of Arsenic (As) in the Maternal Blood **(PA-12)**

Nazmul Rahman Chowdhury: Siderophore Producing Bacterial Interactions in Soil and Their Role in Heavy Metal Bioremediation **(PA-15)**

Taslina Naznin: Isolation, Characterization and Identification of Aroxan-degrading Nitrogen fixing Bacteria: An Attempt to Lay the Foundation for Potential Bioaugmentation Applications **(PA-38)**

Adrita Noumi Arshi: Assessment of Calcium concentration of groundwater of different depth in Khulna district, Bangladesh **(PA-47)**

Fateha Nahum Tahia: Role of High Salt Tolerance Phosphate Solubilizing Bacteria in Promoting Plant Growth Under Salt Stress Condition **(PA-56)**

Fiona Reza: Production of Sodium Alginate from Naturally Occurring Seaweeds in Bangladesh and Its Prospects in Industrial Biotechnology **(PA-58)**

Fahmida Akter Sahara: Characterization and Potential Applications of Spinel Ferrite Nanoparticles Synthesized with *Centella asiatica* Extract **(PA-88)**

Jannatul Mim: The disclosure of antioxidant and photo-degradation properties of green synthetic metal oxide nanoparticles **(PA-89)**

Tanvir Ahmmed: Development of Industrial Wastewater Driven Microbial Fuel Cell for Power Generation **(PA-92)**

Suzon Ahmed: Biogenic synthesis and characterization of Zinc oxide nanoparticles using *Typha domingensis* aqueous leaf extract **(PA-93)**

Al Shariar Hasan: Sequestration of noxious organic dyes based on eco-friendly, cost-effective, waste egg-shell as a natural adsorbent **(PA-94)**

Md Abul Bashar: Preparation of efficient bio-adsorbents for water remediation **(PA-95)**

Sudeshna Nandi: Isolation and encapsulation of caffeine utilizing bacteria with plant growth promoting capabilities for reclamation of caffeine-contaminated soil of tea plantations **(PA-02)**

Preeti Subba: Isolation and characterization of Flubendiamide tolerant bacteria from the gut of *Buzura suppressaria* Guenee (Lepidoptera: Geometridae), a major pest of tea plantation in Northeastern region of India **(PA-03)**

Dr. Shaikh. Mohtasim Billah: Abundance and characteristics of microplastics in the coastal water and sediments from the Bay of Bengal coast of Bangladesh **(PA-74)**

International Conference on Biotechnology in Sustainable Development 2023

October 8, 2023 (Sunday)

Venue: 3rd Floor, Acharya Jagadish Chandra Bose Academic Building, Khulna University

Poster Session IV: Microbial and Industrial Biotechnology

Umama Khan: Amylase Activity of Different Bacillus Strains Isolated from Local Rice Mill Soil **(PA-22)**

Prianka Saha: Evaluation of Antimicrobial Activity of Endophytic Fungi Associated with *Aglaiia cucullata* **(PA-25)**

Md. Naseruzzaman Nabil: Synthesis of thiosemicarbazide derivative Schiff base ligands and metal complexes: Antibacterial and antioxidant activities **(PA-29)**

Md. Habib Al Hasan: Synthesis of azomethine compound as a chemosensor for detection of Pb²⁺ ion and antimicrobial activity **(PA-30)**

Farzana Sayed Sraboni: Structural, Functional and Biological Characterization of Exopolysaccharides Produced by *Enterococcus hirae* MLG3 **(PA-39)**

Afra Anika Rafique: A study of microbial water quality check and isolation of *Helicobacter pylori* from water samples taken from Dhaka city **(PA-44)**

Md. Robiul Hasan: Characterization and AntibioGram Study of Pathogenic Bacteria Isolated from Commercially Cultivated Nile Tilapia (*Oreochromis niloticus*) **(PA-46)**

Abu Reza: Study of Bacterial Diversity of Rhizosphere Soil in High-saline and Low-saline Areas of Bangladesh Using Metagenomics Approach **(PA-51)**

Arifa Afrose Rimi: Isolation, characterization and identification of nitrogen fixing bacteria from rhizosphere of *Sonneratia apetala* collected from the Sundarbans **(PA-57)**

Jannatul Ferdous: Efficacy of low cost natural disinfectants against pathogenic multi drug resistant *Escherichia coli* O157:H7 **(PA-59)**

Afroza Aktar Sharna: Screening and Antibacterial Properties of Actinomycetes isolated from the Sundarbans Mangrove Forest, Bangladesh **(PA-67)**

Shovon Shaha: Microbial Fuel Cell Driven High Salt Tolerant Exoelectrogenic Bacteria Can be used for Power Generation and Bioremediation in Coastal Area of Bangladesh **(PA-69)**

Masuma Anzuman: Control of multiple antibiotic resistance respiratory tract bacteria by green synthesized silver nanoparticles using *Piper chaba* leaf extract **(PA-70)**

Ariful Islam: Elucidation of bacterial characterization along with antibacterial and antifungal assay through *in vitro* approaches of endophytic bacteria from five vegetable plants **(PA-81)**

Farazi Abinash Rahman: Genomics insight into the Neisseria genus revealed antibiotic resistance in *N. flavescens* and *N. lactamica* commensal species **(PA-54)**

Shubhro Saha: Production and partial characterization of Alpha amylase by a novel *Bacillus* sp. B-5 in biofilm and submerged fermentation **(PA-73)**

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Poster Session V: Bioinformatics and Computational Biology

Hossain Md. Hridoy: Exploring genetic links between atherosclerosis and its risk factors through bioinformatics and systems biology **(PA-20)**

Md Habibur Rahman Tasin: Screening of Drug Substances for Breast Cancer: A Bioinformatic and Cheminformatic approach **(PA-26)**

Md. Mohaimenul Islam Tareq: Flavonoids Derivatives from Amazon Plants Potentially Suppress the Expression of H5N1 Influenza-A Virus Subtype: A Computational Drug Development Approach **(PA-27)**

Md Nazmul Hasan Zilani: *Cissus quadrangularis* L. divulged as a source of anti-inflammatory and anti-diabetic pharmacophore in both experimental and computational methods **(PA-28)**

Swagota Briti Ray Gupta: Exploring Probiotic Potential and Therapeutic Efficacy of *Lactobacillus* sp. against *Shigella sonnei*: A Comprehensive Study Involving *in vitro*, *in vivo*, and *in silico* Approaches **(PA-37)**

Mohasana Akter Mita: *Lactobacillus plantarum* DMR14 as a Potential Therapeutic Agent for Diabetes: *in vitro*, *in vivo*, and *in silico* Affirmation **(PA-41)**

Suvro Biswas: Lupeol from *Pterocarpus santalinus* leaf as a promising antidiabetic agent: An *in vitro*, *in silico* and *in vivo* study **(PA-42)**

Kishore Biswas: Development of novel plasmid construct for genetic immobilization of phytase at the cell surface of yeast **(PA-43)**

Zeshan Mahmud Chowdhury: Decoding the role of uncharacterized *Helicobacter pylori* proteins on differentially expressed genes in gastric cancer pathogenesis **(PA-49)**

Md. Tarikul Islam: Identification of natural inhibitors from traditional medicinal plants to ameliorate Amyotrophic Lateral sclerosis (ALS) through computational approaches **(PA-60)**

SK Nazmul Ulla: Identification of Potential Therapeutics against Monkeypox Virus Targeting the A42R Profilin-like Protein: An *in silico* Study **(PA-61)**

Sadia Jannat Tauhida: Therapeutic potentiality of *Carica papaya* leaf against dengue virus using *in silico* tools **(PA-65)**

Md. Mazherul Islam: Computational Approaches of Carbohydrate Derivatives for Potential Antiviral Agents for Dengue Virus **(PA-77)**

Sonia Akhter: Nucleoside-Based Therapeutic Drugs with Computational Studies against SARS-CoV-2 **(PA-78)**

Md Ridoy Hossain: Evaluation of Icn2 gene expression in colorectal cancer and bioactive flavonoids to inhibit the metastatic progression: a computational drug development approach **(PA-96)**

Syeda Afra Saiara: Immunoinformatic Design of a Multivalent Peptide Vaccine Against Mucormycosis: Targeting FTR1 Protein of Major Causative Fungi **(PA-01)**

Md. Hasan Jafre Shovon: A pan-genomic analysis based reverse vaccinology approach for the development of a multi-epitope vaccine against *Stenotrophomonas maltophilia* **(PA-34)**

Md Shohel UI Islam: Genome-wide identification and characterization of magnesium transporter (MGT) gene family in soybean (*Glycine max* L.) and their expression profiles in response to multiple stresses **(PA-64)**

Dipankor Chatterjee: Identification and Validation of Prognostic Signature Genes of Bladder Cancer by Integrating Methylation and Transcriptomic Analysis **(PA-72)**

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Poster Session VI: Food and Nutraceutical Biology

Asma Sadia Shuchi: Evaluation of Antioxidant and Anti-Hemolytic Activities of *Bruguiera parviflora* Leaves **(PA-35)**

Md. Hafizul Islam: Nutritional evaluation of *Catla catla* fish scale for sustainable applications in poultry feed **(PA-36)**

Md. Tushar Imran: Extraction, Partial Purification and Activity Analysis of Bromelain Enzyme from Pineapple Peels **(PA-40)**

Farzana Ahmed Nishi: Evaluation of Biopreservative Potential of Three Selected Plant Extracts **(PA-45)**

A. M. Humyra Islam: Seaweed (*Cladophora glomerata*) extract as fish feed additive for Nile Tilapia (*Oreochromis niloticus*) culture **(PA-48)**

Khadija Akhter: Effect of Foliar Application of Chitosan on Yield and Yield Contributing Characters in Okra (*Abelmoschus esculentus*) **(PA-50)**

Soumya Majumder: Some tea-borne microbes overcoming human gastrointestinal barriers may incite health risks **(PA-06)**