

Proceedings of the National Academy of Sciences, India

Section B: Biological Sciences



Official Publication of
The National Academy of Sciences, India
5, Lajpatrai Road, Allahabad-211002 (India)



Proceedings of the National Academy of Sciences, India

Section B: Biological Sciences

Volume 93 · Number 1 · Jan–Mar 2023

REVIEWS

***Tamilnadia uliginosa* (Retz) Tirveng and Sastre: Potential Application from Traditional Remedies to Modern Therapeutics**

A. Kalita · A. Bharadwaz · D. Kaushik · S. Kumar · H. Sarma · S. Kushari · A. Bharali · B. Deka · I. Hazarika · D. Laloo 1

Biomolecules Regulating Defense Mechanism in Plants

V.A. Chowdhary · J.G. Tank 17

RESEARCH ARTICLES

Diversity of Earthworms in Different Land Use Systems of Kottayam District, Kerala, India

R. Anuja · S.P. Narayanan · S. Sathrumithra · A.P. Thomas · J.M. Julka 27

Woody Species Diversity, Structure, and Regeneration in Tiru-Selam Forest, Northwestern Ethiopia

T. Munye · G. Gashu 45

Biomass and Carbon Stock Capacity of Wacho Forest, Southwestern Ethiopia, and its Implication for Climate Change Mitigation

G. Gashu 59

Green Synthesis and Antibacterial Effect of Fe_3O_4 Cu Nanocomposite Using *Rosmarinus officinalis* L. (Rosemary) Aqueous Extracts

M.F. Koudehi · R. Zibaseresht 71

Fish Diversity Associated with Environmental Parameters in Impacted Area of Ganga River, India

V. Kamboj · N. Kamboj · A.K. Sharma · A. Bisht 79

Assessment of *Leishmania donovani* Inhibition by Zinc Sulfate: an In vitro and In silico Investigation

M. Sirajuddin · A.A. Mahdi · A. Srivastava 91

Pharmacognostic and Nutraceutical Potential of *Momordica Dioica* Roxb. Ex willd. Fruit

A. Srivastava · A. Misra · M.K. Chaudhary · P.K. Shukla · M. Kumar · S. Srivastava 97

Fatty Acid Composition and Oxidative Potential of Food Products Prepared Using Low Erucic Brassica Oils

S. Saklani · K. Grover · M. Choudhary · S.K. Sandhu · M. Javed 107

Integration of Modern Molecular Tools with Geological Processes to Reveal Species Phylogeny, Biogeographical Niche Prediction, and Bio-Evolution

M.S. Bhandari · M.A.C. Martins-Ferreira · A. Shamoon · S. Pandey · R.K. Meena 119

The Hydro-alcoholic Extract of *Achillea wilhelmsii* C. Koch Ameliorates Acetic Acid-induced Ulcerative Colitis through TLR-4

S. Momtaz · M.A. Azimian · P. Gharazi · M. Dehnamaki · Z. Rezaei · M. Rahimifard · M. Baeeri · A.R. Abdollahi · M. Abdollahi · M.H. Farzaei · A.H. Abdolghaffari 127

Study of Antimicrobial Effect of a New Fluoroquinolone Derivative Against Pathogenic Bacteria in Planktonic Form and Biofilm

Z. Taghavi · M. Hassanshahian · G. Hassanshahi 137

Anti-allergic and Anti-hyperglycemic Potentials of *Lumnitzera racemose* Leaves: In vivo and In silico Studies

R.N. Acharyya · S. Mithila · S. Rani · Md.A. Islam · M. Golder · K.S. Ahmed · H. Hossain · S. Dev · A.K. Das 147

Docking Based Screening of Potent Flavonoids as CHK2 Inhibitors from Genus *Miliusa*

C.I. Moodbagil · R. Mahmood · R.S.K. Jain · P. Meghana · N. Prashanth · H.M. Kumaraswamy · R. Sharath 159

Potential of Epiphytic Lichen *Pyxine cocoes*, as an Indicator of Air Pollution in Kolkata, India

S. Banerjee · S.S. Ram · A. Mukhopadhyay · N. Jana · M. Sudarshan · A. Chakraborty 165

The Health Impact of Consuming Smoked Fish and Roasted Plantain on Albino Rats by Serum Enzyme Assay

U.I. Amaihe · G. Onyeze · O.I. Osuagwu · C.E. Enyoh · O.U. Akakuru 181

Assessment of Coverage Percentage, Biomass, and Photosynthetic Pigments of Bryophytes in Kanasar Forest Range, Uttarakhand, India

A. Dhyani · R. Baishya · P.L. Uniyal · K.S. Rao 189

Endophytic Bacteria Isolated from Indian Spices: An Efficient Bioremediation Agent for the Degradation of Sodium Dodecyl Sulphate

S. Vaishali · S. Siddharth · K. Sherikar · S. Sabat 195

Eleven New Records of Lichen to the State of Mizoram, Indo-Myanmar Biodiversity Hot Spot Region, India
P.C. Lalremruata · P. Singh · R. Lalfakzuala 205

Degradation of Complex Textile Dyes by Some Leaf-Litter Dwelling Fungi
S. Chatterjee · S. Pandey 213

Hydrolysis of Cellulose Rich Agricultural Waste Using Two Potent Local Bacterial Isolates
S.A. Abdelhamid · E.H. El-Shatoury · M.S. Asker · S.K. Abd-El-Aal · S.S. Mohamed 225

Production of Organic Liquid Biofertilizer from Fish Waste and Study of its Plant Growth Promoting Effect
M.V. Bhuimbar · P.B. Dandge 235

Identification of Superior Carnation (*Dianthus caryophyllus L.*) Cultivars Based on Morphological Traits
M. Taghizadeh · A. Khadivi 245

Micromorphological, Anatomical and Biochemical Analysis of some Divisive *Capsicum Annum* Varieties of North East India

A. Morang · T. Chetia · T. Boruah 257

Further articles can be found at link.springer.com

Instructions for Authors for *Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.* are available at www.springer.com/40011