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Editorial

Dear Readers,

Greetings!!!

On behalf of the editorial board members, I am extremely delighted to write this message on the release of the *Mapana Journal of Sciences*, October 2020, Issue. I hope this journal will disseminate the new knowledge and practices evolved in different scientific disciplines. In this issue there are five articles emphasized on environmental sustainability and impact of bioactive metabolites in human welfare. The first article of the issue is focused on the assessment of free-floating duckweed *Spirodela polyrhiza* in removal of heavy metals from waste water. In this study, the authors conducted one-month laboratory experiments to mark the percentage removal of different heavy metals and the effect of heavy metals on nitrate reductase activity, total chlorophyll and protein contents in the plant. The authors reported a high percentage of Zn, Cd, Pb, Ni, Fe and Cu accumulation in *Spirodela polyrhiza* species. This finding will provide further insights on the use of such plant species for mitigation of contaminated sites in a cost effective and eco-friendly way. The second article is focused on non-recombinant mutagenesis of *Bacillus tropicus* CUIMW1718 for possible high yield of industrially important alginase. As per the data reported by the authors, the indigenous strain was subjected to Ultraviolet (UV) irradiation, Ethidium bromide (EtBr), Ethyl Methane Sulfonate (EMS) mutagenesis, followed by cross mutation of Ultraviolet (UV) irradiated strain with Ethyl Methane Sulfonate (EMS) and Ethidium bromide (EtBr). This finding suggested to prefer combined mutagenesis for possible stable and high yielding strains. The third article elucidated the effect of various physiochemical parameters on enzymatic reactions. This article highlighted the effect of dilution with water and mixing to play a major role in biochemical reactions. Fourth article focuses on the assessment of *Lawsonia inermis* flowers extract on neuronal system. In this study, the authors reported ethanolic extract of *Lawsonia inermis* flowers to possess positive locomotor depressant, skeletal muscle relaxant, sedative and anticonvulsant effects in the

experimental rodent models indicating its significant depressant action on the central nervous system.

The fifth article of this issue is Expression, Purification and Functional Antibacterial Characterization of Novel Antimicrobial Peptide Gene *Pediocin* against *Salmonella typhi*. In this study the authors expressed the pediocin gene (AY083244.3; pedA) 532bp, encoding 101aa) into pTZ57R/T cloning vector (Fermentas, USA) by double digestion with EcoRI/HindIII followed by ligation and transformation into *E. coli* JM109. The fermented suspension was subjected for Fast Protein Liquid Chromatography to purify the desired peptide. The antimicrobial activity of the isolated peptide was assessed against *Salmonella typhi*. We would like to extend our heartfelt thanks to all the authors and reviewers for their contribution and the readers for their support and constructive criticism.

We look forward to further contributions to the *Mapana Journal of Sciences* and promote the exciting findings of researchers around the globe.

Best Wishes,

Erumalla Venkatanagaraju
Section Editor