PREFACE

Life is like a bicycle.
To keep your balance, you must keep moving
-Albert Einstein

It is my immense pleasure of releasing the special issue of Indian Journal of Biochemistry and Biophysics publishing the selected and quality research papers from the "International Seminar on Recent Advances in Science and Technology". The International Seminar was held during the period November 16-18, 2020 through Virtual mode. The seminar was associated with the 2nd Convention of the North East Academy of Science & Technology (NEAST). The academy was established for the promotion of Science & Technology in the North East India. The academy is committed in expanding various academic activities in this part of country.

The special issue consisted with 10 research articles which cover wide research area and are selected from the different part of country. This includes the core and applied biological sciences including the cancer biology. The molecular docking studies were demonstrated for the phytoconstituents of *Illicium verum* fruit against the Caspase 3, MMP 9 and TNF-α. The emerging micro-pollutants including the pharmaceuticals or personal care products are the global environmental concerns and use of indigenous or engineered materials showed greater implications in the remediation strategies. The papers included the use of advanced or hybrid materials in the remediation of aquatic environment contaminated with several micropollutants which could have greater applications in practical implications. In addition, the use of ferrate (VI)is assessed in the treatment of water contaminated with triclosan and amoxicillin. The treatment process is known to be "Greener Treatment" and attracted greater global attention in recent time. The Schiff base transition metal complexes were synthesized and demonstrated for the pesticidal activity.Similarly, the copper(II) complexes with N-donor chelating groups were screened for the antibacterial and cytotoxicity of these complex compounds. The *in silico* and *in vitro* studies were shown for the drug repurposing the daclatasvir and famciclovir as antiviral activity against the dengue virus infections. The relative binding modes and the affinities of all the selected drugs were predicted and compared with the co-crystallized *n-octyl-beta-D-glucopyranoside (βOG)*. An analytical method was developed using the novel N-doped carbon dot-copper and silver nanocomposite for the low-level detection of uric acid in complex matrix. In addition, the Anti-oxidative potential and anti-cancer activity of *Elaeagnus caudate* (Schltdl) and Antioxidant efficacy and cytotoxicity of *Clerodendrum infortunatum* were also demonstrated. Overall, we are happy to present quality research papers in this special issue and hoping, the research findings presented in this issue could find good readership for wider circulation and impact of the journal.

The Guest Editor greatly acknowledges all the external reviewers for their unconditional academic support and timely review of all these papers which helped us to bring the issue in present form. While presenting the issue, I must take this opportunity to mention that the Editor of IJBB has given us useful suggestions throughout for enhancing the quality of the papers. I also put on record the support we received from our Hon'ble Vice Chancellor, Prof. KRS Sambasiva Rao, for his encouragement and support carrying variety of academic activities in the university. Further, we extend our gratitude and sincere thanks to Dr Ranjana Aggarwal, Director, CSIR-NIScPR, New Delhi and Shri RS Jayasomu, Editor, IJEB for encouragement towards this publication. We also appreciate the support and extensive work done by the Editor Dr NK Prasanna Kumari and team of the Indian Journal of Biochemistry and Biophysics, in bringing out this excellent special issue. At the last but not least, the accurate and efficient type settings of the issue by the technical staff is greatly acknowledged and the patience shown by them in repeated revisions/corrections was incredible.

Prof. Diwakar Tiwari
Guest Editor
Department of Chemistry,
School of Physical Sciences,
Mizoram University,
Aizawl-796 004
Mizoram, India