



## **Technological interventions in Biology**

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**T**he recent integration of advances in biotechnology, genomic research, genetic engineering and molecular marker applications with conventional practices has laid the foundation for molecular approaches revolutionizing 21st century in various fields of science and industry which can benefit the mankind. This is a constantly evolving area of science and a topic of intense interest in basic scientific research for biologists, technologists and policy planners. The domain of applications of biotechnology appears to be tremendous, challenging and transforming several fields. This is the hallmark of modern time which has unlocked unprecedented opportunities for development for human benefit. Biotechnology is an ever evolving science with multipronged strategies requiring linkages among various fields of developing sciences and is reflective of the level of civilization and economic prospects of nations to fulfil relevant public aspirations of food security, nutritional security, health security, energy security, environment-friendly technology and economic developments on a global scale.

With known potential and a wide range of application of biotechnology, researchers, scientists, teachers and students have given priority for learning and investigating the advanced methodologies to gain a deeper insight of new medicines, vaccines and disease diagnostic tools; and higher yielding, resistant to biotic and abiotic stresses and more nutrient-rich crop plants. In the coming years, most of the commercial applications will dwell in medical biotechnology, diagnostics, therapeutics, vaccines, gene therapy, pharmacogenomics, recombinant DNA technology, transgenic plants and other fields of agricultural science, food processing, environmental biotechnology to find environment friendly alternatives to fossil fuels and biodegradable plastics, biofuels, environmental uses and bioremediation, bioinformatics and computational biology. In

recent years, there has been increasing interest in moving toward a bio-based economy as represented by numerous research activities in industrial biotechnology. Each of these is a huge field in itself where enormous manpower is engaged in finding the solutions to the existing and emerging complex problems of application.

The massive open online learning is a recent disruptive innovation of linking learners, learning material and intelligent learning service of highly rated universities and meaningfully and effectively harnessed for training and capacity building of public on a much larger and massive scale. Building skills, competencies and capacities of human resources is given priority by the Journal of Biological Engineering Research and Review (JBERR) with the specific focus on to publish on-line high quality scientific research information, latest findings and scientific advances for quality learning and disseminating original academic information in the field of Biological engineering, Biotechnology, Biomedical Engineering, Bioinformatics, Agri-informatics, Microbiology and Pharmaceutical Sciences for utility to educators, researchers and practitioners. JBERR is expected to rapidly publish original scientific research articles and review papers in the journal by providing a worldwide multidisciplinary open access, peer-reviewed, online valued information at global level to bridge and integrate the intellectual and communicate high quality research articles, reviews and general articles to accelerate promotion and the exchange of ideas and information rationale.

I am happy to go through the journal. Different from other topical issues, this issue of JBERR is compiled with a series of exciting reviews and research articles from spontaneous submissions, again, addressing society's actual problems and needs. The progress is a real testimony how biotechnology contributes to achievements in healthcare, better utilization of resources, and a bio-based economy.