Welcome Message

We are in a world of increasingly integrated economically and is affected by global challenges such as climate change, food security, and environmental degradation which is directly affecting human life. Biotechnology, the technology for manipulating biological entities, can help for surviving and protecting all organisms on the earth. New technologies are emerging every day and there are tremendous advancement of old ones and biotechnology has become a key factor for Better Quality of Life for every human being and whole Human Family in every region and on the global scale.

Climate change has immense effect on the paradigm of lives of all living organisms all over the world. New diseases are emerging in every corners of the world while we don't have concrete solution of devastating life-threatening diseases like cancers, AIDS, diabetics and other chronic diseases. Over one-fourth of Americans suffer from multiple (two or more) chronic conditions (MCC) and 71% of total health care spending goes towards treating people with MCC but there is no single drug that could be prescribed to treat more than one disease. Moreover, we are solely depended on the pharmaceutical companies for our drugs when there is thousands times price gap between active ingredients and fine products. We must look for new drugs, alternate sources of drugs as well as efficient drug delivery. DNA based personalized drugs, bio-based polymer encapsulated drug delivery, and converting our nutritious crop into drug bio-factory could be explored to mitigate the problems in human health management.

Over hundreds of years, agricultural scientists all over the world devoted themselves to increase the agricultural production which was necessary to meet the energy demand for increasing population while nutritional quality of their products was not in priority. World population is predicted to be 9.7 billion by 2050, further increase of agricultural production is necessary however if the nutritional quality of crop product is not addressed right now, the whole world will face serious consequence of malnutrition. The micronutrients concentration in staples are alarmingly low and the genes controlling the uptake and translocation of micronutrients from soil environment to the crop seed are complex and cannot be manipulated rapidly by conventional breeding. Genome editing to manipulate these genes using emerging and efficient technology may help improving health related micronutrient contents in crop plant with its production.

Bio-based composites are derived from biological resources which are environmental friendly and renewable in nature. These composites with their natural origin offer similar structural performance to that of synthetic polymers. The biodegradability of the fossil based synthetic polymers is characteristically low and utilization of these materials causes around 25% greenhouse gas emission which results in environmental pollution. Composites mixed with bio-based and synthetic polymers have many industrial applications and because of their natural occurring components, they offer economic advantages as well as add value to the commodity industrial polymers. In crop agriculture, there are huge amounts of abundant residual product or byproduct which are left behind after harvesting or during food grain preparations which could be a potential source of bio-based composites. The internal structure, architecture, chemical composition, crystallinity, and micro fibril orientation angle of plant fibers determine its performance in the composite. In recent years, the utilization of fibers from agricultural crops has emerged as a renewed area of interest in research and development because they are environment friendly, renewable, and recyclable resource. Expansion of the utilization of bio-based resources in industries would warrant greener environment, sustainable products, and economic value to farmers.

The Biotechnology Conference will be a perfect platform for researchers, scientists, professors, and student to exchange and discuss ideas in the field of biotechnology. This one-day conference will provoke Plenary Sessions, Keynote Speeches, Poster and Oral Presentations. I am pleased to welcome you all to this great opportunity of sharing your knowledge, ideas, and thoughts. Have a wonderful conference.

Biography:

Khwaja G. Hossain completed Ph.D. from the University of Wales, Aberystwyth, UK in 1995 and postdoctoral studies from Chiba University, Matsudo, Japan and North Dakota State University, Fargo, ND, USA. Currently working as a professor at Mayville State University, Mayville. He has published more than 40 papers in reputed journals. A recipient of several federal and state grants, leading research projects in biological and material science.

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