

Genomics and future of medicine

Talha Bin Emran and S M Zahid Hosen

BGC Trust University, Bangladesh

Rapid advance in genomics, as demonstrated by the tangible use of gene diagnosis and targeted therapies indicate that the impact of genomics in healthcare is only going to increase. There has been much progress in genomics in the ten years since a draft sequence of the human genome was published. Opportunities for understanding health and disease are now unprecedented, as advances in genomics are harnessed to obtain robust foundational knowledge about the structure and function of the human genome and about the genetic contributions to human health and disease. The increased efficiency of DNA sequencing opens up the possibility of analyzing a large number of individual genomes and transcriptomes and complete reference proteomes and metabolomes are within reach using powerful analytical techniques based on chromatography, mass spectrometry and nuclear magnetic resonance. These novel approaches to DNA sequencing offer the promise of complete genomic analysis at a cost feasible for routine clinical diagnostics. The expected benefits of genomics include the enhanced discovery of disease genes, which will lead to improved knowledge on the genetic basis of diseases; availability of DNA based diagnostic methods, which will find widespread application in pre-implantation diagnosis, carrier screening, pre-symptomatic testing and population screening; the availability of more effective and more tolerant drugs, which will result in more effective therapies characterized by higher potency and reduced incidence of adverse reactions.

Biography

Talha Bin Emran

B. Sc. (Hon's), M. S. (Biochemistry and Molecular Biology, University of Chittagong), FAGE (India).

Mr. Talha Bin Emran has been working as a Lecturer, in the Department of Pharmacy, BGC Trust University, Bangladesh from January 2012 till date. Mr. Emran has published more than 25 research and review papers in reputed international and national journals. He participated in many seminars and conferences to present his research activities. His research work is based on Phytochemistry, Medicinal Chemistry, Biopharmaceutics, Molecular Biology, Oncology and Bioinformatics. He is a Fellow of Academy of General Education, India (FAGE) and a fellow of Ministry of Science, Information & Communication Technology (MOSICT) in the Session 2011-2012 for MS Thesis. He is a life member in Graduate Biochemist Association (GBA) and also a life member of Association of Pharmacy Professionals (APP), India. He is interested in working on the different updated era of sciences, e.g., Gene technology, Molecular modeling, Peptide and Protein engineering, Immunology and Molecular medicine.

talhabmb@gmail.com