

KEGG (Kyoto Encyclopedia of Genes and Genomes) for representation and analysis of molecular networks involving diseases and drugs

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KEGG is a database resource that integrates genomic, chemical and systemic functional information's. Most human diseases are complex multi-factorial diseases resulting from the combination of various genetic and environmental factors. In the KEGG database resource diseases are viewed as perturbed states of the molecular system, and drugs as perturbants to the molecular system. In particular, gene catalogs from completely sequenced genomes are linked to higher-level systemic functions of the cell, the organism and the ecosystem. Major efforts have been undertaken to manually create a knowledge base for such systemic functions by capturing and organizing experimental knowledge in computable forms; namely, in the forms of KEGG pathway maps, BRITE functional hierarchies and KEGG modules. Continuous efforts have also been made to develop and improve the cross-species annotation procedure for linking genomes to the molecular networks through the KEGG Orthology (KO) system. KEGG Mapper, a collection of tools for KEGG PATHWAY, BRITE and MODULE mapping, enabling integration and interpretation of large-scale data sets. A variation of the KEGG mapping procedure to extend the knowledge base, where different types of data and knowledge, such as disease genes and drug targets, are integrated as part of the KEGG molecular networks.

Biography

Talha Bin Emran B.Sc. (Hon's), M.S. (Biochemistry and Molecular Biology, University of Chittagong), FAGE (India). Talha Bin Emran has been working as a Lecturer, in the Department of Pharmacy, BGC Trust University, Bangladesh from January 2012 to till the date. Emran has published more than 25 research and review papers in reputed international and national journal. He participated in many seminars and conferences to present his research activities. His research work 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.

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