

Bioinformatics, drugs & omics- An overview of the major areas of the omics

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Bioinformatics is becoming more and more important in drug discovery and drug development and is tightly integrated with various omics technologies and other high throughput technologies. The automated omics technologies which have followed the genomics revolution generate very large amounts of data, and it is the task of bioinformatics to take care of these data and make practical use of them. Omics is used in words such as genomics, transcriptomics, proteomics, metabolomics, and interactomics. Omics produces very large amount of data and these data accumulate at an ever increasing speed. The amounts of data are so large that it is impossible for a human brain to encompass even a tiny fraction of them and even if we could, making practical use of them would be an even more difficult task. It is evident therefore that computers are needed to translate the data into formats that can be understood and interpreted by humans. In this study we have concentrated on describing the methods for data acquisition in omics and some features of the underlying biology that are essential for interpreting the results from the data generated. Omics technologies thus aim at studying the organism in their entirety. Based on the knowledge gained it is hoped that we will be able to develop drug faster and more efficiently.

Biography

Mr. S. M. Zahid Hosen has been working as a Lecturer, in the Department of Pharmacy, BGC Trust University, Bangladesh from January 2009 to till the date. Mr. Hosen has published more than 25 research and review papers in reputed International and national Journal. He participated in many seminars and conferences in home and abroad to present his research activities. His research work based on Infectious diseases, Pharmacology, Molecular biology, Cancer biology, Pharmaceutical Biotechnology and Pharmaceutical bioinformatics. After completion of his Master of Pharmacy (Thesis) with distinction he successfully completed course on Pharmaceutical Bioinformatics from world renowned Uppsala University, Sweden. He is a fellow of Academy of General Education, India (FAGE) and also life member of Association of Pharmacy Professionals, India. He is interested in Molecular Medicine, Pharmacogenomics and Pharmaceutical Bioinformatics. At present Mr. Hosen conducted his research work as a project leader (Pharmaceutical Biotechnology) in the "Genomics and Bioinformatics Lab-USTC" under supervision of renowned scientist Professor Dr. Arifuzzaman.

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Formulation and validation of cream for *Tinea pedis* using extract of *Curcuma longa*, *Shorea robusta* and *Madhuca indica*

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Traditional medicine is a very important part of healthcare. Most population in the developing countries still relies mainly on the indigenous traditional medicine for satisfying their primary healthcare needs. During the last decade, there has also been a growing interest in herbal medicine. Dermatomycoses, the most common of mycotic infections, occur worldwide. Although not life threatening, they may produce significant symptoms which may interfere with the quality of life. They are particularly widespread in tropical countries because of warm and humid climate, crowded living conditions, and other socio-economic factors. *Tinea pedis* is widely spread in the Indian population, particularly in house-maids, farmers and athletes. So the present study focused on formulation, evaluation and validation of cream for *tinea pedis* using extract of *curcuma longa*, *shorea robusta* and *madhuca indica*, TLC and HPTLC was done for chemical analysis and quantitative estimation of extracts. Antimicrobial and antifungal assays were carried out to check the activity of the extracts and fractionated products, to be incorporated into the cream; various ratios of the three drugs were tried, out of them, 0.3% of *C. longa*, 0.3% of *Madhuca indica* and 0.6% of fractionated product of *S. robusta* in 1:1:2 proportions showed optimum results, Three formulae for cream base were tried one of them showed good results as smooth texture, optimum pH and good spreadability. The formulation was validated including parameters like pH, viscosity and spreadability.

Biography

Shruti H. Radke has completed her graduation in 2011 from Sharad Pawar College of Pharmacy, RTM Nagpur University. Currently she is doing her masters studies (M.Pharm) from the same institute. She has presented posters in 6 national, 1 international and 1 state conference.

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