



EDITORIAL

GENOMICS

Genomics is the study of the full genetic complement of an organism; i.e genome and incorporates elements from genetics. It uses recombinant DNA, DNA sequencing methods and bioinformatics to sequence, assemble and analyze structure and function of genomes.

It differs from 'classical genetics' in that it considers an organism's full complement of hereditary material, rather than one gene or one gene product at a time. Moreover, genomics focuses on interactions between loci and alleles within the genome and other interactions such as epistasis, pleiotropy and heterosis. Genomics harnesses the availability of complete DNA sequences for entire organisms.

The work of Fred Sanger paved the way for the human genome project in the 1990, an enormous feat of global collaboration that resulted in the publication of the complete human genome sequence by 2003. Next-generation sequencing technologies now, have led to spectacular improvements in the capacity and affordability of genome sequencing. Moreover, advances in bioinformatics have enabled hundreds of life-science databases and projects that provide support for scientific research.

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