



The cost to sequence the human genome has fallen exponentially since it was first sequenced. In the beginning it cost tens or even hundreds of millions of dollars to sequence a single genome. Now, the cost is somewhere around \$1,000 and a single machine can sequence tens of thousands of genomes a year.

As more people get their genome sequenced, the information can be stored on a laptop, USB stick, or shared online. Quick and affordable genetic testing promises to make healthcare—from the genetic components of heart disease to cancer—more individually tailored, targeted, and effective.

Prime concerns and challenges include security and privacy of personal information. Also, communication of genetic risks and educating people on what those risks mean will be critical. In aggregate, however, the list's authors say it is more likely the benefits of personalized medicine will outweigh the risks.

**ADVISORY COMMITTEE**

DR. PRASHANTH CSR  
DEAN ACADEMICS,  
HOD, DEPT OF CSE

PROF GURUPRASAD N  
DEPT OF CSE

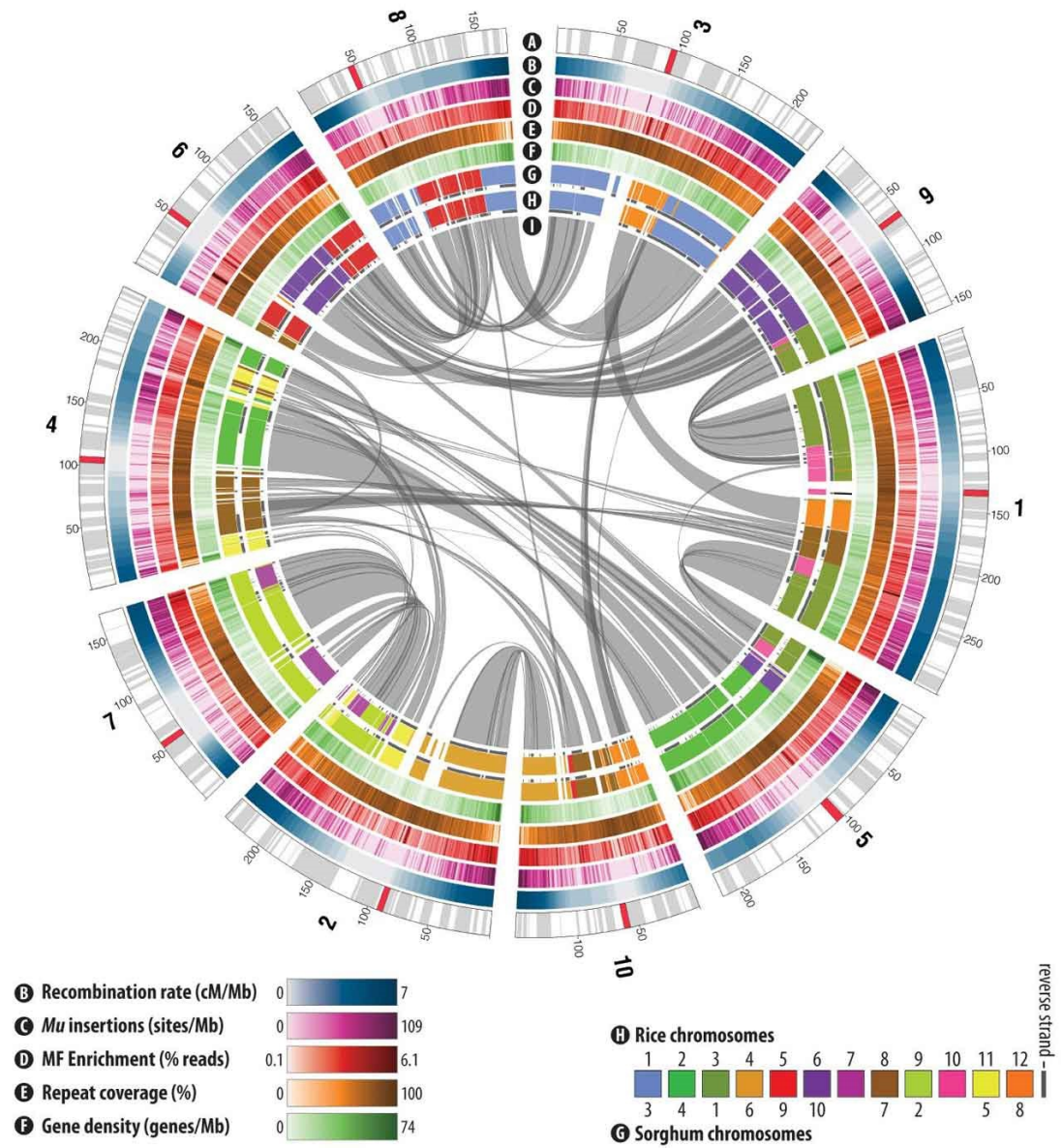
**STUDENT EDITORS**

ANSELM JOSEPH

ANSHUL SINHA

“Health care for an age where your genetic code is on an USB drive.”

Genomics is an interdisciplinary field of science focusing on genomes.] A genome is a complete set of DNA within a single cell of an organism, and as such genomics is a branch of molecular biology concerned with the structure, function, evolution, and mapping of genomes. Genomics aims at the collective characterization and quantification of genes, which direct the production of proteins with the assistance of enzymes and messenger molecules. Proteins in turn make up body structures like organs and tissues as well as control chemical reactions and carry signals between cells. If a cell's DNA is mutated, an abnormal protein may be produced, which can disrupt the body's usual processes and in some cases lead to diseases such as cancer. In contrast to genetics, which refers to the study of genes and their roles in inheritance, genomics is the study of genes, their functions, and related techniques, such as applications of recombinant DNA, DNA sequencing methods, and bioinformatics to sequence, assemble, and analyse the function and structure of genomes.



# NETFLIX

Netflix India.

Netflix, Inc. is an American entertainment company founded on August 29, 1997, in Scots Valley, California, by Reed Hastings and Marc Randolph. It specializes in and provides streaming media and video-on-demand online and DVD by mail. In 2013 Netflix expanded into film and television production, as well as online distribution. As of 2017 the company has its headquarters in Los Gatos, California.

Netflix's initial business model included DVD sales and rental, although Hastings jettisoned DVD sales about a year after Netflix's founding to focus on the DVD rental by mail business. In 2007, Netflix expanded its business with the introduction of streaming media, while retaining the DVD and Blu-ray rental service. The company expanded internationally, with streaming made available to Canada in 2010, and continued growing its streaming service from there.

Netflix entered the content-production industry in 2013, debuting its first series, House of Cards. It has greatly expanded the production of both film and television series since then, offering "Netflix Original" content through its online library of films and television.

Netflix developed and maintains an extensive personalized video-recommendation system based on ratings and reviews by its customers. On October 1, 2006, Netflix offered a \$1,000,000 prize to the first developer of a video-recommendation algorithm that could beat its existing algorithm Cinematics, at predicting customer ratings by more than 10%.

In February 2007, the company delivered its billionth DVD, and began to move away from its original core business model of DVDs, by introducing video on demand via the Internet. Netflix grew as DVD sales fell from 2006 to 2011.

In January 2013, Netflix reported that it had added two million United States customers during the fourth quarter of 2012, with a total of 27.1 million United States streaming customers, and 29.4 million total streaming customers. In addition, revenue was up 8% to \$945 million for the same period. That number increased to 36.3 million subscribers (29.2 million in the United States) in April 2013. As of September 2013, for that year's third quarter report, Netflix reported its total of global streaming subscribers at 40.4 million (31.2 million in the United States). By the fourth quarter of 2013, Netflix reported 33.1 million United States subscribers. By September 2014, Netflix had subscribers in over 40 countries, with intentions of expanding their services in unreached countries.