Short Communication
Volume 9:1,2021
DOI: 10.37421/jcmg.2021.9.169

Journal of Clinical & Medical Genomics

ISSN: 2472-128X **Open Access**

Purpose of Genomic Study

T Shiva Krishna*

Department of Biotechnology, Osmania University, Tarnaka, Hyderabad, Telangana, India

Correspondence to: *T Shiva Krishna, Department of Biotechnology, Osmania University, Tarnaka, Hyderabad, Telangana, India, Tel: 8143389651; E-mail:* shivakrishna@gmail.com

Purpose of Genomic Study

Genomics is a new field of research, which began in late 20th century, although the basis of DNA was discovered more than a century ago. Genomics research has opened for exciting possibilities for genomics applications in many other fields, some of which offer medical and health benefits. The Human Genome is a significant research project in the field of genomics. Discovery of the human genome sequence was the first step in developing and understanding the way of DNA coded to provide human life. There are several research projects are underway to develop knowledge on genome. Over the next century, there were several developments to improve in understanding the DNA, which includes chromosomal inheritance and the nucleotide bases of DNA.

Aim of Genomic Study

- To determine the function of genes and other elements in the genome
- To identify the genome (DNA) sequencing variations in humans and their effects
- To discover protein structure (3-dimensional)
- To identify the function of different protein structures
- To explore the interaction between DNA and proteins in environments (invivo)
- To sequence the genomes of other organisms to make relevant comparisons
- To develop new technologies and to enhance genomics research and efficiency of DNA sequencing
- To explore the legal, ethical and social issues which are associated with genomic research

Clinical Applications from Genome Research

Genomic technologies are being increased in use of contribution of both common and rare genetic factors in development of common diseases, like high blood pressure, diabetes and cancer.

- Gene discovery and diagnosis of rare monogenic disorders
- Identification and diagnosis of genetic factors contributing to common disease
- Pharmacogenetics and targeted therapy
- Prenatal diagnosis and testing
- Infectious diseases
- Gene therapy
- Genome editing

Continued to the progression in the field of genomics may lead to the substantial changes in the way that understand the health conditions and treatments.

E.g., knowledge about particular differences in single nucleotide polymorphisms (SNPs) and the correlation of specific health conditions help to target treatment to individuals at high risk of being affected. Additionally, to these changes in SNPs predict the efficacy of a patient response to certain medical treatments.

Precision medicine is an emerging field in the medicine which involves in tailoring the patient medical plan to the genetic makeup of each individual, to improve the efficacy of treatment and reduce adverse effects of risk.

Advance genomic research help in making significant progression in the utility of precision medicine. It could help further research to determine and improve in detection and diagnostic techniques for health conditions.

How to cite this article: Krishna TS. "Purpose of Genomic Study". J Clin Med Genomics 9 (2021) doi: 10.37421/jcmg.2021.9.169

Received: *January 09, 2021;* ***Accepted:*** *January 25, 2021;* ***Published:*** *January 30, 2021*

Citation: *Krishna TS (2021) Purpose of Genomic Study. J Clin Med Genomics. 9:169. doi: 10.37421/jcmg.2021.9.169*