
Preface

Genome research has indeed pampered our optimism as it was construed that the same would enhance our understanding on the mechanisms that lead to genetic diseases. In the context of human health, genetics involves study on single gene and their regulation to improve public health and prevent diseases. Genetic research helps to identify diseases and health problems that are more likely to be influenced by genetic factors. Genetic tests enable the risk assessment and determine the predisposition of an individual to various diseases by uncovering the mutations or variations in the genome. Such information may be useful in managing an individual's lifestyle and healthcare system. In addition to testing for particular conditions, genetic research provides solutions to health problems caused by genetic abnormalities and mutations either by medications or genetic modification. Most genetic disorders cannot be cured; however, many people have restored their health and avoided potentially life-threatening diseases with the help of genetic research by taking due precautions coupled with advanced medicaments and changed lifestyle.

Continuous technological improvements in DNA sequencing have created an ambiance par excellence that a large number of disease-causing microbe and viral genomes are sequenced on regular basis. The availability and the integration of genetical information have been the driving forces toward our understanding of the normal and abnormal genomes.

We believe that newer and far more despicable diseases would continue to emerge so also the quest to fight these diseases. Conceptually, advances in genetical knowledge fueled by technology could be used to prevent diseases creating much healthier gene pool. Thus, genome analysis both for normal and diseased ones would continue to upgrade our knowledge ensuring hope and assuring a healthy world.

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