One of the basic principles of modern biology holds that the long-chain of molecule deoxyribonucleic acid (DNA) encodes all the instructions needed to create life. The idea of genome project aimed at decoding and sequencing these instructions emerged in political arena in 1980, got momentum later and, officially started in 1990 and completed in 2003. It has been described by its supporters as the Holy Grail of Biology and the biggest scientific endeavour ever under taken by the humanity. The project has yielded various information and is expected to play a central role in medicine and public health in the 21st century by providing genetic information for disease prediction and prevention.

At the same time the information gathered and still gathering from the project are contentious issues politically, scientifically and legally as one. As genome technology moves from the laboratory to the real life setting, a complex array of challenges will face medical, public health and policy makers regarding the appropriate use of genetic information to improve health and prevent disease in individuals, families, and communities.

This research work is an attempt to study the various ethical and legal issues arising out of this mammoth project and legislative and Institutional responses to the break through in genetic science. The research brings out the spectacular progress that has been made in the field of genomics by humanity. The study also brings out salient features of legislative responses. It also reveals various short comings and grave legal vacuum prevailing in this area. An analysis is done for studying the different and varied perspectives of experts from diverse background. The study brings into sharp focus the need for bringing about comprehensive legislation to prevent various possible human right violations and for the law to keep update with the breathtaking speed in which science is progressing.
The study is a rewarding exercise in bringing out the loopholes in the existing legal regime pertaining to human genome. The utility of this research is vital from the point of view of evolving more practical provisions and principles and creating a legal regime, which is equitable, respectful of the dignity of the individual and mindful that the individual is always, much more than a collection of his or her genes. This study contributed significantly to my goals, as a researcher, as it has lent critical understanding to the relationships between Science and Law. The framework I developed to address and solve the legal problems arising out of HGP shall provide beneficial to policy makers and researchers in this field.