

Gene drugs to cure heart attacks

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At a time when cardiovascular diseases (CVD) are the leading cause of death in the world, application of genomic medicines in preventing and treating heart attacks is getting wider acceptance. CVD running in families caused by genes can be effectively prevented through drugs. Though very expensive, the drugs are being manufactured and used in the US and it makes a person and his/her next generations get protection from cardiac disorders.

Dr. Sekar Kathiresan, member of Precision Medicine Plan of US President Barrack Obama and director of preventive cardiology at Massachusetts General Hospital, who was in Kochi to attend the International Genomic Conference, told DC that India had been left out in gene sequencing studies and drug development as export of human DNA



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from the country was not permitted. Since India lacked high-end infrastructure facilities and technical expertise required for gene sequencing studies, the country was nowhere in the picture of genetic analysis based preventive medicine.

"Though South Indians are highly vulnerable to CVD, not even a single study has been conducted for the genetic analysis of the Indian population to

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Kochi: In a unique study, genes of 100,000 Asian persons are being studied to understand their population history which is expected to accelerate precision medicine applications for Asian population. Participants from 12 South Asian countries and seven North and East Asian countries are selected for gene sequencing.

The study initiated by non-profit consortium called GenomeAsia 100K will be a major milestone

in population gene analysis in south Asian countries including India.

Having deeper understanding of the Asian population's genome could lead to better healthcare discoveries in the future, it has been generally observed.

The study assumes great significance for India where the rate of cardiac diseases is rapidly increasing and the average age of cardiac patient is reduced to 30 to 35. —DC

find out the connection between genetic structure and the risks for CVD," he said.

"In 2003, the gene mutation associated with heart attack was identified. After three years of research, drugs have been developed which will help high risk group people with high susceptibility to get protected against the

disease. No editing of the disease-causing gene is done, but using the drugs, its function is being changed," he added.

The gene sequencing is not limited to preventive cardiology, it can be effectively used for several other diseases which have links with genes like Alzheimer's, dementia and even diabetes.