

B'lore researchers dive into gene-disease link

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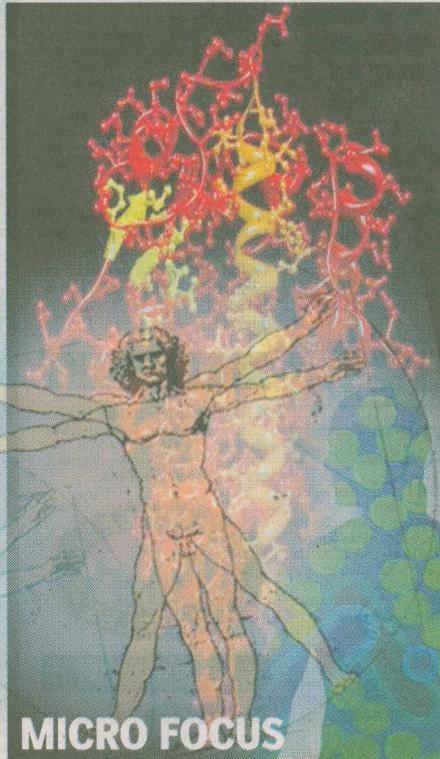
Bangalore: Genetics is in and a lot of answers to our diseases, if not all of them, flow from the genes. A team of Bangalore-based researchers has initiated a genetics project in which they will sequence, study and compare the genomes of 60 people to understand the influence of genes in the emergence of six major diseases, including cancer.

The researchers based out of Avesthagen, a systems biology research and products company that is into population genetics, among other things, are trying to understand the genetic basis of cancer, diabetes type 1, diabetes type 2, arthritis, cardiovascular diseases and neurological disorders. The research is part of 'Avestagenome project', that is an attempt to develop new and accurate diagnosis and therapies for these diseases.

Project To Compare Genomes Of Diseased And Normal People

Dr Sami N Guzder of the science and innovation sector of Avesthagen told TOI: "We are studying and comparing the genomes of diseased people with the genomes of non-diseased people with respect to six diseases. The study will reveal to us changes that may have occurred in the genomes of the diseased and the resulting differences with those of the non-diseased. The differences may help explain a particular gene's influence in the emergence of a particular disease."

The team has selected 10 persons for study of their genomes for each disease. As six diseases are being considered for study, 60 persons have been selected — ie 10 persons will be studied for each disease. Of the 10, five persons would be those afflicted with a disease, say cancer, and five without cancer. The same would be done with respect to other five diseases too. "The genomes of these two groups — the afflicted and non-afflicted — will be studied and analysed for their differences that could be a crucial source of our understanding of causes for the six major



MICRO FOCUS

- Focus of gene project is micro
- To look into changes that occur within human body at protein and metabolite levels
- To study functioning of and interaction between molecules in cells, and occurrences in cell pathways

diseases," Guzder said.

The researchers plan to bring out a complete cellular picture that will help understand particular changes in the cell pathways that may lead to certain reactions in the human body resulting in the diseases.

"The overall vision behind the project is to facilitate development of predictive, preventive and personalised approaches for diagnosis and treatment of cancer and other diseases. Once the project is through, we will have a better understanding of the role genetics plays in the emergence of at least the six diseases we have taken up for study," Guzder said.