MedGenome decodes genetic info to better diagnose diseases

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Sam Santosh has dabbled in two different worlds of codes – software and genetic — and has had a second successful innings as entrepreneur, something few achieve.

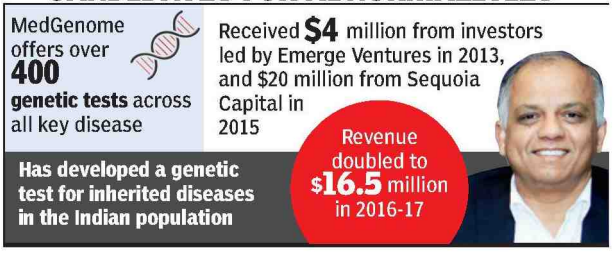
In 1992, he founded California Software (Calsoft), an IT services company, grew its office in Silicon Valley, made acquisitions, and took the firm public and listed it on the BSE in 2002.

MADE IN KARNATAKA

A decade later, he was closely tracking developments related to the Human Genome Project (HGP), a 13-year long research effort to sequence the human genome to understand genetic predispositions to a disease. He noticed how the cost of decoding a human genome was dropping sharply. "It's more dramatic than Moore's law. The $1,000 genome looks near," he says.

The $1,000 genome refers to an era of predictive and personalised medicine during which the cost of fully sequencing an individual's genome is roughly $1,000. In 2007, when the first sequencing service was launched for consumers, the price was $350,000. Today, some say they have breached the $1,000 mark.

'WE WANT TO FIND NEW DRUG CANDIDATES FOR ABNORMALITIES'



Santosh saw an opportunity in this, and started MedGenome in 2013, a genomics-driven research and diagnostics firm based out of Narayana Health City in Bengaluru. Its lab offers over 400 genetic tests across all key disease areas and has a network of more than 400 hospitals for diagnostics and 10 plus research collaborators across the country.

MedGenome zooms into clinical and phenotypic data, looks at the biochemical characteristics of an organism, and provides insights to clinicians for better diagnosis. It also conducts non-invasive prenatal tests to predict the risk of chromosomal disorders in a foetus. "The trigger was also from research institutes that wanted us to study the Indian population, which is unique. Indian genomic data will provide insights into complex diseases at the genetic level," says Santosh.

MedGenome received $4 million in Series A funding from investors led by Emerge Ventures in 2013, and two years later, got $20 million in funding from Sequoia Capital.

Last year, MedGenome bought the Illumina Hiseq X Ten platform for genome sequencing. It's also part of the non-profit consortium GenomeAsia 100K that plans to sequence 100,000 individuals that includes populations from 12 South Asian countries and at least seven North and East Asian countries.

Santosh's team has examined the challenges of carrying inherited diseases in India and the data showed alarming statistics. Over a million babies are born each year with genetic disorders and 20-30% of infant mortality was found to be due to these disorders. MedGenome came up with the Claria Carrier Screening, a genetic test for inherited diseases in the Indian population. The test provides carrier status to couples and their risks of passing down recessive diseases (condition where a person has two copies of an abnormal gene) to their children. "These days, you get many requests for examining paediatric neurology," Santosh says.

MedGenome employs 340 people, a majority of them based in its lab in Bengaluru. It has offices in the US and a lab in Singapore. Its revenue doubled to $16.5 million in 2016-17 and Santosh says the company has broken even. "We want to move up the value chain and understand which some new drug candidates for abnormalities are," he says.