

## New Age Diagnostics

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*Believing in the mantra of different strokes for different folks, new age diagnostic companies can perhaps change the face of an industry that reels under slackened growth.*

Aslight change in the tactics can pave the way for a radical breakthrough, this is applicable to the Indian diagnostic market. Growing at a rate of 15-20 percent, the market had been facing myriad bottlenecks in its progress route and was slammed by critics and market analysts as a highly segmented market that sans regulation and parliamentary pathways. Now that can be passé as the industry is heading for a complete makeover. Backed by the spirit of entrepreneurship, rising awareness among the Indian populace about the concept of modern healthcare coupled with India being recognized as a genetically heterogeneous country, the diagnostic market is now witnessing the flourishing of new age diagnostic companies.

So what are these new age diagnostic companies and what distinguishes them from the companies who had been dominating the scenario till date? The terminology coined is 'New Age' because these companies have taken the plunge to explore new territories and divert their focus from the usual business models pursued by most of the Indian companies till date. So today we have companies looking at core businesses like diagnostic testing of patients at the genetic level in order to prescribe medicines and drugs suited to the patient's metabolism rate and single-nucleotide polymorphism (SNP), tests looking at gene mutations, manufacture of antigens from natural and cell derived sources. The cost-effective quotient of these methodologies are the icing on the cake. Though at an initial stage of growth, these methodologies can fuel the growth for an industry reeling under clogged growth.

BioSpectrum, has kept a close watch on market trends across the country and has managed to bring those companies, who have adopted unique business models to explore the untrodden path, to the limelight.

**Yashraj Biotechnology, Mumbai**



person represents the remaining five percent of the population, which shows undetectable or no enzyme activity and so all the drug taken in by the person keep accumulating and this can cause severe side effects.

Throwing light on Acton's business model Sandeep Saxena, founder and CEO of the company said, "Nowadays, choosing a drug for any complex disease like cancer is very difficult because of the difference in the rates of efficacy of these drugs amongst the Indian populace, as cancer drugs are inherently toxic to some of them. This difference in efficacy is because of the variation in metabolic rates of enzymes from person to person. Acton focuses on the basic DNA code, checks for the enzymes that are responsible for the metabolism, mutations in the genes and suggests drugs according to the genetic structure of the person. This saves both cost and time."

Acton, an angel-funded company, has its genesis way back when founder and chairman, Saxena was graduating with an MBA degree from Nirma Labs affiliated with the Nirma University based in Gujarat. "At the end of the course we are supposed to write a business plan for our start-up company. If that plan would be accepted then they would give us seed fund to initiate that start-up. Our business plan finally got accepted for incubation," recollected Sandeep Saxena.

"We did a detailed study and got all the research articles on pharmacogenomics and zeroed in on the important genes and expressions and its functions. At that time we had no focus. We looked into diseases like cancer, central nervous system (CNS) and depression. Then we decided to focus on oncology as it is the most widely read and researched field that boasts a huge market in India," pointed out Saxena.

While commenting on the modus operandi of the company Sandeep Saxena said, "We have a laboratory in Pune with the basic set of equipments. We collect blood samples from all across the country, we extract the genes while focusing on single points called single nucleotide polymorphism (SNP). From our background research we got a clear idea about the drug response in different patients. Acton's sales force educates doctors, update them on the different drugs and the type of SNP they will positively react."

Acton now follows one gene-one drug correlation. Take for instance the somatic KRAS gene mutation, which is responsible for therapy resistance to tyrosine kinase inhibitors such as cetuximab, in the metastatic colorectal cancer tissue. Around 40 percent of the population does not show any response to the drug because of mutations in the KRAS gene. Acton offers this KRAS gene mutation testing, which should be done immediately after the diagnosis. According to the National Comprehensive Cancer Network (NCCN), only patients with tumors of the abnormal type of KRAS gene should receive treatment with the epidermal growth factor receptor inhibitor cetuximab. For this type of genetic testing already 30 patient samples have been analyzed by Acton and tests have been repeated. Turnaround time for this test is 10 days and tests are done after optimizing the DNA extraction from formalin fixed paraffin embedded (FFPE) blocks and the polymerase chain reaction (PCR).

"From January onwards we ramped up everything right from the number of people, lab equipment and research by recruiting sales managers and executives, we started opening up blood collection centers in Mumbai, Hyderabad, Chennai, Baroda, Ahmedabad and Surat. We also have tie-ups with hospitals in Delhi, Hyderabad, Bangalore and Kolkata," pointed out Saxena.

Acton intends to focus on areas like cardiology and diabetes. "We are talking to cardiologists. This is a recent initiative taken by the company. We believe that genetic tests will avoid severe complications," concluded Saxena.

Ch Srinivas Rao along with Nayantara Som