

Hot Start-up: Shaping the Indian Clinical Genomics landscape

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"I have read a lot of blogs, articles and books on entrepreneurship but nothing prepares you for the journey. It is seductive. It is addictive. It is painful. It grinds you. It shocks you, and it saps you of all your energy. Yet, you go to bed wanting to be back at the first light of the day," wrote Mr Kumar Sankaran recently, the founder and CEO of Leucine Rich Bio, in his company's blog, recounting his entrepreneurial journey in the last one year.

The Terrific Trio

The start-up focuses on human [genome](#) data interpretation, especially for clinical and research use, and developing cutting-edge novel solutions for drug discovery.

Mr Prabhath Manjappa joined Mr Sankaran as the co-founder and COO during its inception.

Says Mr Sankaran, "Both of us have years of experience in systems biology. We have been discussing [genomics](#) and the latest new trends happening in NGS for a long time. We analyzed the markets, and spoke to a variety of experts in the field, figuring out what was exactly needed."

Dr Debojyoti Dhar, who holds a PhD from the Indian Institute of Science (IISc), is another member in the dynamic team, who serves as the company's director, and oversees the business development and [innovational](#) aspects.

Flagship Technologies

The company has developed two different technologies - AGIS and LRB-HGVD.

AGIS, stands for Advanced Genome Interpretation Suite, is a flagship clinical data analysis platform for analyzing and interpreting clinically relevant sequence information from human genomes.

It uses powerful algorithms to report precise disease causing mutations, says Leucine.

"This platform is for hospitals and [sequencing](#) centers around the world," adds Mr Sankaran.

The Human Genome Variation Database, also known as LRB-HGVD, is Leucine's in-house database, curated and maintained by it.

The database is said to provide functional information, mutation impact on disease, drug response, and variant impact on protein structure and functions.

Nascent Market

The company now employees 11 members including the trio.

"Overcoming our fears and investing our own money was our first biggest challenge," recalls Mr Sankaran. "But it forced us to [innovate](#) in every areas -- from finding our office space to recruiting the right people."

He feels that the company's mammoth challenge now is the nascent Clinical Genomics market in India.

"Our platform is for international clients. At present the clinical genomics space in India is evolving. Competing at the international level without sufficient back-up will be a battle," reveals Mr Sankaran.

He adds that there is a lot happening in the US and Middle-East in the area of Clinical Genomics.

"Clinical genomics is a happening area. A lot of people around the world are talking about it. There are numerous conferences happening worldwide. We have the US President Obama and other eminent leaders talking about precision medicine and personalized medicine through genomics. That's a good sign," he explains.

Minimal Awareness

Co-founder Mr Manjappa comments that investors' awareness about the industry is very minimal.

"It's not a classical industry. It's a new technology which needs to mature. Investors expect a lot of business angle. Venture capitalists look at the market numbers. Since it is a new technology, we don't have clear market numbers at the moment. They'd straight away ask for market size when presented with ideas," he states.

Client Base

Leucine's clients now are mainly researchers from both academia and research hospitals.

"We are trying to get in more hospitals. We would like to cater to as many of them as possible around the world," Mr Sankaran says.

Its key clients include Institute for Stem Cell Biology and Regenerative Medicine (inStem), IISc, Alexandria University (Egypt), Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), and Translational Health Science and Technology Institute (THSTI).

Partnerships

Five years from now, Leucine envisions to be a company which is a part of genome [diagnostic](#) interpretation.

"We also want to partner with [pharmaceutical](#) and drug discovery companies in clinical genomics. We are also looking forward to partner with institutions, and help in identification of rare diseases or orphan diseases which hardly gets noticed in India. We want to firmly establish clinical genomics in India, and help spread its awareness. We want to contribute to [rare diseases](#), either through internal research or through our products and services," notes Mr Manjappa.

He feels that social media can be leveraged in building a start-up's brand and business.

In fact, Leucine's first client actually came through the micro blogging social site, Twitter.

"Through social media we get to know what is happening in and around the world. Promotion of your business in LinkedIn is equally important," Mr Sankaran points.

Leucine is open for alliance partnering for distributing and promoting its products in other countries like Australia, Europe, Middle East, South East Asia and the Americas.

It has partnered with Delhi-based distributor, NextGen Life Sciences, to distribute its products and services in India.

"We would like to partner with BIRAC at some point in time, as we have an in house R&D focus on a [Malaria](#) project," shares Mr Sankaran.

Recently, Leucine also partnered with German-based Diadome, where both the parties will promote each other in the field of medical diagnostics.

Mentorship

Mr Sankaran adds that some of the [incubators](#) are located in the outskirts of the city.

"We can't afford so much of travel time and money. There are pros and cons in joining incubators. They are helpful in building start-ups but getting there every day is a lot of trouble. During the initial few months it doesn't matter where you work from. You don't need an air-conditioned office or something grand," he opines.

He sees a lot of Indian start-ups cropping up in Pune and Delhi.

"Being located close to institutions like IITs or IISc will be an added advantage for receiving good amount of mentorship," he observes.

Crowdfunding Opportunities

Mr Sankaran comments that in the West, there is more awareness on funding availability.

He suggests, "In the West, people need not go in search of funds. In India, more awareness needs to be created about start-up [funding](#) opportunities. At the moment, in our country, more investments are happening only in the e-commerce space."

He states that the Government needs to have more initiatives towards building good start-ups.

"The government doesn't seem to communicate well. They need to advertise the funding opportunities through websites and other media, and ensure there are proper screening procedures for start-ups, and reach the right people at the right time," he opines.

He also says that start-ups in India can try the crowdfunding strategy.

"Many start-ups have enjoyed success through crowdfunding, but it is still new in India," he remarks.

Selling Ideas

The founder also emphasizes that if one cannot sell their start-up idea to family members or friends, then it would be a hard ride trying to sell it to customers.

"If you do not [believe in your start-up](#), then no-one else will. One cannot keep excusing saying they don't have enough money to start. If you can't sell your idea to your own uncle, then this is going to be very difficult to sell to someone else. In biotechnology, we need more angel investors than venture capitalists. They should be patient and willing to invest, and wait for a few years for the fruits," he highlights.

He also speaks about [start-up myths](#) that are widely held in Life Sciences.

He adds, "People believe that there are no significant amount of ROI, which is not true. For life sciences start-ups, you need not have plenty of initial capital. One does not have to have full-fledged labs right at the beginning. There are enough funds and backing up support from the government."

Market Needs

For entrepreneurs who are starting up, he advises not to go after too many domains.

"Concentrate on what the [market needs and wants](#). You need to come up with [innovations](#) that are capable of solving market problems. The more projects you do, the better you become at it. Just go out and talk to people and communicate about your product or the company, and try to sell your products and services. Get some people to use your products. Most of us wait till we have the perfect product to sell. A lot of entrepreneurs try to be marginally better than what is already available in the market. However, their aim should be to make products that are 10 times better than what's available in the market," he elaborates.

The Magical P's

In the [entrepreneurial journey](#), patience and perseverance are the keys, he admits.

"It is not going to happen overnight. It is going to be a long journey and a lot of struggle. Keep innovating. [Innovation](#) is the key. And that's the only way you can face the competition better. It is not good to start as a single entrepreneur. Finding a co-founder is important where both can help each other," he suggests.

The entrepreneur involves himself in small [start-up](#) groups in the city and enthusiastically listens to similar stories from other start-ups.

"It's a good way to beat the stress, and you feel that you are not alone in the entrepreneurial journey," he ends.