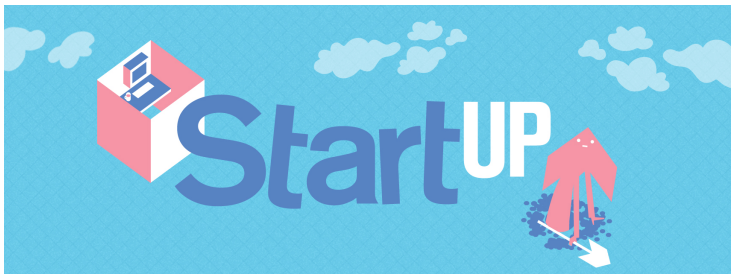
BioSpectrum the business of Bio & Health Sciences

Hottest new start-up: 'A roller-coaster ride for the first 999 days'

08 December 2015 | Features | By BioSpectrum Bureau

Hottest new start-up: 'A roller-coaster ride for the first 999 days'



Dreams Vs Destiny

In 1995, he worked for the National Research Council of Canada, and then moved on to be the associate director & principal scientist for US-based Dyax Corp in 2001.

While in North America for 20 years, he intended to start a drug discovery venture along with his colleagues. But things didn't work out as planned.

He returned to his country in 2008 and worked for Bangalore-based Biocon as the chief scientific manager for the next 4 years. Post which, his good old entrepreneurial dreams began to take shape.

After his stint with Biocon, the year 2012 marked the beginning for Affigenix Biosolutions, his Bangalore-based biotech start-up, offering innovative biosolutions to the Life Sciences industry, where he serves as its MD & CSO.

He says that his inspiration directly trickled down from both his father and father-in-law.

His father at 21 became the family's first entrepreneur in the early 70's by establishing a poly-woven sack manufacturing plant in the rural area. Though a high-school dropout, his father-in-law went on to establish a 4000-employee organization with footprint in almost every state in India.

Innovative Biosolutions

Affigenix's parent organization is the CREW (Chennai Radha Engineering Works) group of company, where its chairman Mr Sambandam Venkatesan, is known to be the investor and also the chairman of Affigenix.

CREW is a leading company in bulk material handling system undertaking projects in thermal power plants and ports with an annual turnover of Rs 400 crore. CREW also owns Interlace India, a software company in Chennai.

Dr Arumugam voices, "As soon as I decided to start the company I informed my family first and secured the initial funding from my father-in-law.... The company name was chosen by my children and the logo was designed by a friend. Before registering the company we legally secured the website address and logo. Although I did not have formal business plan, I

vetted my ideas to my friends and family and then started to look for an incubator facility."

In Aug 2014, the company received the DBT-BIRAC-BIG 3 seed funding worth Rs 45.2 lakh in installments through its BIG partner -- Centre for Cellular and Molecular Platforms (C-CAMP).

Affigenix's R&D facility in Bangalore is equipped to do cutting-edge research in areas such as antibody engineering, drug delivery, and immuno & molecular diagnosis.

For the short term, Affigenix also provides custom biosolutions to biopharma companies mainly involved in manufacturing of biologics such as clearance assay development (host cell protein, host cell DNA, and enzymes used in manufacturing process). It has also developed some viable low-volume, high-value immuno-assay products for biosimilar product development, suitable for pharmacokinetic, immunogenicity and potency/NAb assay, biomarker discovery and personalized medicine.

"The long-term plan is to discover and develop safe, pure and potent biologics to target complex diseases," he adds.

The Pain Of Growing Up

During the start-up's inception, locating an industrial area in the city was a humongous task for Dr Arumugam and his team. "Finding an industrial area to comply with the pollution control board's norm and establish a state-of-the-art biotech facility in a modified mechanical shed was the biggest challenge faced by us," he reveals.

"Also, there were lots of inordinate delivery delay from the vendors while establishing the wet labs in 2013. In terms of R&D hiccups, we figured it out by trial-and-error methods and went through some usual growing pains," he opines.

He feels that in biotech, the industry highly depends on imports of machine and consumables used for the routine day-to-day work. "It is possible with concerted effort and support from Life Sciences industry and academic institutions to make them in India and start exporting," he suggests.

For Affigenix, penetration of pricing strategy is another big challenge to face.

Going Forward

Affigenix's current business model focuses on B2B and it wishes to work with farmers and consumers of diagnostic industry and have a B2C model as well.

For the company, scaling up is going to be a slow process. "We serve a very niche market and scaling up is going to be slow due to smaller number of customer base. Besides adopting the B2B model and growing through R&D, we would also like to venture into B2C model and serve the diagnostic (patients) and agro industries (farmers)," expressed Dr Arumugam, who enjoys gardening.

The company at the moment is in discussion with biotech companies in Gulf, Singapore, Europe and USA to provide customized product and services for their drug and diagnostic development programs.

For FY 2015-16, Affigenix expects a revenue of Rs ~1 crore, and Rs ~4 crores for FY 2016-17.

Amending Companies Act

Dr Arumugam lauds the Government's funding initiatives to promote Life Sciences start-ups in the country.

"Many thanks to the Government for providing seed fundings and other competitive schemes brought through DBT, DBT-BIRAC and DST and through other funding agencies. Our hands are tied-up in competing for many of the research funds in the first three years due to the pre-requisite of having DSIR recognitions to even apply for it. If that restrictions could be removed, it will help start-up companies to secure some additional meritorious funding beyond BIG & SPARSH grants," he comments.

He also adds that India needs creative solutions for many of its local and social problems, and that there are many unmet medical needs.

"Listing them and seeking solutions is one way to ignite the bright and young minds of our country. Amending Companies Act and allowing Corporate Social Responsibility (CSR) contributions to biotech start-ups and emerging companies who are working with social objectives is one quick way to raise billion-dollar funds," he points.

India - A Hot Hub

According to Dr Arumugam, India will become a major manufacturing hubs for biologics, clinical trials and medical tourism.

"Genome-based diagnostics are next-generation sequencing are hot areas now, and how viable it is as a business is yet to be seen. On the technology front, adapting biological platform such as CAR-T technology and CRISPR/Cas 9 gene editing technology will be on the rise more in academics and start-ups. With government support, and as VC funds are now available here as in the West to biotech SMEs, India could come up with next-generation block buster drugs to treat metabolic, infectious, cancer and autoimmune disorders," Dr Arumugam notes, who likes reading author Jeffrey Archer.

He considers Pune and Chennai as more cosmopolitan with good talent pool and high-net worth individuals, therefore, making them very affable as upcoming start-up destinations.

He also encourages start-ups to join an incubator or an accelerator due to lesser overhead expenses, collaborative ecosystem and not needing to worry about basic necessities such as power, water and security.

How does he manage the entrepreneurial stress? "I manage my time and spend quality time with my friends and family and go on vacation once or twice a year. On weekends I usually go out with my family for dinner or a movie," he explains. The birth of his sons and his PhD supervisor addressing him as 'doctor' after completing his thesis were his glorious moments in life, Dr Arumugam adds, an admirer of world-renowned scientist Dr Robert Langer and iconic businessman Mr Dhirubhai Ambani.

When asked about entrepreneurial advice, Dr Arumugam humbly replies, "I don't have enough experience to offer advice, but let them know it will be a roller-coaster ride for the first 999 days for sure."

Entrepreneurial Lessons Learnt:

ï‚§ Good team with passion and enthusiasm a must
ï‚§ Entrepreneur offers freedom and freedom comes with great responsibility
ï‚§ Success will not follow success. Success and failures are part and parcel of entrepreneurial life
ï‚§ First million is tough to make and so is the second and so on

Entrepreneurial Mistakes To Watch Out For:

ï‚§ Not having enough funds and constantly trying to raise it
ï‚§ Lacking awareness in IP & regulatory hurdles
ï‚§ Lacking good mentors or advisors
ï‚§ Poor planning and execution
ï‚§ Relying only on Government grants

Successful Entrepreneurship Needs:

ï‚§ Staying focused on goals
ï‚§ Ability to multitask
ï‚§ Adapting to changes quickly
ï‚§ People managing skills
ï‚§ Experience and expertise matter than glamorous degrees

Life Sciences Start-ups Myth:

ï‚§ No competitors at all
ï‚§ Valuation not possible
ï‚§ Quick exit not possible
ï‚§ There are no VC and Angels investors
ï‚§ Only biotech professionals can begin a company

Ways For Start-up Visibility:

ï‚§ Client recommendations
ï‚§ Conference presentations

ï,§ Publishing research articles in journals
ï,§ Social media (Facebook, LinkedIn, Research Gate)
ï,§ Speaking engagements
ï,§ Through e-commerce start-ups
ï,§ Word-of-mouth

West System Vs East System:

ï,§ Investors' risk appetite more prevalent in West
ï,§ Gestation time in bringing products to market well understood in West
ï,§ Big biopharma cos acquiring smaller start-ups is the main exit strategy in West
ï,§ Free incubation facilities, tax holidays, sabbatical to faculty members are common in West

Top Ways To Raise Start-up Cash:

ï,§ Angels
ï,§ Crowd funding
ï,§ Friends & family
ï,§ Government grants
ï,§ Granting agencies
ï,§ Merging start-ups
ï,§ NGOs

Seeking Partnerships For:

ï,§ Developing a technology to extend half-life of Biologics (Eg: once-a-week dosing of Insulin)
ï,§ Short-term glycation index monitoring as an alternate to the current long-term hemoglobin glycation index monitoring using HbA1C
ï,§ Developing nano-(anti)bodies that could cross human blood & brain barrier
ï,§ Discovering cancer and diabetes biomarker using immuno-proteomics approaches

Milestones:

ï,§ DBT-BIRAC-BIG 3 Award for developing Trypsin-resistant antibodies
ï,§ Started generating small revenues with prototype Trypsin-resistant polyclonal antibodies
ï,§ Developed unique monoclonal antibodies (MAbs) having industrial applications including immunomatrix for purifying trypsin, prenatal diagnostic kit for measuring immunoreactive trypsin, and having potential to engineer as therapeutic MAbs for treating Pancreatitis and COPD
ï,§ DST-Lockheed Martin-FICCI-IIGP 2014 Top 30 Innovators Award for innovating 'Companion Diagnostics for Diabetes Management'. In discussion with diagnostic company for manufacturing and distributing post regulatory approval in India and 60 other countries
ï,§ Patents filed - 1
ï,§ White paper published - 2 (AAPS Journal)
ï,§ Short Listed for Millennium Alliance Grant
ï,§ BIRAC Fellowship 2015 Ignite Programme at University of Cambridge, UK