

## Amrita develops cancer therapies 'Made in India'

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During the mid 2000s, Ms Susan K. Finston along with Dr Ananda M Chakrabarty, were tracking the business opportunities in India, so as to set up a biotech company. This led to the birth of Amrita Therapeutics in 2008 as a bio-discovery company in Gujarat. The firm aimed to develop new, innovative therapies with effectiveness against cancer and other viral or parasitic public health threats through commercialization of multiple-disease targeting (MDT) drugs.

Speaking about the reasons behind the inception of the firm, Ms Finston recalls that, "Over 10 years back, Ananda and I supported efforts to bring product-patent protection to India in order to promote an innovative climate for bio-pharmaceutical R&D and commercialization of science. Even before passage of the Third Patent Amendments in 2005, we began to talk about how wonderful it would be to-be-able-to establish a new biotech start-up company in India. We would benefit from full patent protection and do research on everything from soup to nuts. We would be able to bring entirely new, innovative bio-pharmaceutical therapies to market. This was the seed of Amrita Therapeutics."

While Ms Finston has over 20 years of varied government and private sector legal experience, with particular expertise in bio-pharmaceutical policy, development, and related intellectual property (IP) management; Dr Chakrabarty is a distinguished university professor of microbiology and immunology at the University of Illinois College of Medicine. He also advises senior officials in the US and abroad on policies relating to biotechnology and related technology transfer.

Sharing her views on launching the company, Ms Finston said that, "We had our soft launch at the height of the global financial crisis and feel fortunate that we were able to bring the company forward with seed funding from Gujarat Venture Finance Limited (GVFL), despite the challenging external environment."

As the first company in India being focused on MDT drug development, Amrita Therapeutics has filed several patents (in India and through the Patent Cooperation Treaty), and is now entering into in vivo research (animal studies) as a pre-

requisite for human clinical trials for lead compounds. Amrita Therapeutics has advanced its research program with grant support and technical advice from the department of biotechnology (DBT), government of India and through research partnerships with academic institutions in India and in Lisbon, Portugal.

The company has optimized lead candidate drugs and pre-clinical candidate (PCCs) molecules in preparation for in vivo research and is engaged with proposed contract research organizations (CROs) as partners for the next step in the commercialization process. Amrita Therapeutics also has generated commercially valuable IP assets based on strong in vitro data for novel proteins (ATP-01), peptides (AT-01), and a first-ever combination medical device to provide therapy directly to the tumor site without entering the bloodstream. The company has now filed several patent applications, including two patents for proteins/peptides effective against cancer and HIV; one patent for the combination medical device; and one patent to protect a novel process for peptide drugs effective against multiple-resistant bacterial infections.

GVFL has provided a seed funding of \$400,000 (Rs2 crore). Furthermore, the company has also received private funding and DBT grant support to the tune of \$ 200,000 (Rs1 crore) in the process of disbursement, plus funding and non-monetary equivalents from co-founders and private investors. Collectively, the firm received funding commitments and actual funding between \$800,000- \$1 million (Rs 4-5 crore).

Sharing details on raising funds, Ms Finston said, "We are grateful for both GVFL's and DBT's continuing consideration and support. Based on success of the research until date, we seek to raise an additional \$1.6 million-to- 2million (Rs8-10 crore) in the coming months, and have been shortlisted for additional grants, pending the department of scientific and industrial research's (DSIR) certification of our new lab located at technology based incubators at University of Delhi South Campus.

Although small in size, Amrita Therapeutics has been recognized by the Biotechnology Industry Organization (BIO) annual convention in 2011 as the 'Buzz of BIO', which is the first time ever for an Indian company. The firm also presented an International Case Study on cross-cultural R&D at the 2012 BIO Convention. Commenting on this rare honor, Ms Finston said, "We continue to live in interesting times, and look forward to the continuing opportunities and challenges ahead as Amrita Therapeutics brings new, innovative therapies to the market to meet the needs of patients in India and around the world."

She further added, "Although Ananda and I are not based in India, we have a strong board of directors and on-site management in Ahmedabad, and are now preparing to expand our science team in New Delhi, where we have moved our early research lab at the University of Delhi South Campus. At this stage Amrita Therapeutics falls in the micro small and medium enterprises category for biotech start-ups with headcount of one-to-10. We will be filling out our science team in New Delhi between now and the end of 2012. We both travel back to India as much as possible and also try to attend priority events in the US and overseas, including the annual BIO International Convention and other partnering and venture capital (VC) events in Washington DC and New York, among others."

Speaking about the future plans, Ms Finston said, "Amrita is focusing both on bio-discovery, to develop additional pre-clinical candidates, as well as to move the existing priority compounds and combination medical device through in vivo research. We are in partnership discussions for licensing and/or co-development of our lead compounds and look forward to our first commercial milestone in the coming months. We continue to work under grant funding and with support from our early investors. We also continue to seek like-minded pioneer investors who share our vision to bring to market new and innovative therapies for cancer and other leading public health threats for patients around the world, which we proudly label as - Made in India."