

'We have a strong and diversified pipeline of novel targets

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Dr Suri Venkatchalam,
CEO, Connexios Life Sciences

Dr Suri Venkatchalam started Connexios Life Sciences in 2003 with an aim to bring out one-of-the-first novel therapeutic drug in India.

He started the firm, with venture backing from Nathadur Holdings, following his stint at Metahelix. Now, more than nine years later, Connexios has managed to develop a strong pipeline of drugs in metabolic disorders with special focus on diabetes, with one candidate ready to be taken to the clinics this year.

Connexios provides the right kind of environment for companies to successfully spin off ventures with their own core competencies, as has been the case with Abexome Biosciences and Achira Labs.

In a conversation with BioSpectrum, Dr Suri, who has a diverse academic background-ranging from graduation in chemical engineering to a PhD in physics and post doctoral studies in various aspects of biology, speaks about the challenges faced by a novel drug discovery company in forging strong partnerships for successfully commercializing drug candidates.

What is your strategy for the novel drug discovery domain and what have been the results so far?

Q Dr Venkatchalam: We started with the principle of looking at biological systems as an interconnected, integrated biology network. Our approach is a modelling one, to understand the concept of disease that combines network biology, computational biology and experimental validation. If we understand these networks, we would understand cellular functions

and hopefully the disease.

We were a very small team when we started, today we are a fully-integrated drug discovery company focussed on developing a diversified pipeline of drugs, mostly in metabolic diseases.

However, the technology that has been developed has broad implications in other diseases as well. We have a fairly strong and diversified pipeline of novel targets and early stage candidates. One of them, a GPR 40 agonist for diabetes, is ready for clinical trials and there are about four more to follow in the same line.

We have six active pipeline programs. Our research activities can be broadly classified as 60 percent in drug discovery and 40 percent in basic biology research for target discovery among others. Using basic research, we are also trying to find biomarkers, which can translate into diagnostic tools, which the clinician can use to differentiate between patients of the same disease. We are also trying to develop biomarkers as companion diagnostics in the development of compounds. The work is a combination of using bioinformatics as well as wet lab experiments.

Drug discovery is marked by low success rates. As a mid sized company, what is your strategy to counter this?

Q Dr Venkatchalam: When it comes to selecting targets, we chose those that are sitting at the hub of metabolic disorders. These can have an in-built ability to be repurposed for other diseases where the same cellular functions have been implicated. We try to incorporate complex biology early on in the drug discovery chain to increase the value and efficacy of the compound. This gives us a better chance of getting best in class compounds as you are looking at the entirety of the problem.

What differentiates Connexios from other life sciences companies?

Q Dr Venkatchalam: What differentiates us is our integrated approach to select targets and screen compounds at a price that allows us to do more projects. Our strength in doing this has enabled us to stay alive for the last nine years.

You need a critical level of information, which requires time, and we have had a very supportive investor, who is in for the long run. In that sense, we are very unique globally to have been given this time to build such an expertise from an information as well as people perspective, to straddle multiple points in the entire chain. There are many other people who are building pipelines for novel therapeutics, but we have differentiated ourselves because of our rigorous approach towards biology.

Also, the culture at Connexios is self perpetuating, allowing people to express and follow through with their own ideas as has been the case with Abexome and Achira. Today, we are a fairly large company from a people's perspective with around 190 people spread across three locations in Bangalore.

With rapid changes taking place in the pharma industry worldwide, what are the steps you have taken to stay afloat?

Q Dr Venkatchalam: Our revenue model is focused on building a strong proprietary pipeline and then out licensing it to a partner to further test it in clinical trials, just like classic licensing programs. That is what we are doing now. Keeping in line with that, we are actively looking for partners for trials who can share some risk in the development of the GPR 40 agonist.

Our goal has always been to build a pipeline and find partners and we hope that these partnerships will lead to some kind of cash inflow as well. And as some of the risks start yielding returns, we hope that the partners come back, which will allow us to take bigger risks. We want to be an innovation driven, biology-based drug discovery company, developing innovative therapeutics by leveraging our understanding of metabolism with current focus on diabetes. Over time we would like to be either with our partners or on our own, and see our compounds in later stages of discovery and clinics.

How do you view the venture capital scene for life sciences companies in India?

Q Dr Venkatchalam: Our situation is very unique in India, but our investor is also very unique. Nathadur is not a typical investor, and our relationship with the life sciences arm, Group LifeSpring, is more of a partnership than just an investor. It is not a typical venture capital (VC) model. The VC model for life sciences itself is under stress worldwide because of the fluctuations in the pharma market.

Flexibility is needed when it comes to the life sciences industry. Being a family group, flexibility is something Nathadur can control as it is in their hands, which is what life sciences companies like ours require.

There is a lot of emphasis on biosimilars and generics in India. Where do you see yourself as a novel drug discovery company?

Q Dr Venkatchalam: The requirements for drugs is so vast that the need for novel drugs will always remain as existing drugs. The way I see it, we and other generics companies are addressing non overlapping markets. We are focused on markets that have an appetite for novel drugs. The larger problem of making such novel drugs affordable to the public needs

to be addressed by the industry and the government.

Can you describe the challenges that you are currently facing?

Q Dr Venkatchalam: Today, our main challenge is to find the right partners so that we can take our compounds further into clinical trials. One can regulate the costs in the pre-clinical development of drugs. In the clinic, however, controlling costs become difficult. That is why we are looking for partners.

We need to have creative partnerships. Also, government funding is another interesting aspect that we might look into for trials. In a drug discovery company, the last word is when a research is translated into product. We are very hopeful as we have more options, lower costs, greater staying power, a supportive investor and the ability to tide over difficult situations

Manasi Vaidya in Bangalore