BioSpectrum the business of Bio & Health Sciences

â€œLooking for Indian partners to work on malaria vaccineâ€?

07 February 2015 | Interviews | By Rahul Koul Koul

â€œLooking for Indian partners to work on malaria vaccineâ€?

Besides his outstanding academic credentials, he is also the co-founder of Ancora Pharmaceuticals. During his visit to India as a part of the delegation of 'Australia Business Week in India', he spoke to *BioSpectrum* on his malaria vaccine development program and India as a land of opportunity.

Q: What is the scope of your work and how has your India experience been so far?
Apart from the research to tackle the endemic tropical diseases such as melioidosis, Q fever, drug-resistant Staphyloccoccus aureus, group A Streptococcus and pneumonia that are prevalent in the tropical areas of Australia (which consist of 40 percent of land), and our institute has a great responsibility towards the pacific region. There is very clear reason to engage with the developing Asian nations including India.

As an institute, we have lot of capacity in vaccine development and our portfolios can be very helpful in taking ahead our efforts. And during this course, India is an absolute natural choice in seeking commercial partnerships to develop vaccines of our choice. Besides that we have other capacities in tropical health and we expect these to be utilized here in India. There are many points of synergy for cooperation and we are committed to engage with India among other countries in Asia.

Q: What has been the progress on the malarial vaccine initiative at your institute? What is new?
We have two malarial vaccine portfolios. One is going for the clinical trials immediately and the other one is in development. It is the latter one for which I am seeking Indian partnership. This is based on polysaccharide conjugate vaccine technology that

is mostly used in India. As we know the real problem is that it is difficult to find a vaccine solution for malaria, I have worked all my life without success. The malarial strategy is about complexity, diversity, change in pathway of motile infective form, sporozoite in blood. A sporozoite travels through the blood vessels to liver cells and reproduces there to form merozoites.

Therefore, it is difficult for immune system to track the parasite. Also, there are five species and you can immunize against one but what about the four more. The solution is to find one antigen at every stage in each specie. It sounds impossible but then there is one polysaccharide. It is the only one produced by malaria pathogen conserved at every stage and in every specie. It is our exclusive finding and we have comprehensive IP position on it. We have done a lot of pre-clinical evaluation on it in rodent model systems and it has shown complete protection when immunized. Every time we have done it, we found it prevents the sporozoites to get into blood. There is data which is very exciting and motivates us to do more.

Q: What kind of challenges and opportunities do you find in Indian market?
Australia has a very strong innovation base and basic research capacity but the translation is not there. India has got great manufacturing strength and we are here to leverage it. The challenges are not so problematic here. In fact, the major one for me is that as a scientist I have to talk about business too and that is a personal growth as well.

India has got culture to promote the appropriate technology. Of course, this gets back to its father of nation, Mahatma Gandhi. I see commitment towards humanitarian issues. It is not just about making money but concern for the global health or disease burden. We are working on malarial vaccine and of course there is some money concern but then our commitment is towards the global issues.
I don't care much about challenges as I am an optimist. There are many areas where there can be great deal of partnership between India and Australia. In malaria, India has got outstanding work. Our scientists work in the area of tuberculosis (TB), malaria and diabetes. So the opportunities are plenty to collaborate.

Q: Are you looking at having collaboration on malaria vaccine? Any possible interaction so far?
Of course I am looking for an Indian partner who has the required expertise. I am aware about the efforts at the International Centre for Genetic Engineering and Biotechnology (ICGEB),New Delhi and have a great deal of respect for what they are doing on vaccines. I have been in talks with the eminent scientists working on malarial program there and will be absolutely talking to them more in future as well.