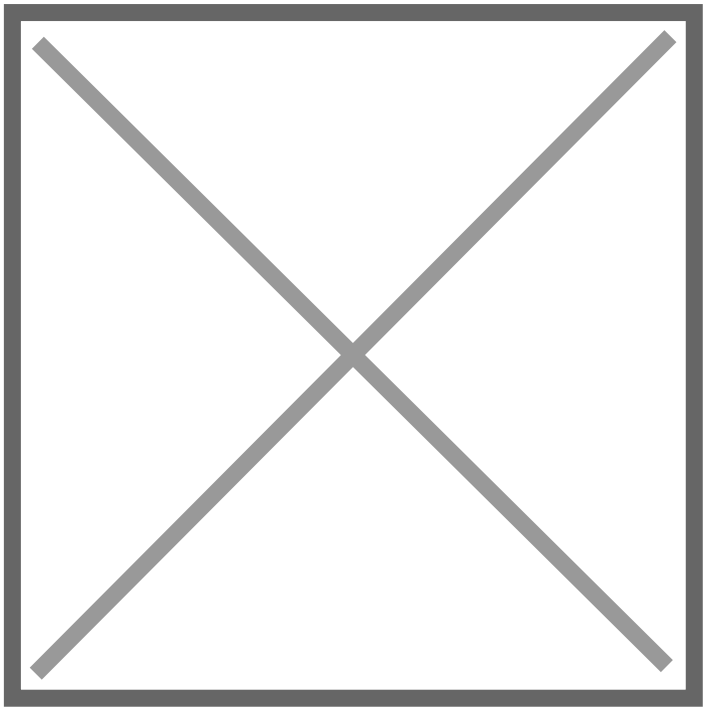
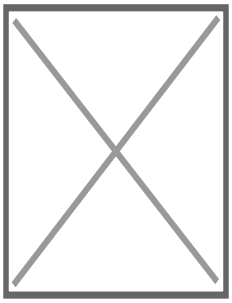
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"Import the science, but implement it in the local context"

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"Import the science, but implement it in the local context"



Bala S Manian, Director, ReaMetrix India Pvt Ltd

The founding of ReaMetrix marked Bala Manian's reinvolvement with Indian business and technology issues after a more than 30-year hiatus. ReaMetrix is a cutting edge life science company continuing Bala's tradition of high tech solutions to problems with offices in San Carlos, California and Bangalore. It has recently developed Accuford TriTStat assay, a critical diagnostic for managing HIV patients, that could entirely alter the cost paradigm for conducting HIV tests.

How different is ReaMetrix in India?

ReaMetrix was started with the idea that we were going to use the availability of highly talented people, scientific talent available at a lower cost to do things that can no longer be done in the US. That was the promise with which ReaMetrix was started. In a fairly short period of time, it became clear that the local economic paradigm subconsciously influences every decision that we make. For example, when I am designing a process in the US, subconsciously, I am willing to accept a high material cost to save labor, as labor is more expensive than material in the US. It is just the opposite here in India. We realized that what we really need to do is not simply bring the process over here. Because if we do that, all we do is the saving of the labor cost. But when we actually redesign the process, based on the labor that is available, then we have a more optimal process over here. For example, in the US, I may be willing to accept 15 percent yield by material because the labor that is required to improve that yield is too expensive. Over here, I can use the labor and improve the yield from 15 percent to 40 percent. So we not only get the cost savings on the labor, we also now improve the whole efficiency of the process. The realization is that if we are going to do diagnostics in India, the idea is not to bring the procedures from the US. Just bring the

science from the US. Import the science but implement the science in the local context. Our Accuford TriTStat is that first proof of principle of that concept.

What is the other differentiation?

Generally, one tends to focus on technology providing all the solutions. But what we are doing at ReaMetrix is simply reversing that paradigm. We put the affordability index first. We define affordability of the task as our target and then find the right technology and the right processes that is going to allow us to deliver the goods and services with that kind of affordability index. In a lot of ways, in trying to do the TriTStat test, we set the goal of what it has to cost and then optimize the process to be able to design.

What is Accuford TriTStat?

The Accuford TriTStat assay has been developed and manufactured by ReaMetrix Corp. as a critical diagnostic for managing HIV patients. The product will be marketed by Millipore India. Our reagent kit provides the consumables for the enumeration of a patient's T-cells on a flow cytometer. The key component of this test are fluorescently-labeled monoclonal antibodies. While the raw materials for the test are imported from established suppliers in developed nations, the process for creating a clinically useful kit is carried out entirely in India.

These reagents will identify particular number of subset of cell. If you take one drop of blood, one microlitre, one cubic millimeter of blood, there are 5 million red blood cells in there, approximately 7,100 white blood cells. Out of that 7,100, there are 900 CD4 positive T-cells and 600 CD8 cells. It is the 900 and 600 cells that we are trying to look at. So it is truly looking for a needle in a haystack. And the way you identify them is you take the antibodies that are specific to CD3 and CD4 and you put different colored florochromes on it. And then when it binds to the cell in the flow cytometer, you count the number of events - number of white cells going by and see if it is positive for CD3 and CD4. If it is positive for CD3 and CD4, then it is a T cell - TCD4 cell. So you count them and you report the result as so many cells per microlitre. That is the result we provide.

How affordable are your products?

Lets take Becton Dickinson (BD) or Beckham Coulter. These are the two major players in this segment. They sell the machines and also the reagents. The reagents are sold at Rs 600- 800 depending on the volume commitment and so on. So the reagents are made in the US. In their case, they add all the value in the US. The raw material that we do is very similar to theirs. So there is no difference between the two, except we add all the value in terms of kit preparation, validation, etc. in Bangalore and we optimize our processes based on the economics over here. And that is the reason why we are able to bring the costs down.

We have started supplying the reagents to Anand Diagnostics. It used to charge about Rs 1,200 for this test. It is paying about Rs 700 for the imported reagent from BD. We are supplying the same reagent to it under Rs 150. So we are talking about reducing the price by a factor of five. We had an agreement with it so that it does not pocket the money all by itself. It has reduced the price to the customer to Rs 500. What is interesting is, before our reagents came into the picture, it was doing only about 4-5 tests a day. Now it is doing about 15 tests a day. We want to use this as an example to change the dynamics.

In a developed country, somebody may have the test done once every two months and in India right now because the cost is so high, typically they do only two tests a year. There is a companion test or a viral test. Actually we are working on an alternative for that as well. That costs Rs 3,000 to Rs 4,000 and lets say this is Rs 2,000 to do the test. The combination of the two tests is about Rs 5,000 and two tests a year would mean Rs 10,000. Now Cipla sells the whole drug for an entire year for Rs 15,000. So when testing for twice a year is as expensive as the drug itself, it is not fair. What we talking now is reducing the cost immediately. We think a combination of the two tests should be available in the price range of Rs 1,000-1,200. And if you do four tests a year, it will still be Rs 5,000. This is including the viral test. In fact the more tests we put in, the price will come down. Then the other viral load right now costs Rs 2,500. We would like to develop an alternative test to bring that price down as well. So the entire testing burn for managing AIDS patient should really be brought down. That's how we go. So rather than focusing on a menu of tests, we are going to focus on the disease.

What are you product expansion plans?

We are currently focusing on making the reagents, by optimizing the process by which we produce the reagents. The second step is to modify it in a dry form so that we can deliver it wherever it needs to be delivered without having to worry about the cold chain requirements. The third step is to build our own hardware platform so that we can provide a complete solution. This platform will be a flow cytometer-type platform but based on today's generation of technology.

Why have you chosen Millipore as your partner, which is not a diagnostics supplier?

Our third philosophy is that we are not going to go and accept either a product concept or a test concept that has been used in the West but rather we want to find out from the market place, what is the right test that is required in the Indian context. Our new ideas are going to come from our customers. So it became clear to us that we cannot just go and find a distribution channel that just sells our products but rather a distribution channel that can own the customer and work with the customer. In India, an existing distribution channel typically has a trading mindset. And that is the reason why ReaMetrix formed this strategic relationship with Millipore India. I'm more interested in the fire under the belly and the gleam in the eye than the past experiences.

Why is it called TriTStat?

Tri is because we look at three different markets-CD3, CD4 and CD8. You need all of those to get the count of CD4, CD8. And we will report how many cells are CD3 positive, how many cells are CD3 and CD4 positive, how many cells are CD3 and CD8 positive. Right now the largest use is for managing HIV patients. But in general this is used to assess the immune system. There are lots of other diseases in which you want to know the immune system, even in some of the autoimmune diseases. That is why it is called TriTStat. "T" is the T cells that we are talking about. Stat is the status of the T cells.

Accuford is the brand name we are establishing which stands for accuracy and affordability. It is affordability without compromising accuracy. Accuford is the brand name, which is really the theme behind what we are doing.

Ch. Srinivas Rao and Namratha Jagtap