

## Automated Robotic Systems and Consumables for Harvesting and Spreading Genes used in Cytogenetics, Diagnosing and Digital Pathology



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**“We are a truly multi-national company providing automation for clinical and research labs in the area of cytogenetics and pathology” - Vijay Dube**

Interview conducted by:  
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CEOCFO Magazine

**CEOCFO: Mr. Dube, would you tell us about ADS Biotec?**

**Mr. Dube:** Our company is involved in biotechnology. Basically, our main focus is in an area called cytogenetics. That essentially is providing automation for laboratories that are trying to harvest metaphase chromosome cells from blood or bone marrow, and this is typically used for diagnosing different types of diseases, whether it be cancer or anything else. Certainly some of this process can be done manually, the problem with that is that it is time consuming, it is prone to error and we as a company have always specialized in automation in robotic systems, and we have developed a whole family of automated systems for harvesting and spreading chromosomes. Essentially, we automate and facilitate the process in medical laboratories, whether they be in hospitals or clinical laboratories where all this work can be done very fast, very efficiently with a lot of consistency.

**CEOCFO: What are some of the steps you are able to help with throughout the process?**

**Mr. Dube:** There are several steps. The process essentially is a laborious process - you have to start with the samples, you have to prepare the samples in a certain way, then you have to put them into a centrifuge which allows them to extract the specific chromosomes that you are looking for. Then, it has to be spread on a slide in a certain way where the scientist can analyze the slide. We basically automate all of that process. It is a “walk away” kind of environment where the lab technician will load up our machine and then they just walk away. The benefit of course for the lab is that they are able to better utilize their workforce. The lab technicians can do multiple things at the same time rather than being just focused on one thing. The other big advantage here for a clinical lab is that if a specific technician falls ill or leaves, it is a manual process and the training of that is very difficult, their capability is very unique, so our machines provide very high level consistency for those customers.

**CEOCFO: Is the industry comfortable with automation in this particular phase?**

**Mr. Dube:** Absolutely. I think the industry is seeing increasingly more reasons to automate, and it is not simply to find ways to reduce cost but more important is to get better quality results. Basically, when it gets to the stage where the specialist is analyzing the data, the analyst finds his or her time is extremely valuable, and if the data is not in a very good consistent form they may have to repeat the process. With automation, the big advantage is consistency and stable results, and the customers are delighted by the fact that they are getting consistent results. Our machines are installed in a very large number of Clinical Labs and Hospitals all over the world, including North America as well as Europe and Asia. The product line we sell is called Hanabi. The origin of this is in Japan; our parent company is located in Tokyo, so the core technology came from Japan, but our headquarters in the U.S. are in Omaha, Nebraska. Besides selling and servicing our automated instruments, our US headquarter also manufactures consumables which are used in our instruments.

**CEOCFO: *What were the challenges in putting the technology, hardware and software, together?***

**Mr. Dube:** Very good question. There are multiple challenges. The first real challenge in my mind is getting accurate and true requirements from the customers. Very often this is not only time consuming but also one needs to spend considerable time engaging with key clients to fully understand their needs. So that is exactly what we have done over time in Japan, in Europe as well as in the U.S. where we work with leading laboratories to help us fully understand what their requirements are and what are the areas we need to automate. The second part of the challenge is manufacturing highly reliable machines. The machines are running 24 hours, seven days a week at a time – so the challenge is to engineer and manufacture instruments that are extremely reliable because the customer cannot afford to have a breakdown. We have designed a large part of our instruments ourselves, they are custom designed, so it is not something where we are buying components from some low cost supplier; we are in fact designing a lot of these components ourselves, and assembling these components ourselves. And then the other challenge is the rigorous testing that it has to go through to make sure that the instrument is relatively easy to use, it should not be complex, so trying to simplify the software and the actual use cases so that the customers in fact make full use of the machines. Those have been the challenges.

**CEOCFO: *What is the competition like? Are there many companies in this field?***

**Mr. Dube:** The market that we are focused on is, I would say, a niche market. There are a lot of companies involved in laboratory automation, but they may be at different stages of laboratory automation and it is actually a broad field. We are focusing very much on cytogenetics, and in that field there are a few competitors, but not very many. We have some competition from companies in Europe and we do have other players who may have some part of our solution, but not a complete solution. So if there are five steps, they may automate one or two steps where our instruments automates all the steps at the same time, so customers tend to prefer our machines. At times they may be a little bit more expensive, so that means that there is perhaps room for some of these smaller companies to survive. The other thing is we target the bigger labs, the labs with very large volume. There may be smaller labs who want just a simple machine and in that case there are a few other suppliers.

**CEOCFO: *Would you tell us about the acquisition of Genial Laboratory Automation?***

**Mr. Dube:** You are very well informed. This was in fact announced this morning. Genial Laboratory Automation is another company based in the UK which has partly been involved in what we are doing but they have some other products which are targeting the same customers. These are products that we do not have, or they have products which are targeting vertical markets which are adjacent to ours, like pathology and others. We have been in discussions with Genial for a few months, and both sides decided that from a strategic stance, it would make sense. We are a bigger player; we have a bigger footprint. Genial is largely limited to Europe; they do not really have much North American presence, or they do have presence but very limited, and certainly have almost no presence in Asia. In the end, it made sense for both companies where we decided to acquire Genial. Genial is doing several things. One of their big focuses was Laboratory Information Management systems, so they designed software for laboratory information management, and then they had a division which was doing instrumentation, which was partly competing with us, partly working in the same area. We decided together with Genial that it was best for them to exit the instrumentation market instead of competing head to head. We ended up acquiring that division of the company. Some of the instruments, which are competitive, will end up merging with our Hanabi product line, but they have some other products which are noncompetitive and our intention is to move that to the U.S., the manufacturing and development of those products. We are just in the process of starting to do that.

**CEOCFO: *Do you see additional acquisitions? Is that part of your strategy or more opportunistic?***

**Mr. Dube:** I would say that for our company we have very high ambitions. We are a company that has wanted to grow quite aggressively. We believe there are opportunities in laboratory automation that we can leverage. We have a very significant internal development, so there was the organic growth based on product that we developed and the market that we addressed, but we believe that for the kind of growth that we are looking for, we should also be actively looking at acquisition opportunities, so growth by acquisition as well. We are doing that in a very strategic way. We are looking for the right kind of companies where we can leverage our existing market presence, our existing footprint where there are companies with highly innovative technology which may not have - which are complementary to what we are doing, but companies may not have access to the market the way we can have access to the market. Those would be very good candidates for us to roll up part of our brand name, our market presence. We are on the lookout. I would not say that we are going to be doing multiple acquisitions, but strategically we will definitely be looking for opportunities where we can find companies which would be a good fit to join what we are trying to do.

**CEOCFO: *Would the customers be the same for the newer products or are you expanding the market?***

**Mr. Dube:** There is definitely our existing customer base which could use some of the newer products we end up

acquiring. It is expanding the market with the same customer base, which is always nice because we already have relationships with those companies, so we would be selling more products to the same customers. But at the same time, we are very conscious that we need to expand in other markets. We are already active in pathology and we are looking for new products that we can add in the pathology area. By the way, not all of our growth activities in that area need to be acquisition. In fact, we are partnering with companies where we are able to either be an OEM or a distributor of a company's products, and we are already doing that to a certain extent in Europe as well as in other parts of the world. There are some European companies that we are selling their product to the U.S. It is a mixture of our own products, some products that we acquire, and at the same time products that we can distribute, at times with are our brand name, at times with other company's brand name. What we are leveraging is the market access that we have. More important is the reputation that we have in the industry as a reliable supplier and someone who can support our customers with complex instruments. That reputation is very important.

**CEOCFO: Do you sell directly, do you work through distributors - how do you handle the sales worldwide?**

**Mr. Dube:** In most places, we sell directly. Of course in North America we have our own sales and support staff. We have in Europe similarly as strong sales and support group, our European headquarters are in Glasgow, but we have technical teams in France, in Germany, in Italy and in the Netherlands, so we cover Europe quite broadly. And then in Asia with our parent company headquartered in Japan, again we have some locations. But we do have distribution channels, and in fact that is part of our strategy to get a bigger footprint. One of our strategies is to focus more on channel partners who can provide us better market reach than we are able to do even with our own sales force. I would say it is a combination. In the past it was solely all direct, but one of the things that we have instituted over the last year or so is to try to broaden our channel partnerships so we are able to get access to a broader set of markets.

**CEOCFO: How do you, as a CEO, handle the challenges of global customers, of looking at new products, of looking at new ideas?**

**Mr. Dube:** You can imagine there are multiple challenges relating to global customers. Although we are a relatively small company with a total workforce of less than 100 people, we are truly a global multi-national company. One hears about large multi-national companies as it relates to globalization, but our company is a very good example of even SME's operating as a true multi-national company. Having presence in many countries including North America, Europe and Asia, we have a very good understanding of the challenges relating to each of the region. Having people on the ground gives us a competitive edge in being able to provide advanced instruments for clinical labs and research applications. Our global presence also allows us to interact with scientist (our customers) throughout the world, getting to understand their requirements which in turns drive product innovation. There are challenges, I would not minimize it. We have to deal with different regulations in Europe and within Europe you have different countries where we have workforce, but those challenges are today relatively easy to overcome. We have the structure and the means. You do not have to be a huge multinational company to overcome those challenges. We are a prime example of a company that could be very happily multinational and benefit from that being a multinational company. The challenges we face are no different than other challenges. We have challenges on how to finance this business, we have challenges on how do we manage such a diverse workforce, we have challenges in terms of different geographies, how do you do business in these geographies, we have challenges in how do we collect the money in these different geographies, but we are open to those challenges, and I do not see those being insurmountable. In fact, another example I would give you is that we have a global company my finance groups, that is in Glasgow, and they are handling finance for all of our group including the U.S. I only have on person in the U.S., but the larger team is sitting in Glasgow, and to me that makes sense. That was the efficient way of doing things. Similarly, we will do the things in geographies where it makes sense, but we will do business in many areas. In North American we are doing a lot of our engineering work, and on the bio-consumable side, there is a lot of new opportunities that we are exploring. That is how you manage it.

