Interview: Mohammad Afshar – CEO, Ariana Pharma, France

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Mohammad Afshar, CEO of Ariana Pharma, shares his insights on the importance of decision support tools, big data's impact on the healthcare industry, and the need to translate this data into the production of real products. He also discusses the challenges he faced as an entrepreneur in France and his goals for the future.

As the founder and CEO of Ariana Pharma what have been some of your major milestones and proudest achievements during your tenure so far?

We founded Ariana Pharma 12 years ago and at the time we were amongst the first companies focused on the issue of big data and data analytics. At the time, the word "big data" did not even exist, and convincing people that there was value in big data was our biggest challenge. The model was to engage in partnerships with big pharma companies like GSK, Novartis, MSD and Pfizer, in order to fund the development of the technology that would enable us to analyze and extract knowledge from the large amount of data. One of the key milestones for our company was an agreement that we signed with the US FDA in 2010 with the department of pharmacogenomic. This changed the shape of the company as it enabled us to get involved with a number of companies that were developing diagnostics and set partnerships with them.

There has now been a novel trend to look for diagnostics that combine multiple analyses; they are called multi-analyte algorithmic tests. This allows for the production of an equation that can understand if a medicine is performing positively or negatively for the patients. The next milestone that we were able to achieve was being able to work in a royalty deal with diagnostic companies such as BioRad and Bruker. The idea is the following: we receive a percentage of future revenues by developing together a multi-analyte diagnostic test, where we provide the algorithm and they provide the system that allows for the measurement of the single analytes. For example, we are working with Bruker to develop a real-time diagnostic for cancer tumors in the brain that can be performed during surgery. This allows a surgeon who is operating to perform a biopsy and have the results within minutes.

The final milestone that we have reached is launching the development of our new product called Onco KEM®. This is a precision medicine used to decipher therapeutic choices. This device is able to identify the best drug solution or treatment for each particular patient. This is a personalized decision support tool for every patient’s needs, specifically focused on the oncology sector. The response rates today of patients with a metastatic cancer are incredibly low. We are looking to increase this rate and increase the likelihood for success with this diagnostic tool. There is a lot of information gathered on each patient around genetic and genomic profiling. This tool will link the odds of each medicine’s efficacy rate at that specific point in time in the tumors life and in turn rank the best solution for the particular patient’s needs. We are currently working with many doctors and hospitals around the world to push this system through. We are also testing this at the moment in multiple cancer centers around the world including France, Israel, Spain and Canada. Over 300 patients have been tested, 150 of whom also received treatment. We are expecting to have the results from the product by the end of this year.

Decision support tools will continue to have a huge impact on the healthcare market and the way we choose treatment for patients. This will also profoundly affect the pharmaceutical industry as it is becoming more and more difficult to justify the reasons why a drug is prescribed to a patient. In the end, the molecular signature of each patient is important to choose the right drug.

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Ariana is currently focused on providing services in two areas: Clinical Data Analysis and Biomarker Identification.. Which of these would you say are your leading revenue producers and from which do you see the most potential in the future?

It was difficult primarily to educate and show the value of the endeavor. Today, people understand the value our products can bring, and see them as an opportunity to assess and filter which product will work best with each patient. If a pharmaceutical sponsor cannot demonstrate the clinical benefit statistically and in terms of value, then it will not be able to receive funding. This part of our business is focused on showing the value of a clinical asset; this is a growth opportunity and this is the future. There are many companies that have turned to us because they have had trouble with clinical trials and reimbursement methods.

Choosing the right drug for each particular patient now is essential. The difficulty is in the way the testing is applied, which is different from the traditional methods. Payers will essentially look for these types of algorithms that are able to select the most appropriate drug. The paradigm is changing in many different ways.

Can you share some insight into what types of companies Ariana Pharma traditionally partners with?

We work with the regulatory side as well as the private sector, including pharma and biotech companies that have a clinical asset. Often, companies come to us looking for solutions with their clinical trials that have issues. For example, the company could be in phase II and looking to meet their end point, in these types of cases we are able to assist our clients. The diagnostic work that we do is very much related to the clinical side as well.

We work with pharma companies that are interested in profiling and seeing who their patients are or could be, and to understand how their patients could be selected before even launching clinical trials. We also work with the university hospitals in the region that run clinical trials as we are a natural partner for them. Additionally, we are also working with companies in the US. They are interested in their patient needs so that they could ultimately also pay less and we help them to develop the right guidelines to select the correct patient.

You have a breadth of experience internationally, particularly in the USA and the UK. Why did you feel France was the right place to set up your headquarters, and could you also tell us more about your internationalization strategy?

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I would say like for many other international entrepreneurs, there was a mix of personal and professional reasons. All in all, we found the French environment propelling and conducive to setting up a business in our field. Traditionally when you begin a company you receive large

amounts of capital from venture funds and build from those initial investments. However, when we began the company in France, there was the opportunity to do it differently. Over the past 12 years we have used EUR 30 million (USD 33.8 million) of capital, out of which about EUR 3 million (USD 3.38 million) was diluted capital. The rest has been funding that we were able to get from the French government, Europe and different partners. It has been an incredibly positive environment to develop a highly innovative, different business.

That being said, the first challenge – coming from the United Kingdom – was to understand the corporate environment in France. I was incredibly lucky that we won seed funding from Aventis, and this funding also allowed us to be part of a training program geared towards entrepreneurs in France. In a way there is a complicated bureaucracy in France, however, the key to success is to be able to understand and navigate it effectively. On a human level, the quality of the people, especially in Paris, is excellent. You are able to attract the best scientists in France and from around the world. You have a very highly educated, hard working population with incredibly bright students as well.

Looking at our international footprint, currently, all of our R&D activity is done in France in collaboration with local hospitals and institutes. Our operation in the United States is where most of out commercial activity takes place, both on the east coast and more recently in the San Francisco area.

Why are you the partner of choice for you clients?

We are one of the only companies in the world that has actual hands-on experience utilizing big data and transporting it into products that actually do something and make a difference. This is one of the key factors that differentiates us from potential competitors. You have a number of companies that are amazingly good at clarifying the concept and theory behind this type of work, but there are very few that can say they have 12 years of experience actually doing it. We do not just analyze data; we develop real products

Looking forward, what are some concrete objectives that you hope to have accomplished in the coming years?

There are two main accomplishments that we hope to have achieved in the next few years. First, we want Onco KEM® to become a standard part of treatment. I believe that our success can be judged on how widely we are able to implement this tool. Secondly, we hope to integrate patient stratification into clinical trials in a systematic way.

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