Interview: Chung-Cheng Liu, President of Adimmune Corporation, Taiwan

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The president of Adimmune Corporation discusses how the avian flu outbreak of 2006/2007 changed the course of the drug manufacturing industry in Taiwan, what that meant for Adimmune, and how he plans to get Adimmune and the Taiwanese biotech industry on the map.

Over the past few decades, how has the identity of Adimmune changed and why?

Adimmune started back in 1965, initially working with Taiwan's Centers of Disease Control (CDC) to provide small volumes of vaccines for the Taiwanese market including importing flu antigens from Japan, formulated/filled, and sold to Taiwan market. It was not until 2006/07 that the fears raised by the avian flu (H5N1) outbreak radically altered the identity and growth potential of the company.

The flu pandemic convinced the Taiwanese government to significantly bolster its domestic vaccine manufacturing capability, initiating the startup of a Project based on the Build-Operate-Transfer (BOT) concept, which incentivized a foreign or domestic company to build a major flu vaccine plant in Taiwan. Negotiations between the government and international companies like GlaxoSmithKline floundered over disagreements regarding technology transfer. Ultimately, the BOT concept was abandoned and Adimmune raised funds to go with itself and international collaborators (Crucell Holland BV) to provide for Taiwan's needs, and today we are the only company in Taiwan with the capacity to produce large amounts of human vaccines.

We constructed a mega manufacturing plant capable of producing 10-15 million doses of flu vaccine per year, and obtained the necessary licenses to start production and sales in Taiwan in 2009. However, today, the government requires only about three million doses to support its annual flu shot program, and Adimmune satisfies just a little over 50 percent of that demand by bidding, with other foreign companies like Novartis and Sanofi, to provide the rest. Unfortunately, today our financial Achilles Heel is that our manufacturing capacity is considerably underutilized. Crucell, our Dutch partner, committed to and still seeks to buy 10 million doses from us every year, but those plans have stalled as Crucell just obtained the necessary licenses in Europe and started its market push after being acquired by J&J 2 years ago.

What is the international business strategy of this company?

Adimmune's core strategic focus for the last few years has centered on manufacturing and marketing JEV, Tetanus toxoid vaccine and flu vaccines—in all of which we have 50-100 percent of domestic market share. However, in terms of population size, Taiwan, with 23 million people, has a limited domestic market. As such, we endeavor to broaden our international presence and become a prominent supplier of biological products and vaccines across the Asia-Pacific region, specifically China.

In some industries, Taiwan lacks a culture of marketing its own products globally because of our lengthy history of 'OEM': manufacturing products that are promoted under the brand names of our foreign partners. If the Taiwanese biotech industry has realistic ambitions of achieving global recognition, then companies must manufacture in Taiwan and sell directly to the international market themselves. To put Adimmune and the Taiwanese biotech industry on the map, we must strive to emulate companies like Taiwan Semiconductor Manufacturing Company (TSCM) and the wider electronics sector, who were adept at both manufacturing in Taiwan and marketing their products as Taiwanese brands, to a global audience.

Despite China's perceived corporate culture problems, it is the market most investors want to tap into. For three years we have been laying the groundwork for our entrance into the mainland. The headache with marketing in China is that their licensing process is both idiosyncratic and arduous. For instance: despite our products like flu vaccine selling seamlessly into the Taiwanese domestic market with a technology for over 30 years, the CFDA wanted to examine our procedure and process and test our entire product details. Such red tape means that we, alongside many similar Taiwanese enterprises, are still waiting to obtain a license to sell our products into the economic juggernaut that is China. The alternative is moving the manufacturing facility to China. We overcame these obstacles by working with the regulatory body in China every step of the way and, hopefully, in one or two months, we will start the clinical trials on the mainland with products made right here in Taiwan.

Adimmune needs China, but considering China has many domestic vaccine companies, does China need Adimmune?

The Chinese believe they have the capacity to be self-sufficient across most sectors, but in such a vast market, there is definitely scope for Adimmune to enter their vaccine sector. There are a significant number of Chinese companies that have traditionally outsourced manufacturing to the Asian Pacific manufacturing belt, and we are actively seeking to forge links with such companies. A line of potential partners has touched base with us, seeking to take advantage of our primary strength: quality, and tangible manufacturing assets. Adimmune's manufacturing plant is EMA certified and has the capacity to manufacture products on a substantial scale for our Chinese partners across the strait. We hope that by 2014, we will manufacture products for a couple of Chinese partners in a novel business model: "value up" instead of "cost down".

How important is Adimmune to the national security of Taiwan?

According to the Taiwanese government, Adimmune is a cornerstone of national security. But in reality, there has been a marked difference between the government's rhetoric and actions. Despite promises being made, we are yet to receive any financial subsidies or purchasing guarantee from the government in vaccine products. Such government action breeds uncertainty in the domestic industry and it is increasingly becoming the environment that we are operating in.

For example: we can very easily provide the three million flu vaccine doses needed in Taiwan, yet we are only supplying 50 percent of these needs because of government purchasing regulation. The rest is outsourced to a foreign enterprise, like Novartis or GSK. With Taiwan being such a constrained market in terms of population size, and our flu vaccine being off-patent, we are struggling to generate profits. If the government's ambition is to build a healthy, domestic vaccine industry, it needs to strongly support its domestic producers by making it a special item as it is related to homeland security especially for flu vaccine and its pandemic potential.

To be profitable we need to endeavor to meet the potential of our considerable manufacturing capacity. A combination of minor annual domestic demand, and Crucell's inability to obtain a license, has forced us to widen our scope and hunt out foreign markets.

How mature is the Taiwan biotech market?

Taiwan is blessed with a strong technology manufacturing background and large life sciences talent pool; but compared to the US, the system in place to support drug/biotech development is quite weak. In the US, the system fosters competition: peer organizations are mutually funded and compete to achieve a top-down directive. By contrast in Taiwan, partly due to a lack of resources, normally only one organization is selected to run a project. The lack of competition inhibits innovation and can breed corruption. This management culture leads to the formation of a monitoring body, which pumps bureaucracy and insecurity into the entire system. Companies are being issued government projects, a number of which are flawed, that they have little influence over. The governments' financial strategy in the industry forms part of a fundamental, underlying problem and it is a systemic flaw that I have raised with government officials on numerous occasions. As someone put it before, we need to put reality before administrative actions, as "nature" can never be fooled.

What will be the position of Adimmune in five years' time?

Adimmune is flat lining because our products are mostly generic biologicals and therefore our margins are low. Over the long-term, we will continue to produce these vaccines for the country—indeed that direction transformed the identity of the company. Yet we would also like to innovate cutting-edge biological products. We possess the land and plan to be able to manufacture such products. Producing innovative vaccines and biologicals requires financial muscle and that is an area we fall short in.

The path towards growth requires addressing our significant excess capacity by finding partners and that is why, as discussed, we are actively turning towards China and global organizations for collaboration. Our strengths lie in our tangible and intangible assets. For instance, in April our manufacturing plant received its EMA certification for the second time, passing with flying colors. Meeting such international regulatory standards distinguishes us from the crowd and it is a strength that we must leverage. Right now, the most important thing is to get our head above the water.

Addimune is actively searching for international collaborators. We are a company with exceptional manufacturing capability, and we now need to emulate TSMC and sell 'Made in Taiwan' to the world!

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