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Dr Wilber Huang: Taiwan's antibodies man

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Abnova founder Dr Wilber Huang wins bioscience industry award



The decoding of human genome created ripples in early 2000 and paved the way for new ventures around the world. These exciting developments in the biotechnology industry then prompted a young physician, Dr Wilber Huang, working at the Cleveland Clinic in Ohio, US, to move beyond the comfort zone of his stable job. While still working during the day, he spent his evenings in libraries or attending classes on business management. On weekends, he flew down to places across the US to visit biotech firms and imbibe entrepreneurial skills from their leaders.

Dr Wilber Huang is the man behind the success of Abnova, based in Taiwan and one of the largest antibody manufacturers of the world. *BioSpectrum* recognized Dr Huang's entrepreneurial skills with the BioSpectrum Asia Pacific Bioscience Industry Entrepreneur of the Year Award in 2012. Ã?Â Ã?Â Ã?Â

It took him two years to set up Abnova in Taiwan. The mission was to become a leader in high-throughput antibody and protein production. Recalling the early days, Dr Huang says, "Mass spectrometry was a fashion then. I felt the way to proteomics would be to increase the number of monoclonal antibodies in the market. It was a good concept but I had to overcome many obstacles in the know-how, technologies, human resources, manufacturing, and financing in order to achieve this goal."

With the target of generating an antibody for every human-expressed gene in the human genome, Dr Huang adopted a unique approach of blending the business model of US biotech companies and the successful model of the IT industry of Taiwan. He says, "The goal was to increase the availability of antibody tools to facilitate research and discovery for biotech and pharmaceutical industries."

Building on a strong foundation, Dr Huang looked at not just one disease, diagnostic or therapeutic in the life sciences industry. Instead, he was interested in increasing the efficiency of the biotech and pharmaceutical industry which was hampered by the specificity of antibodies. "As such, I decided to generate monoclonal antibody in a high throughput fashion to achieve my goal. If I could increase the efficiency of the industry, then other researchers and physicians could use these tools to achieve their goals."

About AbnovaÃ?Â
Abnova intends to become world's largest protein and antibody catalog company by building a full collection of essential proteins and their antibodies targeting the human genome
Website: www.abnova.com
Start-up Year: 2001

Abnova was able to make it through many uncertain and difficult times and when it went public in 2009, it brought a sense of invigoration to the biotech and investment community in Taiwan. "Over the years, we have been able to bring many antibody products to the market and benefit the researchers around the world at large," says Dr Huang.

Taking Abnova through IPO

Abnova went through nine rounds of financing before going public. For a manufacturing company producing in an industrial and high-throughput scale, it was very difficult. Finally at the eighth round of financing, the company got investment from the financial and venture capital community. "I had to rely on friends and families. In retrospect, I really appreciate the investors and shareholders who believed in me and got me through the tough times. Now they are rewarded, I feel very happy for them," says Dr Huang.

Leveraging the electronic and optical industries in Taiwan, Abnova has set the goal to develop a label-free approach to quantify protein using a single antibody. "The ability to quantify all the proteins in the human genome is the next big thing. We feel we have an important contribution to make in this critical area with a large unmet need. We have been working on the

system for the last three years. A commercial prototype will be ready this year. We are excited," Dr Huang shares delightfully.

Under the guidance and management of Dr Huang and his team, Abnova has evolved as one of world's largest antibody manufacturer with the capacity to generate 300 mouse monoclonal antibodies and 200 rabbit polyclonal antibodies per month. Abnova has produced more than 16,000 recombinant proteins, 11,000 MaxPab antibodies, 12,000 monoclonal antibodies and 15,000 polyclonal antibodies targeting the human genome. These products are marketed through a combination of E-commerce-based direct sales and a multi-tiered sales network of over 49 distributors.

Eyes on the future

Sharing his thoughts on the next exciting phase for Abnova, Dr Huang says, "We are making very good progress in diagnostic and therapeutic arena. For example, we have set up GMP manufacturing to produce analyte-specific reagents to initiate clinical trial for in vitro diagnostic for lung cancer. Moreover, antibodies are being humanized to create the lead drug antibody candidate for treatment of prostate cancer and other ailments."

He further adds, "The company has already paved the path to systems, diagnostic and therapeutic product development, which will fuel the growth and expansion of the company. Working out the details and overcoming the obstacles are the main daily task. The solid foundation that Abnova has built on antibody manufacturing will enable it to achieve the goals efficiently. We are opening new chapters for Abnova."

To young entrepreneurs, Dr Huang says, "The most important challenge in Taiwan is the feeling of insecurity among entrepreneurs, investors, and regulators. The approach an entrepreneur takes to overcome this lack of confidence is very important. It has to be concrete and real. Entrepreneurs need to do their job so that investors and regulators can do theirs."