

Dr Il-Sup Huh: Guide of Green Cross

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Green Cross chairman Dr Il-Sup Huh wins bioscience industry award



Before joining the family business of Green Cross in 1979, Mr Il-Sup Huh, the fifth son in the family, served the Korean military. He left the company few months after joining to pursue master's as well as doctoral degree in business administration in the US. Gaining the necessary skill sets and knowledge of running a business, Dr Il-Sup Huh rejoined the business in 1991 to support his second brother who was the chairman at that time. He took over the company in 2009 as its chairman after serving in different positions.

BioSpectrum recognized the man for his achievements in the Korea biotechnology industry with the BioSpectrum Asia Pacific Bioscience Industry Person of the Year Award in 2012 ([see selection criteria](#)). He received the award at the awards night held in Singapore on March 16, 2012.

Success with Green Cross

Green Cross, established in 1967 to produce drugs that are hard to make but essential for human beings, particularly in vaccine and plasma derivatives business, saw many milestones under the stewardship of Dr Huh. A second generation entrepreneur, Dr Huh maintained the direction of the company towards research and development and was fully committed to the development of new medicines by investing annually five-to-seven percent of total sales revenue in R&D, the largest amount among pharmaceutical companies in Korea.

Green Cross' hepatitis B vaccine, Hepavax, launched in 1983 and has sold over 400 million doses by 2010, has been distributed to 60 countries and international organizations, such as WHO and UNICEF, and has been recorded as the most widely used hepatitis B vaccine. Following the success of Hepavax, Dr Il-Sup Huh directed Green Cross to successfully develop a chicken pox vaccine, the world's second in 1993, and an AIDS diagnostic reagent for the first time in Korea.

In the year 2009 when the pandemic H1N1 situation occurred, Green Cross succeeded in rapidly developing H1N1 influenza vaccine and received marketing authorization from the Korea FDA. "If you consider the production and sale of plasma fractions in 1970 which required sophisticated technology, Green Cross in 1970s which required sophisticated technology, Green Cross strived to develop ethical drugs that are hard to produce and resented patients. Subsequently, Green Cross won the biggest ever chickenpox vaccine supply contract from Pan American Health Organization in 2010, also obtained the USFDA approval for a new drug for Parkinson's disease. In 2011, Green Cross witnessed another successful year in its history. In January 2011, it succeeded in developing an orphan drug for Hunter Syndrome and named Hunterase, which will provide an alternative treatment option for those suffering from this rare genetic disease. Green Cross filed an application for the approval of Hunterase.

In addition, Green Cross developed the third generation recombinant hemophilia A drug named Patients Subsequently, Green Cross earned the biggest ever chickenpox vaccine supply contract from Pan American Health Organization in 2010, also obtained the USFDA approval for a new drug for Parkinson's disease. In 2011, Green Cross witnessed another successful year in its history. In January 2011, it succeeded in developing an orphan drug for Hunter Syndrome and named Hunterase, which will provide an alternative treatment option for those suffering from this rare genetic disease. Green Cross filed an application for the approval of Hunterase.

Dr Huh has guided Green Cross with the fundamental principle of enabling healthy people maintain their health, supplying vaccines needed to prevent diseases, and to develop and supply medicines to help patients rapidly recover from diseases. Throughout his career in Green Cross, Dr Huh has aimed to bring innovation and uniqueness. When most of the Asian companies are following the game of generics drugs or biosimilars, Green Cross aims to develop new drugs that require innovative technology or targets a segmented market.

Strengthening its R&D focus, Green Cross announced its plan to build the largest R&D center in Korea, scheduled to be completed in February 2013. The total construction area will be 28,510 sq m. Green Cross has almost 20 pipelines of biobetter drugs, vaccines, rare medicines, and synthetic medicines that have reached the pre-clinical stage. Furthermore, the corporation is planning to launch self-developed new medicines each year from 2011 to 2018.

Striking the right deals

Dr Huh has led Green Cross to become a rapidly-growing Korean pharmaceutical company, with a two-digit growth rate for the last five years. To a large extent, broad and strong partnerships have been a critical part of the company's growth strategy and will continue to be a strong driving force for its future growth. The strategic alliances have enabled Green Cross to expand their clinical development programs towards global market and to launch new products.

In a highly important deal, Green Cross entered into a memorandum of understanding (MoU) with the Thai Red Cross Society to establish a plasma derivatives manufacturing plant worth approximately \$61.6 million. This is the first time that a Korean pharmaceutical company has secured an MoU to build a plant to produce plasma derivatives overseas. Besides, Green Cross is expected to advance into emerging markets as well as established markets in South East Asia.

Dr Huh has also led the company to get USFDA approval for phase III clinical trials for Immunoglobulin IVIG-SN, the first domestically-developed biopharmaceutical. It is estimated that Green Cross' exports of IVIG-SN will be worth more than \$100 million by 2015. In 2011, he fostered an agreement with Japan's aRigen Pharmaceuticals for joint development of the super antibiotic 'WAP-8294A2'. He also forged an agreement for introduction of endometriosis therapy 'Diphereline' with Ipsen Korea and entered into 'R&D industry-university cooperation MoU' with Yonsei University Health System.

The company also entered into an agreement with the US-based MacroGenics for joint development and exclusive sales of Herceptin anticancer antibody therapy. Last year, the biggest blood fraction products and recombinant gene products plant in Asia, Ochang factory, was completed by Green Cross.

Plans ahead

To strengthen competitiveness in the global market, it is critical to retain superior human resources in R&D and train them. Green Cross has strived to recruit both local and overseas candidates and seeks specialists with in-depth expertise and experience in the pharmaceutical industry.

Over the past 40 years, Green Cross has worked continuously for producing new medicines that could save lives in Korea and the world. With a strong belief that R&D is the future, the company aims to become a leading world-class biopharmaceutical company through continued investment in R&D. "This goal is achievable given our drug-development experience, such as developing vaccines for hepatitis B, chicken pox vaccine, and AIDS diagnostic reagent, and state-of-the-art infrastructure. Also, over and above economic benefit we highly value integrity and code of conduct, and are responsible towards our core business strategies and their execution for the nation and people," observes Dr Huh.

Playing multiple roles

Besides his contribution and responsibilities towards Green Cross, Dr Huh has been playing multiple roles in the industry that bring him larger credibility and recognition. He was the chairman of the board of Korea Pharmaceutical Manufacture Association from 2005 to 2007, vice chairman of Korea Biotech Association and is currently the vice president of Korea Tuberculosis Preventive Association. "By doing so, I have contributed in making Korea biotech industry mature and stand proudly on the global stage with other advanced countries," he believes.

Reacting to the government's drug price control measures, the financial burden of public health insurance system, and expanding presence of multinational pharmaceuticals in the Korean market, which is taking a toll on the Korea life sciences industry, Dr Huh says, "I believe that the role of an entrepreneur in the Korea life sciences industry is to focus and develop innovative medicines. The field of life sciences is often exclusive and impenetrable, which is why we are focusing our R&D to rapidly grow into a global game changer as a specialty biopharmaceutical company."

Giving his views on Korea's position in the global vaccine market, Dr Huh shares that the vaccine market, especially in Korea, is relatively small compared to its population, yet it is growing, and various Korean pharmaceutical manufacturers are increasingly investing in vaccine business. This is different from what the case was in the past when Korea had been importing all the vaccines from overseas. Green Cross as a leader in the vaccine field is now expanding its vaccine business towards the second generation technology, like cell-based culture vaccines and multivalent vaccines.