

Novel, Proprietary Vaccine Technology



Wataru Akahata, Ph.D.
Co-Founder, CEO
Chief Scientific Officer
VLP Therapeutics, LLC.

CEOCFO: Dr. Akahata, what is the concept behind VLP Therapeutics?

Dr. Akahata: VLP Therapeutics was established based on a novel, proprietary vaccine technology. Our vision is to combat the 21st century global public health problems by revolutionizing vaccine therapies. We aim to offer innovative therapies that are widely accessible and transform people's lives.

CEOCFO: What is your approach here?

Dr. Akahata: We have developed a novel platform called inserted alphavirus virus-like particle technology ('i- α VLP'). This i- α VLP evokes effective immune responses against the inserted target antigens without side effects typically associated with live vaccines. Through i- α VLP technology, we are developing widely accessible, innovative vaccines to prevent and/or treat cancer, lifestyle chronic diseases, neurological diseases and infectious diseases.

CEOCFO: Have similar concepts been tried in the past?

Dr. Akahata: So far, I have not heard of similar approach.

CEOCFO: Would you please explain a little bit deeper as to what is the science?

Dr. Akahata: Our novel, proprietary i- α VLP technology was created utilizing alphavirus VLPs. Utilizing this α -VLP technology and leveraging its potency, we successfully developed a new compound by inserting a target antigen into the specific area of α VLPs (thus, "inserted" or i- α VLP). Our i- α VLP offers several unique characteristics, which includes repetitive and highly symmetric array, large particle size, availability of other scaffold α VLP to boost the same target antigen, and novel and proprietary method developed and already established by us to insert specific antigen into a specific section of α VLP. These advantages are thought to lead to yield high antigens which is a key to develop efficacious vaccines.

CEOCFO: Where are you in the development process?

Dr. Akahata: We are in the animal proof of concept study stage for the most of the indications. For the indication of malaria, we are moving forward to the clinical trial stage in late 2015/early 2016.

CEOCFO: You recently were the winner of the Life Sciences Impact Grant Award. Would you tell us about that?

Dr. Akahata: It is a grant to stimulate the organic growth of life sciences in Montgomery County, Maryland. They want to support startup companies and if the companies grow, it is good for Montgomery County's economy. Also our mission is public health contribution. Therefore, I think Montgomery County would contribute to the global health if our company successfully develops the vaccines.

CEOCFO: Is the grant specifically for Malaria?

Dr. Akahata: Yes, we applied for the grant for the Malaria vaccine development.

CEOCFO: Has there been any other vaccine developments in Malaria?

Dr. Akahata: The RTS,S made by GSK (GlaxoSmithKline) is going to be approved in Europe. RTS,S showed moderate (30-50%) protection efficacy in clinical trials.

CEOCFO: Are you looking for additional funding?

Dr. Akahata: Yes. We are opportunistically exploring various financing possibilities. For infectious diseases, we are primarily looking for grants such as Small business innovation research (SBIR) grant and Global Health Innovative Technology (GHIT).

CEOFO: *What is the interest today in the investment community? Is this an area garnering attention?*

Dr. Akahata: Yes. We are seeing a lot of interests in the investment community as our novel i- VLP vaccine has a potential to be a breakthrough vaccine technology that addresses unmet medical needs. It is attracting not only the traditional investment communities but also new investment communities that focus on social impact such as public health. More and more people today are interested in creating a venture that has social impact and our approach seems to attract those investors as well.

CEOFO: *From the initial concept to where you are today, have you progressed as expected?*

Dr. Akahata: So far, I think we are on the right track – the company was established in 2012 and we are already gearing up for the clinical trial. Thanks to the experience and know-how brought in by the co-founders, we are moving very quickly and efficiently.

CEOFO: *Would you tell us about the VLP Therapeutics co-founders?*

Dr. Akahata: We have five co-founders including myself. Two of them, Dr. Ryuji Ueno and Dr. Sachiko Kuno, who are entrepreneurs themselves, established and grew two successful and now publicly traded companies, one in Japan and another in the U.S. Through those companies, they successfully commercialized two proprietary drugs, Rescula Eye Drops and Amitiza, based on their own inventions. Their former colleagues from those companies have also joined VLP Therapeutics as co-founders.

“We believe that this i-αVLP vaccine technology has a potential to be a breakthrough technology that can make significant contribution to the global public health.”- Wataru Akahata, Ph.D.

CEOFO: *Why is VLP Therapeutics a company to watch?*

Dr. Akahata: Vaccine is one of the most important inventions in the past centuries. The successful vaccines save millions of lives to prevent infectious diseases and do so in a cost effective way. We are exploring the vaccine technology to expand other new important fields with high unmet medical needs such as cancer, lifestyle chronic diseases, neurological diseases as well as infectious diseases through cutting edge i- VLP vaccine technology. Based on the results of our preclinical studies so far, we believe that this i- VLP vaccine technology has a potential to be a breakthrough technology that can make significant contribution to the global public health.

CEOFO: *In closing, would you tell us about your background and how it prepared you for your work with VLP Therapeutics?*

Dr. Akahata: Before I started VLP Therapeutics, I worked at Vaccine Research Center, National Institutes of Health (NIH). I worked in Dr. Gary Nabel's lab. At that time I learned a lot about how to make vaccines and how to set up clinical trials. Therefore, that experience brings me where I am today with VLP Therapeutics.

Interview conducted by: Lynn Fosse, Senior Editor, CEOFO Magazine

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