



**With a Number of Preclinical Stage Programs in Infectious Disease as well as Lung and Pancreatic Cancer, Immunome, Inc. is Harnessing the Human Immune System to Generate First In Class Therapeutics**

**Healthcare  
Biopharmaceutical  
(Privately Held)**

**Immunome, Inc.**

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**Timothy J. Pelura, Ph.D.  
Chairman, President and CEO**

**BIO:**

Dr. Pelura joined Immunome in September of 2009 as President and CEO. He is a serial life science entrepreneur with over 35 years of experience in the pharmaceutical, biotech and medical device industries and has been pivotal in the development of several new drugs spanning numerous therapeutic areas. Previously, Dr. Pelura was founding President and CEO of Promedior, a product-focused biotech company developing novel therapeutics for the treatment

of fibrotic disorders and diseases. In less than 3 years, he attracted \$30MM in tier 1 venture capital, established the corporate strategy, built the management team and brought this nascent technology to the clinic. Prior to Promedior, Dr. Pelura served as Chief Scientific Officer for Kereos, responsible for all R&D activities for their oncology, cardiology, and molecular imaging programs. Prior to joining Kereos, he served as President and COO of Provasis Therapeutics, a developer of interventional neurosurgical devices and was successful in selling the company to the largest medical device company in the world with significant returns for the investors. Dr. Pelura held executive R&D positions at Neuron Therapeutics and Alliance Pharmaceutical Corp. At both companies he was pivotal in the development and commercialization of numerous innovative medical products. Earlier, Dr. Pelura worked in various capacities at KabiVitrum and Pharmacia where he was involved with parenteral nutrition, drug delivery, and lipid emulsion research and development. Dr. Pelura, an avid believer in the tremendous potential of the tri-state region, is pivotally involved in several non-profit, regional life science development initiatives. Dr. Pelura holds a Ph.D. in chemistry from Rutgers University.

**Company Profile:**

Immunome is a start-up biopharmaceutical company with a patented native, human antibody platform which enables us to harness the natural curative power of the human immune system. We believe that the novel antibodies generated by the human immune system have unique proper-

ties that may provide significant clinical benefit compared to those made by artificial systems such as mice or bacteria. We are using this game-changing technology to develop novel therapies for diseases which currently have no or inadequate treatment options.

**Interview conducted by:  
Lynn Fosse, Senior Editor  
CEOCFO Magazine**

**CEOCFO:** Dr. Pelura, you have a long history in the industry, what attracted you to the concept of Immunome?

**Dr. Pelura:** The Immunome opportunity is quite interesting. What we are able to do is mine the human immune system in order to discover new and very differentiated therapeutics for multiple diseases. What we have known for years is that the human immune system is very complex and powerful, but we have had a hard time harnessing it to generate First in Class therapeutics, and we figured out a way to do this.

**CEOCFO:** Would you explain the Immunome technology?

**Dr. Pelura:** What we do is make antibody drugs. Antibodies are proteins that our immune system makes. These proteins stick to foreign materials, identify them as foreign so that our body can remove them. This is kind of a first line defense against foreign infectious agents that invade our bodies. Additionally we know that our bodies make antibodies to different types of cancers in an attempt to clear the cancer. Therefore, we are able to isolate the cells from a small sample of blood from a human, iso-

late the cells that make those antibodies, find the antibody of interest, and develop it into a drug. This has been considered the Holy Grail for many years. The current way that our competition makes antibodies is by using artificial systems such as mice. One can clearly see the shortcomings of relying on a mouse to make a human therapeutic. We believe that if you really want to cure a human disease, you should go to a human being and find out what the human immune system thinks is important about battling that particular disease.

**CEO CFO:** Will this be a personalized drug?

**Dr. Pelura:** No. We of course will recruit individuals that have established some level of immunity to the disease that we are interested in. However, one thing very good about the human immune system is that we make antibodies that are what we call highly conserved, which means they will be useful for any human being. We are just asking the human immune system to tell us what is important about controlling a particular disease. We take that cue and transform it into a drug. This drug will be used for anyone who has this disease.

**CEO CFO:** Why is it that this approach has not been tried with people; what has been the stumbling block?

**Dr. Pelura:** If we look back twenty-five years ago there was a company called Centocor, which was eventually bought by J&J for their antibody technology. They initially started the company hoping to do what we do, that is discover antibodies from human immune systems. They failed because the B cell, the cell in our blood that makes antibodies is not a cell that you can keep alive for very long. It dies after a couple days. So, if you are trying to find an antibody that the B cell is making, you are running against the clock and often these cells die. We have been able to figure out a way to immortalize those human B cells. We take the B cell and we fuse it with a different type of cell called a fusion partner, which makes the resul-

tant B cell immortal. This means that we can put it in a culture dish and we can grow it for years and years. Hence, we can ask that cell questions about how it responds to different diseases over and over and find very interesting antibodies from that single cell.

**CEO CFO:** I understand you believe that this is a game-changing technology; where is Immunome between the science and the application?

**Dr. Pelura:** As with many early-stage biotech companies, one of the big challenges today is financing. We are early-stage, meaning that we are at preclinical stage. We have a number of infectious disease programs as well as cancer programs in lung and pancreatic cancer. Our business model is to raise non-dilutive capital via partnership deals with large pharma. It

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brings in needed cash for us to support our internal programs without selling equity. We felt that this was the most acceptable and viable approach to raise cash in these days and it is working so far. We signed our first R&D collaboration in the fall of last year with a top-five company and we are currently in negotiations with another top-five company, who is interested in working with us in the future.

**CEO CFO:** Are there particular diseases that Immunome is targeting first, and how do you decide where to begin?

**Dr. Pelura:** The easiest area for us to study is infectious disease, because if you think back on how we isolate these antibodies, we first look for a human subject that is immune to a particular disease. Therefore, it is easy for us to find a patient who has

recently survived a bad infection. We isolate the antibodies that their body made that protected them or cured them from that disease. The direction we are going in the future however is in cancer. The rationale behind this is based on the fact that oncologists often see patients that are doing a lot better than they would be expected to. These are patients with advanced cancer that have been stable for three or four years without a therapy. Now this is a small number of patients, but they do exist. Our hypothesis is that those patients are doing well because their immune systems have found a way to make antibodies against their own tumors. It is obviously more complicated than infectious disease, but there is a tremendous need for new therapeutic antibodies in this space. There is also a tremendous need for new targets to go after in cancer. There are currently 32 clinical programs underway using antibodies in cancer against 8 targets. Clearly there is a tremendous amount of competition around this very small number of targets. What we are able to do is screen these antibodies against cancer cell lines so we can actually discover antibodies to totally new disease targets, which is quite a game changer.

**CEO CFO:** You have a long history in life science as an entrepreneur; what are the most important things you have learned that will enable you to move Immunome forward?

**Dr. Pelura:** The first point is you have to identify a truly game changing opportunity, especially in this current financial world we are in. Unless you have something that is very different, it is going to be very difficult to raise money, but first it starts with the opportunity. Secondly, you have to have very good and smart people around you. Our founder and chief scientific officer, Dr. Scott Dessain, is an M.D, PhD, and a practicing oncologist. He studied at the Whitehead Institute at MIT where he worked under really one of the finest minds in antibody research. He is my right-hand man. Without good people and good science behind you, you have a hard

way to go. Finally, you must identify a commercialization path that is realistic considering the hurdles that you are up against. I'm referring to the regulatory hurdles, reimbursement hurdles, and lastly the capital requirements to get you crossed the finish line. Often companies make a mistake of going after the very largest market as their first indication, but the problem with these very big markets is that they often require very long clinical trials, three-five year clinical trials and thousands of patients. This equates to lots of money and lots of time. The approach that I have taken over the years is to go after smaller niche indications where you have very clear clinical end points. This equates to smaller clinical trials, shorter clinical trials, and hence capital efficiency. We want to get on the market as soon as we can. We will go into the market with a small indication and once there is a proven track-record with the technology in that small indication, then you can move onto bigger market applications.

**CEOCFO:** Immunome has one partnership and you have another one in the process; by and large has the medical community been paying attention?

**Dr. Pelura:** 2011 going into 2012 has been an interesting year for us in that we are just getting the company off the ground. We started to have some discussions with companies, but for the most part the dozen or so companies that have approached us have been unsolicited, which is quite surprising and fortunate for us. There seems to have been a realization amongst the large companies that the human approach that we use has tremendous value. However, they also realize, because of the pressures that they are up against with regards to their weak pipelines and blockbuster drugs going off patent, that their best chance of success is to align with small companies like Immunome. Small companies like Immunome do discovery very well. We will leave formal development in their hands. Therefore, it has been an exciting year and yes these companies obviously know who we are, and they have been coming to us.

**CEOCFO:** Final thoughts, why should investors pay attention to Immunome?

**Dr. Pelura:** Most preclinical or early-stage life sciences companies represent somewhat of a challenge for an early stage investor. Generally, life

science ventures require a long time and significant capital to get you to the commercial finish line. Hence, since the total amount of money needed to get a drug to the market can be significant, the early stage investors are likely to be quite diluted by later stage investors. Therefore, the approach we are taking is quite a seed-change from the traditional biotech model in that rather than raising a tremendous amount of money, putting all that money behind a single asset with all the risks that a single drug carries, we are relying on multiple partnerships to bring in non-dilutive cash to bring our products forward. This means that we are not raising that much money and hence our early stage investors won't be diluted. To date, we have only raised about \$1.9 million and we are only going to raise a little bit more. When I say a little bit more, I mean less than a million. That will be the last equity we sell from the company. Therefore, anybody that gets into this opportunity now has the potential of a big upside on exit. We are quite different than the garden variety biotech company from an investment standpoint.



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