TARGAZYME

Lynnet Koh, CEO and founder of Targazyme — "We aim to bring to cancer patients an alternative to toxic chemotherapy, radiation, radical surgery and the current standard of care cancer drugs that may extend life by a few months but leave patients with life-long side effects. Specifically, we are developing the next generation of cancer immunotherapy medicine, one where cancer patients with solid cancer tumors can hopefully be successfully treated with the power of their immune system quickly, affordably and with an improved safety profile.

Each year sees a couple of dozen new drugs licensed for use, but in their wake, tens of thousands of candidate drugs will fall by the wayside. The research and development journey of those new drugs that make it to market will have taken around 15 years and cost around £1.15bn.

Before a drug can reach a patient, it must go through rigorous testing to determine whether it is safe, and effective at treating the condition it was developed for and to ascertain the correct dosage and appropriate administration route.

Simply put, biotech drug development is a massive undertaking, and selecting responsive partners, who prioritize in sync with you for your new drug approval and focus on high quality and fast turnaround, goes a long way in avoiding missteps and moving your drug program closer to approval.

Immunotherapies, which harness the body's natural defenses to combat disease, have revolutionized cancer treatment. A survey by market research firm InCrowd revealed that hematologists and oncologists considered chimeric antigen receptor (CAR) T-cell therapies the most exciting new development in cancer treatment.

While exciting, these genetically engineered adoptive cell therapies have shown efficacy so for treatment of only patients with blood cancers with limited efficacy for treating patients with solid cancer tumors, a major unmet medical need since the latter accounts for approximately 98 percent of total new cancer patients annually. Safety continues to be challenging with high manufacturing costs resulting in patients being charged easily half a million dollars per treatment.

Targazyme focuses on addressing this vast unmet medical need for cancer patients with solid cancer tumors, where there are approximately 100 million new patients worldwide each year. They are developing the next generation of immune cell therapies called Tumor Infiltrating Lymphocyte (TIL) therapies with their potential for successfully treating cancer patients with solid tumors.

TILs are immune cells that has moved from the blood into a tumor. TILs can recognize and kill cancer cells. In cancer therapy, TILs are removed from a patient's tumor, grown in large numbers in a laboratory, and then given back to the patient to help the immune system kill the cancer cells.

Targazyme's TILs are differentiated from other immune cell therapies thanks to the use of their novel fucosylation platform technology which overcomes one of the critical technical constraints that limit the effectiveness of immune cell therapies: i.e., the Improved delivery of immune cells to sites of tumors where today, less than 5 percent of transplanted immune cells will reach the tumors from the blood vasculature. Additionally, preclinical testing data shows that their fucosylation platform also increases the killing machinery of the transplanted TILs, enables intra-tumor penetration of the TILs all of which contributes improves the tumor-killing abilities of their TILs, enabling patients to receive potentially more efficacious and affordable immune cell therapies to treat their solid cancer tumors.

Validating data published in respected medical journals such as Clinical Cancer Research and IBJ by collaborators at MD Anderson Cancer Center and Harvard point to Targazyme-manufactured immune cell therapies as a potential alternative to what is currently the standard of care for cancer patients i.e. the highly toxic chemotherapy, radiation, radical

surgery or standard of care cancer drugs that may extend life by a few months but with life-long side effects. In fact, the data points to the day where with Targazyme's immunotherapy medicine, patients with solid cancer tumors can hopefully be successfully treated with the power of their immune system.

With the established preclinical proof of concept and the safety profile for the product class established in phase 2 clinical trials, Targazyme is now raising capital to drive its novel immunotherapy medicine into clinical trials to enable clinical validation of its potentially transformative products.

In conversation with Lynnet Koh, CEO and founder of Targazyme

Walk us through the journey of the company right from its beginning to the point where it unwaveringly stands today?

Targazyme was founded with the mission to successfully develop the next generation of cancer immunotherapy for metastatic cancer patients, one that can potentially enable cancer patients with solid tumors to be successfully cured with the power of their own immune system safely, affordably, and quickly.

What drove the creation of this mission to make a life-changing difference for cancer patients and families worldwide with our novel medicine was the pain and helplessness I felt in the space of 5 years when I lost several close family members and friends to lymphoma, colon cancer, breast and lung cancers. I could not understand why despite the trillions of dollars spent on cancer research, people I loved went through so much pain and died when they had cancer.

Seeing the pain worldwide, I made a personal commitment to make a big difference to hopefully change the course of cancer medicine and patient outcomes in a big way worldwide by starting Targazyme with the goal to get our potentially transformative drugs to the finishing line to help cancer patients.

What other major illnesses can your TZ 101 and TZ 102 products address besides cancer?

Targazyme has a cell-enabling patent-protected platform technology with multiple products in its portfolio that have the potential to transform cancer patient outcomes as well as patients with blood disorders, autoimmune diseases such as Lupus, MS, ALS, cardiovascular diseases such as myocardial infarction, diabetic retinopathy, critical limb ischemia, to improve in outcomes in regeneration medicine and anti-aging. While the potential of our products to help patients with a wide range of significant illnesses is tremendous, we have been laser-focused on making a life-changing difference for cancer patients and their families.

Mention some of the prominent achievements of your company.

We started Targazyme with nothing but a product idea and a personal commitment to address

Lynnet Koh, Founder & CEO

Helping provide better drugs to combat cancer and save lives

Lynnet Koh is the Founder and CEO of Targazyme. She has been described as a visionary, a major technology/product innovator, a mission-driven, ethical company builder and a 'chief product officer'– driven by a commitment to developing best-in-class medicine to make a life-changing difference for cancer patients and their families, to help employees/ consultants grow to their very best selves and to build a great company that is built to last.

Lynnet is huge on ensuring decisions impact both short-term and medium- and long-term results and being patient-driven and patient-inspired! She is driven to make this world a much better place and leave a legacy that is built to last!

compelling unmet medical needs in cancer and to remove the pain for cancer patients and their families worldwide.

We have come a long way since then! Now our novel patent-protected TZ 101 has been proven safe and efficacious in phase 2 clinical trials at MD Anderson Cancer Center for blood cancer patients undergoing stem cell transplantation. This has resulted in a FDA Phase 3 Special Protocol Assessment Award which provides Targazyme a clear pathway towards first approval in the United States. We have a phase 3 peripheral blood registration trial pending.

In addition to TZ 101 for treating patients with blood cancers, blood disorders, and autoimmune diseases undergoing hematopoietic stem transplantation, we now have have our second product TZ 102 Tumor Infiltrating Lymphocyte Therapy which we aim to drive into clinical development. This is exciting since preclinical testing data points to the potential of this clinical candidate to hopefully enable cancer patients with solid tumors to be treated successfully with the power of their own immune system, hopefully without the current standard of care such as chemotherapy, radiation, and radical surgery! Our cell enabling platform technology has also been shown in preclinical testing to have the potential to help prevent solid organ transplant rejection, help treat autoimmune diseases such as Type 1 Diabetes, Lupus, MS, help enable better outcomes for patients with cardiovascular diseases such as myocardial infarction, diabetic retinopathy, critical limb ischemia etc. Having said that, we have been and will continue to be laser-focused on the development of our oncology/hematology assets.

The company also has 37 + patents with 35 patent pending applications worldwide, vital freedom to operate/the ability to obstruct competitors with our patents, and multiple FDA orphan drug and BLA designations have been received, all of which collectively provide seven years market exclusivity post regulatory approval, 12 additional years of protection post product approval from generic drugs, 50% tax savings for future acquirers of cumulative Targazyme R&D spending, FDA grants and savings on $1MM FDA filing fees.

What does the future hold for your company and its customers? Are exciting things on the way?

We will be raising/allocating significant resources to clinical grade manufacturing, advancing into Registration Trials with TZ101, and advancing into the clinic with TZ102 Tumor Infiltrating Lymphocyte Therapies for the treatment of cancer patients with solid cancer tumors. We want to seek product approval from FDA and other regulators to begin selling our first product, TZ101, and we want to achieve clinical validation for our second product, TZ102 Tumor Infiltrating Lymphocytes therapies.

We hope to demonstrate in clinical trials that our clinical drug candidates can help enable the potentially curative treatment of stem cell transplantation to become much safer and to work more effectively, thereby improving outcomes for terminally ill blood cancer, a blood disorder, and autoimmune disease patients. With TZ 102 Tumor Infiltrating Lymphocyte therapies, we hope to usher in the next frontier of cancer medicine, one where our drug candidates can harness the patients' own immune system to hopefully help obliterate the cancer tumors as an alternative to the poison that is chemotherapy/radiation, the radical surgery that may leave patients permanently disfigured or the cancer drugs that may extend life by a few months but with significant life-long side effects.to become much safer and to work more effectively, thereby improving outcomes for terminally ill blood cancer, a blood disorder, and autoimmune disease patients. Last but not least, we hope to usher in the next frontier of cancer medicine, one where our drug candidates can harness the patients' own immune system to help obliterate the cancer tumors as an alternative to the poison that is chemotherapy/radiation, the radical surgery that may leave patients permanently disfigured or the cancer drugs that may extend life by a few months but with significant life-long side effects.

To ensure our platform technology also helps patients with other diseases such as auto-immune diseases, cardiovascular diseases, regenerative medicine, we aim to pursue out-licensing deals with other bio-pharmaceutical companies with commercialization capabilities. This strategy will also help us build a licensing revenue-generating business to hopefully provide our shareholders, multiple shots on goal with shareholder value creation.

"Tumor Infiltrating Lymphocytes are part of the body's natural response to cancer."