

tella, inc.

Entering into a phase III clinical trial, initiated by investigators, of autologous dendritic cell-based therapeutic vaccination for patients with advanced pancreatic cancer resistant to standard chemotherapy

www.tella.jp

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Mitsui-Hanagiri Bldg. 1st floor
7-22-36 Nishi-Shinjuku
Shinjuku-ku, Tokyo 160-0023
JAPAN

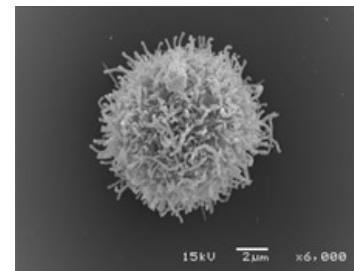
Founded in: 2004
CEO: Yuichiro Yazaki, MD
No. of employees: 55
Type of Ownership: Public
Stock exchange: 2191 JASDAQ

December 2017: Leveraging its proprietary technology of culturing highly purified dendritic cells (DCs), tella is developing, as its first immunotherapeutic product, a DC-based vaccine in combination with WT1 (Wilms' tumor gene 1) antigen for inoperable pancreatic cancer. Venture Valuation (VV) interviewed Dr. Yuichiro Yazaki, President and CEO.



VV: **How do you differentiate your DC-based immunotherapy from the competition?**

Yazaki: DCs (see image) are well known as efficient antigen-presenting cells responsible for T cell¹ activation. Our cell culture technology, obtained from the Institute of Medical Science, University of Tokyo, is able to generate substantially purified autologous monocyte-derived mature DCs.



* A dendritic cell
(courtesy of Jikei University School of Medicine)

Mature DCs normally represent a very small quantity, around 0.2%, of blood mononuclear cells. Vaccination requires a sufficient amount of highly pure autologous mature DCs. Compared to the first approved DC-based vaccine, Sipuleucel-T², by the U.S. Food and Drug Administration, DCs that we isolate and generate are scientifically proven to be much more pure.³

Another important factor is the selection of tumor antigens. WT1, with which we have the exclusive right for the use of DC-based vaccination, has been ranked as the most valuable cancer marker among 75 cancer-associated antigens by the U.S. National Cancer Institute project⁴.

¹ a subtype of white blood cell, part of the immune system, that helps the body fight infection and cancer

² Trade name Provenge for prostate cancer developed by Dendreon Corporation

³ News Release www.tella.jp/company/release/2010/05/371/

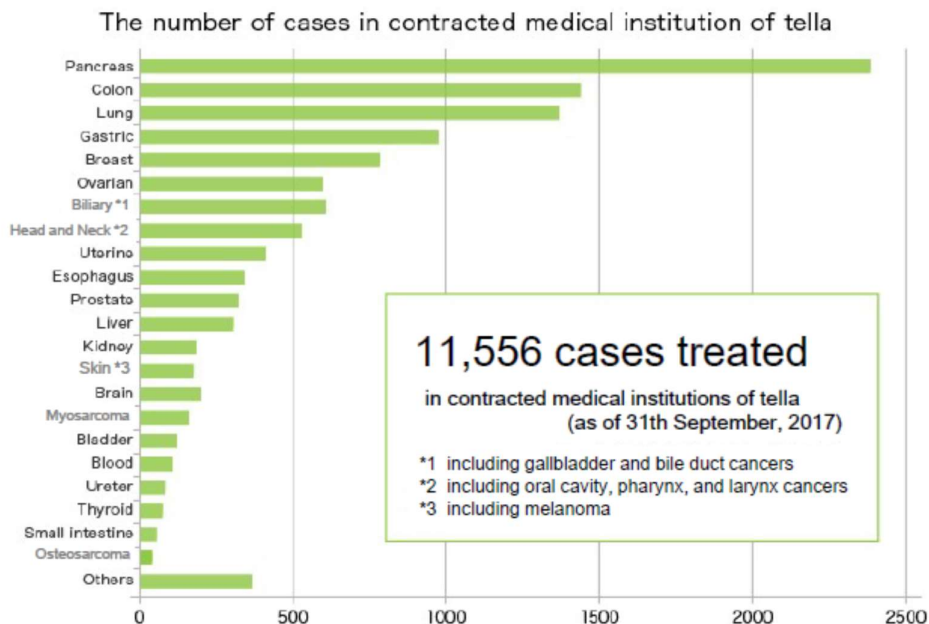
⁴ <https://www.ncbi.nlm.nih.gov/pubmed/19723653>

For our product development strategy, we have also acquired the exclusive right for other tumor antigens such as MAGE-A4 (melanoma-associated antigen 4) peptide, survivin peptide (anti-apoptotic protein), and hUVEC (human umbilical vein endothelial cell) protein. By combining ideal antigens and researching most promising ones, we are determined to provide patients with more efficacious and better treatments than competitors.

VV: **Your business model is to earn revenues from consulting, technical support, and cell culture services while developing DC-based therapeutic vaccination.**

Yazaki: We have been providing services to 35 leading medical institutions in Japan. They are specialized cancer care centers and clinics, and university hospitals. While DC-based therapeutic vaccination is still unregulated in Japan, our technology has been applied and improved by prominent oncologists at several medical institutions who have treated 11,556 patients as of last September (see chart). Around 20% of them are pancreatic cancer patients.

The patients are not only Japanese but also from abroad. The number of non-Japanese patients looking for better treatment has increased, mostly from neighboring countries in Asia.



The methods and results of treatment have been published in a dozen international academic journals such as Cancer Immunology, Immunotherapy, Cancer Science, Clinical Cancer Research, European Journal of Cancer, World Journal of Gastroenterology, Pancreas, and so on.

We are currently making autologous vaccines available to a team of cancer researchers of Wakayama Medical University who have initiated a phase III clinical trial. The trial is multi-center, double-blind, randomized study of DC vaccine loaded with WT1 peptides versus placebo with S-1 for patients with advanced pancreatic cancer refractory to standard chemotherapy. The study outline was presented at the ASCO (American Society of Clinical Oncology) last June.

VV: Sponsoring a clinical trial towards regulatory approval requires substantial funds, even investigator initiated clinical trials are subsidized by the Japanese government. What is your fund raising strategy?

Yazaki: We require around 3.8 billion JPY (approx. 33 million USD) of which 1.47 billion JPY (approx. 13 million USD) has been raised by equity financing.

Along with increasing revenues from our various service activities and expanding our network of medical institutions, we intend to build synergy effects by partnering with pharmaceutical and biotech companies.

We are particularly interested in collaborating with companies focusing on research and development on immune checkpoint inhibitors. We believe the combination of DC-based vaccination which activates T cells and checkpoint inhibitors enabling T cells to remain active in tumor microenvironment is a promising approach in cancer treatment.

VV Comments after the interview:

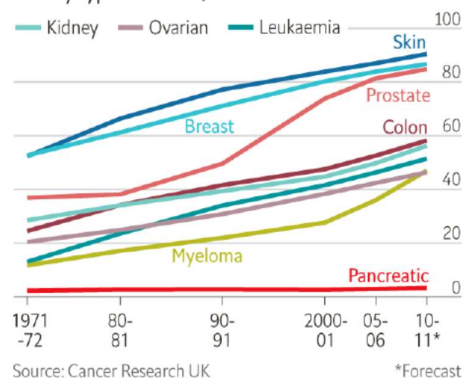
Pancreatic cancer is a severely aggressive cancer. The five-year survival rate is less than 10% worldwide. As an example, in the chart displaying the survival rate of nine different cancers in England and Wales, pancreatic cancer is the lowest rate and shown no significant improvement since 1971.⁵

Most pancreatic cancer patients have relatively advanced disease when they are diagnosed. Prognosis is very poor.

It takes a few more years that the results of phase III clinical trial will be compiled. And then application for regulatory approval will be filed. There is no doubt that tella's

Living longer

England and Wales, five-year relative survival rate by type of cancer, %



⁵ The Economist September 16th 2017 “Targeting tumours”

product will give hope and therapeutic choice to pancreatic cancer patients and their families all over the world.

Contact **Mariko Hirano**, m.hirano (at) venturevaluation.com

Venture Valuation specializes in independent assessment and valuation of technology-driven companies in growth industries, such as the Life Sciences (Biotech, Pharma, Medtech), ICT, Nanotech, Cleantech and Renewable Energy. In addition to valuation products, Venture Valuation offers high-quality, focused information services like the Global Life Sciences Database, Biotechgate.com and this “*Let’s Interview Series*” with companies with interesting technologies and services. We select and interview thriving companies and organizations all over the world.