

August 9, 2016

Press Release

Company	GreenPeptide Co., Ltd.
Representative	Kenichi Nagai, President & CEO (Code: 4594 TSE Mothers)
Inquiries	Teruhiko Sakai, Director/CFO (TEL.03-5840-7697)

Announcement of Joint Research and Development with Kanagawa Cancer Center

GreenPeptide wishes to announce that it has concluded a joint research agreement with Kanagawa Prefectural Hospital Organization for research on the discovery and clinical application of Neoantigens*¹ (tumor antigens arising from somatic mutations in cancer cell) aiming at their clinical application as new cancer immunotherapy candidates.

(1) Research objectives

With the appearance of immune checkpoint inhibitors in recent years, genetic mutations arising in cancer cells are now receiving attention as new cancer immunotherapy targets. Also, with the development of next generation gene sequencers*², in the last 10 years, there have been dramatic advances in gene decoding technologies and it has become possible to more comprehensively analyze antigens*³ used as markers when the immune systems of cancer patients attack cancer cells.

Soon after the discovery of tumor antigens by Dr. Boon in 1991, from among several hundred new antigen peptides that Kurume University comprehensively researched and identified in the 1990s and 2000s, GreenPeptide has been conducting clinical studies on those with immune-enhancing capability as new cancer immunotherapy candidates both in Japan (ITK-1) and the USA (GRN-1201).

On the basis of this experience and technological innovations in recent years, GreenPeptide will proceed with research aiming at the discovery and clinical application of Neoantigens (tumor antigens arising from somatic mutations in cancer cell), which have been receiving much attention as next generation cancer immunotherapy targets in recent years.

Dr. Tetsuro Sasada Director of Cancer Vaccine Center in Kanagawa Cancer Center, who will jointly conduct the research with us, is currently moving forward with the research on Neoantigens on the basis of his experience gained through participation in several basic

research and clinical research projects in cancer immunotherapy as well as his involvement in the clinical development of the immune checkpoint inhibitor, ipilimumab (anti-CTLA-4 antibody). GreenPeptide therefore expects robust collaboration in the joint research.

(2) Collaboration with research institute of Kanagawa Prefectural Hospital Organization

Our partner in the collaborative research will be the Cancer Immunotherapy R&D department of Kanagawa Cancer Center Research Institute (<http://kcch.kanagawa-pho.jp/kccri/organization/menekiryoho.html>), the research unit of one of the 5 prefectural hospitals in Kanagawa Prefecture operated by the Kanagawa Prefectural Hospital Association.

The research institute has been in operation for 30 years since its founding and has much knowledge of the cancer peptide vaccine therapies that GreenPeptide is developing as well as other cancer immunotherapies. It also has a track record in the identification and evaluation of Neoantigens so we feel that the collaboration will be highly significant to our future research and development activities.

(3) Details of research collaboration

Research project name	Exploratory Research on New Cancer Immunotherapy Targets
Objectives and nature of research	Discovery and evaluation of molecules with potential to be targets for new immunotherapies against Neoantigens
Organizations conducting research	Kanagawa Cancer Center Research Institute GreenPeptide Co., Ltd.
Period of research	Date of concluding agreement to March 31, 2018

(4) Effect on Company results

The effect of the conclusion of the present collaborative research agreement on the company's results in the year to March 2017 will be minimal.

【Explanation of terms】

*¹Neoantigen: A mutation antigen arising from somatic mutations in cancer cell, which is only expressed on cancer cell (not expressed on normal cell). It has been reported that Specific Neoantigens in cancer cell have high potential for response of immune system and that immunotherapy based on immune checkpoint inhibitors is readily effective against cancers with numerous Neoantigens.

*²Next Generation Sequencer (NGS) : A general term applying to devices that decode genetic sequences. Tremendous advances have been made in recent years, one of them the achievement of high-speed decoding.

*³Antigen: Antigen is a target molecule recognized and attacked by the immune system (cytotoxic T cells), such as a protein made by a cancer cell, or a fragment of one

(peptide). ITK-1 (Phase III clinical trial underway in Japan) and GRN-1201 (Phase I clinical trial underway in USA) are both cancer peptide vaccines and consist of several chemically synthesized peptides that are present in the body.

About GreenPeptide Co., Ltd.

GreenPeptide is a drug discovery venture company engaged in the research and development of cancer immunotherapies that make use of the body's immune system to fight cancer. There are hopes that cancer immunotherapies will be the 4th therapy when surgery, radiotherapy and chemotherapy have failed.

Having 2 cancer peptide vaccines (ITK-1 for prostate cancer, GRN-1201 for malignant melanoma) as mainstay products, GreenPeptide aims to contribute to innovation in cancer therapy through the creation of novel cancer immunotherapies that disseminate a new drug discovery concept originating in Japan worldwide.