

## Notice of Business Collaboration with Takara Bio in the Development of NIB103

Noile-Immune Biotech Inc. (Headquarter: Minato-ku, Tokyo, President & CEO: Koji Tamada, hereinafter referred to as “Noile-Immune”), a company being committed to conduct research and development of CAR-T cell therapy for solid cancers, hereby announces that Noile-Immune and Takara Bio Inc. (Headquarter: Kusatsu City, Shiga Prefecture, President & CEO: Koichi Nakao, hereinafter referred to as "Takara Bio") have entered into a business collaboration agreement (hereinafter referred to as “Agreement”) on co-development of NIB103, one of pipelines of Noile-Immune.



As announced on June 28, Noile-Immune made a strategic decision to select NIB103 as a pipeline with top priority and is being committed to its clinical development. Takara Bio has extensive experience in the manufacture and development of gene-modified T cell therapies, including CAR-T cells and TCR-T cells. By building the collaboration with Takara Bio, Noile-Immune will establish a manufacturing system for NIB103 in Japan, and continuously promote the improvement and acceleration of development of NIB103.

Under this Agreement, Noile-Immune will develop NIB103 in collaboration with Takara Bio in Japan. Takara Bio is exclusively responsible for the manufacture of NIB103 for investigational products and commercial products after launch, and bears the cost related to the manufacture of investigational products. Noile-Immune is exclusively responsible for development activities and marketing after launch of NIB103 in Japan, except the manufacture, and bears the cost related to these activities. In the countries other than Japan, Noile-Immune continues to exclusively hold all rights of the development, manufacture and marketing of NIB103. Based on the Agreement between Noile-Immune and Takara Bio, the companies will initiate and expedite the manufacturing of NIB103 as quick as possible.

The impact on our business performance of this fiscal year is expected to be minor.

### **【NIB103】**

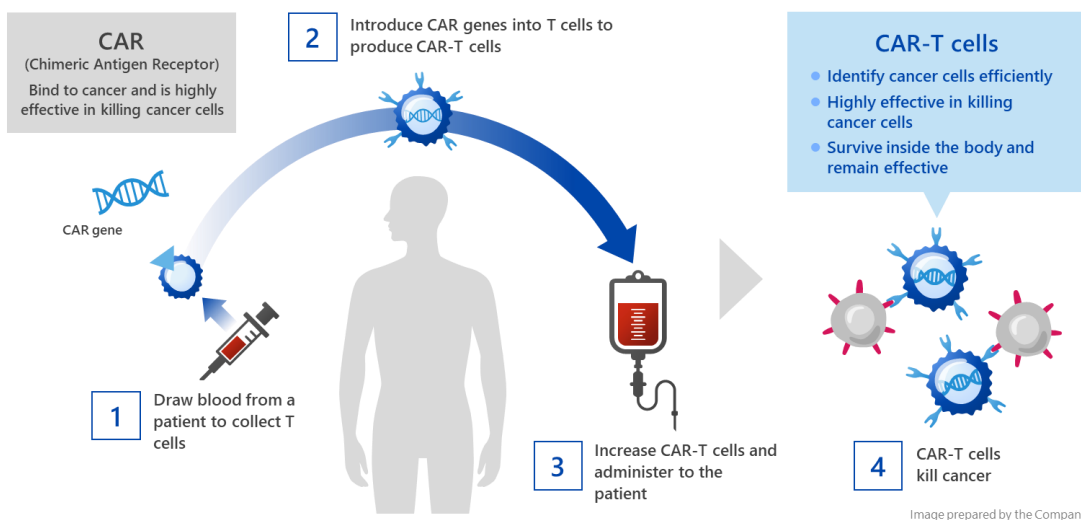
NIB103 is a CAR-T cell with Noile-Immune's proprietary PRIME technology and is an autologous PRIME CAR-T cell that uses cancer patients' own lymphocytes. NIB103 targets mesothelin, which is expressed in some of triple negative breast cancer (TNBC), colorectal cancer, ovarian cancer, and pancreatic cancer, and it is estimated

that the potential population is approximately 60,000 patients per year in Japan and approximately 367,000 patients per year including those overseas.

### 【CAR-T cell therapy】

CAR-T cells are manufactured by introducing an artificial gene called a chimeric antigen receptor (CAR) into a type of white blood cell called T cells, which are taken from the patient's blood. The CAR has the ability to detect cancer cells with high sensitivity and to mount a strong attack against them. CAR-T cell therapy is a treatment in which CAR-T cells are expanded in culture for one to two weeks and then administered to the patient. CAR-T cells transfected with the CAR gene recognize and attack the cancer cells that express the target cancer antigen.

#### Latest cancer cell therapy: CAR-T cell therapy



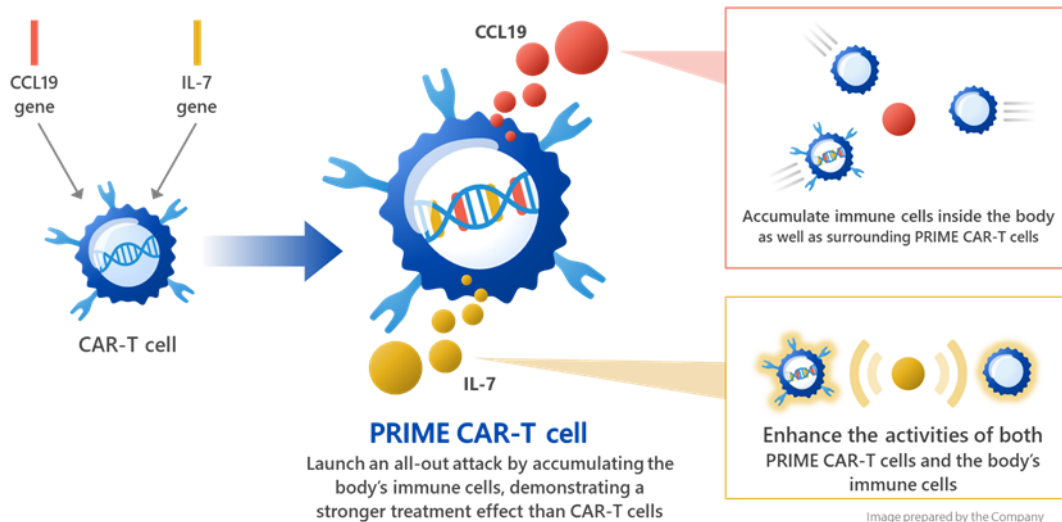
**A treatment which artificially produces and administers cells that efficiently identify cancer cells and are highly effective in killing cancer cells**

### 【Noile-Immune's proprietary PRIME technology (PRIME CAR-T cell therapy)】

PRIME technology is Noile-Immune's proprietary technology which further improves immune cells, such as CAR-T cells used for anti-cancer therapy, to produce interleukin-7 (IL-7) and CCL19, and has a potential to promote the growth and survival of T cells and to stimulate the migration of T cells and dendritic cells, so as to enhance the therapeutic effects against cancer. PRIME technology was developed to create an environment conducive to attacking cancer cells efficiently by inducing accumulation of a large number of CAR-T cells and body's immune cells at the site of cancer.

For more details, please visit [https://www.noile-immune.com/en/Our\\_Science/prime\\_car-t.html](https://www.noile-immune.com/en/Our_Science/prime_car-t.html).

## PRIME technology (Proliferation Inducing and Migration Enhancing Technology)



## **Technology to improve accumulation and activity of CAR-T cells and the body's immune cells by engineering genes to produce substances that could enhance immunity**

### **【Takara Bio Inc.】**

Takara Bio Inc. <https://www.takara-bio.co.jp/> is a global solution provider (platformer) in the life science industry. Takara Bio launched the first domestically produced genetic engineering research reagent (restriction enzyme) in 1979, and in 1988, it became the first company in Japan to sell the polymerase chain reaction (PCR) system for gene amplification. Currently, it handles more than 10,000 products for genetic engineering and cell engineering research, supporting life science research worldwide. In recent years, Takara Bio has also supported the development and manufacturing of pharmaceutical companies and biotech start-ups as a Contract Development and Manufacturing Organization (CDMO) in the fields of cell and gene therapy. Furthermore, it is taking on the challenge of developing innovative modalities such as gene therapy. Takara Bio aims to bring smiles to people's lives through a healthy lifestyle facilitated by biotechnology.

### **【Noile-Immune Biotech Inc.】**

Noile-Immune Biotech Inc. (TSE: 4893) is a biotech company, an academia start-up, and is committed to the practical application of next-generation immunotherapy for solid cancers by utilizing PRIME CAR-T cells which incorporate Noile-Immune's proprietary PRIME technology, an innovative approach to enhance the therapeutic effects of immune cell therapy. As PRIME technology can be combined with various chimeric antigen receptors (CARs) to create novel drugs and applied to a broad range of modalities, it is expected to develop many anti-cancer therapeutic approaches in combination with other technologies in the future. Through our business activities, Noile-Immune aims to contribute to the creation of a society that can overcome cancer.

For more information, please visit <https://www.noile-immune.com/en.html>.

**Contact for inquiries or additional information**

2-12-10 Shiba-Daimon, Minato-ku, Tokyo 105-0012, Japan

Noile-Immune Biotech Inc.

E-mail: [pr@noile-immune.com](mailto:pr@noile-immune.com)