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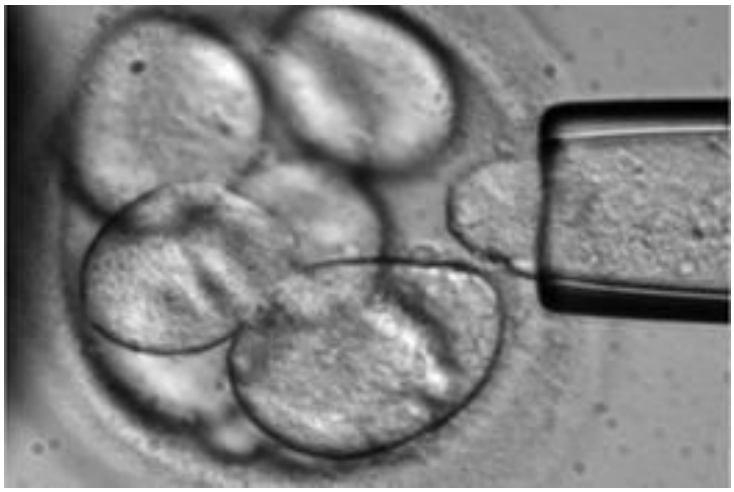
ASIA EDITION

RetroNectin now available for clinical research

June 18, 2013 | News | By BioSpectrum Bureau



Singapore: In an effort to aid progress in gene therapy clinical research, representatives of Clontech Laboratories and its Japan-based parent company Takara Bio, announced the availability of clinical grade RetroNectin reagent for direct supply to biomedical researchers.

RetroNectin reagent is designed to enable efficient retroviral transduction of genes into hematopoietic stem cells as well as lymphocytes and other blood cells. The RetroNectin method has been recognized as a standard gene transduction method in ex vivo gene therapy around the world. In addition, RetroNectin reagent has another remarkable feature that can also be useful for cell therapies: during the expansion culture of human T lymphocytes, RetroNectin reagent helps to increase proportion of naive T cells. This RetroNectin induced T cell method has already become available as a cancer therapy in three Japanese clinics under technical support from Takara Bio.

Takara Bio is the exclusive supplier of RetroNectin reagent, a recombinant human fibronectin fragment developed in 1995 by Takara Bio in collaboration with Indiana University. It has been used in 68 gene therapy clinical trials in 44 institutes and hospitals in 10 countries to date.

Previously, access to clinical-grade RetroNectin reagent required a Material Transfer Agreement (MTA) between a research institution and Takara Bio. Researchers may now submit direct orders to Clontech or local Takara Bio subsidiaries for RetroNectin (GMP), which is manufactured as a quality-assured product according to guidelines for Good Manufacturing Practice (GMP). The Drug Master File for RetroNectin (GMP) has been filed with the US Food and Drug Administration (FDA).

In a recent study published in *Science Translational Medicine* in March 2013, scientists at Memorial Sloan-Kettering Cancer Center reported an immunotherapy strategy for the treatment of five adult patients with acute lymphoblastic leukemia. Each patient's T cells were extracted, altered by introduction of DNA that would cause the cells to attack tumor cells, and infused back into the patient's bloodstream. According to researchers, all patients achieved tumor eradication and complete remission. RetroNectin reagent was used during T cell transduction.

Corresponding author Dr Renier J Brentjens said, "It was very clear to us even 10 years ago that the use of RetroNectin coated plates markedly, massively improved gene transfer." Dr Brentjens continued, "The methodologies that many of us now use have been developed over a number of years. Once you have a system that works, you become very reliant and dependent on those reagents."

"RetroNectin reagent has become a standard reagent for many gene transfer protocols worldwide," said Carol Lou, general manager of Clontech. "We are sure that such direct access to RetroNectin (GMP) without MTA execution will make this reagent available much more easily to any scientists or clinicians interested in RetroNectin clinical applications, which aligns with Takara Bio's mission of contributing to the health of mankind through gene therapy."