



December 15, 2016

**Sysmex, Astellas and Daiichi Sankyo Sign Memorandum of Understanding
on the Creation of a Method for Analyzing Circulating Tumor Cells**

-Engaging in Joint Research to Create New Cancer Diagnostic Value and Applying It to Drug Research-

Sysmex Corporation (HQ: Kobe, Japan; Chairman and CEO: Hisashi Ietsugu), Astellas Pharma Inc. (HQ: Tokyo, Japan; President and CEO: Yoshihiko Hatanaka) and Daiichi Sankyo Co., Ltd. (HQ: Tokyo, Japan; President and CEO: Joji Nakayama) have signed a memorandum of understanding to create a method for analyzing circulating tumor cells (CTC)¹.

Currently, surgically resected tissue (biopsy samples) are applied for the analysis of cells, proteins and genes to provide appropriate therapy for individual cancer patients.

CTC are a very small population of cancer cells existing in the blood, and are assumed to be the cause of metastasis from original cancer tissue to other organs. Therefore, multifaceted analysis of CTC, including changes of their numbers and changes in characteristics for a better understanding of a patient's clinical condition is anticipated to provide useful information for predicting prognosis and appropriate therapy, and a variety of research activities for analyzing CTC are ongoing globally.

Sysmex has been pursuing R&D on new testing methods toward the establishment of liquid biopsy² to identify disease-derived trace components, such as cells, genes and proteins, in blood and body fluids, to reduce the burden of diagnosis and treatment on patients.

Meanwhile, Astellas and Daiichi Sankyo have been interested in CTC as a source to understand the disease profile of cancer, as a tool for patient stratification for highly effective drugs, and as a source of information for new drug research. They both expect that utilization of CTC analysis in R&D will enhance the quality and speed of R&D and have been jointly searching for a more accurate CTC analysis method.

To pursue joint research aimed at creating a CTC analysis method, Sysmex, Astellas and Daiichi Sankyo have entered into a memorandum of understanding related to the creation of a collaborative structure.

Based on this memorandum, the parties will collaborate on creating a novel CTC analysis method, which will be not only for R&D on liquid-biopsy-based diagnostics and drugs, but also for driving establishment of standardized CTC analysis in a clinical setting.

Through the establishment of a novel CTC analysis method, the parties aim to create new value for diagnosis and treatment, which will lead to breakthrough treatments for cancer patients.

Terminology

- 1 Circulating tumor cells (CTC)
Tumor cells circulating in the bloodstream or peripheral blood. Refers to cells that have separated from a primary or metastasized tumor and invaded the blood.
- 2 Liquid biopsy
Similar in performance to a biopsy, which is carried out on a sample taken from tissue such as tumors, but which attempts to reduce the burden on the patient by using blood or body fluids tests instead.

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