

**Business Alliance with Karydo TherapeutiX Begins:  
Using AI to Predict with High Precision the Effects and Side Effects of  
Pharmaceuticals and Food Products on the Human Body**

Predictions can be made based on the body's reactions alone, without information on the composition of the product being tested

NAGASE & Co., Ltd. (Chuo-ku, Tokyo; Representative Director and President: Kenji Asakura) has begun its business alliance with Karydo TherapeutiX, Inc. (Chiyoda-ku, Tokyo; Chair of Board of Directors: Thomas N. Sato), which develops and provides services using big data and AI to predict the effects on the human body of pharmaceuticals, food products, and agrochemicals.

NAGASE provides the pharmaceutical industry with finish dosage form, pharmaceutical active ingredients, and intermediates and additives for compounding, while providing the food industry with functional food materials, and has a large customer network. A problem in these industries is that the increasing length of time required for the certification of new compounds which could lead to new active ingredients or functionality has caused a corresponding increase in development costs.

Karydo's core technology is an algorithm that decodes the multidimensional crosstalk network between organs in the body upon the intake of pharmaceuticals or food products. For example, by imputing the reactions of various organs in the body which occur upon administering a pharmaceutical (such as changed numerical values), and carrying out mathematical, information, and AI analysis, it is possible to predict the effects and side effects of the pharmaceutical even without information on its composition. Another benefit is that unlike a black box AI in which it is not possible to see the process by which a result is reached, this is a transparent white box AI which shows the mechanisms by which the effects and side effects of the pharmaceutical occur.

With this technology, new drug targets (active sites) can be predicted in less time, and the success rate of clinical trials for new drugs increased, which should contribute to shortening the process required for developing new drugs. Additionally, if new biomarkers and targets for diagnosis can be found in less time, this will lead to new possibilities in the medical approaches taken for disease prevention or treatment in pre-symptomatic stages. Through this business alliance, NAGASE has acquired exclusive worldwide marketing rights for the fundamental technologies developed by Karydo. By applying these technologies in pharmaceuticals, food products, and other fields, we will contribute to building "a sustainable world where people live with peace of mind."

**■ Outline of Karydo TherapeutiX, Inc.**

(1) Name	Karydo TherapeutiX, Inc.
(2) Head Office	Chiyoda-ku, Tokyo



Bringing it all together

(3) Representative	Chair of Board of Directors Thomas N. Sato
(4) Established	2015
(5) Business Areas	Developing and providing technology platforms allowing for early identification/prevention, pre-emptive treatment, and control of disease
(6) URL	<a href="https://karydo-tx.com/">https://karydo-tx.com/</a>

■ **Inquiries**

NAGASE & CO., LTD.

Contact for Business

Life & Healthcare Products Department, Pharma-Medicals Division

Tel: 06-6535-2327

Contact for News Reporting

Corporate Planning Department, Corporate Administration Office

Tel: 03-3665-3640