

# Daiichi Sankyo and DarwinHealth Enter Exclusive Research Collaboration for Novel Cancer Target Initiative

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**Daiichi Sankyo Company, Limited → , DarwinHealth →**

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TOKYO, BASKING RIDGE, N.J., and NEW YORK, April 4, 2018 /PRNewswire/ -- Daiichi Sankyo Company, Limited (hereafter, Daiichi Sankyo) and DarwinHealth today announced they have entered into a research agreement providing Daiichi Sankyo with exclusive access to DarwinHealth's proprietary novel cancer target database in order to identify potential new targets for cancer drug development.

DarwinHealth's proprietary database and technology were created to identify critical mechanisms linked to tumor dependencies and maintenance beyond genetic mutations, and include information on Master Regulators of specific tumor subtypes, as well as direct upstream modulators (both necessary for cancer cell maintenance) across more than 35 tumor and 90 tumor subtypes.

"The purpose of this agreement is to identify novel, high-value cancer targets that can subsequently be prioritized and undergo rigorous experimental validation to drive drug development for a new generation of anti-cancer therapies that would be designed, developed, and owned by Daiichi Sankyo," said Gideon Bosker, MD, Chief Executive Officer, DarwinHealth.

DarwinHealth will receive an upfront payment and has the potential to receive development and commercialization milestone payments should specified events occur relating to DarwinHealth's novel cancer targets. Daiichi Sankyo will receive exclusive access to



DarwinHealth's novel cancer target database for a predetermined amount of time with an option to extend. Financial terms of the agreement were not disclosed.

"We believe that the combination of both molecular and computational techniques used by DarwinHealth coupled with the expertise of our scientists in designing small molecules and antibodies may offer a disruptive approach to accelerating the discovery of precision-medicine cancer compounds," said Antoine Yver, MD, MSc, Executive Vice President and Global Head, Oncology Research and Development, Daiichi Sankyo. "This new agreement is a natural next step in expanding our current ongoing translational research collaboration and we look forward to working with DarwinHealth to further science to create meaningful treatments for patients with cancer."

"The novel cancer targets will be selected and prioritized based on their role as either Master Regulators (MRs) or their most specific Master Regulator Upstream Modulators (MRUMs) within a tumor-specific checkpoint module," said Professor Andrea Califano, Co-Founder and Chairman of Scientific and Medical Advisory Board, DarwinHealth. "Therefore, they are expected to represent highly valuable targets for anti-tumor therapy, cancer drug design, and preclinical development."

### **About DarwinHealth**

DarwinHealth: Precision Therapeutics for Cancer Medicine is a "frontiers of cancer," technology-focused company, co-founded by CEO Gideon Bosker, MD, and Professor Andrea Califano, Clyde and Helen Wu Professor of Chemical Systems Biology and Chair, Department of Systems Biology at Columbia University. The company's technology was developed by the Califano lab over the last 13 years and is exclusively licensed from Columbia University.

DarwinHealth utilizes proprietary, systems biology algorithms to match virtually every cancer patient with the drugs and drug combinations that are most likely to produce a successful treatment outcome. "Conversely, these same algorithms also can prioritize investigational drugs and compound combinations of unknown potential against a full spectrum of human malignancies, as well as novel cancer targets," explained Dr. Bosker, "which make them invaluable for pharmaceutical companies seeking to both optimize and repurpose their compound pipelines and discover mechanistically actionable, novel cancer targets."

DarwinHealth's mission statement is to deploy novel technologies rooted in systems biology to improve clinical outcomes of cancer treatment. This is articulated along two complementary axes. First, DarwinHealth's technologies support the systematic identification and validation of drugable targets at a more foundational, deep state of the cancer cell's regulatory logic so we and our scientific partners can move to and exploit next generation actionability based on fundamental and more universal tumor dependencies and mechanisms. Second, from a drug development perspective, the same technologies capable of identifying potentially druggable novel targets based on master regulators, and upstream modulators of those targets. This is where the DarwinHealth oncotectural approach, with its emphasis on elucidating and targeting tumor checkpoints, provides its most important solutions and repositioning roadmaps for advancing precision-focused cancer drug discovery and therapeutics.

The unique, precision medicine-based methods employed by DarwinHealth are supported by a deep body of scientific literature authored by its scientific leadership, including DarwinHealth CSO, Mariano Alvarez, PhD, who co-developed the company's critical computational infrastructure. These proprietary strategies leverage the ability to reverse-engineer and analyze the genome-wide regulatory and signaling logic of the cancer cell, by integrating data from *in silico*, *in vitro*, and *in vivo* assays. This provides a fully integrated drug characterization and discovery platform designed to elucidate, accelerate, and validate precise developmental trajectories for pharmaceutical assets, so their full clinical and commercial potential can be realized. For more information, please visit: [www.DarwinHealth.com](http://www.DarwinHealth.com).

### **About Daiichi Sankyo Cancer Enterprise**

The mission of Daiichi Sankyo Cancer Enterprise is to leverage our world-class, innovative science and push beyond traditional thinking to create meaningful treatments for patients with cancer. We are dedicated to transforming science into value for patients, and this sense of obligation informs everything we do. Anchored by three pillars including our investigational Antibody Drug Conjugate Franchise, Acute Myeloid Leukemia Franchise and Breakthrough Science Franchise, we aim to deliver seven distinct new molecular entities over eight years during 2018 to 2025. Our powerful research engines include two laboratories for biologic/immuno-oncology and small molecules in Japan, and Plexxikon Inc., our small molecule structure-guided R&D center in Berkeley, CA. Compounds in pivotal stage development include: DS-8201, an antibody drug conjugate (ADC) for HER2-expressing breast, gastric and other cancers; quizartinib, an oral selective FLT3 inhibitor, for newly-diagnosed and

relapsed/refractory acute myeloid leukemia (AML) with FLT3-ITD mutations; and pexidartinib, an oral CSF-1R inhibitor, for tenosynovial giant cell tumor (TGCT). For more information, please visit: [www.DSCancerEnterprise.com](http://www.DSCancerEnterprise.com).

### **About Daiichi Sankyo**

Daiichi Sankyo Group is dedicated to the creation and supply of innovative pharmaceutical products to address diversified, unmet medical needs of patients in both mature and emerging markets. With over 100 years of scientific expertise and a presence in more than 20 countries, Daiichi Sankyo and its 15,000 employees around the world draw upon a rich legacy of innovation and a robust pipeline of promising new medicines to help people. In addition to a strong portfolio of medicines for hypertension and thrombotic disorders, under the Group's 2025 Vision to become a "Global Pharma Innovator with Competitive Advantage in Oncology," Daiichi Sankyo research and development is primarily focused on bringing forth novel therapies in oncology, including immuno-oncology, with additional focus on new horizon areas, such as pain management, neurodegenerative diseases, heart and kidney diseases, and other rare diseases. For more information, please visit: [www.daiichisankyo.com](http://www.daiichisankyo.com). Daiichi Sankyo, Inc., headquartered in Basking Ridge, New Jersey, is a member of the Daiichi Sankyo Group. For more information on Daiichi Sankyo, Inc., please visit: [www.dsi.com](http://www.dsi.com).

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