

## Press Release

### **Updated Clinical Results and New Biomarker Analyses Presented for Daiichi Sankyo's DS-1062 in Patients with Advanced NSCLC at 2019 World Conference on Lung Cancer**

- Updated results presented for investigational TROP2 targeting ADC DS-1062 in unselected patients with unresectable advanced NSCLC who are refractory to or have relapsed following standard treatment or for whom no standard treatment is available
- Dose escalation data showed DS-1062 was well-tolerated with 12 partial responses observed in a dose-dependent manner, including five confirmed partial responses among seven patients receiving the 8 mg/kg recommended dose for expansion
- Biomarker analyses demonstrated a relationship between TROP2 expression level and patient response
- Study has proceeded into dose expansion with plans to increase enrollment by an additional 40 patients

**Tokyo, Munich, and Basking Ridge, NJ – (September 10, 2019)** – Daiichi Sankyo Company, Limited (hereafter, Daiichi Sankyo) announced the presentation of updated phase 1 clinical results and new biomarker data for DS-1062, an investigational TROP2 targeting antibody drug conjugate (ADC), in 52 unselected patients with heavily pretreated advanced non-small cell lung cancer (NSCLC). The data were featured today in a Mini Oral Session at the IASLC 2019 World Conference on Lung Cancer (#WCLC19) in Barcelona, Spain ([#MA25.10](#), Abstract #3854).

Updated efficacy results for 46 evaluable patients who received DS-1062 at one of eight doses (0.27 mg/kg to 10.0 mg/kg) showed 12 partial responses (10 confirmed, 2 early) observed in a dose-dependent manner. Five of the confirmed partial responses were observed among seven patients (71.4 percent) receiving DS-1062 at 8 mg/kg, the recommended dose for expansion. The other two patients receiving the 8 mg/kg dose experienced stable disease, and six of the seven are continuing on trial. Patients had received prior treatments, including immune checkpoint inhibitors (86.5 percent), EGFR inhibitors and ALK inhibitors. The data cut-off was July 3, 2019. Thirty-five patients were ongoing in the trial as of August 20, 2019.

Thirty-five patients were evaluable for TROP2 expression by immunohistochemistry (IHC) analysis. TROP2 expression trended higher in patients who experienced a partial response. Gene analysis suggested SLFN11 expression, which has previously been associated with response to topoisomerase I inhibitors, trended higher in patients with tumor reduction.<sup>1</sup> In addition, data showed a decrease in cfDNA in patients who experienced partial response and stable disease.

“There is a need for new treatment options to help patients with advanced non-small cell lung cancer that continues to progress on standard therapies, and these findings with DS-1062 in heavily pretreated patients are encouraging,” said Rebecca S. Heist, MD, MPH, Medical Oncologist, Massachusetts General Hospital, Cancer Center, and a study investigator. “Further study in more patients at the recommended expansion dose will help further assess the potential for targeting TROP2 with DS-1062 in NSCLC.”

Updated data for 52 patients evaluable for safety as of July 3, 2019 showed that DS-1062 was well-tolerated in doses up to 8 mg/kg, which is defined as the maximum tolerated dose and the recommended dose for expansion. The most common treatment-emergent adverse events (any grade, occurring in  $\geq 30$  percent of patients) included fatigue (36.5 percent) and nausea (36.5 percent). Twenty-two patients (42.3 percent) experienced at least one treatment emergent adverse event (TEAE)  $\geq$  grade 3. Dose-limiting toxicities occurred in two patients at the 10 mg/kg dose (one mucosal inflammation and one stomatitis) and in one patient at the 6 mg/kg dose (rash maculopapular). TEAEs led to discontinuation in two patients (3.8 percent). Serious TEAEs were reported in 14 patients (26.9 percent) regardless of causality. One patient (1.9 percent) with disease progression treated with the 6.0 mg/kg dose developed an adverse event of special interest (respiratory failure, grade 5). Any pulmonary events suspected of being interstitial lung disease (ILD) or pneumonitis are considered adverse events of special interest and evaluated by an independent adjudication committee. The case was adjudicated and determined not to be ILD. Since the data cutoff, four potential cases of ILD have been reported and are pending adjudication: one grade 2 pneumonitis [6.0 mg/kg], one grade 2 organizing pneumonia [8.0 mg/kg], one grade 2 pneumonitis [8.0 mg/kg] and one grade 5 respiratory failure in a patient with disease progression [8.0 mg/kg].

“These findings support DS-1062 as a potential TROP2 targeting therapy for NSCLC and further reinforce the strength and flexibility of our DXd ADC platform, which enables each of our ADCs to be custom designed to potentially provide an optimal balance of safety and efficacy,” said Eric Slosberg, PhD, Head, Global Translational Development, Oncology Research and Development, Daiichi Sankyo. “As the study advances, we will continue with our translational research to help uncover underlying factors contributing to patient response and identify patients most likely to respond to DS-1062.”

DS-1062 was designed using Daiichi Sankyo’s proprietary DXd ADC technology to target and deliver chemotherapy inside cancer cells that express TROP2 as a cell surface antigen. The DXd ADC technology provides flexibility to adapt the drug-to-antibody ratio (DAR) or the number of DXd molecules conjugated per antibody. DS-1062 has a DAR of four, which is based on initial preclinical research into the construct necessary for intended safety and efficacy in TROP2 expressing tumors. Preclinical studies have demonstrated that DS-1062 selectively binds to the TROP2 receptor on the surface of a tumor cell. It is proposed that DS-1062 is then brought inside the cancer cell where lysosomal enzymes break down the tetrapeptide-based linker and release the DXd payload.

## **About the Phase 1 Study**

The phase 1, first-in-human open-label study is investigating the safety and tolerability of DS-1062 in patients with unresectable advanced NSCLC who are refractory to or have relapsed following standard treatment or for whom no standard treatment is available. The first part of the study (dose escalation) assesses the safety and tolerability of increasing doses of DS-1062 to determine the maximum tolerated dose and recommended dose for expansion. The second part of the study (dose expansion) will evaluate the safety and tolerability of DS-1062 at the recommended dose for expansion and will enroll 40 additional patients with advanced NSCLC. Study endpoints include safety, pharmacokinetics, objective response rate, duration of response, disease control rate, time to response, progression-free survival, overall survival, biomarker analysis and immunogenicity. The study is currently enrolling patients with unresectable advanced NSCLC in the United States and Japan. For more information about the study, visit [ClinicalTrials.gov](https://clinicaltrials.gov).

## **Unmet Need in Non-Small Cell Lung Cancer (NSCLC)**

Lung cancer is the most common cancer and the leading cause of cancer mortality worldwide; there were an estimated 2.1 million new cases of lung cancer in 2018 and 1.8 million deaths.<sup>2</sup> Most lung cancers are diagnosed at an advanced or metastatic stage.<sup>3</sup> Non-small cell lung cancer (NSCLC) accounts for 80 to 85 percent of all lung cancers.<sup>4</sup> The introduction of targeted therapies and checkpoint inhibitors in the past decade has improved the treatment landscape for patients with advanced or metastatic NSCLC; however, for those who are not eligible for current treatments, or whose cancer continues to progress, new therapeutic approaches are needed.<sup>5</sup>

TROP2 (trophoblast cell-surface antigen 2) is a transmembrane glycoprotein that is highly expressed on several types of solid tumors, including NSCLC.<sup>6,7</sup> Researchers have recognized TROP2 as a promising molecular target for therapeutic development in various types of malignancies, including NSCLC.<sup>7,8</sup> Overexpression of TROP2 has been associated with increased tumor aggressiveness and decreased survival in several cancers.<sup>9</sup> High TROP2 expression was identified in 64 percent of non-small cell adenocarcinomas and 75 percent of non-small cell squamous cell carcinomas in one study.<sup>6</sup> Currently, no TROP2 targeting therapy is approved for NSCLC or any cancer.

## **About DS-1062**

Part of the investigational ADC Franchise of the Daiichi Sankyo Cancer Enterprise, DS-1062 is an investigational TROP2 targeting ADC. ADCs are targeted cancer medicines that deliver cytotoxic chemotherapy (“payload”) to cancer cells via a linker attached to a monoclonal antibody that binds to a specific target expressed on cancer cells. Designed using Daiichi Sankyo’s proprietary DXd ADC technology, DS-1062 is comprised of a humanized anti-TROP2 monoclonal antibody attached to a novel topoisomerase I inhibitor payload by a tetrapeptide-based linker. It is designed to target and deliver

chemotherapy inside cancer cells and reduce systemic exposure to the cytotoxic payload (or chemotherapy) compared to the way chemotherapy is commonly delivered.

DS-1062 is one of three Daiichi Sankyo ADCs in clinical development for NSCLC in addition to U3-1402 and [fam-] trastuzumab deruxtecan (DS-8201), which is being co-developed and co-commercialized globally in collaboration with AstraZeneca.

DS-1062, U3-1402 and DS-8201 are investigational agents that have not been approved for any indication in any country. Safety and efficacy have not been established.

### **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, 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. 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 therapies to improve standards of care and address diversified, unmet medical needs of people globally by leveraging our world-class science and technology. With more than 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 cardiovascular diseases, under the Group's 2025 Vision to become a "Global Pharma Innovator with Competitive Advantage in Oncology," Daiichi Sankyo is primarily focused on providing novel therapies in oncology, as well as other research areas centered around rare diseases and immune disorders. For more information, please visit: [www.daiichisankyo.com](http://www.daiichisankyo.com).

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