Press Release

Ifinatamab Deruxtecan Continues to Demonstrate Promising Objective Response Rates in Patients with Extensive-Stage Small Cell Lung Cancer in IDeate-Lung01 Phase 2 Trial

- Objective response rate of 54.8% seen with Daiichi Sankyo and Merck's ifinatamab deruxtecan at 12 mg/kg dose in pretreated patients
- 12 mg/kg selected as optimal dose for extension part of IDeate-Lung01 phase 2 trial and recently initiated IDeate-Lung02 phase 3 study

Basking Ridge, NJ and Rahway, NJ – (September 7, 2024) – Results from an interim analysis of the dose-optimization part of the ongoing IDeate-Lung01 phase 2 trial showed ifinatamab deruxtecan (I-DXd) continues to demonstrate promising objective response rates in patients with pretreated extensive-stage small cell lung cancer (ES-SCLC). These data were featured today as part of a press conference and will be presented during an oral presentation (OA04.03) on Sunday at the 2024 World Conference on Lung Cancer (#WCLC24) hosted by the International Association for the Study of Lung Cancer.

Ifinatamab deruxtecan is a specifically engineered, potential first-in-class B7-H3 directed antibody drug conjugate (ADC) discovered by Daiichi Sankyo (TSE: 4568) and being jointly developed by Daiichi Sankyo and Merck (NYSE: MRK), known as MSD outside of the United States and Canada.

Small cell lung cancer (SCLC) is the second most common type of lung cancer, accounting for about 15% of cases.[1] SCLC is aggressive and progresses rapidly to the metastatic stage, which has a five-year survival rate of only 3%.[2,3] Approximately 65% of all SCLC tumors have a moderate-to-high expression of the protein B7-H3, which is associated with disease progression and poor prognosis.[4,5]

"Most patients treated for small cell lung cancer experience rapid progression of disease and there is a high unmet need in the advanced setting," said Charles M. Rudin, MD, PhD, Deputy Director of Memorial Sloan Kettering Cancer Center and Co-Director of the Fiona and Stanley Druckenmiller Center for Lung Cancer Research. "These interim results from the first part of the IDeate-Lung01 trial suggest that ifinatamab deruxtecan could play an important role in treating patients with pretreated extensive-stage small cell lung cancer and further research is warranted."

A confirmed objective response rate (ORR) of 54.8% (95% CI: 38.7-70.2) and 26.1% (95% CI: 14.3-41.1) were observed in patients with ES-SCLC receiving ifinatamab deruxtecan in the 12 mg/kg (n=42) and 8 mg/kg (n=46) cohorts, respectively, as assessed by blinded independent central review (BICR). Twenty-three partial responses (PR) were seen in the 12 mg/kg cohort. One complete response (CR) and eleven PRs were seen in the 8 mg/kg cohort. A median duration of response (DoR) of 4.2 months (95% CI: 3.5-7.0) and 7.9 months (95% CI: 4.1-NE) and a disease control rate (DCR) of 90.5% (95% CI: 77.4-97.3) and 80.4% (95% CI: 66.1-90.6) were observed in the 12 mg/kg and 8 mg/kg cohorts, respectively. The median duration of treatment was 4.7 months for the 12 mg/kg dose (range, 0.03-15.2) and 3.5 months for the 8 mg/kg dose (range, 0.03–13.9). Median progression-free survival (PFS) of 5.5 months (95% CI: 4.2-6.7) and 4.2 months (95% CI: 2.8-5.6) and median overall survival (OS) of 11.8 months (95% CI: 8.9-15.3) and 9.4 months (95% CI: 7.8-15.9) were observed in the 12 mg/kg and 8 mg/kg cohorts, respectively. The 12 mg/kg dose has been selected for the dose expansion part of the trial. Median follow-up was 15.3 months (95% CI: 13.6-16.2) in the 12 mg/kg cohort and 14.6 months (95% CI: 13.4-16.5) in the 8 mg/kg cohort as of data cutoff of April 25, 2024.

In a subset of patients with brain target lesions at baseline, an intracranial ORR of 50.0% (95% CI: 18.7-81.3) and 66.7% (95% CI: 22.3-95.7) were observed as assessed by central nervous system (CNS) BICR in the 12 mg/kg (n=10) and 8 mg/kg (n=6) cohorts, respectively. In these patients, two intracranial CRs were seen in each cohort. Three and two intracranial PRs and five and two cases of stable disease (SD) were seen in the 12 mg/kg and 8 mg/kg cohorts, respectively.

“The objective response rate and median overall survival of nearly a year along with the preliminary intracranial responses observed reinforces the potential for ifinatamab deruxtecan to improve outcomes for patients living with this difficult-to-treat type of lung cancer,” said Mark Rutstein, MD, Global Head, Oncology Clinical Development, Daiichi Sankyo. “We look forward to seeing additional results from the extension part of the IDeate-Lung01 phase 2 trial and the recently initiated IDeate-Lung02 phase 3 trial where we are evaluating ifinatamab deruxtecan in patients with extensive-stage small cell lung cancer versus treatment of physician’s choice of chemotherapy.”

“These results demonstrate promising objective response rates in patients with pre-treated extensive-stage small cell lung cancer, a patient population with a poor prognosis and limited treatment options,” said Marjorie Green, MD, Senior Vice President and Head of Oncology, Global Clinical Development, Merck Research Laboratories. “We are encouraged by these results supporting the potential of B7-H3 as an

actionable target in small cell lung cancer and look forward to advancing our pivotal clinical development program for ifinatamab deruxtecan."

The safety profile seen in IDeate-Lung01 is consistent with that observed for ifinatamab deruxtecan in previous trials with no new safety signals identified. Grade 3 or higher treatment-emergent adverse events (TEAEs) occurred in 50.0% and 43.5% of patients in the 12 mg/kg (n=42) and 8 mg/kg (n=46) cohorts, respectively. The most common treatment-related TEAEs (>20% of total population) across both doses include nausea (50.0% and 28.3%), decreased appetite (42.9% and 17.4%), anemia (35.7% and 13.0%), decreased neutrophil count/neutropenia (33.3% and 10.9%), white blood cell decreased (21.4% and 4.3%) and asthenia (1.4% and 13.0%). Five (11.9%) and four (8.7%) interstitial lung disease (ILD)/pneumonitis events were confirmed as treatment-related in the 12 mg/kg and 8 mg/kg doses, respectively, as determined by an independent adjudication committee. The majority of ILD events (four with 12 mg/kg, three with 8 mg/kg) were low grade (grade 1 or 2). There was one grade 3 (12 mg/kg) and one grade 5 (8 mg/kg) ILD. No ILD events were pending adjudication at the time of data cutoff of April 25, 2024. Treatment discontinuations due to adverse events occurred in 16.7% and 6.5% in the 12 mg/kg and 8 mg/kg cohorts, respectively.

Patients in IDeate-Lung01 receiving ifinatamab deruxtecan received a median of two lines of therapy in both dose groups including a majority (76.1%) previously treated with immunotherapy. The median treatment duration was 4.7 months (range: 0.03-15.2) in the 12 mg/kg cohort and 3.5 months (range: 0.03-13.9) in the 8mg/kg cohort.

Summary of IDeate-Lung01 Results

Efficacy Measure	**Ifinatamab deruxtecan (12 mg/kg) n=42**	**Ifinatamab deruxtecan (8 mg/kg) n=46**
Confirmed ORR, % (95% CI)	54.8% (38.7-70.2)	26.1% (14.3-41.1)
CR, n (%)	0	1 (2.2%)
PR, n (%)	23 (54.8%)	11 (23.9%)
Stable disease (SD)/non-CR/non-PD, n (%)	15 (35.7%)	25 (54.3%)
Progressive disease (PD), n (%)	2 (4.8%)	5 (10.9%)
DCR, % (95% CI)	90.5% (77.4-97.3)	80.4% (66.1-90.6)
DoR, median (95% CI), months	4.2 months (3.5-7.0)	7.9 months (4.1-NE)
TTR, median (95% CI), months	1.4 months (1.0-8.1)	1.4 months (1.2-1.5)
PFS, median (95% CI), months	5.5 months (4.2-6.7)	4.2 months (2.8-5.6)
OS, median (95% CI), months	11.8 months (8.9-15.3)	9.4 months (7.8-15.9)

CR, complete response; DCR, disease control rate; DoR, duration of response; ORR, objective response rate; OS, overall survival, PR, partial response; PD, progressive disease; PFS, progression-free survival; TTR, time to response; SD, stable disease

About the IDeate-Lung01 Trial

IDeate-Lung01 is a global, multicenter, randomized, open-label two-part phase 2 trial evaluating the safety and efficacy of ifinatamab deruxtecan in patients with ES-SCLC. In the first part of the trial (dose optimization), patients were previously treated with at least one prior line of platinum-based chemotherapy and a maximum of three prior lines of therapy. In the second part (extension), patients were previously treated with a minimum of two previous lines of systemic therapy.

In the first part of the trial, patients were randomized 1:1 to receive either 8 mg/kg or 12 mg/kg of ifinatamab deruxtecan. In the second part of the trial, patients will receive the recommended dose for expansion (12 mg/kg) of ifinatamab deruxtecan.

The primary endpoint is ORR as assessed by BICR. Secondary endpoints include DoR, PFS, OS, DCR, time to response and overall safety profile. Intracranial ORR was assessed by BICR as an exploratory analysis.

IDeate-Lung01 is enrolling patients in Asia, Europe and North America. For more information about the trial, visit ClinicalTrials.gov.

About Small Cell Lung Cancer

More than 2.48 million lung cancer cases were diagnosed globally in 2022.[6] SCLC is the second most common type of lung cancer, accounting for approximately 15% of cases.[1] SCLC is aggressive and progresses rapidly to the metastatic stage, which has a five-year survival rate of only 3%.[2,3] While conventional first-line therapy for patients with advanced SCLC may help some patients live longer, the current second-line standard of care offers limited clinical benefit and new treatment approaches are needed.[7,8,9,10]

About B7-H3

B7-H3 is a transmembrane protein that belongs to the B7 family of proteins which bind to the CD28 family of receptors that includes PD-1.[11,12] B7-H3 is overexpressed in a wide range of cancer types, including SCLC, and its overexpression has been shown to correlate with poor prognosis, making B7-H3 a promising therapeutic target.[4,12,13,14,15] There are currently no B7-H3 directed medicines approved for the treatment of any cancer.

About Ifinatamab Deruxtecan

Ifinatamab deruxtecan (I-DXd) is an investigational potential first-in-class B7-H3 directed ADC. Designed using Daiichi Sankyo's proprietary DXd ADC Technology, ifinatamab deruxtecan is comprised of a humanized anti-B7-H3 IgG1 monoclonal antibody attached to a number of topoisomerase I inhibitor payloads (an exatecan derivative, DXd) via tetrapeptide-based cleavable linkers.

Ifinatamab deruxtecan is being evaluated in a global development program, which includes IDeate-Lung01, a phase 2 monotherapy trial in patients with previously treated ES-SCLC; IDeate-Lung02, a phase 3 trial in patients with relapsed SCLC versus investigator's choice of chemotherapy; IDeate-Lung03, a phase 1b/2 trial in patients with ES-SCLC in combination with atezolizumab with or without carboplatin as first-line induction or maintenance therapy; IDeate-PanTumor01, a phase 1/2 first-in-human trial in patients with advanced solid malignant tumors in collaboration with Sarah Cannon Research Institute (SCRI) with study operational oversight and delivery provided through SCRI's early phase oncology clinical research organization, SCRI Development Innovations in Nashville, TN; and, IDeate-PanTumor02, a phase 2 trial in patients with recurrent or metastatic solid tumors.

Ifinatamab deruxtecan was granted orphan drug designation by the U.S. Food and Drug Administration in April 2023 and by the European Commission in February 2024 for the treatment of SCLC.

About the Daiichi Sankyo and Merck Collaboration

Daiichi Sankyo and Merck entered into a global collaboration in October 2023 to jointly develop and commercialize patritumab deruxtecan (HER3-DXd), ifinatamab deruxtecan (I-DXd) and raludotatug deruxtecan (R-DXd), except in Japan where Daiichi Sankyo will maintain exclusive rights. Daiichi Sankyo will be solely responsible for manufacturing and supply. In August 2024, the global co-development and co-commercialization agreement was expanded to include MK-6070, an investigational delta-like ligand 3 (DLL3) targeting T-cell engager, which they will jointly develop and commercialize worldwide, except in Japan where Merck will maintain exclusive rights. Merck will be solely responsible for manufacturing and supply for MK-6070.

About the ADC Portfolio of Daiichi Sankyo

The Daiichi Sankyo ADC portfolio consists of seven ADCs in clinical development crafted from two distinct ADC technology platforms discovered in-house by Daiichi Sankyo.

The ADC platform furthest in clinical development is Daiichi Sankyo's DXd ADC Technology where each ADC consists of a monoclonal antibody attached to a number of topoisomerase I inhibitor payloads (an exatecan derivative, DXd) via tetrapeptide-based cleavable linkers. The DXd ADC portfolio currently consists of ENHERTU, a HER2 directed ADC, and datopotamab deruxtecan (Dato-DXd), a TROP2 directed ADC, which are being jointly developed and commercialized globally with AstraZeneca. Patritumab deruxtecan (HER3-DXd), a HER3 directed ADC, ifinatamab deruxtecan (I-DXd), a B7-H3 directed ADC, and raludotatug deruxtecan (R-DXd), a CDH6 directed ADC, are being jointly developed and commercialized globally with Merck. DS-3939, a TA-MUC1 directed ADC, is being developed by Daiichi Sankyo.

The second Daiichi Sankyo ADC platform consists of a monoclonal antibody attached to a modified pyrrolobenzodiazepine (PBD) payload. DS-9606, a CLDN6 directed PBD ADC, is the first of several planned ADCs in clinical development utilizing this platform.

Datopotamab deruxtecan, ifinatamab deruxtecan, patritumab deruxtecan, raludotatug deruxtecan, DS-3939 and DS-9606 are investigational medicines that have not been approved for any indication in any country. Safety and efficacy have not been established.

About Daiichi Sankyo

Daiichi Sankyo is an innovative global healthcare company contributing to the sustainable development of society that discovers, develops and delivers new standards of care to enrich the quality of life around the world. With more than 120 years of experience, Daiichi Sankyo leverages its world-class science and technology to create new modalities and innovative medicines for people with cancer, cardiovascular and other diseases with high unmet medical needs. For more information, please visit www.daiichisankyo.com.

Merck's Focus on Cancer

Every day, we follow the science as we work to discover innovations that can help patients, no matter what stage of cancer they have. As a leading oncology company, we are pursuing research where scientific opportunity and medical need converge, underpinned by our diverse pipeline of more than 25 novel mechanisms. With one of the largest clinical development programs across more than 30 tumor types, we strive to advance breakthrough science that will shape the future of oncology. By addressing barriers to clinical trial participation, screening and treatment, we work with urgency to reduce disparities and help ensure patients have access to high-quality cancer care. Our unwavering commitment is what

will bring us closer to our goal of bringing life to more patients with cancer. For more information, visit https://www.merck.com/research/oncology/.

About Merck

At Merck, known as MSD outside of the United States and Canada, we are unified around our purpose: We use the power of leading-edge science to save and improve lives around the world. For more than 130 years, we have brought hope to humanity through the development of important medicines and vaccines. We aspire to be the premier research-intensive biopharmaceutical company in the world – and today, we are at the forefront of research to deliver innovative health solutions that advance the prevention and treatment of diseases in people and animals. We foster a diverse and inclusive global workforce and operate responsibly every day to enable a safe, sustainable and healthy future for all people and communities. For more information, visit www.merck.com and connect with us on X (formerly Twitter), Facebook, Instagram, YouTube and LinkedIn.

Forward-Looking Statement of Merck & Co., Inc., Rahway, N.J., USA

This news release of Merck & Co., Inc., Rahway, N.J., USA (the "company") includes "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements are based upon the current beliefs and expectations of the company's management and are subject to significant risks and uncertainties. There can be no guarantees with respect to pipeline candidates that the candidates will receive the necessary regulatory approvals or that they will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements.

Risks and uncertainties include but are not limited to, general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally; global trends toward health care cost containment; technological advances, new products and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approval; the company's ability to accurately predict future market conditions; manufacturing difficulties or delays; financial instability of international economies and sovereign risk; dependence on the effectiveness of the company's patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions.

The company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the company's Annual Report on Form 10-K for the year ended December 31, 2023 and the company's other filings with the Securities and Exchange Commission (SEC) available at the SEC's Internet site (www.sec.gov).

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