December 11, 2017

Juno Therapeutics and Celgene Corporation Release Additional Data from TRANSCEND Trial of JCAR017 in Patients with Relapsed or Refractory Aggressive B-cell Non-Hodgkin Lymphoma

—74% (14/19) ORR and 68% (13/19) CR rate at 3 months and 50% (7/14) CR at 6 months in core group at dose level 2—

—Across doses, 80% (16/20) of core group patients in CR at month 3 remain in response at month 6; 92% (11/12) of core group patients in response at 6 months remain in response as of data cutoff—

—1% (1/67) severe CRS and 15% (10/67) severe NT in core group: safety profiles appear similar between full and core groups—

—Data continue to support better responses at dose level 2 without dose related toxicity observed for CRS and NT, compared to dose level 1 in core group—

SEATTLE & SUMMIT, N.J.--(BUSINESS WIRE)-- Juno Therapeutics, Inc. (NASDAQ: JUNO), a biopharmaceutical company developing innovative cellular immunotherapies for the treatment of cancer, and Celgene Corporation (NASDAQ: CELG) today released additional data from the TRANSCEND study of JCAR017 (lisocabtagene maraleucel; liso-cel) in patients with relapsed or refractory (r/r) aggressive B-cell non-Hodgkin lymphoma (NHL) in a presentation at the 59th American Society of Hematology (ASH) Annual Meeting and Exposition.

This press release features multimedia. View the full release here:
http://www.businesswire.com/news/home/20171211005346/en/

"We are highly encouraged by the latest efficacy and tolerability data, particularly at dose level two, as these are patients with a poor prognosis who need better treatment options," said Sunil Agarwal, M.D., Juno's President of Research and Development. "These data support a potential best-in-class profile and further support the importance of a defined cell product. We continue to enroll our pivotal cohort in DLBCL patients and over the next twelve to eighteen months we intend to explore earlier lines of therapy, additional therapeutic areas, and combinations."

TRANSCEND is an open-label, multicenter Phase 1 study to determine the safety, pharmacokinetics, and antitumor activity of JCAR017 in adult patients with relapsed or refractory diffuse large B cell lymphoma (DLBCL), primary mediastinal B-cell lymphoma, follicular lymphoma Grade 3B, and mantle cell lymphoma.

The data were based on a cutoff date of October 9, 2017 and presented by Jeremy Abramson, M.D., of Massachusetts General Hospital, who is a Principal Investigator for the TRANSCEND study. They add to those disclosed on November 1, 2017 in ASH Abstract #581.

As with previous readouts, the TRANSCEND data were presented for both the core and full groups. The core group (N=67) includes 29 patients who received dose level two (DL2 = 100 million cells), 34 patients who received dose level one (DL1 = 50 million cells), and 4 patients who received dose level one twice, approximately 14 days apart.

The core group includes patients with DLBCL (NOS and transformed from follicular lymphoma) who are ECOG Performance Status 0-1. These patients represent a high-risk patient population, with approximately 90% of treated patients having one or more predictors of poor survival, including double or triple hit lymphoma, being chemorefractory to front-line or subsequent therapies, never reaching a complete remission with prior treatments, or never having undergone an autologous transplant. Enrollment of the pivotal cohort is ongoing with the core group at DL2.

The full analysis group represents evaluable r/r patients in the DLBCL cohort (N=91), which includes an additional 24 patients with poor performance status (ECOG Performance Status 2) or with niche subtypes of aggressive NHL. In both analysis groups all efficacy data are based on at least one month of follow-up with a 28-day restaging scan and all safety evaluable data are based on having received JCAR017 (liso-cel) with at least one month of follow-up. Product was available

for 98% (126/128) of patients apheresed in the DLBCL cohort.

"The results of this study continue to show the exciting potential of this CAR T therapy," said Jay Backstrom, Chief Medical Officer and Global Head of Regulatory Affairs for Celgene. "Our collaboration with Juno reflects our commitment to delivering transformational treatments to patients with blood cancers such as non-Hodgkin lymphoma."

Topline data from the presentation as of the October 9, 2017 data cutoff date included:

Responses in core group

- At DL2, the data showed a 3 month overall response rate (ORR) of 74% (14/19) and a 3 month complete response (CR) rate of 68% (13/19). Of patients that have reached 6 months of follow-up, 50% (7/14) were in CR. Across doses, 80% (16/20) of patients with CR at 3 months stayed in CR at 6 months, and 92% (11/12) of patients in response at 6 months remain in response as of data cutoff.
- Across doses, median duration of response (DOR) was 9.2 months and median durability of CR was not reached.

Tolerability in core group

- 1% (1/67) experienced severe cytokine release syndrome and 15% (10/67) experienced severe neurotoxicity.
- 36% (24/67) had any grade CRS and 21% (14/67) had any grade NT.
- 58% (39/67) had no CRS or NT of any grade.
- At dose level 1, 3% (1/34) experienced severe CRS and 21% (7/34) experienced severe NT.
- At dose level 2, 0% (0/29) experienced severe CRS and 7% (2/29) experienced severe NT.
- 13% (9/67) received tocilizumab and 18% (12/67) received corticosteroids.

Tolerability across doses in full group

- 1% (1/91) experienced severe CRS and 12% (11/91) experienced severe NT.
- 35% (32/91) had any grade CRS and 19% (17/91) had any grade NT.
- 60% (55/91) had no CRS or NT of any grade.
- The most common treatment-emergent adverse events (TEAEs) other than CRS and NT that occurred at ≥25% included neutropenia (49%), anemia (38%), fatigue (37%), thrombocytopenia (29%), nausea (27%), and diarrhea (25%). The most common TEAEs were similar between core and full groups.

JCAR017 (liso-cel) is a defined composition CD19-directed CAR T cell product candidate using a 4-1BB costimulatory domain. Juno believes JCAR017's clinical profile could enable outpatient administration. A biologics license application filing is expected to be completed in the second half of 2018, with approval as early as the end of 2018.

ASH Investor and Analyst Event and Webcast

The Juno ASH Investor and Analyst Event and webcast will be held Monday, December 11, 2017 at 8:30 p.m. Eastern Time. The webcast can be accessed live on the Investor Relations page of Juno's website, www.JunoTherapeutics.com, and will be available for replay for 30 days following the event.

About Juno

Juno Therapeutics is building a fully integrated biopharmaceutical company focused on developing innovative cellular immunotherapies for the treatment of cancer. Founded on the vision that the use of human cells as therapeutic entities will drive one of the next important phases in medicine, Juno is developing cell-based cancer immunotherapies based on chimeric antigen receptor and high-affinity T cell receptor technologies to genetically engineer T cells to recognize and kill cancer. Juno is developing multiple cell-based product candidates to treat a variety of B-cell malignancies as well as multiple solid tumors and multiple myeloma. Several product candidates have shown compelling clinical responses in clinical trials in refractory leukemia and lymphoma conducted to date. Juno's long-term aim is to leverage its cell-based platform to develop new product candidates that address a broader range of cancers and human diseases. Juno brings together innovative technologies from some of the world's leading research institutions, including the Fred Hutchinson Cancer Research Center, Memorial Sloan Kettering Cancer Center, Seattle Children's Research Institute (SCRI), the University of California, San Francisco, and The National Cancer Institute. Juno Therapeutics has an exclusive license to the St. Jude

Children's Research Hospital patented technology for CD19-directed product candidates that use 4-1BB, which was developed by Dario Campana, Chihaya Imai, and St. Jude Children's Research Hospital. Juno's product candidate JCAR017 was developed in collaboration with SCRI and others. JCAR017 is an investigational CAR T therapy and is not approved for use in any country.

About Celgene

Celgene Corporation, headquartered in Summit, New Jersey, is an integrated global biopharmaceutical company engaged primarily in the discovery, development and commercialization of innovative therapies for the treatment of cancer and inflammatory diseases through next-generation solutions in protein homeostasis, immuno-oncology, epigenetics, immunology and neuro-inflammation. For more information, please visit www.celgene.com. Follow Celgene on Social Media: @Celgene, Pinterest, LinkedIn, FaceBook and YouTube.

About The Juno-Celgene Collaboration

Celgene Corporation and Juno Therapeutics formed a collaboration in June 2015 under which the two companies will leverage T cell therapeutic strategies to develop treatments for patients with cancer and autoimmune diseases with an initial focus on chimeric antigen receptor (CAR) and T cell receptor (TCR) technologies. In April 2016, Celgene exercised its option to develop and commercialize the Juno CD19 program outside North America and China.

Forward-Looking Statements

This press release contains forward-looking statements, which are generally statements that are not historical facts. Forward-looking statements can be identified by the words "expects," "anticipates," "believes," "intends," "estimates," "plans," "will," "outlook" and similar expressions. Forward-looking statements are based on management's current plans, estimates, assumptions and projections, and speak only as of the date they are made. Celgene and Juno undertake no obligation to update any forward-looking statement in light of new information or future events, except as otherwise required by law. Forward-looking statements involve inherent risks and uncertainties, most of which are difficult to predict and are generally beyond the control of either company. Actual results or outcomes may differ materially from those implied by the forward-looking statements as a result of the impact of a number of factors, many of which are discussed in more detail in the public reports of each company filed with the Securities and Exchange Commission.

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