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Updated Data from Phase 1/2 Open-Label Study of BCMA-Directed CAR-T Cell Therapy LCAR-B38M Show Tolerable Safety Profile, High Overall Response and MRD Negative Rate in Treatment of Patients with Advanced R/R Multiple Myeloma¹

BEERSE, BELGIUM, Tuesday 4 December 2018 – The Janssen Pharmaceutical Companies of Johnson & Johnson reported today updated results from Legend Biotech Inc.’s LEGEND-2 Phase 1/2 open-label study, which evaluated the investigational chimeric antigen receptor T-cell (CAR-T) therapy LCAR-B38M in the treatment of patients with advanced relapsed or refractory (R/R) multiple myeloma. The findings, featured in an oral presentation at the 2018 American Society of Hematology (ASH) Annual Meeting (Abstract #955),¹ build upon the data from one of four independent institutional studies, the Second Affiliated Hospital of Xi’an Jiaotong University, which were initially presented at the 2017 American Society of Clinical Oncology (ASCO) Annual Meeting² and the 2017 European Hematology Association (EHA) Meeting.³ These updated results showed that the B-cell maturation antigen (BCMA) directed CAR-T cell therapy LCAR-B38M achieved deep and durable responses, with a manageable and tolerable safety profile, in patients who failed a median of three prior therapies.¹

“CAR-T science has led to the approval of much-needed therapeutic interventions for certain blood cancers, and it is our hope that the results we are seeing in multiple myeloma will yield another much-needed option for patients,” said Wan-Hong Zhao, M.D., Ph.D.,

Associate Director of Hematology at The Second Affiliated Hospital of Xi'an Jiaotong University in Xi'an, China, and lead study investigator. "We are excited about these data and the fact that they demonstrated notable responses in heavily pre-treated patients with multiple myeloma, a population that traditionally has been difficult to treat."

In this study update, 57 patients with advanced R/R multiple myeloma received LCAR-B38M CAR-T cell therapy. The median age of the patients was 54 years (range, 27-72); median number of prior therapies was three (range, 1-9); and 74 percent of patients had Stage III disease by Durie-Salmon staging.¹ According to study findings, there was an 88 percent overall response rate (95 percent confidence interval [CI]: 76-95). Complete response (CR) was achieved by 74 percent of patients (95 percent CI, 60-85); very good partial response was achieved by four percent of patients (2/57 patients; 95 percent CI, 0.4-12) and partial response was achieved by 11 percent of patients (95 percent CI, 4-22).⁴ Notably, among 42 patients with CR, 39 patients (68 percent) were minimal residual disease (MRD) negative in the bone marrow as measured by 8-colour flow cytometry. With a median follow-up of 12 months, the median duration of response was 16 months (95 percent CI: 12-not reached [NR]) and a median progression-free survival (PFS) of 15 months for all patients was observed. Among the patients who achieved an MRD negative CR, the median PFS was 24 months.¹

The most common adverse events (AEs) were pyrexia (91 percent), cytokine release syndrome (CRS) (90 percent), thrombocytopenia (49 percent), and leukopenia (47 percent). In patients who experienced Grade ≥ 3 AEs (65 percent), the most common were leukopenia (30 percent), thrombocytopenia (23 percent) and increased aspartate aminotransferase (21 percent).⁴ CRS was mostly Grade 1 (47 percent) and 2 (35 percent). However, four patients (7 percent) experienced Grade 3 CRS. The median time to onset of CRS was nine days (range, 1-19). All but one of the CRS events resolved, with a median duration of nine days (range, 3-57). Neurotoxicity was observed in one patient who had Grade 1 aphasia, agitation, and seizure-like activity. Overall, 17 patients died during the study and follow-up period; causes of death were progressive disease (PD; n=14), suicide after PD (n=1), oesophagitis (n=1), and pulmonary embolism and acute coronary syndrome (n=1).¹

"Janssen has a long-standing commitment to improving outcomes for patients with multiple myeloma, so these early data are encouraging as to the potential difference this investigational therapy could make to patients with relapsed or refractory disease," said Dr Catherine Taylor, Haematology Therapy Area Lead, Europe, Middle East and Africa

(EMA), Janssen-Cilag Limited. "We will further explore the safety and efficacy profile of this important BCMA-targeted immunotherapy, with the aim of understanding the potential role it could play as a novel approach for treating patients with multiple myeloma."

In December 2017, Janssen entered into a worldwide collaboration and licence agreement with Legend Biotech, USA Inc, and Legend Biotech Ireland Limited ("Legend"), subsidiaries of GenScript Biotech Corporation, to jointly develop and commercialise LCAR-B38M in multiple myeloma.⁵ LCAR-B38M is a CAR-T cell therapy directed against two distinct BCMA epitopes, which confers high avidity and affinity binding of the compound to the BCMA-expressing cells.¹ In China, a Phase 2 confirmatory trial registered with the Center for Drug Evaluation (CTR20181007) is currently being planned to further evaluate LCAR-B38M in patients with advanced R/R multiple myeloma.

While LCAR-B38M identifies the investigational product being studied in China, the investigational product being studied in the US/EU is identified as JNJ-68284528; both terms are representative of the same CAR-T therapy. Globally, Janssen, together with Legend, is advancing a Phase 1b/2 trial ([NCT03548207](#)) of JNJ-68284528 to evaluate its efficacy and safety in adults with advanced R/R multiple myeloma.⁶ The study is currently enrolling patients following U.S. Food and Drug Administration clearance of an Investigational New Drug application as [announced](#) in May 2018.⁷

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About LEGEND-2

LEGEND-2 ([NCT03090659](#)) is an ongoing Phase 1/2, single-arm, open-label programme in China comprised of four independent institutional studies being conducted at participating hospitals evaluating the efficacy and safety of LCAR-B38M for the treatment of patients with R/R multiple myeloma.⁸

About CAR-T and BCMA

CAR-T cells are an innovative approach to eradicating cancer cells by harnessing the power of a patient's own immune system. BCMA is a protein that is highly expressed on myeloma cells.⁹ By targeting BCMA via a CAR-T approach, CAR-T therapies may have the potential to redefine the treatment paradigm for multiple myeloma and potentially advance towards cures for patients with the disease.

About Multiple Myeloma

Multiple myeloma (MM) is an incurable blood cancer that starts in the bone marrow and is characterised by an excessive proliferation of plasma cells.¹⁰ More than 45,000 people were diagnosed with MM in Europe in 2016, and more than 29,000 patients died.¹¹ Up to half of newly diagnosed patients do not reach five-year survival,¹² and almost 29% of patients with MM will die within one year of diagnosis.¹³

Although treatment may result in remission, unfortunately, patients will most likely relapse as there is currently no cure.¹⁴ Refractory MM is when a patient's disease progresses within 60 days of their last therapy.^{15,16} Relapsed cancer is when the disease has returned after a period of initial, partial or complete remission.¹⁷ While some patients with MM have no symptoms at all, most patients are diagnosed due to symptoms that can include bone problems, low blood counts, calcium elevation, kidney problems or infections.¹⁸ Patients who relapse after treatment with standard therapies, including protease inhibitors and immunomodulatory agents, have poor prognoses and few treatment options available.¹⁹

About the Janssen Pharmaceutical Companies of Johnson & Johnson

At the Janssen Pharmaceutical Companies of Johnson & Johnson, we are working to create a world without disease. Transforming lives by finding new and better ways to prevent, intercept, treat and cure disease inspires us. We bring together the best minds and pursue the most promising science. We are Janssen. We collaborate with the world for the health of everyone in it. Learn more at www.janssen.com/emea. Follow us at www.twitter.com/janssenEMEA for our latest news.

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Cautions Concerning Forward-Looking Statements

This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 regarding product development and the potential benefits and treatment impact of LCAR-B38M and JNJ-68284528. The reader is cautioned not to rely on these forward-looking statements. These statements are based on current expectations of future events. If underlying assumptions prove inaccurate or known or unknown risks or uncertainties materialise, actual results could vary materially from the expectations and projections of Janssen-Cilag International NV, Janssen-Cilag Limited, Janssen Biotech, Inc., any of the Janssen Pharmaceutical Companies of Johnson & Johnson and/or Johnson & Johnson. Risks and uncertainties include, but are not limited to: challenges and uncertainties inherent in product research and development, including the uncertainty of clinical success and of obtaining regulatory approvals; uncertainty of commercial success; manufacturing difficulties and delays; competition, including technological advances, new products and patents attained by competitors; challenges to patents; product efficacy or safety concerns resulting in product recalls or regulatory action; changes in behaviour and spending patterns of purchasers of health care products and services; changes to applicable laws and regulations, including global health care reforms; and trends toward health care cost containment. A further list and descriptions of these risks, uncertainties and other factors can be found in Johnson & Johnson's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, including in the sections captioned "Cautionary Note Regarding Forward-Looking Statements" and "Item 1A. Risk Factors," and in the company's subsequent Quarterly Reports on Form 10-Q and other filings with the Securities and Exchange Commission. Copies of these filings are available online at www.sec.gov, www.jnj.com or on request from Johnson & Johnson. None of the Janssen Pharmaceutical Companies nor Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.

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