Updated Amivantamab and Lazertinib Combination Data Demonstrate Durable Responses and Clinical Activity for Osimertinib-Relapsed Patients with EGFR-Mutated Non-Small Cell Lung Cancer

Findings to be presented at the ASCO Annual Meeting show preliminary efficacy in patients with EGFR-mutated NSCLC and Janssen’s commitment to address the need for new targeted therapies for this patient population

Janssen to also present data comparing amivantamab monotherapy and real-world therapies in patients with NSCLC with EGFR exon 20 insertion mutations who have progressed after platinum doublet chemotherapy

May 19, 2021 (RARITAN, N.J.) – The Janssen Pharmaceutical Companies of Johnson & Johnson today announced updated data from the Phase 1 CHRYSLIS study showing treatment with amivantamab in combination with lazertinib led to a median duration of response (DOR) of 9.6 months in chemotherapy-naïve patients with non-small cell lung cancer (NSCLC) and epidermal growth factor receptor (EGFR) exon 19 deletion or L858R
mutations whose disease had progressed after treatment with osimertinib. These data, which will be presented in an oral presentation at the 2021 American Society of Clinical Oncology (ASCO) Annual Meeting on Friday, June 4, also provide new insights on the importance of biomarkers to identify a subgroup of patients more likely to respond to amivantamab and lazertinib (Abstract #9006). Results from the CHRYSLIS study have led to new studies to further evaluate the potential of amivantamab and lazertinib combination therapy, which include the Phase 3 MARIPOSA study and Phase 1/1b CHRYSLIS-2 study.  

“Typically, patients whose disease no longer responds to osimertinib therapy would have little opportunity to seek additional treatments, other than chemotherapy. However, the durable responses we are seeing with the combination of amivantamab and lazertinib suggest an additional targeted option may be possible,” said Byoung Chul Cho, M.D., Ph.D., Yonsei Cancer Center, Yonsei University College of Medicine in Seoul, South Korea, and lead study investigator. “The results from this CHRYSLIS study cohort also offer promising insights that may help identify patients more likely to respond to an amivantamab and lazertinib combination regimen.”

In the combination cohort of the Phase 1 CHRYSLIS study, 45 patients with NSCLC with EGFR exon 19 deletion or L858R mutations whose disease had progressed on osimertinib, but who had not yet received chemotherapy, received the combination dose of 1050 mg (for patients who weigh <80kg) or 1400 mg (for patients who weigh ≥80kg) amivantamab and 240 mg lazertinib. Of those patients, 36 percent (95 percent confidence interval [CI], 22-51) had a confirmed response (CR) (1 complete response and 15 partial responses [PR]) with the regimen. The median DOR was 9.6 months (95 percent CI, 5.3–not reached), and the DOR greater than six months was 69 percent. The median progression-free survival (mPFS) was 4.9 months (95 percent CI, 3.7–9.5) and the clinical benefit response rate was 64 percent (95 percent CI, 49–78).

In the study, each patient’s tumor was characterized through genetic testing of circulating tumor DNA and tumor tissue biopsy to identify the mechanism(s) of resistance to osimertinib. The study identified 17 patients with EGFR and/or MET-based resistance; of those patients, the overall response rate was 47 percent, median DOR was 10.4 months, clinical benefit response rate was 82 percent, and median progression-free survival was 6.7 months. Of the remaining 28 patients without identified EGFR or MET-based resistance, 29 percent of patients experienced a confirmed tumor response. Among these 28 patients, 18
had unknown mechanisms of osimertinib-resistance and 10 had non-EGFR/MET mechanisms of resistance.\textsuperscript{1} The study also examined 20 patients who had sufficient tumor tissue to do immune-histochemistry (IHC) staining for EGFR and MET expression. Among 10 patients whose tumors stained high for EGFR and MET expression, 90 percent had a tumor response. Janssen will prospectively validate both next-generation sequencing (NGS) and immunohistochemistry (IHC) based biomarkers to identify patients most likely to benefit from amivantamab and lazertinib in a cohort in CHRYSALIS-2 study.

The most common adverse events (AEs) were predominantly Grade 1-2 and included infusion-related reactions (78 percent), rash (acneiform dermatitis, 51 percent + rash, 27 percent) and paronychia (49 percent).\textsuperscript{1} Sixteen percent of patients experienced treatment-related Grade ≥3 AEs and included discontinuations (4 percent) and dose reductions (18 percent).\textsuperscript{1}

In the post-platinum, EGFR exon 20 insertion mutation NSCLC setting, Janssen will present an indirect treatment comparison demonstrating that clinical trial patients treated with amivantamab monotherapy had a 10-month higher overall survival (OS) compared to those treated with real-world therapies such as immune checkpoint inhibitors, tyrosine kinase inhibitors (TKIs) and single-agent chemotherapies (Abstract #9052) in U.S. databases.\textsuperscript{4} In a separate study using French real-world data from the Epidemiological Strategy and Medical Economics (ESME) database, the prognosis for patients with NSCLC with EGFR exon 20 insertion mutations appears to be worse compared to those with the common EGFR mutations, exon 19 deletions and L858R (Abstract #9062).\textsuperscript{5}

“Patients with non-small cell lung cancer and EGFR mutations continue to experience significant unmet need for treatment options and often face a poor prognosis,” said Kiran Patel, M.D., Vice President, Clinical Development, Solid Tumors, Janssen Research & Development, LLC. “We remain committed in our efforts to transform the treatment of lung cancer through the ongoing investigation of amivantamab as a monotherapy and in combination with lazertinib as a potential treatment option for patients with various genetic alterations.”

**About the CHRYSALIS Study**
CHRYSALIS (NCT02609776) is an open-label, multicenter, first-in-human Phase 1 study to evaluate the safety, pharmacokinetics and preliminary efficacy of amivantamab as a
monotherapy and in combinations, including with lazertinib, in patients with advanced NSCLC with various EGFR mutations. The study enrolled 460 patients with advanced NSCLC. The study consists of two parts: The first consists of amivantamab monotherapy and combination dose escalations, and the second consists of amivantamab monotherapy and combination dose expansions.

The results from the CHRYSALIS study have led to new studies to further evaluate the potential of amivantamab and lazertinib combination therapy. The Phase 3 MARIPOSA study (NCT04487080) will assess the amivantamab and lazertinib combination against osimertinib in untreated advanced EGFR-mutated NSCLC, and a Phase 1/1b study, CHRYSLALIS-2, (NCT04077463) has been initiated to examine the combination in patients who have progressed after treatment with osimertinib and chemotherapy.

**About Amivantamab**
Amivantamab is an investigational, fully-human EGFR-MET bispecific antibody with immune cell-directing activity that targets tumors with activating and resistance EGFR mutations and MET mutations and amplifications. Amivantamab is being studied as a monotherapy in patients with EGFR exon 20 insertion mutations. Amivantamab is also being studied in combination with lazertinib in adult patients with advanced NSCLC. Janssen has filed regulatory submissions in the U.S. and Europe seeking approval of amivantamab for the treatment of patients with NSCLC with EGFR exon 20 insertion mutations whose disease has progressed on or after platinum-based chemotherapy. These applications mark the first-ever regulatory submissions for a treatment for patients with NSCLC and EGFR exon 20 insertion mutations. Amivantamab is being studied in multiple clinical trials, including as first-line therapy in untreated advanced EGFR-mutated NSCLC in the Phase 3 MARIPOSA (NCT04487080) study assessing amivantamab in combination with lazertinib, the Phase 3 PAPILLON (NCT04538664) study assessing amivantamab in combination with carboplatin-pemetrexed for patients with advanced or metastatic EGFR-mutated NSCLC and exon 20 insertion mutations, and the Phase 1 PALOMA (NCT04606381) study assessing the feasibility of subcutaneous (SC) administration of amivantamab based on safety and pharmacokinetics and to determine a dose, dose regimen and formulation for amivantamab SC delivery.

**About Lazertinib**
Lazertinib is an oral, third-generation, brain-penetrant, EGFR TKI that targets both the
T790M mutation and activating EGFR mutations while sparing wild type-EGFR. Interim safety and efficacy results from the lazertinib Phase 1-2 study were published in *The Lancet Oncology* in 2019. In 2018, Janssen Biotech, Inc. entered into a license and collaboration agreement with Yuhan Corporation for the development of lazertinib.

**About the Amivantamab Expanded Access Program (EAP) Protocol**
The amivantamab EAP is for U.S. patients 18 years of age or older who have histologically or cytologically confirmed unresectable or metastatic NSCLC with an EGFR exon 20 insertion mutation; who are not amenable to curative therapy; whose disease has progressed during or after current standard of care platinum-based chemotherapy; and who may benefit from treatment with amivantamab prior to its potential FDA approval. The EAP has specific inclusion and exclusion criteria for patients to be considered for enrollment in the program, and patients must not be eligible for another amivantamab study. Interested patients should contact their physician to discuss whether they may be a candidate for amivantamab through the EAP. Additional information about the expanded access protocol can be found on clinicaltrials.gov (NCT04599712) and at [https://www.janssen.com/compassionate-use-pre-approval-access](https://www.janssen.com/compassionate-use-pre-approval-access).

**About Non-Small Cell Lung Cancer (NSCLC)**
Worldwide, lung cancer is one of the most common cancers, and NSCLC makes up 80 to 85 percent of all lung cancers. The main subtypes of NSCLC are adenocarcinoma, squamous cell carcinoma and large cell carcinoma. Among the most common driver mutations in NSCLC are alterations in EGFR, which is a receptor tyrosine kinase supporting cell growth and division. EGFR mutations are present in 10 to 15 percent of people with NSCLC adenocarcinoma and occur in 40 to 50 percent of Asians. The five-year survival rate for all people with metastatic NSCLC and EGFR mutations who are treated with EGFR TKIs is less than 20 percent.

**About the Janssen Pharmaceutical Companies of Johnson & Johnson**
At Janssen, we’re creating a future where disease is a thing of the past. We’re the Pharmaceutical Companies of Johnson & Johnson, working tirelessly to make that future a reality for patients everywhere by fighting sickness with science, improving access with ingenuity and healing hopelessness with heart. We focus on areas of medicine where we can make the biggest difference: Cardiovascular & Metabolism, Immunology, Infectious Diseases & Vaccines, Neuroscience, Oncology and Pulmonary Hypertension.
†Dr. Cho has been a paid consultant to Janssen; he has not been paid for any media work.

Cautions Concerning Forward-Looking Statements

This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 regarding amivantamab and lazertinib. 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 materialize, actual results could vary materially from the expectations and projections of Janssen Research & Development, LLC, Janssen Biotech, Inc., any of the other Janssen Pharmaceutical Companies, 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 behavior 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 January 3, 2021, including in the sections captioned "Cautionary Note Regarding Forward-Looking Statements" and "Item 1A. Risk Factors,” and in the company’s most recently filed Quarterly Report on Form 10-Q, and the company’s subsequent 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.


22 Zhang et al 2016 (Oncotarget, Vol. 7, No. 48) study which estimated prevalence of EGFR mutations across various patient subgroups, including Asians.

