December 10, 2013

Ibrutinib Data Published in The Lancet Oncology Suggest a Positive Effect in Previously Untreated Chronic Lymphocytic Leukemia Patients Over Age 65

Encouraging Data from a Phase 1b/2, Open-label, Multicenter Study

RARITAN, NJ - December 9, 2013 - Janssen Research & Development, LLC (Janssen) today announced data from a study published in *The Lancet Oncology*, evaluating the safety and activity of ibrutinib as a single-agent therapy in patients over the age of 65 with previously untreated chronic lymphocytic leukemia (CLL, N=29) or small lymphocytic lymphoma (SLL, N=2). The study met its primary endpoint of safety, with data demonstrating treatment with ibrutinib as an initial therapy was associated with adverse events (AEs) that were predominantly Grade 1 or 2 in nature.

Efficacy data were also collected and showed that 71 percent (95% CI, 52.0-85.8) of patients treated with ibrutinib achieved an objective response (defined as a complete or partial response). Although estimates of progression-free survival (PFS) and overall survival (OS) were not reached at the median follow up of 22.1 months, it is estimated that more than 95% of patients would be alive and progression-free at two years.

"This early stage study in previously untreated patients suggests a positive effect with ibrutinib in CLL and SLL," said lead author Susan O'Brien, M.D., Department of Leukemia, Division of Cancer Medicine, The University of Texas MD Anderson Cancer Center. "The results of this study are encouraging given the average age, overall health and unmet needs of the typical CLL population."

Primary Endpoint: Safety
Adverse events were predominantly Grade 1 or 2 in severity, with the most frequently (≥25 percent) reported being diarrhea (68 percent) which was often self-limited and resolved without discontinuation of treatment. Other common mild to moderate AEs that were reported included nausea (48 percent), fatigue (32 percent), hypertension (29 percent), peripheral edema (29 percent), dizziness (26 percent), dyspepsia (26 percent) and upper respiratory tract infection (26 percent).

The most common Grade 3 AEs included diarrhea (13 percent), infection (10 percent) and hypertension (7 percent). Grade ≥3 hematological adverse events included one instance of Grade 3 neutropenia and one instance of Grade 4 thrombocytopenia. Two patients discontinued treatment due to Grade 3 fatigue and Grade 2 viral infection.

Secondary Endpoints: Efficacy
Secondary endpoints included the proportion of patients achieving an objective response, PFS, long-term tolerability and pharmacodynamics. Median follow-up for all patients was 22.1 months (interquartile range (IQR), 18.4-23.2 months) and the median treatment duration was 21 months (IQR, 0.3-26.6 months).

At 22 months, median PFS and OS were not reached. PFS and OS rates at 24 months (based on Kaplan-Meier projections) were estimated to be 96.3 percent (95% CI, 76.5-99.5) and 96.6 percent (95% CI, 77.9-99.5) respectively.

The objective response rate (ORR) was 71 percent, including;

- 55 percent partial responses (PR)
- 13 percent complete responses (CR)
- 3 percent nodular partial responses (nPR)

An additional 13 percent of patients (N=4) achieved a PR with on-going lymphocytosis (PR-L). Response was assessed on the basis of the International Workshop on Chronic Lymphocytic Leukemia (IWCLL) guidelines with the exception that lymphocytosis was not a sole criterion for disease progression. Disease response to ibrutinib therapy was independent of high-risk clinical and genomic factors.

The median time to initial response was 1.9 months (IQR,1.5-7.4 months), while the median time to best response and complete response were 5.9 months (IQR,1.8-22.1 months) and 12 months (IQR, 7.1-15.6 months).

"This is the first study to investigate the safety and efficacy of ibrutinib as a first-line therapy in the CLL patient population. It is building on our understanding of ibrutinib as a potential treatment for older patients who struggle to tolerate and adhere to currently available treatments," said Peter F. Lebowitz, M.D., Ph.D., Global Oncology Therapeutic Area Head, Janssen. "Through these studies we are beginning to understand more about how ibrutinib works. Lymphocytosis is an interesting

example: of the 13 patients who achieved a partial response with lymphocytosis at some time during their treatment, two achieved a complete response and seven achieved a partial response with resolution of their lymphocytosis."

Study Design
The Phase 1b/2 open-label multi-center study (PCYC-1102, NCT01105247) evaluated 31 previously untreated patients 65 years old and older, with CLL or SLL. The median age was 71 years (range 65-84 years) and 23 patients (74 percent) were older than 70 years. Fifty-five percent of patients' disease was categorized as Rai stage 3 or 4. The primary endpoint of the study was the safety of two fixed dose regimens, as assessed by the frequency and severity of AEs. The secondary objectives assessed the clinical activity of oral, once-daily ibrutinib 420 mg (27 patients) or 840 mg (4 patients) based on overall response rate (ORR), PFS, long-term tolerability and pharmacodynamics. Because few patients received an ibrutinib dose of 840 mg and the results for the two dose cohorts were similar, data for all patients were pooled for analyses.

The data were presented in part at the annual meetings of the American Society of Hematology, 2012, and the American Society of Clinical Oncology, 2012.

Ibrutinib was recently approved in the U.S. under the tradename IMBRUVICA™, as a single agent for the treatment of patients with mantle cell lymphoma (MCL) who have received at least one prior therapy[1]. This indication is based on overall response rate. An improvement in survival or disease-related symptoms has not been established. Ibrutinib has been submitted to the European Medicines Agency (EMA) for the treatment of adult patients with relapsed or CLL/SLL or adult patients with relapsed or refractory MCL. Use of ibrutinib in markets and for indications in which it has not been approved, is investigational.

Ibrutinib is being jointly developed and commercialized by Janssen and Pharmacyclics, Inc. Pharmacyclics, Inc. sponsored the study.

IMPORTANT SAFETY INFORMATION

WARNINGS AND PRECAUTIONS

Hemorrhage - Five percent (5%) of patients with MCL had Grade 3 or higher bleeding events (subdural hematoma, gastrointestinal bleeding, and hematuria). Bleeding events including bruising of any grade occurred in 48% of patients with MCL treated with 560 mg daily. The mechanism for the bleeding events is not well understood. Consider the benefit-risk of ibrutinib in patients requiring antiplatelet or anticoagulant therapies and the benefit-risk of withholding ibrutinib for at least 3 to 7 days pre and post-surgery depending upon the type of surgery and the risk of bleeding.

Infections - Fatal and non-fatal infections have occurred. At least 25% of patients with MCL had infections ≥ Grade 3, according to NCI Common Terminology Criteria for Adverse Events (CTCAE). Monitor patients for fever and infections and evaluate promptly.

Myelosuppression - Treatment-emergent Grade 3 or 4 cytopenias were reported in 41% of patients. These included neutropenia (29%), thrombocytopenia (17%) and anemia (9%). Monitor complete blood counts monthly.

Renal Toxicity - Fatal and serious cases of renal failure have occurred. Treatment-emergent increases in creatinine levels up to 1.5 times the upper limit of normal occurred in 67% of patients and from 1.5 to 3 times the upper limit of normal in 9% of patients. Periodically monitor creatinine levels. Maintain hydration.

Second Primary Malignancies - Other malignancies (5%) have occurred in patients with MCL who have been treated with IMBRUVICA, including skin cancers (4%), and other carcinomas (1%).

Embryo-Fetal Toxicity - Based on findings in animals, IMBRUVICA can cause fetal harm when administered to a pregnant woman. Advise women to avoid becoming pregnant while taking IMBRUVICA. If this drug is used during pregnancy or if the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to a fetus.

Adverse Reactions - The most commonly occurring adverse reactions (≥ 20%) in the clinical trial were thrombocytopenia*, diarrhea (51%), neutropenia*, anemia*, fatigue (41%), musculoskeletal pain (37%), peripheral edema (35%), upper respiratory tract infection (34%), nausea (31%), bruising (30%), dyspnea (27%), constipation (25%), rash (25%), abdominal pain (24%), vomiting (23%) and decreased appetite (21%).

* Treatment-emergent decreases (all grades) of platelets (57%), neutrophils (47%) and hemoglobin (41%) were based on laboratory measurements and adverse reactions.

The most common Grade 3 or 4 non-hematological adverse reactions (≥ 5%) were: pneumonia (7%), abdominal pain (5%), atrial fibrillation, diarrhea (5%), fatigue (5%), and skin infections (5%). Treatment-emergent Grade 3 or 4 cytopenias were reported in 41% of patients.

Ten patients (9%) discontinued treatment due to adverse reactions in the trial (N=111).

The most frequent adverse reaction leading to treatment discontinuation was subdural hematoma (1.8%). Adverse reactions leading to dose reduction occurred in 14% of patients.

Drug Interactions:
CYP3A Inhibitors - Avoid concomitant administration with strong or moderate inhibitors of CYP3A. If a moderate CYP3A inhibitor must be used, reduce the IMBRUVICA dose.

CYP3A Inducers - Avoid co-administration with strong CYP3A inducers.

Special Populations - Hepatic Impairment - Avoid use in patients with baseline hepatic impairment.

For the full prescribing information, visit http://www.imbruvica.com/downloads/Prescribing_Information.pdf.

About CLL
Chronic Lymphocytic Leukemia (CLL) is a slow-growing blood cancer that most commonly originates from B-cells, a type of white blood cell (lymphocyte). B-cells are part of the immune system and play an important role in fighting infection in the body. CLL is the most common adult leukemia in the Western World. Approximately 15,680 patients in the U.S. are diagnosed each year with CLL[2]. CLL is a chronic disease of the elderly, and is primarily diagnosed in those over 70 years old[3]. The five-year survival rate is approximately 82 percent.[2] Patients commonly receive multiple lines of treatment over the course of their disease. When cancer cells are located mostly in the lymph nodes, the disease is called SLL.

About ibrutinib
Ibrutinib is approved in the U.S., under the trade name IMBRUVICA™ and is indicated for the treatment of patients with mantle cell lymphoma (MCL) who have received at least one prior therapy. This indication is based on overall response rate (ORR). An improvement in survival or disease-related symptoms has not been established.[1] Outside the U.S. and for other indications including CLL, ibrutinib is investigational.

Ibrutinib works by blocking a specific protein called Bruton's tyrosine kinase (BTK).[1] BTK is a signaling molecule of the B-cell antigen receptor (BCR) pathway, which is emerging as a target in some B-cell malignancies.[4,5,6] BTK's role in signaling through the B-cell surface receptors results in activation of pathways necessary for B cell trafficking, chemotaxis and adhesion.1

For more information, visit www.IMBRUVICA.com.

About Janssen Research & Development, LLC
At Janssen, we are dedicated to addressing and solving some of the most important unmet medical needs of our time in oncology, immunology, neuroscience, infectious diseases and vaccines, and cardiovascular and metabolic diseases. Driven by our commitment to patients, we develop innovative products, services and healthcare solutions to help people throughout the world. Janssen Research & Development and Janssen Biotech are part of the Janssen Pharmaceutical Companies. Please visit www.janssenrnd.com for more information.

Janssen in Oncology
In oncology, our goal is to fundamentally alter the way cancer is understood, diagnosed, and managed, reinforcing our commitment to the patients who inspire us. In looking to find innovative ways to address the cancer challenge, our primary efforts focus on several treatment and prevention solutions. These include a focus on hematologic malignancies, prostate cancer and lung cancer; cancer interception with the goal of developing products that interrupt the carcinogenic process; biomarkers that may help guide targeted, individualized use of our therapies; as well as safe and effective identification and treatment of early changes in the tumor microenvironment.

# # #

(This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. 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 unknown risks or uncertainties materialize, actual results could vary materially from the expectations and projections of Janssen Research & Development, LLC and/or Johnson & Johnson. Risks and uncertainties include, but are not limited to, general industry conditions and competition; economic factors, such as interest rate and currency exchange rate fluctuations; technological advances, new products and patents attained by

competitors; challenges inherent in new product development, including obtaining regulatory approvals; challenges to patents; changes in behavior and spending patterns or financial distress of purchasers of health care products and services; changes to governmental laws and regulations and domestic and foreign health care reforms; trends toward health care cost containment; and increased scrutiny of the health care industry by government agencies. A further list and description of these risks, uncertainties and other factors can be found in Exhibit 99 of Johnson & Johnson's Annual Report on Form 10-K for the fiscal year ended December 30, 2012. Copies of this Form 10-K, as well as subsequent 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 statements as a result of new information or future events or developments.)

---

1. IMBRUVICA Prescribing Information, November 2013.

2. Cancer.net. "Leukemia - Chronic Lymphocytic - CLL". http://www.cancer.net/cancer-types/leukemia-chronic-lymphocytic-cll/statistics. Accessed June 2013.

3. American Cancer Society. "Leukemia--Chronic Lymphocytic". http://www.cancer.org/acs/groups/cid/documents/webcontent/003111-pdf.pdf. Accessed March 2013.

4. Buggy JJ and Elias L. Bruton tyrosine kinase (BTK) and its role in B-cell malignancy. Int Rev Immunol. 2012;31:119-132.

5. Woyach JA, Johnson AJ, and Byrd JC. The B-cell receptor signaling pathway as a therapeutic target in CLL. Blood. 2012;120 (6):1175-1184.

6. Davis RE, Ngo VN, Lenz G, et al. Chronic active B-cell receptor signaling in diffuse large B-cell lymphoma. Nature. 2010;463 (7277):88-92.

Media Inquiries:
Kellie McLaughlin
Phone: 1-908-927-7477
Mobile: 1-609-468-8356

Investor Relations:
Stan Panasewicz
Phone: 1-732-524-2524

Louise Mehrotra
Phone: 1-732-524-6491

U.S. Medical Information, Phamacyclics:
1-877-877-3536