Media Enquiries:
Laura Coughlan
Mobile: +353 87 147 9356
Email: LCoughl5@its.jnj.com

Investor Relations:
Christopher DelOrefice
Phone: +1 732-524-2955

Lesley Fishman
Phone: +1 732-524-3922

Janssen Announces European Commission Approval of Imbruvica®▼(ibrutinib) for Expanded Use in Two Indications

Decision represents the fifth European approval in five years

BEERSE, BELGIUM, 13 August 2019 – The Janssen Pharmaceutical Companies of Johnson & Johnson today announced that the European Commission (EC) has approved variations to broaden the use of Imbruvica® (ibrutinib) in two indications. This includes the use of ibrutinib in combination with obinutuzumab in adult patients with previously untreated chronic lymphocytic leukaemia (CLL) and the use of ibrutinib plus rituximab for the treatment of adult patients with Waldenström's macroglobulinemia (WM). The approval follows the Positive Opinion from the European Medicines Agency's (EMA) Committee for Medicinal Products for Human Use (CHMP) on 28 June 2019.

"The data supporting both the CLL and WM approvals show significant improvements in progression free survival with the use of ibrutinib-based therapy versus the standard of care study comparators respectively," said Dr Alessandra Tedeschi, Medical Director, Department of Hematology, Niguarda Hospital, Milan, Italy, and investigator in both the iNNOVATE and iLLUMINATE studies. "These approvals therefore provide healthcare professionals with new chemotherapy-free options for patients with these complex blood cancers."

The approval in CLL was based on results from the Phase 3 iLLUMINATE (PCYC-1130) study, published in *The Lancet Oncology*, which investigated ibrutinib in combination with obinutuzumab versus chlorambucil plus obinutuzumab in patients with previously untreated CLL.[1]

In WM, the decision was based on data from the Phase 3 iNNOVATE (PCYC-1127) study, published in the *New England Journal of Medicine*.[2] The study evaluated the efficacy and safety of ibrutinib in combination with rituximab, versus rituximab with placebo, in patients with previously untreated and relapsed/refractory WM.[3]

Additional information about both studies can be found at www.ClinicalTrials.gov (NCT02264574 and NCT02165397).[4,5]

"With five European Commission approvals in five years, this latest EC decision further extends the potential reach and impact ibrutinib can have for patients," said Craig Tendler, M.D., Vice President, Clinical Development and Global Medical Affairs, Oncology, Janssen Research & Development, LLC. "We remain committed to a comprehensive clinical development programme for ibrutinib, including exploring its use in other combinations, to address the needs of more and more patients with B-cell malignancies."

Ibrutinib, a first-in-class Bruton's tyrosine kinase (BTK) inhibitor, is jointly developed and commercialised by Janssen Biotech, Inc., and Pharmacyclics LLC, an AbbVie company.

Dr Alessandra Tedeschi is co-investigator in both the iNNOVATE and iLLUMINATE studies. She was not compensated for any media work.

#ENDS#

About ibrutinib

Ibrutinib is a first-in-class Bruton's tyrosine kinase (BTK) inhibitor, which works by forming a strong covalent bond with BTK to block the transmission of cell survival signals within the malignant B-cells.[6] By blocking this BTK protein, ibrutinib decreases survival and migration of B lymphocytes, thereby delaying progression of the cancer.[7]

Ibrutinib is currently approved in Europe for:[8]

- Chronic lymphocytic leukaemia (CLL): As a single agent or in combination with obinutuzumab for the treatment of adult patients with previously untreated CLL, and as a single agent or in combination with bendamustine and rituximab (BR) for the treatment of adult patients with CLL who have received at least one prior therapy
- Mantle cell lymphoma (MCL): As a single agent for the treatment of adult patients with relapsed or refractory MCL
- Waldenström's macroglobulinemia (WM): As a single agent for the treatment of adult patients who have received at least one prior therapy or in first-line treatment for patients unsuitable for chemo-immunotherapy, and in combination with rituximab for the treatment of adult patients

Ibrutinib is approved in more than 95 countries, and, to date, has been used to treat more than 158,000 patients worldwide across its approved indications.

The most common adverse reactions seen with ibrutinib include diarrhoea, neutropenia, haemorrhage (e.g., bruising), musculoskeletal pain, nausea, rash, and pyrexia.[8]

For a full list of side effects and information on dosage and administration, contraindications and other precautions when using ibrutinib please refer to the Summary of Product Characteristics for further information.

About chronic lymphocytic leukaemia

Chronic lymphocytic leukaemia (CLL) is typically a slow-growing blood cancer of the white blood cells.[9] The overall incidence of CLL in Europe is approximately 4.92 cases per 100,000 persons per year and is about 1.5 times more common in men than in women.[10] CLL is predominantly a disease of the elderly, with a median age of 72 years at diagnosis.[11]

The disease eventually progresses in the majority of patients, and they are faced with fewer treatment options with each relapse. Patients are often prescribed multiple lines of therapy as they relapse or become resistant to treatments.

About Waldenström's macroglobulinemia
Waldenström's macroglobulinemia (WM) is a rare form of non-Hodgkin's lymphoma (NHL).[12] It causes overproduction of a protein called monoclonal immunoglobulin M (IgM) antibody, which causes a thickening of the blood.[13] Incidence rates among men and women in Europe are approximately 7.3 and 4.2 per million persons, respectively.[14] The causes of WM are unknown, with it typically affecting older adults and being slightly more common in men than women.[12,14]

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.

Learn more at www.janssen.com/emea. Follow us at www.twitter.com/janssenEMEA for our latest news. Janssen Research & Development, LLC and Janssen Biotech, Inc. are part of the Janssen Pharmaceutical Companies of Johnson & Johnson.

Cautions Concerning Forward-Looking Statements
This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 regarding a recommendation to broaden the existing marketing authorisation for ibrutinib. 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 the 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 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 30, 2018, 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.

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