PRESS RELEASE

innate pharma

OPENING OF THE PHASE I/II TRIAL OF IPH2201 IN COMBINATION WITH IBRUTINIB IN PATIENTS WITH RELAPSED OR REFRACTORY CHRONIC LYMPHOCYTIC LEUKEMIA

- ***Third trial opened in the Phase II clinical program of IPH2201 - program rollout on track***
- ***Trial conducted in the United States with leading investigator at OSU***

Marseille, France, October 6, 2015

Innate Pharma SA (the "Company" - Euronext Paris: FR0010331421 – IPH) today announced the opening of the Phase I/II trial of IPH2201, a first-in-class NKG2A checkpoint inhibitor, tested in combination with ibrutinib in patients with relapsed or refractory Chronic Lymphocytic Leukemia ("CLL"). This trial, which will include up to 45 patients, is multicentric and will be performed in the United States.

Pierre Dodion, Chief Medical Officer of Innate Pharma, said: "*HLA-E is expressed by CLL cells of virtually all patients. IPH2201 is a new checkpoint inhibitor targeting both T and NK cells and preventing their inhibition by HLA-E on tumor cells. In addition, ibrutinib has been demonstrated to create a favorable pro-inflammatory environment; this could result in a synergistic effect with the immunomodulating action of IPH2201".* He added: *"The Ohio State University Comprehensive Cancer Center is a leading center in developing new therapies to cure Chronic Lymphocytic Leukemia. It is a great opportunity for the development of IPH2201 to work with them".*

Pr. John Byrd, Director, and Dr Farrukh Awan, Principal Coordinating Investigator, both expert leaders in the field of CLL at the Division of Hematology, Department of Internal Medicine, Ohio State University, said: *"Ibrutinib represents a breakthrough medicine that was approved for the treatment of relapsed and del(17(p13.1) CLL in 2014. However, although ibrutinib induces a high response rate in patients with CLL, responses are rarely complete. Ultimately the disease progresses in a number of patients. Achieving complete responses would be of great interest to potentially prolong remission, and maybe eventually improve survival rate. Targeting the immune system in several novel ways is the rationale to combine IPH2201 and ibrutinib in this trial".*

This trial is part of a global co-development and commercialization agreement with AstraZeneca for IPH2201. Within this frame, Innate Pharma expects to have four trials opened by the end of 2015. In addition to the CLL trial, two Phase I/II studies are currently ongoing, testing IPH2201 as a single agent respectively in squamous cell carcinoma of the Head and Neck and in Ovarian cancer[*]. The fourth trial, testing IPH2201 in combination cetuximab in patients with Head and Neck cancer, will start in the coming months.

The co-development plan also includes Phase II combination clinical trials with IPH2201 and durvalumab (MEDI4736), a PD-L1 immune checkpoint inhibitor, in solid tumors, which will be performed by AstraZeneca/MedImmune.

[*] Sponsored by NCIC Clinical Trials Group and performed in Canada.

About study IPH2201-202:

This Phase Ib/IIa study is a multicenter open label trial of the combination of IPH2201 and ibrutinib in patients with relapsed or refractory Chronic Lymphocytic Leukemia. Its primary objective is to evaluate the anti-leukemic activity of the combination and the primary endpoint for efficacy is complete response rate. The secondary objectives are to assess the safety of the combination of IPH2201 and ibrutinib. The trial will be performed in the United States under the coordination of leading investigators at the Ohio State University.

36 to 45 patients are planned to be enrolled. The trial is conducted in two parts:

- In the first part of the study, 12 to 24 patients will receive a combination of ibrutinib at the approved dosage and IPH2201; 4 dose levels of IPH2201 up to 10 mg/kg will be explored. Based on previous experience with IPH2201, these dosages are expected to induce saturation of the NKG2A receptor.
- In the second part of the study, IPH2201 at the dose selected in the dose-escalating part will be assessed in combination with ibrutinib during 26 cycles in up to 24 patients.

The rationale of this trial is based on the observation that HLA-E is expressed in virtually all patients with CLL, at higher levels compared to normal B cells (Veuillen, Aurran-Schleinitz et al. 2012). IPH2201 is a NGK2A checkpoint inhibitor that blocks the HLA-E driven inhibition of NK and $CD8^+$ cells. By binding to NGK2A, IPH2201 restores the capability of those cells to destroy tumor cells. Furthermore, ibrutinib has been demonstrated to create a favorable pro-inflammatory environment; this could result in a synergistic effect with the immunotherapeutic action of IPH2201. Thus, treatment with IPH2201 in combination with ibrutinib may improve the quality of response above and beyond that achieved with ibrutinib alone and achieve complete responses; a higher rate of complete response should lead to improved overall survival.

In a Phase I dose-escalation safety trial, IPH2201 was found to be safe and well-tolerated.

About Chronic Lymphocytic Leukemia (CLL):

CLL results from progressive accumulation of morphologically mature B lymphocytes in the blood, bone marrow and lymphatic tissues. In Western countries, CLL is the most common form of leukemia, accounting for about 25% of all leukemias. Incidence increases with age and the median age of diagnosis is 70 for males and 74 for females. It is estimated that 15,720 new cases will occur in 2014 in the US, causing 4,600 deaths (Siegel, Ma et al., 2014).

Ibrutinib, a first in class kinase inhibitor of BCR signaling, has been approved in 2014 for the treatment of patients with CLL who have received at least one prior therapy. Its approval was based on the safety and efficacy results of several trials which have shown mainly partial responses. The indication for ibrutinib was subsequently extended to include CLL with 17p deletion, irrespectively of the line of therapy.

About IPH2201:

IPH2201 is a first-in-class immune checkpoint inhibitor targeting NKG2A receptors expressed on tumor infiltrating cytotoxic CD8 T lymphocytes and NK cells.

NKG2A is an inhibitory receptor binding HLA-E. By expressing HLA-E, cancer cells can protect themselves from killing by $NKG2A^+$ immune cells. HLA-E is frequently up-regulated on cancer cells of many solid tumors or hematological malignancies. IPH2201, a humanized IgG4, blocks the binding of NKG2A to HLA-E allowing activation of NK and cytotoxic T cell responses.

Hence, IPH2201 may re-establish a broad anti-tumor response mediated by NK and T cells. IPH2201 may also enhance the cytotoxic potential of other therapeutic antibodies.

IPH2201 is partnered with AstraZeneca and MedImmune, the Company's global biologics research and development arm, through a co-development and commercialization agreement. The initial development plan includes: Phase II combination clinical trials with durvalumab (MEDI4736) in solid tumors; multiple Phase II trials planned by Innate Pharma to study IPH2201 both as monotherapy and in combination with currently approved treatments across a range of cancers; and the development of associated biomarkers. As previously announced, under the terms of this agreement, Innate Pharma is eligible to cash payments of up to $1.275 billion as well as double digit royalties on sales. In addition to the initial payment of $250 million to Innate Pharma, AstraZeneca will pay a further $100 million prior to initiation of Phase III development, as well as additional regulatory and sales-related milestones of up to $925 million. AstraZeneca will book all sales and will pay Innate Pharma double-digit royalties on net sales. The arrangement includes the right for Innate Pharma to co-promote in Europe for a 50% profit share in the territory.

About Innate Pharma:

Innate Pharma S.A. is a biopharmaceutical company discovering and developing first-in-class therapeutic antibodies for the treatment of cancer and inflammatory diseases.

Its innovative approach has translated into major alliances with leaders in the biopharmaceutical industry such as Bristol-Myers Squibb, AstraZeneca and Novo Nordisk A/S.

The Company has two clinical-stage programs in immuno-oncology, a new therapeutic field that is changing cancer treatment by enhancing the capability of the body's own immune cells to recognize and kill cancer cells. Innate Pharma's science also has potential in chronic inflammatory diseases.

Listed on Euronext-Paris, Innate Pharma is based in Marseille, France, and had 110 employees as at June 30, 2015.

Learn more about Innate Pharma at www.innate-pharma.com.

Practical Information about Innate Pharma shares:

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Disclaimer:

This press release contains certain forward-looking statements. Although the company believes its expectations are based on reasonable assumptions, these forward-looking statements are subject to numerous risks and uncertainties, which could cause actual results to differ materially from those anticipated. For a discussion of risks and uncertainties which could cause the company's actual results, financial condition, performance or achievements to differ from those contained in the forward-looking statements, please refer to the Risk Factors ("Facteurs de Risque") section of the *Document de Reference* prospectus filed with the AMF, which is available on the AMF website or on Innate Pharma's website.

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