

Phase I/II Data Published in New England Journal of Medicine Demonstrate that Incyte JAK Inhibitor, INCB18424, Provides Marked and Durable Clinical Benefits in Patients with Myelofibrosis, a Rare, Life-Threatening Blood Cancer

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- ***Myelofibrosis is a cancer characterized by bone marrow failure, enlarged spleen, poor quality of life and shortened survival***
- ***Phase I/II data show Incyte's JAK1 and JAK2 inhibitor INCB18424 demonstrates durable clinical benefits including reduction of spleen size and alleviation of debilitating constitutional symptoms in myelofibrosis patients***
- ***Incyte has retained all US rights and out-licensed INCB18424 to Novartis outside the US; two Phase III trials are fully enrolled***

WILMINGTON, Del., Sep 15, 2010 (BUSINESS WIRE) --

Incyte Corporation (Nasdaq:INCY) - Results from a Phase I/II study of Incyte's janus kinase (JAK) inhibitor with the investigational name INCB18424 (also known as INCB018424 and INC424) were published today in *The New England Journal of Medicine*, demonstrating marked and durable clinical benefits in patients with myelofibrosis. Incyte retained rights for the development and potential commercialization of INCB18424 in the US and out-licensed the compound to Novartis for development and potential commercialization outside the US.

Myelofibrosis is a rare, life-threatening hematological neoplasm characterized by bone marrow failure, enlarged spleen (splenomegaly), debilitating symptoms, poor quality of life, weight loss and shortened survival. There are no approved medical treatments in the US for the disease. Both the US Food and Drug Administration and European Medicines Agency have granted INCB18424 orphan drug status for myelofibrosis.

"Effective therapies are needed for patients with myelofibrosis, which is very debilitating and life threatening," said lead investigator Srdan Verstovsek, MD, PhD, of M.D. Anderson Cancer Center, Houston, Texas. "The rapid and durable clinical benefits observed in patients in this study signify a major step forward in our understanding of this serious condition and provide compelling evidence that INCB18424 has the potential to be the first targeted treatment for myelofibrosis."

The Phase I/II study of 153 patients showed that 70% to 82% of myelofibrosis patients receiving oral INCB18424 twice daily experienced marked (25% or more) reduction in palpable spleen size which was durable for more than one year of follow-up. More than half of subjects treated with an optimized dose regimen which began with 15 mg twice daily achieved at least a 50% reduction in palpable spleen size. This marked reduction was confirmed using objective measurements by MRI, where 48% of patients on optimized regimens had at least a 35% reduction in spleen volume.

After only one month of therapy, patients with symptoms including fatigue, night sweats and pruritus (itching) achieved more than 50% improvement in symptom scores, as measured by the Myelofibrosis Symptom Assessment Form. Patients, particularly those with prior weight loss, experienced a clinically meaningful gain in total body weight following treatment. Additional clinical benefits observed in the study included improved performance status, increased exercise capacity, and normalization of elevated platelet and white cell counts. These improvements were accompanied by reductions of circulating cytokines, inflammation-causing proteins in the blood that are markedly elevated in patients with myelofibrosis¹.

Two Phase III clinical trials, COMFORT-I in the US, Canada and Australia, and COMFORT-II in Europe, have completed enrollment and are evaluating the benefits of treatment with INCB18424 compared to either placebo or best available care².

A strong association exists between abnormal JAK signaling and the development of myelofibrosis, polycythemia vera, and essential thrombocythemia, a related group of conditions referred to as myeloproliferative neoplasms³⁻⁶. Patients with these diseases can progress to secondary acute myelogenous leukemia⁷, which is virtually untreatable and is associated with a dismal prognosis⁸. The discovery of JAK mutations common to myelofibrosis, polycythemia vera and essential thrombocythemia, has linked them on a molecular level⁹. This finding, together with the fact that these patients tend to have elevated inflammatory cytokines that signal through JAK1 and JAK2, led Incyte to the discovery and development of INCB18424, a potent, selective inhibitor of the JAK1 and JAK2 tyrosine kinases.

"The results of this study support the overall scientific promise of JAK1 and JAK2 inhibition in the treatment of myeloproliferative neoplasms, with clinical improvement demonstrated for the first time in the treatment of myelofibrosis," stated Paul A. Friedman, Chief Executive Officer and President of Incyte.

Study details

The open-label, non-randomized, dose-escalation Phase I/II study was sponsored by Incyte and conducted at M.D. Anderson Cancer Center and the Mayo Clinic. Primary outcome measures were safety and tolerability. The secondary outcome measure was preliminary effectiveness¹.

A starting dose of 15 mg twice daily with individualized dose titration was found to be the most effective and safest dose of INCB18424. Median duration of therapy exceeded one year. Notably, improvements occurred in patients regardless of JAK mutational status. Investigators observed that treatment with INCB18424 reduced levels of inflammatory cytokines in the blood, which they believe could provide a rational biological explanation for the mutation-independent response to therapy¹.

INCB18424 provided rapid and sustained reduction in splenomegaly, alleviation of constitutional symptoms, improvement of performance status and

exercise capacity and weight gain. Symptoms of myelofibrosis not directly related to splenomegaly, including night sweats, fevers, fatigue, weight loss and pruritus, also improved in response to INCB18424. Reduction in cytokine levels while on therapy, presumably through the combined inhibition of JAK1 and JAK2, paralleled improvements in patients' systemic symptoms¹.

At the time of the data analysis, the median duration of therapy for 153 patients enrolled in the study was 14.7 months, and 115 (75%) were still receiving INCB18424. Non-hematologic side effects related to therapy were infrequent (<10%) and predominately mild or moderate in severity. Hematologic side effects, which were expected based on the role of the JAK pathway in hematopoiesis, included reversible anemia and thrombocytopenia (reduced platelet counts). Thrombocytopenia was the dose-limiting toxicity of the drug. Mean hemoglobin levels decreased during the first 3 to 4 cycles of therapy and then stabilized or improved with continued treatment. Serious adverse events occurred in 59 patients, of whom 12 patients experienced serious adverse events that were considered by the investigator to be at least possibly related to treatment¹.

About Myelofibrosis

Myelofibrosis is one of the myeloproliferative neoplasms, a related group of blood disorders, that also includes polycythemia vera and essential thrombocythemia. Myelofibrosis is associated with bone marrow failure, splenomegaly and debilitating symptoms, transformation to acute myelogenous leukemia and shortened survival. For myelofibrosis patients in general, clinical findings such as splenomegaly, anemia and constitutional symptoms may significantly reduce quality of life^{10,11,12}.

The disease, for which no drugs have been approved in the US, has a high unmet medical need. Although allogeneic stem cell transplantation may cure myelofibrosis, the procedure is associated with significant morbidity and mortality and is usually appropriate only in younger patients¹². The 5-year survival rate after transplantation is about 50%¹³.

About INCB18424

INCB18424 is Incyte's lead internally developed JAK1 and JAK2 inhibitor that entered Phase I clinical testing in May 2007 and has shown positive clinical activity in a number of hematology and inflammatory conditions. The compound is currently in Phase III development for patients with myelofibrosis and Phase II for patients with advanced polycythemia vera and essential thrombocythemia. A global Phase III registration trial in patients with advanced PV considered refractory to or intolerant of hydroxyurea is expected to begin later this year.

About the Incyte Novartis Alliance

In November 2009, Incyte and Novartis announced a major collaboration and license agreement for two hematology-oncology programs in which Incyte retained exclusive rights to develop and commercialize INCB18424 in the US and Novartis received exclusive rights to develop and commercialize INCB18424 for territories outside the US. Novartis also received worldwide rights for Incyte's cMET inhibitor, INCB28060.

About Incyte

Incyte Corporation is a Wilmington, Delaware-based drug discovery and development company focused on developing proprietary small molecule drugs for oncology and inflammation. For additional information on Incyte, visit the Company's web site at www.incyte.com.

Forward Looking Statements

Except for the historical information contained herein, the matters set forth in this press release, including statements with respect to the rapid and durable clinical benefits of INCB18424 observed in patients with myelofibrosis with or without the JAK2 mutations signifying a major step forward in our understanding of this serious condition and providing compelling evidence of the potential of INCB18424 as a treatment for myelofibrosis regardless of mutational status, the clinical results of this Phase I/II study strongly suggesting that dysregulated JAK signaling plays a major role in myelofibrosis, and the expected timing for commencement of a global Phase III registration trial of INCB18424 in patients with advanced PV are all forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995.

These forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially, including the high degree of risk and uncertainty associated with drug development and clinical trials, including unexpected new clinical data and unexpected additional analysis of existing clinical data, the uncertainty associated with the regulatory approval processes, unanticipated developments in the efficacy or safety of INCB18424, uncertainty regarding the timing of commencement of the Phase III registration trial of INCB18424 for advanced PV, and other risks detailed from time to time in Incyte's filings with the Securities and Exchange Commission, including its Quarterly Report on Form 10-Q for the quarter ended June 30, 2010. Incyte disclaims any intent or obligation to update these forward-looking statements.

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