New Data from Phase 1 Study of Ivosidenib or Enasidenib in Combination with Azacitidine Demonstrate Robust Responses and a Well Tolerated Safety Profile in Newly Diagnosed IDHm AML Patients

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- Safety Profile of Combination Therapies Consistent with Single Agent IDHm Inhibitors and Azacitidine -

- ORR of 78%, CR Rate of 44% and CR/CRi/CRp Rate of 65% in the Ivosidenib Arm; Molecular Clearance Observed in 7 Out of 21 Patients -

- Randomized Trials in Newly Diagnosed IDHm AML Patients Ineligible for Intensive Chemotherapy Ongoing, Including Phase 3 AGILE Study of Ivosidenib in Combination with Azacitidine -

CHICAGO, June 04, 2018 (GLOBE NEWSWIRE) -- Agios Pharmaceuticals, Inc. (NASDAQ:AGIO), a leader in the field of cellular metabolism to treat cancer and rare genetic diseases, today presented encouraging new data from a Phase 1 study evaluating ivosidenib (AG-120) or enasidenib (IDHIFA®; AG-221) in combination with azacitidine in newly diagnosed isocitrate dehydrogenase (IDH) mutant acute myeloid leukemia (AML) patients. The data were featured at the 2018 American Society of Clinical Oncology (ASCO) Annual Meeting.

“Patients with newly diagnosed AML who are ineligible for intensive “7+3” chemotherapy typically have poor outcomes and few available treatment options,” said Courtney DiNardo, M.D., lead investigator and assistant professor, department of leukemia at the University of Texas MD Anderson Cancer Center. “With additional patients now treated in the ivosidenib arm of this Phase 1 study, the updated combination data demonstrate a favorable safety profile and impressive response rates vs. those expected with azacitidine alone. I look forward to further demonstrating the clinical benefit of utilizing an IDH inhibitor in combination with traditional frontline AML treatment as part of the ongoing Phase 1 and randomized trials.”

About the Ongoing Phase 1/2 Study
The ongoing Phase 1/2 study is evaluating an investigational use of enasidenib or ivosidenib in combination with azacitidine in patients with newly diagnosed IDH mutant AML unable to receive intensive chemotherapy. In the Phase 1b portion of the study, 23 patients received 500 mg of ivosidenib daily plus azacitidine and 6 patients received enasidenib (n=3 at 100 mg and n=3 at 200mg) daily plus azacitidine.

- As of the March 15, 2018 data cutoff, 19 patients remained on study (17 ivosidenib, 2 enasidenib).
- Enrollment is complete for the ivosidenib Phase 1b portion. Enasidenib and azacitidine continue to be assessed in the randomized Phase 2 portion of the study.

Ivosidenib Results
Safety

- The most common adverse events (AEs) regardless of causality were nausea (61%, n=14), anemia (52%, n=12) and thrombocytopenia (48%, n=11).
- The most common Grade 3-4 AEs were anemia and thrombocytopenia (44%, n=10 each), and febrile neutropenia (39%, n=9).
- IDH differentiation syndrome was reported in three patients.

Efficacy

- Overall, 78% of patients (18/23) had a response
- The combined CR/CRi/CRp rate was 65% (15/23).
    - 44% (10 of 23 patients) had a complete response (CR)
    - 22% (5 of 23 patients) had a complete response with incomplete hematologic or platelet recovery (CRi/CRp)
    - All patients with a CR, CRi or CRp response remain on treatment as of the data cutoff with patients on study up to 19 months. The median duration of response has not been reached.
- The median time to first response was 1.8 months (range 0.7-3.8 months) and the median time to best response was 3.6 months (range 0.8-6.7 months).
- IDH1 mutation clearance was observed in 7 of 21 patients with available longitudinal VAF profiling

Enasidenib Results
Updated data from the six patients in the enasidenib and azacitidine combination presented in December 2017 were also shown.

Safety

- The most common AEs regardless of causality were hyperbilirubinemia (n=5) and abdominal pain, nausea, vomiting and

pyrexia (n=4 each).
- The most common Grade 3-4 AEs were anemia and thrombocytopenia (n=3 each) followed by hyperbilirubinemia, neutropenia, lung infection and pneumonia (n=2 each).

Efficacy

- Overall, four out of six patients achieved a response, including 3 CRs and one MLFS.
- IDH2 mutation clearance was observed in 3 of 6 patients with available longitudinal VAF profiling

Neither enasidenib nor ivosidenib are approved in any country for the treatment of patients with newly diagnosed AML or approved in combination with azacitidine.

About Acute Myelogenous Leukemia (AML)
AML, a cancer of blood and bone marrow characterized by rapid disease progression, is the most common acute leukemia affecting adults. Undifferentiated blast cells proliferate in the bone marrow rather than mature into normal blood cells. AML incidence significantly increases with age, and the median age of diagnosis is 68. The vast majority of patients do not respond to chemotherapy and progress to relapsed/refractory AML. The five-year survival rate for AML is approximately 27 percent. IDH1 mutations are present in about 6 to 10 percent of AML cases.

About Agios
Agios is focused on discovering and developing novel investigational medicines to treat cancer and rare genetic diseases through scientific leadership in the field of cellular metabolism. In addition to an active research and discovery pipeline across both therapeutic areas, Agios has an approved oncology precision medicine and multiple first-in-class investigational therapies in clinical and/or preclinical development. All Agios programs focus on genetically identified patient populations, leveraging our knowledge of metabolism, biology and genomics. For more information, please visit the company's website at www.agios.com.

About Agios/Celgene Collaboration
IDHIFA® (enasidenib) is part of Agios' global strategic collaboration with Celgene Corporation focused on cancer metabolism. Under the terms of the 2010 collaboration agreement, Celgene has worldwide development and commercialization rights for IDHIFA® (enasidenib). Agios continues to conduct certain clinical development activities within the IDHIFA® (enasidenib) development program and is eligible to receive reimbursement for those development activities and up to $95 million in remaining payments assuming achievement of certain milestones, and royalties on any net sales. Celgene and Agios are currently co-commercializing IDHIFA® (enasidenib) in the U.S. Celgene will reimburse Agios for costs incurred for its co-commercialization efforts.

Cautionary Note Regarding Forward-Looking Statements
This press release contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Such forward-looking statements include those regarding: the potential benefits of TIBSOVO® (ivosidenib) and IDHIFA® (enasidenib); Agios' plans for the further clinical development of TIBSOVO® and IDHIFA®; and Agios' strategic plans and prospects. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "would," "could," "potential," "possible," "hope" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Such statements are subject to numerous important factors, risks and uncertainties that may cause actual events or results to differ materially from Agios' current expectations and beliefs. For example, there can be no guarantee that any product candidate Agios is developing will successfully commence or complete necessary preclinical and clinical development phases; that positive safety and efficacy findings observed in early stage clinical trials will be replicated in later stage trials; or that development of any of Agios' product candidates will successfully continue. There can be no guarantee that any positive developments in Agios' business will result in stock price appreciation. Management's expectations and, therefore, any forward-looking statements in this press release could also be affected by risks and uncertainties relating to a number of other important factors, including: Agios' results of clinical trials and preclinical studies, including subsequent analysis of existing data and new data received from ongoing and future studies; the content and timing of decisions made by the U.S. FDA and other regulatory authorities, investigational review boards at clinical trial sites and publication review bodies; Agios' ability to obtain and maintain requisite regulatory approvals and to enroll patients in its planned clinical trials; unplanned cash requirements and expenditures; competitive factors; Agios' ability to obtain, maintain and enforce patent and other intellectual property protection for any product candidates it is developing; Agios' ability to maintain key collaborations, such as its agreements with Celgene; and general economic and market conditions. These and other risks are described in greater detail under the caption "Risk Factors" included in Agios' public filings with the Securities and Exchange Commission. Any forward-looking statements contained in this press release speak only as of the date hereof, and Agios expressly disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

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