Agios Presents Mitapivat Long-term Extension Data Demonstrating Durability of Hemoglobin Response and Transfusion Burden Reduction in Adults with Pyruvate Kinase (PK) Deficiency at 63rd ASH Annual Meeting and Exposition

December 13, 2021

– Additional Data Presented at ASH Support the Potential of Mitapivat to Improve Ineffective Erythropoiesis and Iron Overload and Stabilize Bone Mineral Density in PK Deficiency Patients –

– Mitapivat Is Under Regulatory Review in the U.S. and EU as a Potential Treatment for Adults with PK Deficiency –

– Agios to Host Investor Webcast on Dec. 14, 2021, at 7:30 a.m. ET –

CAMBRIDGE, Mass., Dec. 13, 2021 (GLOBE NEWSWIRE) -- Agios Pharmaceuticals, Inc. (NASDAQ: AGIO), a leader in the field of cellular metabolism to treat genetically defined diseases, today reported new data from the ongoing long-term extension study assessing the duration of effects of mitapivat on hemoglobin response and transfusion burden reduction in adults with pyruvate kinase (PK) deficiency who had participated in one of the pivotal studies, ACTIVATE and ACTIVATE-T, conducted in not regularly transfused and regularly transfused adults with PK deficiency, respectively. Data from the study were featured in an oral presentation at the American Society of Hematology (ASH) Annual Meeting and Exposition, hosted virtually and in person from Dec. 11-14, 2021, in Atlanta. Mitapivat is a first-in-class, investigational, oral, small molecule allosteric activator of wild-type and a variety of mutated pyruvate kinase enzymes.

Long-term extension data (abstract #848) demonstrate that previously reported effects of mitapivat on hemoglobin and transfusion burden were maintained over time. Non-regularly transfused patients randomized to mitapivat in ACTIVATE maintained hemoglobin response for up to 19.5 months. Similarly, 35 percent of ACTIVATE patients who switched from placebo to mitapivat in the extension study achieved a hemoglobin response, which was maintained for the duration of follow-up. All regularly transfused patients who achieved transfusion-free status in ACTIVATE-T with mitapivat treatment maintained the status through the extension study for up to 21.9 months. Mitapivat was well tolerated, and the safety profile was consistent with the core period of ACTIVATE and ACTIVATE-T, as well as previous studies.

“The Phase 3 long-term extension data demonstrate that mitapivat’s clinically meaningful effects on hemoglobin response and reduction in transfusion burden can be maintained over time, sustaining its potential impact on patients’ lives,” said Rachael Grace, M.D., MMSc, director of hematology clinical research at Boston Children’s Hospital and investigator on the study. “Treatment with mitapivat has resulted in improvements in many of the most challenging manifestations of PK deficiency in a broad spectrum of patients, and I believe it has the potential to be an important treatment option for this community.”

In addition, Agios presented data at ASH further supporting the potential of mitapivat to address hallmark symptoms and complications of PK deficiency.

Mitapivat Improves Ineffective Erythropoiesis and Reduces Iron Overload in Patients with Pyruvate Kinase Deficiency (Abstract #757)
In an oral presentation, data from ACTIVATE, ACTIVATE-T and the Phase 3 long-term extension study were reported, showing that treatment with mitapivat improved markers of ineffective erythropoiesis and iron metabolism in adults with PK deficiency, regardless of transfusion status. Through this mechanism, mitapivat may have the potential to improve iron homeostasis, thereby reducing iron overload.

Bone Mineral Density Remains Stable in Pyruvate Kinase Deficiency Patients Receiving Long-term Treatment with Mitapivat (Abstract #924)
In a separate poster presentation, data from a large, pooled analysis of the DRIVE-PK Phase 2 study, ACTIVATE and ACTIVATE-T Phase 3 studies and the Phase 3 long-term extension study were reported, assessing the impact of mitapivat treatment on bone mineral density in a broad population of non-regularly transfused and regularly transfused adults with PK deficiency for up to 5.5 years. Among the 64 patients who had low bone mineral density at baseline, 62 patients remained stable or improved while being treated with mitapivat.

“PK deficiency is characterized by serious symptoms and complications, including anemia, iron overload and osteoporosis, regardless of transfusion status, and there are currently no approved therapies for people living with this disease,” said Sarah Gheuens, M.D., Ph.D., chief medical officer of Agios. “Collectively, the data we’ve presented at ASH continue to support the potential of mitapivat to revolutionize care for PK deficiency patients as the first disease-modifying therapy for this chronic, debilitating disease. We look forward to working with regulators as they continue their review of mitapivat for potential approval in the U.S. and EU next year.”

Mitapivat is not approved for use by any regulatory authority.

Conference Call Information
Agios will host a virtual investor event at 7:30 a.m. ET on Dec. 14, 2021, to review the key clinical oral and poster presentations from this year’s ASH meeting. The event will be webcast live and can be accessed under “Events & Presentations” in the Investors and Media section of the company's website at www.agios.com. The archived webcast will be available on the company's website beginning approximately two hours after the event.

About PK Deficiency
Pyruvate kinase (PK) deficiency is a rare, inherited disease that presents as chronic hemolytic anemia, which is the accelerated destruction of red blood cells. The inherited mutation in the PKLR gene can cause a deficit in energy within the red blood cell, as evidenced by lower PK enzyme activity, a decline in adenosine triphosphate (ATP) levels and a build-up of upstream metabolites, including 2,3-DPG (2,3-diphosphoglycerate).

PK deficiency is associated with serious complications, including gallstones, pulmonary hypertension, extramedullary hematopoiesis, osteoporosis and iron overload and its sequelae, which can occur regardless of the degree of anemia or transfusion burden. PK deficiency can also cause quality of

life problems, including challenges with work and school activities, social life and emotional health. Current management strategies for PK deficiency, including red blood cell transfusions and splenectomy, are associated with both short- and long-term risks. There are no currently approved therapies for PK deficiency. For more information, please visit www.knowpkdeficiency.com.

Agios, in partnership with PerkinElmer Genomics, launched the Anemia ID program to offer no-cost genetic testing to eligible patients in the U.S with suspected hereditary anemias, including PK deficiency. The program was created in response to feedback from patients, advocates and physicians about the need for improved diagnosis to inform disease management decisions. To learn more, please visit www.AnemiaID.com.

Agios also launched the myAgios® patient support services program for people living with PK deficiency and their caregivers. After enrolling in the program, patients and caregivers are connected with a dedicated Patient Support Manager (PSM) with a clinical background to provide tailored support, educational resources and opportunities to connect with other patients and caregivers in the community. To learn more or enroll, please visit www.myagios.com.

About Agios
Agios is focused on discovering and developing novel investigational medicines to treat genetically defined diseases through scientific leadership in the field of cellular metabolism. The company's most advanced drug candidate is a first-in-class pyruvate kinase (PK) activator, mitapivat, that is currently being evaluated for the treatment of three distinct hemolytic anemias. In addition to its active late-stage clinical pipeline, Agios has multiple novel, investigational therapies in clinical and preclinical development. For more information, please visit the company's website at www.agios.com.

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 Agios' plans, strategies and expectations for the preclinical, clinical and commercial advancement of its drug development programs, including mitapivat; the potential benefits of Agios' products and product candidates, including mitapivat; and the potential benefits of Agios' strategic plans and focus. The words "anticipate," "expect," "goal," "hope," "milestone," "plan," "potential," "possible," "strategy," "will," "vision," 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. 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, without limitation risks and uncertainties related to: the failure of Agios to receive milestone or royalty payments related to the sale of its oncology business, the uncertainty of the timing of any receipt of any such payments, and the uncertainty of the results and effectiveness of the use of proceeds from the transaction; the impact of the COVID-19 pandemic to Agios' business, operations, strategy, goals and anticipated milestones, including its ongoing and planned research activities, ability to conduct ongoing and planned clinical trials, clinical supply of current or future drug candidates, commercial supply of future approved products, and launching, marketing and selling future approved products; 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, the EMA or 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 and 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 establish and maintain collaborations; 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, or SEC, including the risks and uncertainties set forth under the heading Risk Factors in our filings with the SEC. While the list of factors presented here is considered representative, this list should not be considered to be a complete statement of all potential risks and uncertainties. Any forward-looking statements contained in this communication are made only as of the date hereof, and we undertake no obligation to update forward-looking statements to reflect developments or information obtained after the date hereof and disclaim any obligation to do so other than as may be required by law.

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