Agios Reports Initial Data from Phase 1 Study of AG-519 in Healthy Volunteers

June 9, 2016

- Data Demonstrate Favorable Safety Profile with up to 14 Days of Daily Dosing -

- Robust Dose-Dependent Changes in ATP and 2,3-DPG Blood Levels Observed Consistent with PKR Enzyme Activation -

- Company to Host Conference Call and Webcast Saturday, June 11 at 9:30am ET -

COPENHAGEN, Denmark, June 09, 2016 (GLOBE NEWSWIRE) -- Agios Pharmaceuticals, Inc. (Nasdaq:AGIO) today announced the initial data from the Phase 1 integrated single ascending dose (SAD) and multiple ascending dose (MAD) clinical trial of AG-519 in healthy volunteers at the 21st Congress of the European Hematology Association (EHA) taking place June 9-12, 2016 in Copenhagen. These data provide early proof-of-mechanism for AG-519, a potent, oral, selective second pyruvate kinase-R (PKR) activator that is wholly owned by Agios. Agios is also developing AG-348, a first-in-class, oral PKR activator that is being evaluated in an ongoing Phase 2 study, DRIVE-PK.

In this Phase 1 study, dosing of AG-519 over 14-days in healthy volunteers resulted in a dose-dependent increase in PKR activity as evidenced by a substantial increase in ATP (adenosine triphosphate) and decrease in 2,3-DPG (2,3-diphosphoglycerate) levels, which are important biomarkers of PKR activation in healthy volunteers. These data support the hypothesis that AG-519 enhances PKR activity and has the potential to correct the underlying defect of pyruvate kinase (PK) deficiency, a rare, potentially debilitating, congenital anemia.

“Achieving proof-of-mechanism for AG-519, our second PKR activator, further advances Agios’ novel approach to the treatment of rare metabolic disorders,” said Chris Bowden, M.D., chief medical officer of Agios. “These Phase 1 data from AG-519 bring us closer to our goal of delivering the first disease-modifying treatment for patients with PK deficiency.”

Results from the Completed SAD Portion of the Phase 1 Study

- Four cohorts with doses of AG-519 ranging from 50 mg to 1250 mg were tested against placebo in 32 healthy volunteers.
- AG-519 demonstrated a favorable safety profile in all doses tested. There were no serious adverse events (SAEs) reported, with all adverse events (AEs) being mild to moderate, and the most common being headache. In addition, there were no early discontinuations due to AG-519 and the maximum tolerated dose was not reached.
- Mean decreases in blood 2,3-DPG levels up to 43 percent from baseline were observed in the SAD cohorts, reaching minimum levels after 24 hours. As expected, ATP levels did not change after a single dose of AG-519, consistent with SAD findings from AG-348. Healthy volunteers receiving placebo showed no changes in 2,3-DPG or ATP levels.

Preliminary Results from the Ongoing MAD Portion of the Phase 1 Study

- The first two cohorts reported data from 16 healthy volunteers dosed twice daily with 125 mg or 375 mg of AG-519 or placebo for 14 days.
- There were no SAEs reported, with all AEs being mild to moderate, and the most common being headache. One subject receiving AG-519 at the 375 mg dose experienced a low blood platelet count (Grade 2 thrombocytopenia) on Day 14. Platelet levels started to recover within five days of the last dose and returned to normal levels seven days after the last dose.
- Pharmacodynamic data from these cohorts showed a mean decrease of up to 47 percent in blood 2,3-DPG levels and a mean increase of up to 62 percent in blood ATP levels from baseline. In contrast, healthy volunteers receiving placebo showed no changes in 2,3-DPG or ATP levels.
- Subjects treated with AG-519 exhibited no significant changes in sex steroids levels, consistent with a lack of aromatase enzyme inhibition.
- Enrollment into additional MAD cohorts is ongoing.

Conference Call Information

Agios will host a conference call and webcast from EHA to review the data from the AG-348 DRIVE-PK study and the AG-519 Phase 1 Study in Healthy Volunteers on Saturday June 11, 2016 beginning at 9:30 a.m. ET (3:30 p.m. CEST). To participate in the conference call, please dial (877) 377-7098 (domestic) or (631) 291-4547 (international) and refer to conference ID 18475657. The webcast will be accessible live or in archived form under "Events & Presentations" in the Investors and Media section of the company's website at www.agios.com.

About PK Deficiency

PK deficiency is a rare inherited disease that presents as hemolytic anemia, which is the accelerated destruction of red blood cells. The mutations in PKR enzymes cause a deficit in cellular energy within the red blood cell, as evidenced by lower pyruvate kinase enzyme activity and a decline in ATP levels and a build-up of upstream metabolites, including 2,3-DPG.

The current standard of care for PK deficiency is supportive, including blood transfusions, splenectomy, chelation therapy to address iron overload and/or interventions for other treatment- and disease-related morbidities. Currently, there is no approved therapy to treat the underlying cause of PK

deficiency.

Boston Children’s Hospital in collaboration with Agios is also conducting a natural history study to better understand the symptoms and complications of PK deficiency, identify patients and treatment centers and capture other clinical data including quality of life measures and genetic information.

About Agios’ PK-R Activators

AG-348 and AG-519 are orally available, potent, selective small molecule activators of PKR. Both molecules were discovered by the Agios research team and the company retains worldwide development and commercialization rights.

About Agios

Agios is focused on discovering and developing novel investigational medicines to treat cancer and rare genetic metabolic disorders through scientific leadership in the field of cellular metabolism. In addition to an active research and discovery pipeline across both therapeutic areas, Agios has multiple first-in-class investigational medicines 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.

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 Agios' product candidates targeting pyruvate kinase-R mutations, including AG-348 and AG-519; Agios’ plans for the further clinical development of AG-519; and its 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’ Quarterly Report on Form 10-Q for the quarter ended March 31, 2016, and other filings that Agios may make with the Securities and Exchange Commission in the future. 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.

Contacts

Investors:
Kendra Adams, 617-844-6407
Senior Director, Investor & Public Relations
Kendra.Adams@agios.com

Renee Leck, 617-649-8299
Senior Manager, Investor & Public Relations
Renee.Leck@agios.com

Media:
Dan Budwick, 973-271-6085
Senior Vice President, Media Relations
Pure Communications Inc.
dan@purecommunicationsinc.com

Agios Pharmaceuticals