



AgiOS Research in Cancer Metabolism Highlighted at AACR Annual Meeting 2012

April 3, 2012

Cambridge, Mass. – April 3, 2012 – Agios Pharmaceuticals, the leading biopharmaceutical company focused on discovering and developing novel drugs in the field of cancer metabolism, announced today that preclinical data from Agios research were highlighted in two poster sessions and an oral presentation at the American Association for Cancer Research (AACR) Annual Meeting 2012 being held March 31-April 4, 2012 in Chicago. The conference also featured two symposia specifically dedicated to research in the field of cancer metabolism.

“Cancer metabolism was one of the focus areas of this year’s AACR meeting, and we are pleased that Agios research and collaborators were featured prominently,” said Scott Biller, Ph.D., chief scientific officer of Agios. “Our three abstracts at AACR showcase the breadth of Agios research in cancer metabolism and build on the recent publications on IDH biology in the February issue of *Nature* - marking Agios’ third *Nature* publication in less than three years. Clearly, the field of cancer metabolism continues to gain momentum, underscoring our belief that targeting cancer metabolism could make a big difference in the lives of cancer patients.”

At the AACR meeting today, a poster titled “X-Ray structure of human glutaminase in complex with BPTES and analysis of BPTES-resistant mutants” (Abstract 3237) was presented, showing the first reported crystal structure of glutaminase bound with the compound BPTES. Agios researchers also demonstrated that the anti-cancer activity of BPTES acts directly through the inhibition of glutaminase.

A second poster titled “IDH mutations and tumorigenicity” (Abstract LB-164) was presented on Monday, April 2, 2012. Agios scientists have previously shown that IDH1 and IDH2 mutations in acute myelogenous leukemia (AML) and other forms of cancer produce high levels of the oncometabolite 2-hydroxyglutarate (2HG). The new research demonstrated that high levels of 2HG lead to the epigenetic rewiring of cells and tumorigenesis. Agios also disclosed that it has developed potent mutant-selective inhibitors of both IDH1 and IDH2, which were capable of lowering 2HG levels by greater than 90% in in vivo tumor models. These inhibitors also reversed the altered methylation profiles of IDH mutant cells, demonstrating the therapeutic potential of these drugs in patients with AML and other cancers in which IDH1 or IDH2 mutations are present.

Finally, an oral presentation titled “Induced dependency on amino acid metabolism in proliferating cancer cells upon PKM2 activation” (Abstract 1002), presented on Sunday, April 1, 2012, showed that pharmacological activation of PKM2 in cancer cells makes those cells dependent on the availability of the amino acid serine for continued survival.

Dr. Biller added, “In addition to acknowledging the tremendous work of our scientists on the research presented at AACR, I would also like to congratulate our scientific advisory board member, Charles Sawyers, M.D., on the honor of being elected by the members of AACR to serve as the president-elect for 2012-2013. We are delighted to see Dr. Sawyers recognized by his peers with this prestigious position.”

About Cancer Metabolism

Cancer metabolism is a new and exciting field of biology that provides a novel approach to treating cancer. Cancer cell metabolism is marked by profound changes in nutrient requirements and usage to ensure cell proliferation and survival. Research in the field has demonstrated that cancer cells become addicted to certain fuel sources and metabolic pathways. In cancer, this metabolic reprogramming is coordinated with proliferative signaling and regulated by the same oncogenes and tumor suppressor genes to ensure efficient proliferation. Glycolysis (sugar metabolism), fatty acid metabolism and autophagy (self metabolism) are three pathways shown to play a critical role in cancer metabolism. Identifying and disrupting certain enzymes in these, and perhaps other, metabolic pathways provides a powerful intervention point for discovery and development of cancer therapeutics.

About Agios Pharmaceuticals

Agios Pharmaceuticals is the first biopharmaceutical company dedicated to the discovery and development of novel therapeutics in the emerging field of cancer metabolism. To support and drive these efforts, Agios has built a robust platform integrating cancer biology, metabolomics, biochemistry and informatics to enable target and biomarker identification. Agios’ capabilities to interrogate differential cellular metabolism of diseased cells relative to normal cells may also be applicable to other therapeutics areas including inborn errors of metabolism, a class of genetic diseases caused by mutations/defects of single metabolic genes. The company’s founders represent the core thought leaders in the field of cancer metabolism, responsible for key advances, insights and discoveries in the field. Agios Pharmaceuticals is located in Cambridge, Massachusetts. For more information, please visit the company’s website at www.agios.com.