

## **Xanthus Presents Data Supporting Distinctive Mechanism of Action for Xanafide®**

*In Vitro* Study Results Reported in Presentations at the American Association for Cancer Research Annual Meeting

CAMBRIDGE, Mass.--([BUSINESS WIRE](#))-- Xanthus Pharmaceuticals, Inc. today announced results from three collaborative *in vitro* studies into the mechanism of action of Xanafide® (amonafide malate). Xanafide is a topoisomerase II inhibitor that is currently in a pivotal Phase 3 trial under a special protocol agreement (SPA) with the FDA for the treatment of secondary acute myeloid leukemia (AML). These *in vitro* studies, presented on April 13 and 14 at the American Association for Cancer Research (AACR) Annual meeting demonstrated how Xanafide acts differently from classical topoisomerase inhibitors such as daunorubicin.

Data from these studies showed that Xanafide triggered a similar level of apoptosis but with less DNA damage. While Xanafide targeted many of the same genes as daunorubicin, it was less susceptible to resistance mechanisms. Xanafide was also effluxed substantially less than daunorubicin when tested on cells from patients with acute myeloid leukemia (AML).

“These studies extend our prior findings on Xanafide’s mechanism of action and continue to strengthen the supporting data for the use of Xanafide as a new treatment for acute myeloid leukemia and other blood cancers. Secondary AML has historically been challenging to treat due to its unfavorable cytogenetics and its frequent multi-drug resistance to currently available therapies,” said Richard T. Dean, Ph.D., Xanthus’ Chief Executive Officer. “The unique mechanism and resistance profile demonstrated in these and other *in vitro* studies support our belief that Xanafide may offer an important new treatment option for patients with secondary AML.”

These results were discussed in presentations on April 13, 2008 by: Dr. Daniel Fernandes of the Hollings Cancer Center, Medical University of South Carolina and colleagues entitled, “*Amonafide interferes with topoisomerase II binding to DNA and induces chromatin disorganization*”; Dr. Amadeo Parissenti of the Regional Cancer Program, Sudbury Regional Hospital, Sudbury, ON Canada and colleagues entitled, “*Chemosensitivity targets in multidrug resistant (MDR) cells: a comparative study of amonafide and daunorubicin*”; and on April 14, 2008 by Dr. Maria Baer of the Greenebaum Cancer Center, University of Maryland and colleagues entitled, “*Multidrug resistance (MDR) in AML: Predicting P-glycoprotein (Pgp) function by direct measurement of drug efflux is more effective than use of surrogate efflux indicators*”.

### **About Xanafide® and Secondary AML**

Xanafide (amonafide malate) is a topoisomerase II inhibitor that the Company is developing for the treatment of secondary acute myeloid leukemia (AML) and related

disorders. Secondary AML patients have had either antecedent myelodysplastic syndrome or prior exposure to leukemogenic therapy and represent a poor prognosis population. While AML has approved treatments, no therapies are approved by FDA specifically for patients with secondary AML. In both Phase 1 and Phase 2 studies conducted in patients with poor-risk AML, amonafide exhibited particularly promising clinical activity in patients with secondary AML and the candidate does not appear to be susceptible to multi-drug resistance. Xanafide is currently in a Phase 3 clinical trial under a special protocol assessment (SPA) agreement with the U.S. Food and Drug Administration (FDA). Xanafide has also been granted Orphan Drug designation by the FDA for use in the treatment of AML.

### **About Xanthus Pharmaceuticals, Inc.**

Xanthus Pharmaceuticals, Inc. is developing a portfolio of novel, clinical-stage, small-molecule therapeutic candidates through a management team whose accomplished track record encompasses all aspects of drug development, from discovery through regulatory approval and commercialization. The Company is applying its expertise to advance its current pipeline to address significant unmet medical need in oncology and autoimmune diseases.

Xanthus is headquartered in Cambridge, Massachusetts with an additional facility in Montreal, Quebec. More information is available at [www.xanthus.com](http://www.xanthus.com).

***This press release contains forward-looking statements concerning Xanthus that involve a number of risks and uncertainties. For this purpose, any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words, "believes," "anticipates," "plans," "expects," "estimates," "intends," "should," "could," "will," "may," and similar expressions are intended to identify forward-looking statements. There are a number of important factors that could cause Xanthus' actual results to differ materially from those indicated by such forward-looking statements, including risks as to whether results obtained in early clinical studies or in preclinical studies such as the studies referred to above will be indicative of results obtained in future clinical trials or warrant additional trials; whether products based on Xanthus' technology will advance through the clinical trial process and receive approval from the United States Food and Drug Administration or equivalent foreign regulatory agencies; whether the company will have the cash resources to develop and commercialize its products; and whether the patent and patent applications owned or licensed by Xanthus will protect the Company's technology and prevent others from infringing it. Xanthus disclaims any intention or obligation to update any forward-looking statements.***