October 3, 2007

Anthera Announces Completion of Enrollment and Dosing In Phase II Trial of A-002 for the Treatment of Cardiovascular Disease

SAN FRANCISCO, CA – October 3, 2007 – Anthera Pharmaceuticals, Inc., a privately-held biopharmaceutical company developing anti-inflammatory therapeutics for chronic and acute inflammatory diseases, announced today the completion of enrollment and patient dosing in its Phase II clinical study of its lead compound, A-002 for stable coronary artery disease. Data analysis is scheduled to be completed by the end of the year.

“We are pleased with the rapid enrollment of this study and look forward to reporting the results later this year,” said Colin Hislop, M.D., Senior Vice President Clinical Development at Anthera Pharmaceuticals. “Previously reported results have been promising and we expect the results of our ongoing evaluation will help guide Phase III clinical trial design.”

A-002 Clinical Trial Protocol
The PLASMA trial (**P**hospholipase **L**evels **A**nd **S**erological **M**arkers of **A**therosclerosis) is a multi-center, randomized, double-blind, placebo-controlled trial that enrolled approximately 400 patients with stable coronary heart disease. Subjects were randomized to receive four doses of A-002 or standard of care for up to eight weeks. The study was designed to investigate the safety and the efficacy of A-002 (a potent inhibitor of the human enzymes known as secretory phospholipase A2) on dyslipidemia (primarily Low Density Lipoprotein Cholesterol “LDL-C”) and systemic inflammation (as measured by levels of C-Reactive Protein “CRP”) in patients with stable coronary heart disease. Elevated levels of sPLA2 have been implicated in abnormal lipid metabolism, atherogenesis and vascular inflammation. The Company is scheduled to meet with the Food and Drug Administration in the fourth quarter for an end-of-Phase II meeting to obtain concurrence on the design of the Phase III program.

A-002 Once Daily Clinical Trial
Based on preliminary data from the PLASMA Phase II clinical trial, Anthera has initiated a follow up clinical study investigating the effect of Once-Daily A-002 on dyslipidemia (primarily LDL-C) and systemic inflammation in a similar cardiovascular patient population. The trial expects to enroll 120 patients at 15 US sites and patients will be randomized to receive either A-002 (one of two doses) or placebo for eight weeks.
“Preliminary data analysis from our original PLASMA study, which employed twice daily dosing of A-002, suggests that a single daily dose may be sufficient to suppress sPLA2 for up to 24 hours. We look forward to further exploring this opportunity to improve patient convenience,” said Jim Pennington, M.D., Chief Medical Officer and Executive Vice President of Anthera Pharmaceuticals. “We are hopeful these studies will provide additional clinical and scientific rationale to further develop A-002 in patients in need of novel therapies to improve their lipid profiles and reduce vascular damage due to inflammation.”

Data analysis of the PLASMA Once-Daily Phase II trial is expected to be completed in early 2008. Anthera anticipates the A-002 Phase III program will target patients with coronary heart disease, with associated hyperlipidemia and inflammation who are currently not achieving adequate cholesterol control with diet, exercise, and existing statin therapies such as Lipitor®. The Phase III program is scheduled to begin during the first half of 2008.

Further information about this clinical trial and atherosclerosis can be found at www.plasmatrial.com or www.anthera.com.

About Anthera Pharmaceuticals
Anthera Pharmaceuticals is a pharmaceutical development company focused on the development and advancement of promising clinical products for the treatment of serious inflammatory diseases. The Company has acquired worldwide rights (ex. Japan) to a series of clinical and pre–clinical products that inhibit the enzymatic activity of secretory phospholipase A2– a group of enzymes responsible for the release of arachidonic acid and subsequent production of leukotrienes, prostacyclins and other mediators of inflammation. These highly potent compounds inhibit novel– upstream steps in the inflammation cascade and have the potential to address a variety of diseases. For more information please visit: www.anthera.com.

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