CONTACTS

Matthew Bennett
Ikaria
(908) 238-6673
matthew.bennett@ikaria.com

Jason Rando
The Ruth Group
646-536-7025
jrando@theruthgroup.com

IKARIA COMPLETES DOSING OF PHASE 1A CLINICAL STUDY FOR IK-1001 (SODIUM SULFIDE) FOR INJECTION

Clinton, NJ, May 19, 2008 – Ikaria Holdings, Inc., a fully integrated critical care biotherapeutics company, announced today that it has completed dosing of its Phase 1a trial for its drug candidate, IK-1001 (sodium sulfide) for injection.

The study was a Phase 1, randomized, single blind, placebo-controlled, single center dose escalation study of a single bolus injection of IK-1001 in healthy volunteers to assess safety, tolerability and pharmacokinetics. The study comprised five dosing cohorts of 0.005 mg/kg, 0.01 mg/kg, 0.03 mg/kg, 0.06 mg/kg and 0.1 mg/kg with four subjects in the first cohort and eight subjects in the remaining cohorts. Subjects were monitored for adverse events. Blood and urine were sampled to determine pharmacokinetic profiles. Doses evaluated were expected to be within the therapeutic window based on preclinical animal models. At the doses tested, no adverse reactions were observed that were of clinical significance, and no clinical laboratory abnormalities were detected. The trial was conducted in Melbourne, Australia and involved a total of 36 healthy volunteers.

Ralf Rosskamp, M.D., Executive Vice President for Research and Development of Ikaria, commented, "We are very pleased with these preliminary results, which suggest that IK-1001 is a well tolerated drug at the doses tested in healthy volunteers. Pre-clinical data have demonstrated the therapeutic potential of sodium sulfide for injection as a treatment for multiple hypoxic/ischemic conditions, including myocardial infarction, cardiopulmonary bypass surgery, and acute lung injury. In conjunction with this Phase 1a trial utilizing a single bolus injection, and an ongoing second, parallel Phase 1 study utilizing a single infusion regimen to be completed in July 2008, a dose regimen can be selected for Phase 2a. With the results of both studies in hand, we will begin planning for Phase 2a trials, which, pending discussions and approval from the appropriate regulatory bodies, we expect to start later this year."

Daniel Tasse, President & CEO of Ikaria, remarked, "IK-1001 is an important addition to our growing portfolio of clinical-stage drug development candidates, which includes Covox® (carbon monoxide) for inhalation in Phase 2 trials and INOmax® (nitric oxide) for inhalation, which is already on the market, as well as in multiple Phase 2 and Phase 3 trials. Although these drug candidates are targeted for different indications and patient populations, all share a common goal of providing therapeutic options for currently unmet critical care needs. It is Ikaria's mission to develop novel treatments for the critically ill in the in hospital and ICU setting - an area of medicine that is highly underserved, yet represents a multi-billion-dollar market."

Hydrogen sulfide is more commonly known as a toxic gas at high levels, but has demonstrated a biologically protective role when delivered in very low doses. Based upon research on the bioactivity of the gaseous signaling molecule hydrogen sulfide, or H_2S, Ikaria is investigating the impact of the sulfide ion, administered as sodium sulfide, in a number of disease models. Preclinical data demonstrate the therapeutic potential of IK-1001 (sodium sulfide) for injection, a parenteral injectable formulation of hydrogen sulfide, in a variety of disease models including myocardial infarction, cardiopulmonary bypass surgery, thoracoabdominal aortic aneurysm surgery, liver ischemia and reperfusion, organ storage and transplantation and acute lung injury.

Mark Roth, Ph.D., a member of the research faculty of the Hutchinson Cancer Research Center (FHCRC), noted, "The fact that IK-1001 progressed from the early concept stage into the completion of this Phase 1 trial in less than 18 months speaks volumes about the quality and innovative spirit of the R&D group at Ikaria." In a landmark article in the prestigious journal, *Science*, Dr. Roth demonstrated the ability of hydrogen sulfide to induce a state of reversible metabolic hibernation in mice. Ikaria's hydrogen sulfide clinical platform is based on its exclusive, worldwide license from the FHCRC, as well as its own patents.

About Ikaria Holdings, Inc.

Ikaria Holdings, Inc. is a fully integrated biotherapeutics company focused on the development and commercialization of innovative pharmaceutical products and drug/device combinations for the critically ill in the hospital and ICU setting. The company's product, INOmax® (nitric oxide) for inhalation, is an FDA-approved drug for the treatment of hypoxic respiratory failure in term and near-term newborns. The drug also is approved by regulatory authorities and used in Canada, Europe, Australia and Latin America. In addition to the ongoing clinical development as well as the marketing and selling of its INOmax product, Ikaria is engaged in a number of Phase 2 trials with Covox® (carbon monoxide) for inhalation and Phase 1 trials with hydrogen sulfide (H_2S) for various critical care indications. Ikaria has a staff of approximately 350 people and is headquartered in Clinton, NJ, with research facilities in Seattle, WA and Madison, WI and manufacturing in Port Allen, LA. For more information on Ikaria, please visit www.ikaria.com.

###