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Sunesis to Host Analyst & Institutional Investor Meeting on October 4, 2012

SOUTH SAN FRANCISCO, Calif., September 27, 2012 – Sunesis Pharmaceuticals, Inc. (Nasdaq: SNSS) today announced that the Company will host an analyst and institutional investor meeting on Thursday, October 4, 2012, from 5:00 to 6:30 PM Eastern Time in New York City. The event will include an overview of vosaroxin and the VALOR trial, a pivotal Phase 3, randomized, controlled, double-blind, multinational clinical trial in first relapsed or refractory acute myeloid leukemia (AML), as well as the Less Intensive 1 (LI-1) Study being conducted by the United Kingdom's National Cancer Research Institute (NCRI) Haematological Oncology Study Group.

The event will be moderated by Daniel Swisher, Chief Executive Officer of Sunesis, and will include presentations by, and an in depth panel discussion with, key opinion leaders in AML, including VALOR principal investigators. Presentations will be followed by a question and answer session.

The panel will include:

- Alan K. Burnett, MD, Professor of Medicine, Head of Haematology, Department of Medical Genetics, Haematology and Pathology at Cardiff University School of Medicine;
- Eric Feldman, MD, Chair of the VALOR Steering Committee, Professor of Medicine and Director of the Leukemia Program and Hematological Malignancies at Weill Cornell Medical College; and
- Farhad Ravandi, MD, a principal investigator of VALOR, Professor of Medicine, Department of Leukemia, Division of Cancer Medicine, The University of Texas MD Anderson Cancer Center.

A live webcast of the event will be available on the Sunesis website at <http://ir.sunesis.com>. A replay of the webcast will be archived on the "Calendar of Events" page in the Investors and Media section of the Sunesis website following the event.

About VALOR

VALOR is a Phase 3, randomized, double-blind, placebo-controlled, pivotal trial in patients with first relapsed or refractory AML. The trial's target enrollment is 675 patients at more than 110 leading sites in the U.S., Canada, Europe, Australia and New Zealand. The VALOR trial is

currently enrolling patients, who are randomized one to one to receive either vosaroxin on days one and four in combination with cytarabine daily for five days, or placebo in combination with cytarabine. The trial's primary endpoint is overall survival. For more information on the VALOR trial, please visit www.valortrial.com.

About Vosaroxin

Vosaroxin is a first-in-class anti-cancer quinolone derivative (AQD), a class of compounds that has not been used previously for the treatment of cancer. Vosaroxin both intercalates DNA and inhibits topoisomerase II, resulting in replication-dependent, site-selective DNA damage, G2 arrest and apoptosis. Both the U.S. Food and Drug Administration (FDA) and European Commission have granted orphan drug designation to vosaroxin for the treatment of acute myeloid leukemia. Additionally, vosaroxin has been granted fast track designation by the FDA for the potential treatment of relapsed or refractory acute myeloid leukemia in combination with cytarabine.

About AML

AML is a rapidly progressing cancer of the blood characterized by the uncontrolled proliferation of immature blast cells in the bone marrow. The American Cancer Society estimates there will be approximately 13,780 new cases of AML and 10,200 deaths from AML in the U.S. in 2012. Additionally, it is estimated that the prevalence of AML across major global markets (U.S., France, Germany, Italy, Spain, United Kingdom, and Japan) is over 50,000. AML is generally a disease of older adults, and the median age of a patient diagnosed with AML is about 67 years. AML patients with relapsed or refractory disease and newly diagnosed AML patients over 60 years of age with poor prognostic risk factors typically die within one year, resulting in an acute need for new treatment options for these patients.

About Sunesis Pharmaceuticals

Sunesis is a biopharmaceutical company focused on the development and commercialization of new oncology therapeutics for the treatment of solid and hematologic cancers. Sunesis has built a highly experienced cancer drug development organization committed to advancing its lead product candidate, vosaroxin, in multiple indications to improve the lives of people with cancer. For additional information on Sunesis, please visit <http://www.sunesis.com>.

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