OXiGENE Announces Publication of Preclinical Data on OXi4503 Demonstrating Potent Anti-Leukemic Effects

SOUTH SAN FRANCISCO, Calif., May 27, 2010 (GLOBE NEWSWIRE) -- OXiGENE, Inc. (Nasdaq:OXGN) (Stockholm:OXGN), a clinical-stage, biopharmaceutical company developing novel therapeutics to treat cancer and eye diseases, announced publication of preclinical data on its second-generation, dual-action vascular disrupting agent (VDA) OXi4503 that demonstrate potent activity against acute myeloid leukemia (AML). The data were published in *Blood* in an article entitled, "Leukemia regression by vascular disruption and anti-angiogenic therapy" by Gerard Madlambayan, Christopher Cogle and colleagues from the Department of Medicine and Program in Stem Cell Biology at the University of Florida in Gainesville, Florida. The data are available online, ahead of print on the *Blood* website: http://bloodjournal.hematologylibrary.org/cgi/reprint/blood-2009-06-230474v1.

In these studies researchers administered OXi4503 to mice that were carriers of human AML, which serve as models of human AML, including a subcutaneous model and an orthotopic model of primary human AML, which were then studied for disease regression. The data show that OXi4503 produced remissions in AML of differing subtypes, including those with activating mutations in subtype FLT3. The investigators further demonstrated that the potent anti-leukemic effects of OXi4503 resulted from the combination of two effects: 1) vascular disruption, which interferes with endothelial cell interactions with leukemia, and 2) direct cytotoxic effects on leukemia cells via generation of intracellular reactive oxygen species (ROS). The authors concluded that OXi4503 may represent a promising therapeutic agent, including for patients with high risk AML.

"We continue to be very encouraged by the antitumor effects of OXi4503, especially the indications that its unique dual action mechanism may underlie its particularly potent activity in certain cancer types, including high-risk AML," commented Dai Chaplin, Ph.D., OXiGENE's Chief Scientific Officer. "We believe that OXi4503 has significant potential in a range of solid tumors and leukemias. We intend to continue to explore ways to optimize its potential in AML and other forms of leukemia, including initiation of clinical evaluation of OXi4503 in AML later in 2010."

About OXi4503

OXi4503 (combretastatin A1 di-phosphate / CA1P) is a dual-mechanism vascular disrupting agent (VDA) that is being developed in clinical trials for the treatment of solid tumors. Like its structural analog, ZYBRESTAT™ (fosbretabulin / CA4P), OXi4503 has been observed to block and destroy tumor vasculature, resulting in extensive tumor cell death and necrosis. In addition, preclinical data indicate that OXi4503 is metabolized by oxidative enzymes (e.g., tyrosinase and peroxidases), which are elevated in many solid tumors and tumor white blood cell infiltrates, to an orthoquinone chemical species that has direct cytotoxic effects on tumor cells. Preclinical studies have shown that OXi4503 has (1) single-agent activity against a range of xenograft tumor models; and (2) synergistic or additive effects when incorporated in various combination regimens with chemotherapy, molecularly-targeted therapies (including tumor-angiogenesis inhibitors), and radiation therapy. OXi4503 is currently being evaluated as a monotherapy in a

Phase 1 dose-escalation trial in patients with advanced solid tumors and in patients with hepatic tumor burden.

About OXiGENE

OXiGENE is a clinical-stage biopharmaceutical company developing novel therapeutics to treat cancer and eye diseases. The Company's major focus is developing vascular disrupting agents (VDAs) that selectively disrupt abnormal blood vessels associated with solid tumor progression and visual impairment. OXiGENE is dedicated to leveraging its intellectual property and therapeutic development expertise to bring life-extending and life-enhancing medicines to patients.

Safe Harbor Statement

This news release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Any or all of the forward-looking statements in this press release, which include OXiGENE's expected initiation, progress, conclusion and reporting on clinical studies and the effectiveness of OXi4503 in treating solid or liquid tumors may turn out to be wrong. Forward-looking statements can be affected by inaccurate assumptions OXiGENE might make or by known or unknown risks and uncertainties, including, but not limited to, outcomes or timing of reporting final results from the ongoing Cancer Research United Kingdom sponsored Phase 1 clinical trial of OXi4503 in patients with advanced solid tumors, timing or outcomes of any studies to be initiated in other oncology patients, including but not limited to patients with leukemias, including AML, and the company's continued ability to access additional capital. Additional information concerning factors that could cause actual results to materially differ from those in the forward-looking statements is contained in OXiGENE's reports to the Securities and Exchange Commission, including OXiGENE's reports on Form 10-K and 10-Q. However, OXiGENE undertakes no obligation to publicly update forward-looking statements.

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