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OXiGENE Begins Phase II NSCLC Trial of ZYBRESTAT™ in Combination with Bevacizumab and Chemotherapy

WALTHAM, Mass.-- March 26, 2008 --OXiGENE, Inc., a clinical-stage biopharmaceutical company developing novel therapeutics to treat cancer and eye diseases, announced that the company has begun dosing patients in a randomized, double-blinded, controlled Phase II study of its potential first-in-class vascular disrupting agent (VDA), ZYBRESTAT™ (fosbretabulin), in combination with the anti-angiogenic drug, bevacizumab, and the chemotherapeutic agents carboplatin and paclitaxel as first-line therapy for patients with Stage IIIb/IV non-small cell lung cancer (NSCLC).

The multi-center study is being conducted in the US and India and is expected to enroll approximately 60 patients at 14 sites. Half of the patients will be administered intravenous ZYBRESTAT plus bevacizumab, carboplatin and paclitaxel, and half will receive the standard first-line regimen of a combination of bevacizumab, carboplatin and paclitaxel. The primary outcome of the trial will be a comparison of safety and progression-free survival between the two treatment arms. The study design also includes analysis of tumor response rate as measured by RECIST criteria. The anticipated duration of the study is 24 months, and the company expects to announce top-line data in the second half of 2009.

"This study builds upon encouraging observations made in preclinical and clinical studies suggesting that combination therapy with ZYBRESTAT and bevacizumab results in enhanced anti-tumor activity and prolonged tumor blood-flow inhibition," commented Patricia Walicke, M.D., Chief Medical Officer of OXiGENE. "We're optimistic that this study will provide further support for this combination in the treatment of non-small cell lung cancer, and more generally for the paradigm of anti-vascular therapy with VDA and anti-angiogenic agent combinations."

Additional information regarding the study design, enrollment criteria, and participating centers will be available at http://www.clinicaltrials.gov (keyword: non-small cell lung cancer).

About ZYBRESTAT (fosbretabulin)

OXiGENE believes that ZYBRESTAT is poised to become the first therapeutic product in a novel class of small-molecule drug candidates called vascular disrupting agents (VDAs). Through interaction with vascular endothelial cell cytoskeletal proteins, ZYBRESTAT selectively targets and collapses tumor vasculature, thereby depriving the tumor of oxygen and causing death of tumor

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cells. In clinical studies in solid tumors, ZYBRESTAT has demonstrated potent and selective activity against tumor vasculature, as well as clinical activity against anaplastic thyroid cancer, ovarian cancer, and various other solid tumors. In clinical studies in patients with forms of macular degeneration, intravenously-administered ZYBRESTAT has demonstrated clinical activity.

About Non-small Cell Lung Cancer

The American Cancer Society estimates that over 180,000 cancer patients in the United States will be diagnosed with NSCLC in 2008. Lung cancer deaths in Europe are estimated to be over 340,000 per year. Lung cancer is the leading cause of cancer death among both men and women – more than prostate, breast and colon cancer combined.

About OXiGENE, Inc.

OXiGENE is a clinical-stage biopharmaceutical company developing novel small-molecule therapeutics to treat cancer and eye diseases. The Company's major focus is the clinical advancement of drug candidates that selectively disrupt abnormal blood vessels associated with solid tumor progression and visual impairment. OXiGENE is dedicated to leveraging its intellectual property position and therapeutic development expertise to bring life-saving 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 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, the timing and results of the Phase 2 clinical trial of ZYBRESTAT in non-small cell lung cancer. 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, 10-Q and 8-K. However, OXiGENE undertakes no obligation to publicly update forward-looking statements, whether because of new information, future events or otherwise. Please refer to our Annual Report on Form 10-K for the fiscal year ended December 31, 2007.

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