OXiGENE Announces New Preclinical Data Presented at AACR Supporting Development of Lead Vascular Targeting Agents; OXi4503 Shows Promising Preclinical Efficacy Data in Colorectal Tumors

CA4P's Safety Profile Further Characterized

WALTHAM, Mass., Apr 18, 2005 (BUSINESS WIRE) -- OXiGENE, Inc. (NASDAQ: OXGN, XSSE: OXGN) today announced the presentation of positive new preclinical data at the 96th Annual Meeting of the American Association of Cancer Research, further supporting its clinical development programs for CA4P and OXi4503.

"We believe that the positive presentations and quality of data on OXiGENE's vascular targeting agents made by our collaborators as well as independent researchers at this year's AACR Annual Meeting validate the promise of these product candidates," stated Frederick W. Driscoll, President and Chief Executive Officer of OXiGENE. "OXiGENE has two novel clinical candidates, CA4P and OXi4503, in development; placing us at the forefront of this exciting approach to treating cancer."

In a poster entitled Therapeutic effects of the antivascular agent Combretastatin A-1 phosphate on orthoptic and colorectal tumors in nude mice, Dr. Barbara Pedley of The Royal Free and University College Medical School in the United Kingdom presented data from a study designed to investigate the therapeutic efficacy of OXi4503 as a potential candidate for combination studies.

Dr. Pedley and her colleagues established that OXi4503 had single-agent activity against implanted SW1222 colon tumors and liver metastases in mice. The investigators found that central blood perfusion had ceased in most of the tumor deposits, including those in the liver, after 1 hour following treatment, with no effect on normal liver tissue. By 24 hours following treatment, there was no resumption of blood perfusion within the tumor, and many of the tumors showed extensive central cell death, or necrosis. OXi4503 alone significantly inhibited tumor growth compared with controls.

The authors of the study concluded that "the potential for this novel anti-vascular agent to enhance antibody-targeted therapies is therefore promising, and the relevant experiments are currently underway."

"These new preclinical data build upon the growing body of scientific evidence that OXi4503 has the capabilities to cause significant anti-tumor effects as a single-agent," commented David Chaplin, Ph.D., Chief Scientific Officer of OXiGENE. "Additionally, the conclusion by the researchers that OXi4503 could also enhance antibody therapies is positive and may provide another avenue of future investigation for this agent."

In a poster entitled Combretastatin-A-4-P induced hypertension can be controlled with conventional anti-hypertensive therapy in a rat model without compromising the reduction in tumor blood flow, Dr. Davina Honess presented data from a study by researchers from the Gray Cancer Institute in the United Kingdom. The primary aim of this study was to assess the feasibility of controlling CA4P-induced hypertension in rats by means of anti-hypertensive agents in clinical use, the vasodilator sodium nitroprusside or the beta-blocker propranolol, and the secondary aim was to determine whether tumor blood flow shutdown was adversely affected by such intervention.

The authors concluded that "CA4P-induced hypertension can be controlled with conventional anti-hypertensive agents, without compromising the reduction in tumor blood flow. Anti-hypertensive treatment may be clinically useful to prevent potential cardiovascular side effects."

"Researchers in the Honess study have been able to control hypertension with the use of conventional anti-hypertensive agents in their model, without compromising blood flow shutdown at the tumor site," said Dr. Chaplin. "In clinical settings, this approach could be beneficial because it could broaden the use of CA4P in patients susceptible to hypertension."

About Combretastatin A4P (CA4P)

CA4P leads a novel class of drug candidates which have been referred to by OXiGENE as vascular targeting agents (VTAs). CA4P attacks the vascular structure of solid tumors and other diseases characterized by the formation of aberrant blood vessels. The compound triggers a change in the shape of the endothelial cells lining these blood vessels, in turn blocking the flow of blood to a tumor and depriving it of oxygen and nutrients essential to its survival. Similarly, in eye diseases that are characterized by abnormal blood vessel growth, CA4P has been shown in preclinical studies to suppress development and induce regression of these unnecessary blood vessels.

CA4P is currently being studied in seven clinical trials in oncology, including anaplastic thyroid, lung, head and neck, prostate, colorectal, ovarian, cervical cancers and other imageable tumor types. These clinical trials involve the use of CA4P in both single-agent and combination therapies. It is also currently being studied in a Phase I/II trial in wet age-related macular degeneration and a Phase II trial in myopic macular degeneration.

About OXi4503

OXiGENE believes that OXi4503 is the first in a new class of compounds known as ortho-quinone prodrugs (OQPs), which display a novel cytotoxic effect in addition to their proven vascular targeting capabilities mediated by their action on the tubulin cytoskeleton. Unlike anti-angiogenesis agents that focus on preventing new tumor blood vessels from forming, OQPs appear to attack existing blood vessel structures in the central regions of solid tumors and also have a cytotoxic effect that could enable destruction of the outside rim of cells residing next to, and dependent on, normal tissue blood vessels. OXi4503 is currently in Phase I clinical trials for advanced cancers.

About OXiGENE

OXiGENE is an emerging pharmaceutical 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 enhancing medicines to patients.

This news release about AACR presentations 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, including statements regarding therapeutic efficacy and future success of CA4P and OXi4503 in treating cancer; the potential of OXi4503 to inhibit tumor growth and to enhance antibody-targeted therapies; the capabilities of OXi4503 to cause significant anti-tumor effects as a single-agent; and the benefits of using CA4P in patients susceptible to hypertension. Forward-looking statements can be affected by inaccurate assumptions OXiGENE might make or by known or unknown risks and uncertainties. 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 10-Q, 8-K and 10-K reports. 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, 2004 for a description of these risks.

SOURCE: OXiGENE, Inc.

OXiGENE Inc.
James Murphy, 781-547-5900
jmurphy@oxigene.com
or
MacDougall BioCommunications
Chris Erdman, 508-647-0209
chris@macbiocom.com