Myrexis Reports Azixa(R) Phase 2 Study Results at 2011 American Society of Clinical Oncology (ASCO) Annual Meeting

Azixa is Active and Well Tolerated in Patients Who Failed First-Line Therapy

Multi-Dose Efficacy Presented From Cancer Metabolism Inhibitor Program

SALT LAKE CITY, June 6, 2011 (GLOBE NEWSWIRE) -- Myrexis, Inc. (Nasdaq:MYRX), a biotechnology company focused on developing and commercializing novel treatments for cancer, today announced presentation of Phase 2 clinical study results from its lead product candidate Azixa (verubulin) at the 2011 American Society of Clinical Oncology (ASCO) Annual Meeting, June 3-7, 2011, in Chicago, IL. The Phase 2 results are from the Company's open-label Azixa monotherapy study in patients with recurrent glioblastoma multiforme (GBM) who had failed prior standard of care chemotherapy, but who are naïve to Avastin®(bevacizumab).

"Glioblastoma patients who relapse following standard first-line therapy are limited in terms of treatment options," stated Adrian N. Hobden, Ph.D., President and CEO of Myrexis. "We are encouraged by the anti-tumor activity exhibited by single-agent Azixa. These results, together with those from previous studies of Azixa in patients with GBM, provide further rationale for the ongoing Phase 2b comparative arm study of Azixa in newly diagnosed GBM patients."

There were 31 patients with recurrent GBM enrolled in this arm of the Phase 2 Azixa monotherapy study who had failed temozolomide and were naïve to treatment with Avastin. Two patients (6.5%) achieved partial response as assessed by Macdonald criteria. Another patient (3.2%) with two tumor lesions at baseline responded with no detectable disease after cycle 13 of Azixa treatment and continues to receive Azixa. A further five patients (16.1%) achieved stable disease. The median duration of stable disease was four months and the median duration of partial response was six months. The median progression-free duration was 1.8 months (range 0.04-13.1) and the median overall survival was 9.9 months (range 1.1-17.2). The most common adverse events were fatigue (26%), nausea (10%), and constipation (10%).

In November 2010, Myrexis reported results from the Avastin-experienced cohort of this Phase 2 study at the annual meeting of the Society for NeuroOncology (SNO), demonstrating that Azixa monotherapy was well-tolerated and exhibited anti-tumor activity comparable to commonly prescribed third-line GBM agents. One patient from this cohort achieved a partial response, as assessed by standard criteria, with 80% tumor reduction over twelve months of Azixa treatment. Four additional patients experienced stable disease.

In December 2010, Myrexis initiated a two-arm Phase 2b trial of Azixa in patients newly diagnosed with GBM. Patients are randomized to receive either Azixa in combination with standard of care therapy, which includes radiation treatment and temozolomide, or the standard of care therapy alone. This study is expected to enroll up to 120 newly diagnosed GBM patients.

The Company also presented a second poster highlighting preclinical findings from its potential best-in-class cancer metabolism inhibitor (CMI) program. MPC-9528, which is currently in IND-enabling studies and MPI-0487316, representing a structurally distinct lead class of CMI compounds, both demonstrated flexible dosing and dramatic tumor regression across multiple tumor types. MPC-9528 is an orally bioavailable small molecule inhibitor of the enzyme Nicotinamide phosphoribosyltranferase (Nampt). Nampt inhibition results in tumor cell death following depletion of a critical metabolic coenzyme, nicotinamide adenine dinucleotide (NAD).

Alternate dosing schedules were used to examine the anti-tumor activity of both MPC-9528 and MPI-0487316 in mouse xenograft studies. The results confirm the on-target mechanism of action of MPC-9528, demonstrating a rapid and sustained depletion of NAD in tumors that was correlated to the specific dose and schedule. Robust, durable tumor regression (up to 100%) was observed across doses and schedules and all doses were well tolerated. Based on pharmacokinetic analyses, the study concluded that the tumor regression caused by MPC-9528 is dependent on maintaining a threshold concentration of drug in the body and not necessarily linked directly to maximal plasma concentration.

In previous studies, Myrexis demonstrated that healthy cells are able to utilize niacin (vitamin B3) as an alternative pathway for NAD production, but that many tumor cell lines (~40%) are deficient for a critical enzyme in this pathway called Naprt (nicotinic acid phosphoribosyltranferase). Previous poster presentations at the American Association for Cancer Research annual meeting in April 2011 included data supporting co-administration of niacin as a method of increasing the therapeutic index of MPC-9528 by reducing or preventing adverse events associated with higher doses and enhancing the anti-tumor activity of

MPC-9528 in Naprt-deficient tumors. A simple companion diagnostic may be used to measure Naprt expression and thereby identify patients with tumors most likely to respond to a combination of MPC-9528 and niacin.

About Azixa

Azixa is the lead product candidate under development by Myrexis for the treatment of primary brain cancers and metastatic tumors with brain involvement. Azixa is a novel small molecule drug candidate that acts as a microtubule destabilizing agent, causing arrest of cell division and programmed cell death, or apoptosis, in cancer cells. Several currently marketed clinically effective drugs share the identical mechanism of action. Importantly, however, Azixa has two distinguishing characteristics. In non-clinical studies, Azixa has demonstrated the unique ability to effectively cross the blood-brain barrier and reach concentrations in the brain which are as much as 30 times that measured in the plasma. In addition, Azixa does not appear to be subject to multiple drug resistance (MDR) mechanisms.

In June of 2010, Myrexis presented data from two Phase 2a clinical studies that demonstrated Azixa, in combination with standard chemotherapy, resulted in durable responses with no additive toxicity in patients with glioblastoma multiforme (GBM) or metastatic melanoma. In November 2010, Myrexis presented data from the ongoing Phase 2a Azixa monotherapy GBM trial that demonstrated durable responses in patients who had failed both first and second line therapy. A Phase 2b comparative-arm clinical study of Azixa in combination with standard of care therapy is currently underway to evaluate Azixa as a first-line treatment in up to 120 newly diagnosed GBM patients.

About MPC-9528

MPC-9528 is an orally bioavailable and potent small molecule Cancer Metabolism Inhibitor (CMI) discovered by Myrexis that is currently in preclinical development for the treatment of cancer. MPC-9528 selectively inhibits nicotinamide phosphoribosyltransferase, or Nampt, an enzyme critical for converting nicotinamide into nicotinamide adenine dinucleotide (NAD). Cellular processes such as glucose metabolism, DNA repair and gene expression require and consume NAD. Cancer cells have increased NAD requirements and are highly sensitive to NAD depletion. Blocking the Nampt-NAD pathway severely inhibits cancer cell metabolism, resulting in energy deprivation and ultimately cell death. In animal models, MPC-9528 causes dramatic tumor regressions across multiple tumor types.

Normal healthy human cells produce NAD by a number of different pathways. Additional research, however, indicates that that many cancers, as much as 40% of all cancers, lose the ability to produce NAD by these alternative pathways and become dependent upon Nampt activity. Patients with these tumor types may be particularly responsive to MPC-9528 therapy and a simple companion diagnostic could be used to identify these patients. MPC-9528 has the potential to be the best-in-class Nampt inhibitor with promise for treating a wide variety of cancers.

About Myrexis, Inc.

Myrexis, Inc. is a biotechnology company focused on developing and commercializing novel treatments for cancer. The Company has leveraged a unique understanding of the genetic causes of human disease to generate a strong pipeline of clinical and preclinical product candidates. These include compounds with distinct mechanisms of action and novel chemical structures that have first-in-class and/or best-in-class therapeutic potential. Myrexis is led by an experienced management team with expertise in all aspects of pre-clinical, clinical and commercial drug development.

The Company's oncology program is comprised of two clinical-stage programs and one pre-clinical stage program. Myrexis' pipeline is led by Azixa (verubulin, MPC-6827), a novel small molecule microtubule destabilizing agent which is targeted to the brain. It is in Phase 2b clinical development for the treatment of glioblastoma multiforme. The Company's Hsp90 program is comprised of novel, potent, small molecule oncology compounds including MPC-3100, a fully-synthetic and orally bioavailable inhibitor of Hsp90 in Phase 1 clinical development and MPC-0767, a novel L-alanine ester pro-drug of MPC-3100, with improved aqueous solubility. MPC-9528, currently in IND-enabling studies, is the lead pre-clinical candidate in the Company's Cancer Metabolism Inhibitor (CMI) program. Myrexis is also evaluating MPI-0485520, an orally bioavailable, potent and selective small molecule inhibitor of type I interferon that is being developed for the treatment of autoimmune diseases.

For more information, please visit www.myrexis.com.

The Myrexis, Inc. logo is available at http://www.globenewswire.com/newsroom/prs/?pkgid=6327

Forward-looking statement safe harbor

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of

1995, including statements relating to the attributes and potential efficacy, and the expected timing of development and reporting of data on Myrexis' product candidates. These "forward-looking statements" are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied in such forward-looking statements. These risks and uncertainties include, but are not limited to, the factors discussed under the heading "Risk Factors" contained in Myrexis' Form 10-K, for the year ended June 30, 2010, which was filed with the Securities and Exchange Commission on September 13, 2010, as well as any updates to those risk factors filed from time to time in Myrexis' Quarterly Reports on Form 10-Q or Current Reports on Form 8-K. All information in this press release is as of the date of the release, and Myrexis undertakes no duty to update this information unless required by law.

CONTACT: Myrexis, Inc.

Wayne Laslie,

Chief Operating Officer

(corporate)

801-214-7822

investor.relations@myrexis.com

The Ruth Group

Stephanie Carrington (investors)

(646) 536-7017

scarrington@theruthgroup.com

Jason Rando (media)

(646) 536-7025

jrando@theruthgroup.com