Myrexis Presents Key Findings From Its Cancer Metabolism Inhibitor, MPC-9528

SALT LAKE CITY, Sept. 20, 2010 (GLOBE NEWSWIRE) -- Myrexis, Inc. (Nasdaq:MYRX), a biotechnology company focused on discovering, developing, and commercializing novel treatments for cancer, today announced key findings from preclinical studies of the Company's novel cancer metabolism inhibitor (CMI), MPC-9528, at the Cancer and Metabolism: Pathways to the Future Symposium in Edinburgh, Scotland. Compelling preclinical evidence demonstrates that treatment with MPC-9528 results in significant tumor growth inhibition and that the co-administration of niacin improves the therapeutic index of MPC-9528. Additional data, from a large panel of tumor cell lines and primary human tumor tissue indicate that approximately 40% of all cancers may carry a biochemical defect making them respond well to the combination of niacin and MPC-9528 treatment. A simple companion diagnostic could be used to identify patients with such tumors.

Key Findings:

MPC-9528 is a potent and selective inhibitor

In biochemical and cellular assays, MPC-9528 demonstrated picomolar potency for its target, Nampt (nicotinamide phosphoribosyltransferase). Tumoricidal activity is on target and effective against a wide rage of tumor cells.

Co-administration of niacin (vitamin B3) improves MPC-9528's therapeutic index

Myrexis demonstrated that co-administration of niacin (vitamin B3) could protect healthy cells from MPC-9528 activity, and that this protective effect was dependent on expression of the enzyme Naprt1. Niacin could not prevent MPC-9528-induced cell death in cancer cells that express little or no Naprt1.

Expression of Naprt1 is deficient in approximately 40% of all cancers

The Company evaluated 145 tumor cell lines across diverse cancer types and found Naprt1 deficiency to be common, affecting about 40% of the cell lines.

MPC-9528 causes dramatic tumor regressions across multiple tumor types.

In animal models, both Naprt1-proficient and Naprt1-deficient tumors responded to MPC-9528, demonstrating potent tumoricidal activity. However, greater tumor growth inhibition could be achieved in Naprt1-deficient tumors by adding niacin, which allowed MPC-9528 to be tolerated at doses greater than twice the typical maximum tolerated dose (MTD).

"MPC-9528 is a unique IND candidate. The compound has highly selective, potent on-target anti-cancer activity. It is possible to use a simple and straightforward companion diagnostic to identify tumors which are dependent upon the biochemical pathway inhibited by MPC-9528. It should be possible to treat these tumors safely and even more aggressively and effectively with the co-administration of niacin," commented Robert Carlson, Ph.D., Vice President and Head of Research at Myrexis. "Use of a companion diagnostic and niacin in our clinical program has the potential to increase the efficiency of patient enrollment and enrich for patients likely to be responsive to MPC-9528."

A copy of the Poster, "MPC-9528, a cancer metabolism inhibitor, demonstrates greater therapeutic index in a Naprt1 deficient cancer xenograft model with co-administration of nicotinic acid," which was presented at Cancer and Metabolism: Pathways to the Future Symposium in Edinburgh, Scotland earlier today is available on-line at the Company's website, www.myrexis.com.

About MPC-9528

MPC-9528 is an orally-bioavailable, small molecule Cancer Metabolism Inhibitor (CMI) discovered by Myrexis that is currently in preclinical development for the treatment of a variety of cancers. MPC-9528 potently and 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 absolutely dependent upon Nampt activity. Patients with these tumor types could be particularly responsive to MPC-9528 therapy and a simple companion diagnostic could be used to easily indentify these patients. MPC-9528 has the potential to be the best-in-class Nampt inhibitor with potential for treating a wide variety of cancers.

About Myrexis, Inc.

Myrexis, Inc. is a biotechnology company focused on discovering, 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 human genetics, protein-protein interaction technology, chemical proteomic drug discovery and clinical and commercial development.

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 of Myrexis' product candidate MPC-9528. 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 by 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.
Patrick M. Burke, Ph.D., V.P., Corporate
and Business Development
801-214-7822
investor.relations@myrexis.com

The Ruth Group
Investors
Sara Pellegrino
(646) 536-7002
spellegrino@theruthgroup.com
Media
Jason Rando
(646) 536-7025
jrando@theruthgroup.com