MYREXIS, INC.

FORM 10-Q
(Quarterly Report)

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended December 31, 2010

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____to _____

Commission file number: 001-34275

MYREXIS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**26-3996918**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
305 Chipeta Way Salt Lake City, Utah	**84108**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (801) 214-7800

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☐ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐ Accelerated filer ☒

Non-accelerated filer ☐ (Do not check if a smaller reporting company) Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of February 7, 2011, the registrant had 25,593,187 shares of common stock outstanding.

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PART I – FINANCIAL INFORMATION
MYREXIS, INC.
Condensed Balance Sheets (Unaudited)
(In thousands, except per share amounts)

	December 31, 2010	June 30, 2010
Assets		
Current assets:		
Cash and cash equivalents	$ 14,295	$ 35,911
Marketable investment securities	99,972	102,965
Accounts receivable	3	—
Prepaid expenses	838	453
Other current assets	232	—
Total current assets	115,340	139,329
Equipment and leasehold improvements:		
Equipment	6,057	6,035
Leasehold improvements	1,188	1,160
	7,245	7,195
Less accumulated depreciation	2,041	1,199
Net equipment and leasehold improvements	5,204	5,996
Long-term marketable investment securities	18,499	8,577
Other assets	206	206
Total assets	$ 139,249	$ 154,108
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 1,348	$ 1,927
Accrued liabilities	2,406	2,323
Total current liabilities	3,754	4,250
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.01 par value, authorized 5,000 shares; no shares issued and outstanding	—	—
Common stock, $0.01 par value, authorized 60,000 shares; 25,540 shares issued and outstanding at December 31, 2010; 25,214 shares issued and outstanding at June 30, 2010	255	252
Additional paid-in capital	200,054	196,532
Accumulated other comprehensive income	10	25
Accumulated deficit	(64,824)	(46,951)
Total stockholders' equity	135,495	149,858
Total liabilities and stockholders' equity	$ 139,249	$ 154,108

See accompanying notes to condensed financial statements (unaudited).

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MYREXIS, INC.
Condensed Statements of Operations (Unaudited)
(In thousands, except per share amounts)

	Three Months Ended December 31,		Six Months Ended December 31,	
	2010	2009	2010	2009
Research revenue	$ 23	$ —	$ 130	$ 60
Costs and expenses:				
Research and development expense	4,995	8,217	10,710	14,097
General and administrative expense	4,240	6,928	8,802	12,164
Total costs and expenses	9,235	15,145	19,512	26,261
Operating loss	(9,212)	(15,145)	(19,382)	(26,201)
Other income, net	1,349	355	1,509	780
Net loss	$ (7,863)	$ (14,790)	$ (17,873)	$ (25,421)
Loss per basic and diluted share	$ (0.31)	$ (0.60)	$ (0.71)	$ (1.05)
Weighted-average shares used to compute net loss per basic and diluted share	25,339	24,526	25,288	24,301

See accompanying notes to condensed financial statements (unaudited).

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MYREXIS, INC.
Condensed Statements of Cash Flows (Unaudited)
(In thousands)

	Six Months Ended December 31, 2010	2009
Cash flows from operating activities:		
Net loss	$(17,873)	$ (25,421)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	842	575
Share-based compensation expense	2,761	3,164
Gain on sale of marketable investment securities	—	(45)
Changes in operating assets and liabilities:		
Prepaid expenses	(385)	(229)
Accounts receivable	(3)	(6)
Other current assets	(232)	(7)
Other assets, long-term	—	(374)
Accounts payable	(579)	4,506
Accrued liabilities	83	(1,731)
Net cash used in operating activities	(15,386)	(19,568)
Cash flows from investing activities:		
Capital expenditures for equipment	(50)	(791)
Purchase of marketable investment securities	(94,396)	(117,559)
Proceeds from maturity of marketable investment securities	87,453	40,368
Net cash used in investing activities	(6,993)	(77,982)
Cash flows from financing activities:		
Net proceeds from common stock issued under share-based compensation plans	763	1,174
Net cash provided by financing activities	763	1,174
Net increase (decrease) in cash and cash equivalents	(21,616)	(96,376)
Cash and cash equivalents at beginning of period	35,911	128,372
Cash and cash equivalents at end of period	$ 14,295	$ 31,996

See accompanying notes to condensed financial statements (unaudited).

MYREXIS, INC.

Notes to Condensed Financial Statements (Unaudited)

(1) Organization and Basis of Presentation

(a) Organization and Business Description

Myrexis, Inc. ("Myrexis" or the "Company") is a biotechnology company focused on discovering, developing and commercializing novel treatments for cancer. The Company's pipeline includes clinical and preclinical product candidates with distinct mechanisms of action and novel chemical structures that have the potential to be first-in-class and/or best-in-class therapeutics. The discovery and development of each of the Company's drug candidates has been guided by a unique understanding of the genetic causes of human diseases, the genetic factors that may cause drug side effects, drug interactions, and drug metabolism. The Company's extensive experience in human genetics, protein-protein interaction technology and chemical proteomic drug discovery has allowed identification of novel drug targets and accelerated progression from chemical lead compounds to investigational drug candidates.

The Company's operations are located in Salt Lake City, Utah.

(b) Basis of Accounting and Combination

The accompanying financial statements have been prepared by Myrexis in accordance with U.S. generally accepted accounting principles ("GAAP") for interim financial information and pursuant to the applicable rules and regulations of the Securities and Exchange Commission (the "SEC"). In the opinion of management, the accompanying financial statements contain all adjustments necessary to present fairly all financial statements in accordance with GAAP. The financial statements herein should be read in conjunction with the Company's audited financial statements and notes thereto for the fiscal year ended June 30, 2010, included in the Company's Annual Report on Form 10-K for the year ended June 30, 2010. Operating results for the three and six months ended December 31, 2010 may not necessarily be indicative of results to be expected for any other interim period or for the full year.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(2) Marketable Investment Securities

A decline in the market value of any available-for-sale security below cost that is deemed other than temporary results in a charge to earnings and establishes a new cost basis for the security. Losses are charged against "Other income (expense)" when a decline in fair value is determined to be other than temporary. The Company reviews several factors to determine whether a loss is other than temporary. These factors include but are not limited to: (i) the extent to which the fair value is less than cost and the cause for the fair value decline, (ii) the financial condition and near term prospects of the issuer or declines in credit risk, (iii) the length of time a security is in an unrealized loss position and (iv) whether it is more likely than not that the company will hold the securities for a period of time sufficient to allow for any anticipated recovery in fair value.

The amortized cost, gross unrealized holding gains and losses, and fair value for available-for-sale securities by major security type and class of security at December 31, 2010 and June 30, 2010 were as follows:

(in thousands)	Amortized cost	Gross unrealized holding gains	Gross unrealized holding losses	Estimated fair value
December 31, 2010:				
Available-for-sale:				
Money market funds	$ 10,126	$ —	$ —	$ 10,126
Corporate bonds and notes	25,487	35	—	25,522
U.S. Federal agency issues	92,427	—	(25)	92,402
Total	$128,040	$ 35	$ (25)	$128,050

	Amortized cost	Gross unrealized holding gains	Gross unrealized holding losses	Estimated fair value
June 30, 2010:				
Available-for-sale:				
Money market funds	$ 34,593	$ 1	$ —	$ 34,594
Corporate bonds and notes	31,556	—	(21)	31,535
U.S. Federal agency issues	79,415	45	—	79,460
Total	$145,564	$ 46	$ (21)	$145,589

In addition, the Company holds $500,000 restricted cash in an 18-month certificate of deposit as collateral for a corporate purchasing card program and $48,000 in a restricted cash account as collateral for office equipment. These amounts are included in long-term marketable securities on the balance sheet as of December 31, 2010.

Maturities of debt securities classified as available-for-sale are as follows at December 31, 2010 (in thousands):

	Amortized cost	Estimated fair value
Available-for-sale:		
Due within one year	$ 99,959	$ 99,972
Due after one year through three years	17,955	17,952
	$117,914	$117,924

(3) Fair Value Measurements

The fair value of the Company's financial instruments reflects the amounts that the Company estimates to receive in connection with the sale of an asset or be paid in connection with the transfer of a liability in an orderly transaction between market participants at the measurement date (exit price). The fair value hierarchy prioritizes the use of inputs used in valuation techniques into the following three levels:

Level 1—quoted prices in active markets for identical assets and liabilities.

Level 2—observable inputs other than quoted prices in active markets for identical assets and liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Some of the Company's marketable securities primarily utilize broker quotes in a non-active market for valuation of these securities.

Level 3—unobservable inputs.

The substantial majority of the Company's financial instruments are valued using quoted prices in active markets or based on other observable inputs. The following table sets forth the fair value of the Company's financial assets that the Company re-measured at December 31, 2010 and June 30, 2010:

(In thousands) December 31, 2010	Level 1	Level 2	Level 3	Total
Money market funds	$10,126	$ —	$ —	$ 10,126
Corporate bonds and notes	—	25,522		25,522
Federal agency issues	—	92,402	—	92,402
Total	$10,126	$117,924	$ —	$128,050

(In thousands) June 30, 2010	Level 1	Level 2	Level 3	Total
Money market funds	$34,594	$ —	$ —	$ 34,594
Corporate bonds and notes	—	31,535		31,535
Federal agency issues	—	79,460	—	79,460
Total	$34,594	$110,995	$ —	$145,589

(4) Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive income. Specifically, the Company includes in other comprehensive income the changes in unrealized gains and losses on its holdings of available-for-sale securities, which are excluded from its net loss. The following table sets forth the calculation of the Company's comprehensive net loss:

(In thousands)	Three Months Ended December 31, 2010	Three Months Ended December 31, 2009	Six Months Ended December 31, 2010	Six Months Ended December 31, 2009
Net loss	$(7,863)	$(14,790)	$(17,873)	$(25,421)
Other comprehensive loss:				
Change in unrealized gain and on marketable securities	(39)	168	(15)	206
Total comprehensive loss	$(7,902)	$(14,622)	$(17,888)	$(25,515)

(5) Earnings Per Share

The loss per basic and diluted share is calculated by dividing net loss by the weighted-average number of shares outstanding during the reported period. For the three and six months ended December 31, 2010, there were outstanding potential common equivalent shares of 2,909,861 and 2,574,719, respectively, compared to 1,963,753 and 1,854,235, respectively, in the same periods in 2009 which were excluded from the computation of diluted earnings per share because the effect would have been anti-dilutive. These potential dilutive common equivalent shares may be dilutive to basic earnings per share in future periods.

The calculation of diluted loss per share is the same as the basic loss per share since the inclusion of any potentially dilutive securities would be anti-dilutive.

(6) Share-Based Compensation

The Company recognizes compensation expense using a fair-value based method for costs related to stock options and other equity-based compensation. The expense is measured based on the grant date fair value of the awards that are expected to vest, and the expense is recorded over the applicable requisite service period. In the absence of an observable market price for a share-based award, the fair value is based upon a valuation methodology that takes into consideration various factors, including the exercise price of the award, the expected term of the award, the current price of the underlying shares, the expected volatility of the underlying share price based on peer companies, the expected dividends on the underlying shares and the risk-free interest rate.

The Company has adopted two equity incentive plans, the Myrexis, Inc. 2009 Employee, Director and Consultant Equity Incentive Plan (the "Equity Incentive Plan") and the Myrexis, Inc. 2009 Employee Stock Purchase Plan (the "ESPP"). The Company is authorized to issue a total of 8,260,690 shares under the plans.

The Company's Equity Incentive Plan provides for the issuance of common stock based awards, including restricted stock, restricted stock units, stock options, stock appreciation rights and other equity based awards to its directors, officers, employees and consultants.

The Company's ESPP is intended to qualify as an "employee stock purchase plan" under Section 423 of the Internal Revenue Code of 1986, as amended. Full-time employees of Myrexis who will own less than five percent of Myrexis's outstanding shares of common stock are eligible to contribute a percentage of their base salary, subject to certain limitations, over the course of six-month offering periods for the purchase of shares of common stock. The purchase price for shares of common stock purchased under the ESPP will equal 85 percent of the fair market value of a share of common stock at the beginning or end of the relevant six-month offering period, whichever is lower.

Share-based compensation expense recognized for Myrexis employees included in the statements of operations for the three and six months ended December 31, 2010 and 2009 was as follows (*in thousands*):

	Three Months Ended December 31,		Six Months Ended December 31,	
	2010	2009	2010	2009
Research and development	$ 585	$ 811	$ 1,264	$ 1,303
General and administrative	738	1,008	1,497	1,861
Total employee stock-based compensation expense	$ 1,323	$ 1,819	$ 2,761	$ 3,164

During the three months ended December 31, 2010, the Company granted 81,250 options under the Equity Incentive Plan at a weighted-average exercise price of $3.71 per share. During the six months ended December 31, 2010, the Company granted 844,060 options and 141,094 restricted stock units under the Equity Incentive Plan at a weighted-average exercise price of $3.82 per share for options and a fair value of $3.86 per share for restricted stock units.

During the three months ended December 31, 2010, 149,778 stock options were exercised at a weighted average price of $1.69 per share. During the six months ended December 31, 2010, 193,648 stock options were exercised at a weighted average price of $1.77. As of December 31, 2010, unrecognized compensation expense related to the unvested portion of stock options granted to Myrexis employees was approximately $7.2 million that will be recognized over a weighted-average period of 2.63 years.

The fair value of each option grant is estimated on the grant date using the Black-Scholes option pricing model. Expected option lives were based on historical option lives under the Myrexis equity compensation plan and volatilities used in fair value calculations are based on a benchmark of peer companies with similar expected option lives. The related expense is recognized on a straight-line basis over the vesting period.

Currently eligible Myrexis employees are participating in the ESPP offering period that began December 1, 2010 and will close May 31, 2011. Expense associated with Myrexis employees participating in the ESPP was approximately $90,000 and $180,000, respectively, for the three and six month periods ended December 31, 2010.

(7) Income Taxes

In accordance with the interim reporting requirements, the Company uses an estimated annual effective rate for computing its provision for income taxes. The effective rate was zero for each of the three and six month periods ended December 31, 2010 and 2009.

The Company reduces deferred tax assets by a valuation allowance if, based on the weight of evidence, it is more likely than not that some portion or all of the deferred tax assets will not be realized. At December 31, 2010, the Company has certain deferred tax assets, primarily from NOL's and research and development tax credits generated since June 30, 2009, which have been offset in total by a valuation allowance.

The Company has adopted Accounting for Uncertainty in Income Taxes . For the three months ended December 31, 2010, the Company recorded approximately $250,000 of additional liability for unrecognized tax benefits related to research tax credits. The Company includes any interest and penalties associated with any unrecognized tax benefits within the provision for income taxes on the statement of operations. The Company does not anticipate any material changes in the liability for unrecognized benefits in the next 12 months.

(8) Commitments and Contingencies

Myrexis has assumed all rights and obligations under a license agreement for exclusive rights to utilize certain intellectual property rights related to the drug candidate Azixa. Under this agreement Myrexis may pay milestone payments totaling up to $23 million. Payment of milestones is based on the occurrence of potential future events, including the initiation of certain human clinical trials, filing of a New Drug Application with the U.S. Food and Drug Administration, receipt of regulatory approval, and the achievement of specific revenue targets.

Various legal claims have been filed against Myrexis that relate to the ordinary course of business and are currently pending resolution. In the opinion of management and upon consultation with legal counsel, the ultimate resolution of these matters is not expected to have a material adverse effect on the financial position or future results of operations of Myrexis.

(9) Other Income

Other income of $1.4 million and $1.5 million for the three and six months ended December 31, 2010 compared to $0.4 million and $0.8 million for the same periods in 2009, respectively, reflects a one-time $1.2 million grant received in November 2010 as a part of the qualifying therapeutic discovery project under section 48D of the Internal Revenue Code.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read this discussion together with the financial statements, related notes and other financial information included elsewhere in this Quarterly Report on Form 10-Q. The following discussion may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed under "Risk Factors" in our Annual Report on Form 10-K for the year ended June 30, 2010 filed with the Securities and Exchange Commission (the "SEC"). These risks could cause our actual results to differ materially from any future performance suggested below.

Overview

We are a biotechnology company focused on discovering, developing and commercializing novel treatments for cancer. Our pipeline includes clinical and preclinical product candidates with distinct mechanisms of action and novel chemical structures that have the potential to be first-in-class and/or best-in-class therapeutics. The discovery and development of each of our drug candidates has been guided by a unique understanding of the genetic causes of human diseases, the genetic factors that may cause drug side effects, drug interactions, and drug metabolism. Our extensive experience in human genetics, protein-protein interaction technology and chemical proteomic drug discovery has allowed identification of novel drug targets and accelerated progression from chemical lead compounds to investigational drug candidates.

We expect to incur significant net losses for the foreseeable future and that such losses will fluctuate from quarter to quarter and that such fluctuations may be substantial. Additionally, we expect to incur substantial sales, marketing and other expenses in preparation for the commercialization of our drug candidates and some of these expenses will be incurred prior to U.S. Food and Drug Administration, or FDA, approval, which approval is not assured.

We do not know if we will be successful in developing any of our drug candidates. While expenses associated with the completion of our current clinical programs are expected to be substantial and increase, we believe that accurately projecting total program-specific expenses through commercialization is not possible at this time. The timing and amount of these expenses will depend upon the costs associated with potential future clinical trials of our drug candidates, and the related expansion of our research and development organization, regulatory requirements, advancement of our preclinical programs and product manufacturing costs, many of which cannot be determined with accuracy at this time. We are also unable to predict when, if ever, material net cash inflows will commence from our drug candidates. This is due to the numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of unanticipated events arising during clinical development, including:

- the scope, rate of progress, and expense of our clinical trials and other research and development activities;
- the length of time required to enroll suitable subjects;
- the number of subjects that ultimately participate in the trials;
- the efficacy and safety results of our clinical trials and the number of additional required clinical trials;
- the terms and timing of regulatory approvals;
- our ability to market, commercialize, manufacture and supply, and achieve market acceptance for our drug candidates that we are developing or may develop in the future; and
- the filing, prosecuting, defending or enforcing of patent claims or other intellectual property rights.

A change in the outcome of any of the foregoing variables in the development of a drug candidate could mean a significant change in the costs and timing associated with the development of that drug candidate. For example, if the FDA or another regulatory authority were to require us to conduct clinical trials beyond those which we currently anticipate to complete clinical development of a drug candidate, or if we experience significant delays in the enrollment of patients in any of our clinical trials, we would be required to expend significant additional financial resources and time on the completion of clinical development.

Our Clinical-Stage Oncology Programs

We currently have two clinical-stage programs in oncology:

- **Azixa** . Azixa (verubulin) is our most advanced cancer drug candidate and is being developed for the treatment of advanced primary and metastatic tumors with brain involvement. Azixa is currently in two Phase 2 clinical trials to determine its efficacy in Glioblastoma multiforme, or GBM. In December of 2010, we initiated a two arm Phase 2b trial of Azixa in combination with the standard of care therapy including radiation treatment and temozolomide compared to the standard of care therapy alone in patients newly diagnosed with GBM.

- **MPC-3100** . MPC-3100 is an Hsp90 inhibitor we are developing for the treatment of cancer. In the second quarter of 2009, we initiated a Phase 1 open-label, dose-finding, multiple-dose clinical trial in patients with refractory or relapsed cancers, including solid tumors, lymphomas and leukemias. We expect to complete this study in the first half of 2011.

Azixa: Our Lead Drug Candidate for the Treatment of Cancer

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. Azixa has also been shown to be a vascular disrupting agent, or VDA, in a mouse model of human ovarian cancer. Thus, Azixa has a dual mode of action; it induces apoptosis and acts as a VDA, resulting in tumor cell death. Importantly, in non-clinical studies, Azixa has demonstrated the unique ability to effectively cross the blood-brain barrier and accumulate in the brain. Azixa does not appear to be subject to multiple drug resistance. Azixa has been given orphan drug status by the FDA for the treatment of GBM.

In 2007, we completed two open-label, dose-escalating, multiple dose Phase 1 clinical trials to investigate the safety, tolerability and pharmacokinetics of Azixa and to observe for any evidence of anti-tumor activity in treatment of a variety of refractory solid tumors with and without brain metastases. In these Phase 1 trials, six out of 66 subjects had stable disease ranging from 5 to 16 months and there was no evidence of central nervous system, or CNS, toxicities or development of peripheral neuropathies.

In 2008, we initiated recruitment of patients for an open-label, dose finding, multiple-dose Phase 2 clinical trial to confirm the safety profile of Azixa in combination with the chemotherapeutic agent carboplatin in subjects with recurring/relapsing GBM. In this study, 19 patients with recurrent GBM received one of three dose levels of Azixa administered in combination with a fixed dose of carboplatin. All patients had failed previous standard of care treatment with temozolomide. Study endpoints included determination of the maximum tolerated dose, dose limiting toxicities, and evaluation of evidence of anti-tumor activity of Azixa when given with carboplatin as judged by response rate and progression-free survival, or PFS. In June of 2010, we reported results from this study at the annual meeting of the American Society of Clinical Oncology (ASCO) in Chicago. The combination of Azixa at all three concentrations with a fixed dose of carboplatin, including the previously determined single agent maximum tolerated dose of Azixa, was well-tolerated. A dose reduction of Azixa was not required when combined with carboplatin in these patients. In this study, six subjects achieved stable disease and two subjects had achieved partial responses. One subject's partial response duration was 7.8 months; the additional patient's response was, at that time, 16 months in duration and has been classified by his physician as almost a complete response. This second patient has been off study drug for a further four months and there has been no disease recurrence. The overall response rate was 42% as defined by partial response and stable disease evaluated using MacDonald criteria.

In 2008, we initiated an open-label, dose finding, multiple-dose Phase 2 clinical trial to confirm the safety profile of Azixa in combination with the chemotherapeutic agent temozolomide, the current standard of care for recurrent metastatic melanoma, and to look for evidence of reduced tumor burden and improved survival. The protocol allowed us to enroll up to 36 subjects in this trial, however, we determined that 22 subjects was sufficient to answer the questions regarding the safety profile of Azixa in combination with temozolomide and we completed enrollment with a total of 22 subjects. This trial explored Azixa's efficacy in patients with metastatic melanoma (Stage IV) with and without confirmed CNS metastases. Three separate cohorts of patients with metastatic melanoma received escalating dose levels of Azixa administered in combination with a fixed dose of temozolomide. Study endpoints included determination of the maximum tolerated dose, dose limiting toxicities, and evaluation of evidence of anti-tumor activity of Azixa when given with temozolomide as judged by response rate and PFS. In November 2009, we reported initial results from this study at the AACR-NCI-EORTC Molecular Targets and Cancer Therapeutics meeting in Boston. In June of 2010, we reported final results from this study at the annual meeting of the American Society of Clinical Oncology (ASCO) in Chicago. Twenty-two patients with refractory metastatic melanoma were studied at three different doses of Azixa. The combination of Azixa at all concentrations with fixed dose temozolomide, including the previously determined single agent maximum tolerated dose of Azixa, was well-tolerated. A dose reduction of Azixa was not required when combined with temozolomide in these patients. In this study, two patients achieved partial response durations of four and 10 months. Nine patients experienced stable disease durations between three and seven months. The response rate (defined as partial response by modified RECIST criteria and stable disease) was 50% and the median PFS of patients in the metastatic melanoma study was 2.9 months. While the results from this study are encouraging, because of the small number of patients in the trial, the results were not statistically significant, and we cannot assure you that we will achieve positive results and/or positive results with statistical significance in subsequent clinical trials of Azixa in combination with temozolomide in this or any other patient population.

In the second quarter of 2009, we initiated an open-label Phase 2 clinical trial to evaluate Azixa as monotherapy in patients with recurrence of GBM, including a cohort of patients who have never been treated with bevacizumab and a cohort of patients who have recurrence of GBM following treatment with bevacizumab. In this trial, PFS will be evaluated as the primary endpoint, with safety, pharmacokinetic parameters and overall survival as secondary endpoints. We have completed enrollment of 56 patients in this trial and the trial is ongoing. In November of 2010, we reported results from the 25 patient bevacizumab-experienced cohort of this study at the annual meeting of the Society for NeuroOncology (SNO) in Montreal. In these patients, Azixa monotherapy was well-tolerated. One patient achieved a partial response as assessed by MacDonald criteria with two measurable tumor reductions over twelve months of Azixa treatment and four additional patients experienced stable disease. The median and mean progression-free duration was 22 and 37 days, respectively. The median and mean overall survival were 94 and 105 days, respectively. We expect to present results from the bevacizumab-naïve cohort of patients in the second quarter of 2011.

In December of 2010, we initiated a two arm Phase 2b trial of Azixa in combination with standard of care therapy including radiation treatment and temozolomide compared to the standard of care therapy alone in patients newly diagnosed with GBM. This study is expected to enroll up to 120 newly diagnosed GBM patients at treatment centers in the United States and India.

MPC-3100 for the Treatment of Cancer

MPC-3100 is a fully synthetic, orally bio-available, non-geldanamycin compound that has shown significant and broad preclinical anti-tumor activity in mouse models of human cancers. MPC-3100 has not demonstrated the same hepatic or renal toxicity *in vivo* as the geldanamycin analogs. MPC-3100 inhibits Hsp90 by binding to the same site as geldanamycin and has displayed potent anticancer activity in several *in vitro* and *in vivo* models. MPC-3100 significantly and dose-dependently reduced tumor growth in multiple studies conducted in mice implanted with a variety of human cancer cell lines, including colon, prostate, myeloid leukemia, small cell lung, gastric, breast, and ovarian cancers.

We submitted an investigational new drug application for MPC-3100 in the first quarter of 2009 and initiated patient enrollment of a Phase 1 clinical trial in the second quarter of 2009 to investigate the safety and tolerability of MPC-3100, pharmacokinetics, and the potential for anti-tumor activity. This trial is an open-label, multiple-dose, dose escalation design in up to 40 subjects with refractory or relapsed cancer. Physical examination findings, electrocardiograms, pharmacokinetics, clinical laboratory parameters, and adverse events will be evaluated in subjects at each dose level to assess safety. Disease progression will be evaluated using standard clinical practice guidelines for each patient's cancer type. In November 2009, we presented the preliminary results of this ongoing study at the AACR-NCI-EORTC Molecular Targets and Cancer Therapeutics meeting in Boston. Preliminary data to date have demonstrated that MPC-3100 is orally bio-available in cancer patients with a half life of approximately 12 hours. Drug absorption has not been maximized and continues to increase with increasing dose. Plasma concentrations in patients are comparable to those found to inhibit tumor growth in non-clinical studies. Moreover, these concentrations of MPC-3100 were achieved in patients in the absence of dose-limiting toxicities. We expect to report additional preclinical data at the annual meeting of the American Association for Cancer Research, April 2-6, 2011 in Orlando Florida. We expect to complete this trial in the clinic in the first half of 2011 and are currently planning to initiate a Phase 2 clinical trial of MPC-3100 in 2011.

Our Preclinical Programs

Our proprietary research is primarily focused on oncology. We are investigating a number of potential drug targets as well as screening potential drug candidates against novel targets and optimizing those drug candidates that appear to have the greatest potential. Our most advanced preclinical program is MPC-9528.

MPC-9528 is an orally bio-available, potent, and selective small molecule Cancer Metabolism Inhibitor (CMI) being developed for the treatment of cancer. MPC-9528 inhibits Nicotinamide phosphoribosyltransferase (Nampt) *in vitro* and in cells at picomolar drug concentrations and is tumoricidal in every cancer line tested to date representing 17 different tumor tissue types. MPC-9528 displays on-target activity in tumor cells by potently reducing Nicotinamide Adenine Dinucleotide (NAD) levels, which leads to inhibition of glycolysis, energy deprivation and cell death, while NAD in normal tissues is less affected. In preclinical efficacy studies, MPC-9528 causes dramatic tumor regressions in multiple tumor types when administered orally with either a low daily dose or higher intermittent dose schedule. The NAD-reducing and tumoricidal activity of MPC-9528 can be completely blocked by nicotinic acid (niacin, Vitamin B3). Nicotinic acid is converted to NAD through an alternative pathway that is dependent upon the enzyme Nicotinic acid phosphoribosyltransferase (Naprt1) which does not involve Nampt. Our studies have found that approximately 40% of tumor cell lines are deficient in Naprt1 and in these cells, nicotinic acid had little to no effect on MPC-9528 tumoricidal activity. Furthermore, in animal model studies we found that a combination of nicotinic acid with MPC-9528 increased the tolerated dose of MPC-9528 while still causing tumoricidal effects on tumors deficient in Naprt1. This demonstrates the potential to increase the therapeutic index of MPC-9528 by combining it with nicotinic acid to treat patients with tumors that are deficient in Naprt1. A diagnostic method designed to measure Naprt1 expression could be used to identify those patients with Naprt1 deficient tumors that are most likely to benefit from this combination therapy. Results from our most recent preclinical studies of MPC-9528 were presented at the 22nd EORTC-NCI-AACR Symposium on "Molecular Targets and Cancer Therapeutics" in Berlin, Germany on November 17, 2010 and we expect to report additional preclinical data at the annual meeting of the American Association for Cancer Research, April 2-6, 2011 in Orlando Florida. Based on the data to date, we expect to complete preclinical studies of MPC-9528 and advance this candidate into human clinical studies by the end of 2011.

Critical Accounting Policies and Use of Estimates

Critical accounting policies are those policies which are both important to the portrayal of a company's financial condition and results and require management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. Our critical accounting policies are as follows:

- income taxes;
- clinical trial expenses; and
- share-based payment expense.

Income Taxes

Our income tax provision is based on income before taxes and is computed using the liability method in accordance with Accounting Standards Codification, or ASC, 740— *Income Taxes* . Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using tax rates projected to be in effect for the year in which the differences are expected to reverse. Significant estimates are required in determining our provision for income taxes. Some of these estimates are based on interpretations of existing tax laws or regulations, or the expected results from any future tax examinations. Various internal and external factors may have favorable or unfavorable effects on our future provision for income taxes. Those factors include, but are not limited to, changes in tax laws, regulations and/or rates, the results of any future tax examinations, changing interpretations of existing tax laws or regulations, changes in estimates of prior years' items, past levels of R&D spending, acquisitions, changes in our corporate structure, and changes in overall levels of income before taxes all of which may result in periodic revisions to our provision for income taxes.

Developing our provision for income taxes, including our effective tax rate and analysis of potential uncertain tax positions, if any, requires significant judgment and expertise in federal and state income tax laws, regulations and strategies, including the determination of deferred tax assets and liabilities and any estimated valuation allowance we deem necessary to offset deferred tax assets. We have determined that a valuation allowance is necessary to fully offset our deferred tax assets. Our tax position and tax strategies are subject to audit by various taxing authorities. While we believe we have provided adequately for our uncertain income tax positions in our consolidate financial statements, adverse determination by these taxing authorities could have a material adverse effect on our consolidated financial condition, results of operations or cash flows. Interest and penalties on income tax items are included as a component of overall income tax expense.

Clinical Trial Expenses

The cost of our clinical trials is based, in part, on estimates of the services received and efforts expended pursuant to contracts with numerous clinical trial centers and clinical research organizations, or CROs. In the normal course of business, we contract with third parties to perform various clinical trial activities in the ongoing development of our drug candidates. The financial terms of these agreements vary from contract to contract, are subject to negotiation and may result in uneven payment flows. Payments under the contracts depend on factors such as the achievement of certain events, the successful enrollment of patients or the completion of portions of the clinical trial or similar conditions. The objective of our accrual policy is to match the recording of expenses in our financial statements to the actual services received and efforts expended. As such, we recognize direct expenses related to each patient enrolled in a clinical trial on an estimated cost-per-patient basis as services are performed. In addition to considering information from our clinical operations group regarding the status of our clinical trials, we rely on information from CROs, such as estimated costs per patient, to calculate our accrual for direct clinical expenses at the end of each reporting period. For indirect expenses, which relate to site and other administrative costs to manage our clinical trials, we rely on information provided by the CRO, including costs incurred by the CRO as of a particular reporting date, to calculate our indirect clinical expenses. In the event of early termination of a clinical trial, we would recognize expenses in an amount based on our estimate of the remaining non-cancelable obligations associated with the winding down of the clinical trial, which we would confirm directly with the CRO.

If our CROs were to either under or over report the costs that they have incurred or if there is a change in the estimated per patient costs, it could have an impact on our clinical trial expenses during the period in which they report a change in estimated costs to us. Adjustments to our clinical trial accruals primarily relate to indirect costs, for which we place significant reliance on our CROs for accurate information at the end of each reporting period.

Share-Based Payment Expense

Share-based compensation expense standards set accounting requirements for "share-based" compensation to employees, including employee stock purchase plans, and requires us to recognize, as expense, in our statements of operations, the fair value of our stock options and other equity-based compensation. The determination of grant date fair value is estimated using an option-pricing model, which includes variables such as the terms of each grant, the expected volatility of our share price, the exercise behavior of our employees, interest rates, and dividend yields. These variables are projected based on our historical data, experience, and other factors. Changes in any of these variables could result in material adjustments to the expense recognized for share-based payments.

Results of Operations for the Three and Six Months Ended December 31, 2010 and 2009

Revenue

Research revenue is comprised of research services related to short-term research agreements. Research revenue for the three and six months ended December 31, 2010 was $23,000 and $130,000 compared to $0 and $60,000 in the same periods in 2009. Research revenue for the three and six months ended December 31, 2010 and 2009 reflects revenues earned utilizing our expertise to identify and characterize protein-protein interactions. Research revenue from our contract research agreements is recognized using a proportional performance methodology over the life of each contract. Consequently, such revenue will fluctuate up or down depending upon when we enter into new contracts, complete our obligations under existing contracts and as these individual programs progress and outputs increase or decrease.

Research and Development

Research and development expenses are comprised primarily of salaries and related personnel costs, laboratory supplies, equipments costs, facilities expense, and costs associated with our clinical trials. Research and development expenses for the three and six months ended December 31, 2010 were $5.0 million and $10.7 million compared to $8.2 million and $14.1 million in the same periods last year. The respective 39% and 24% decreases were primarily due to:

- decreased external drug candidate costs of approximately $2.5 million and $2.7 million for the three and six months ended December 31, 2010, respectively, were primarily due to lower external drug development costs resulting from the discontinuation of further development of our HIV drug candidate MPC-4326; the completion of patient enrollment in other clinical trials; and decreased preclinical development costs resulting from reductions in headcount and laboratory supplies; and
- decreased preclinical development costs of approximately $0.5 million and $0.3 million for the three and six months ended December 31, 2010, respectively, resulting from a reduction in headcount and laboratory supplies.

Our research and development expenses include costs incurred for our current clinical-stage drug candidates, Azixa and MPC-3100, our most advanced preclinical-stage drug candidate, MPC-9528, as well as our discontinued drug candidate MPC-4326. Currently, the only costs we track by each drug candidate are external costs such as services provided to us by clinical research organizations, manufacturing of drug supply, and other related outsourced services. We do not assign or allocate internal costs such as salaries and benefits, facilities costs, lab supplies and the costs of preclinical research and studies to individual development programs. We also incurred costs related to external research collaborations from our research services business. We track all underlying principal costs associated with our research collaborations. All development costs for our drug candidates and external research collaborations are expensed as incurred.

Research and development costs for the three and six months ended December 31, 2010 and 2009 were as follows:

(In thousands)	Three Months Ended December 31, 2010	2009	Six Months Ended December 31, 2010	2009
External costs, drug candidates:				
Azixa	$ 272	$ 803	$ 654	$ 1,512
MPC-4326	(214)	1,057	(144)	1,109
MPC-3100	258	1,135	788	1,596
MPC-9528	91	—	223	—
Sub-total direct costs	407	2,995	1,521	4,217
Internal costs, drug candidates	1,294	1,363	2,541	2,759
Preclinical development costs	3,140	3,587	6,317	6,595
External research collaborations	154	272	331	526
Total research and development	$ 4,995	$ 8,217	$ 10,710	$ 14,097

The timing and amount of any future expenses, completion dates, and revenues for our drug candidates is not readily determinable due to the early stage of these development programs.

We expect our research and development expenses will fluctuate over the next several years as we conduct additional clinical trials to support the potential commercialization of our drug candidates currently in clinical development, including Azixa and MPC-3100, and advance other drug candidates into clinical development. In particular, we expect our external drug development costs to increase as we enroll patients in our Phase 2b clinical trial for Azixa.

General and Administrative

General and administrative expenses consist primarily of salaries and related personnel costs for business development, executive, legal, finance and accounting, information technology, human resources, and facilities expenses. General and administrative expenses for the three and six months ended December 31, 2010 were $4.2 million and $8.8 million compared to $6.9 million and $12.2 million for the same periods in 2009. These 39% and 28% decreases in general and administrative expenses during the three and six months ended December 31, 2010, were due primarily to a reduction in headcount, a reduction in acquisition expenses associated with an acquisition proposal which terminated in April 2010, and the inclusion of higher litigation related expenses incurred during the prior year periods. These decreases were offset, in part, by increased facilities costs.

Other Income

Other income of $1.4 million and $1.5 million for the three and six months ended December 31, 2010 compared to $0.4 million and $0.8 million for the same periods in 2009, respectively, reflects a one-time $1.2 million grant received in November 2010 as a part of the qualifying therapeutic discovery project under section 48D of the Internal Revenue Code. This increase was offset, in part, by a reduction in interest income of $0.2 million and $0.5 million for the three and six months ended December 31, 2010 earned on our marketable investment securities as compared to 2009. The decrease in interest income is a result of a reduction in our invested balance of marketable securities for the three and six months ended December 31, 2010 as compared to 2009.

Liquidity and Capital Resources

Net cash used in operating activities was $15.4 million during the six months ended December 31, 2010 compared to $19.6 million used in operating activities for the same six months in 2009. The change in cash used in operating activity can be attributed primarily to the timing and payment of liabilities which were offset, in part, by a lower net loss in 2010.

Our investing activities used $7.0 million in cash during the six months ended December 31, 2010 compared to $78.0 million for the same six months in 2009. The change is primarily due to a reduction in our overall cash position and timing of new purchases and maturities of our marketable securities.

Approximately $0.8 million in cash was provided by financing activities during the six months ended December 31, 2010 as a result of proceeds from stock options exercised during the period compared to $1.2 million for the same six months in 2009. The change is attributable to a lower stock price during the six months ended December 31, 2010 resulting in fewer option exercises.

As of December 31, 2010, we had $132.8 million in cash, cash equivalents and marketable securities. We believe that with our existing capital resources, we will have adequate funds to maintain our current and planned operations through at least June 30, 2013, although no assurance can be given that changes will not occur that would consume available capital resources before such time and we may need or want to raise additional financing within this period of time. Our future capital requirements, cash flows, and results of operations could be affected by and will depend on many factors that are currently unknown to us, including:

- progress in and results from our clinical trials of Azixa and MPC-3100;
- failure or delays in advancing our preclinical drug candidates, including MPC-9528, or other drug candidates we may develop in the future, into clinical trials;
- results of clinical trials conducted by others on drugs that would compete with our drug candidates;
- issues in manufacturing our drug candidates or approved products;
- regulatory developments or enforcement in the United States and foreign countries;
- developments or disputes concerning patents or other proprietary rights;
- introduction of technological innovations or new commercial products by us or our competitors;
- changes in estimates or recommendations by securities analysts, if any cover our common stock;
- failure to secure adequate capital to fund our operations if and when needed, or the issuance of equity securities at prices below the current market price;
- public concern over our drug candidates or any approved products;
- litigation;
- future sales of our common stock;
- general market conditions;
- changes in the structure of healthcare payment systems;
- failure of any of our drug candidates, if approved, to achieve commercial success;
- economic and other external factors or other disasters or crises;
- period-to-period fluctuations in our financial results; and
- overall fluctuations in U.S. equity markets.

We may require significant additional funds earlier than we currently expect in order to conduct additional clinical trials and conduct additional preclinical and discovery activities. Because of the numerous risks and uncertainties associated with the development and commercialization of our drug candidates, we are unable to estimate the timing or the amount of increased capital outlays and operating expenditures associated with our current and anticipated clinical trials.

To the extent our capital resources are insufficient to meet our future capital requirements, we will need to finance our future cash needs through public or private equity offerings, collaboration agreements, debt financings or licensing arrangements. However, the credit markets and the financial services industry have recently been experiencing a period of unprecedented turmoil and upheaval that have made equity and debt financing more difficult to obtain. Additional funding may not be available to us on acceptable terms or at all. In addition, the terms of any financing may adversely affect the holdings or the rights of our stockholders. For example, if we raise additional funds by issuing equity securities or by selling convertible debt securities, further dilution to our existing stockholders may result. If we raise funds through collaboration agreements or licensing arrangements, we may be required to relinquish rights to our technologies or drug candidates, or grant licenses on terms that are not favorable to us.

If adequate funds are not available, we may be required to terminate, significantly modify or delay our research and development programs, reduce planned commercialization efforts, or obtain funds through collaborators that may require us to relinquish rights to our technologies or drug candidates that we might otherwise seek to develop or commercialize independently. We may elect to raise additional funds even before we need them if the conditions for raising capital are favorable. On November 9, 2010, we filed a shelf registration statement with the SEC for the issuance of common stock, preferred stock, various series of debt securities and/or warrants or rights to purchase any of such securities, either individually or in units, with a total value of up to $80 million, from time to time at prices and on terms to be determined at the time of any such offering. The registration statement was declared effective on November 19, 2010.

Certain Factors That May Affect Future Results of Operations

The Securities and Exchange Commission, or SEC, encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. This Quarterly Report on Form 10-Q contains such "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995.

Words such as "may," "anticipate," "estimate," "expects," "projects," "intends," "plans," "believes" and words and terms of similar substance used in connection with any discussion of future operating or financial performance, identify forward-looking statements. All forward-looking statements are management's present 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 described in the forward-looking statements. These risks include, but are not limited to those set forth under the heading "Risk Factors" contained in Item 1A of our Annual Report on Form 10-K for the year ended June 30, 2010 that we have filed with the SEC.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this Quarterly Report on Form 10-Q might not occur. Stockholders are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this Quarterly Report on Form 10-Q. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to Myrexis, Inc. or to any person acting on its behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We maintain a portfolio of cash, cash equivalents and short term and long term marketable securities which are subject to interest rate risk. Our investments consist primarily of highly liquid securities of various types and maturities of two years or less, with a maximum average maturity of one year. Changes in interest rates affect the fair market value of these marketable investment securities. There have been no material changes in our exposure to market risk as compared to our disclosures under Item 7A in our Annual Report on Form 10-K for the year ended June 30, 2010.

Item 4. Controls and Procedures.

(a) *Evaluation of Disclosure Controls and Procedures* . Our principal executive officer and principal financial officer evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on this evaluation, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

(b) *Changes in Internal Controls* . There were no changes in our internal control over financial reporting, identified in connection with the evaluation of such internal control that occurred during our last fiscal quarter that have materially affected, or are reasonably likely to materially affect our internal control over financial reporting.

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PART II - OTHER INFORMATION

Item 1. Legal Proceedings.

None.

Item 1A. Risk Factors.

There are no material changes to the risk factors described in our Annual Report on Form 10-K for the year ended June 30, 2010.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. (Removed and Reserved).

Item 5. Other Information.

None.

Item 6. Exhibits.

(a) *Exhibits*

10.1 Non-Employee Director Compensation Policy, effective November 11, 2010.

31.1 Certification of principal executive officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.

31.2 Certification of principal financial officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.

32.1 Certifications of the principal executive officer and the principal financial officer under Section 906 of the Sarbanes-Oxley Act of 2002.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

MYREXIS, INC.

Date: February 9, 2011

By: /s/ A DRIAN N. H OBDEN
Adrian N. Hobden, Ph.D.
President and Chief Executive Officer
(principal executive officer)

Date: February 9, 2011

By: /s/ R OBERT J. L OLLINI
Robert J. Lollini
Chief Financial Officer
(principal accounting and financial officer)

Exhibit 10.1

Myrexis, Inc.
Non-Employee Director Compensation Policy
(effective November 11, 2010)

The following is a description of the standard compensation arrangements under which Myrexis, Inc.'s (the "Company") non-employee directors will be compensated for their service as directors, including as members of the various committees of the Company's Board of Directors (the "Board").

Annual Retainer	$35,000
Chairman of the Board	$50,000 additional retainer
Committee Chair Compensation	
Audit Committee	$18,000 additional retainer
Compensation Committee	$14,000 additional retainer
Nominating and Governance Committee	$10,000 additional retainer
Committee Member Compensation (other than each Committee Chair)	
Audit Committee	$9,000 additional retainer
Compensation Committee	$7,000 additional retainer
Nominating and Governance Committee	$5,000 additional retainer
Per Meeting Fees	The Company will pay each non-employee director a per meeting cash fee of $2,000 for in-person attendance and $1,000 for telephonic attendance at any Board meetings in excess of five meetings per fiscal year. The Company will also pay each non-employee director a per meeting cash fee of $2,000 for in-person attendance and $1,000 for telephonic attendance at committee meetings in excess of five audit committee meetings, four compensation committee meetings, and three nominating and governance committee meetings, per fiscal year.
Stock Option Awards	
Upon initial election*	25,000 options
Annually	16,250 options

* Each non-employee director serving on the Board on the day following the date of the distribution of the Company's shares of common stock by Myriad Genetics, Inc. to Myriad Genetics, Inc.'s stockholders will be considered a new non-employee director as of that date and will automatically, without any further action required by the Board, receive a non-qualified option to purchase 25,000 shares of common stock on that date.

All cash fees will be paid in four quarterly installments following each quarter of service. Non-employee directors will also reimbursed for their out-of pocket expenses incurred in attending meetings.

All options will be granted under the Company's 2009 Employee, Director and Consultant Equity Incentive Plan (the "2009 Plan").

Annual option grants will be granted automatically on the date of each annual meeting of the Company's stockholders commencing in 2010 to each director who is (i) not an employee of the Company or any of its Affiliates (as defined in the 2009 Plan), or (ii) nominated or elected pursuant to or in satisfaction of a contractual obligation of the Company, provided that on such dates such director has been in the continued and uninterrupted service of the Company as a director since his or her election or appointment, and provided further that a director who was initially elected to the Board within six months of the annual meeting shall not receive an annual grant.

All options (i) will have an exercise price equal to the Fair Market Value (as defined in the 2009 Plan) per share of the Company's common stock on the date of grant, (ii) will have a term of 10 years unless such director is terminated for Cause (as defined in the 2009 Plan), in which case the provisions of Paragraph 14 of the 2009 Plan shall apply, and (iii) will vest in full on the first anniversary of the date of grant, assuming continued membership on the Board, provided however, that (a) in the event of a Change of Control (as defined in the 2009 Plan) of the Company, outstanding options shall become fully exercisable as of the date of the Change of Control, (b) in the event of the death of a director, outstanding options shall become fully exercisable as of the date of death, and (c) in the event of the Disability (as defined in the 2009 Plan) of a director, outstanding options shall vest to the extent of a pro rata portion through the date of Disability of any additional vesting rights that would have accrued on the next vesting date had the director not become Disabled. The proration shall be based upon the number of days accrued in the current vesting period prior to the date of Disability.

Exhibit 31.1

CERTIFICATIONS UNDER SECTION 302

I, Adrian N. Hobden, Ph.D., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Myrexis, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f))for the registrant and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 9, 2011

/s/ A DRIAN N. H OBDEN
Adrian N. Hobden, Ph.D.
President and Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATIONS UNDER SECTION 302

I, Robert J. Lollini, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Myrexis, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f))for the registrant and have:

   a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 9, 2011

/ S / R OBERT J. L OLLINI
Robert J. Lollini
Chief Financial Officer
(principal accounting and financial officer)

Exhibit 32.1

CERTIFICATIONS UNDER SECTION 906

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Myrexis, Inc., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Quarterly Report on Form 10-Q for the period ended December 31, 2010 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 9, 2011

/s/ A DRIAN N. H OBDEN
Adrian N. Hobden, Ph.D.
President and Chief Executive Officer
(principal executive officer)

Dated: February 9, 2011

/s/ R OBERT J. L OLLINI
Robert J. Lollini
Chief Financial Officer
(principal accounting and financial officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.