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

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(D) OF THE
SECURITIES EXCHANGE ACT OF 1934

DATE OF REPORT (DATE OF EARLIEST EVENT REPORTED): MAY 5, 2005

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

FLORIDA	1-13165	59-2417093
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)

1655 ROBERTS BOULEVARD, N.W., KENNESAW, GEORGIA 30144
(Address of principal executive office) (zip code)

REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (770) 419-3355

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

|_| Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

|_| Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

|_| Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

|_| Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 2.02 RESULTS OF OPERATIONS AND FINANCIAL CONDITION.

The information provided pursuant to this Item 12 is to be considered "filed" under the Securities Exchange Act of 1934 ("Exchange Act") and incorporated by reference into those filings of CryoLife, Inc. ("CryoLife") that provide for the incorporation of all reports and documents filed by CryoLife under the Exchange Act.

On May 5, 2005, CryoLife issued a press release announcing its results for the quarter ended March 31, 2005. CryoLife hereby incorporates by reference herein the information set forth in its Press Release dated May 5, 2005, a copy of which is attached hereto as Exhibit 99.1. Except as otherwise provided in the press release, the press release speaks only as of the date of such press release and such press release shall not create any implication that the affairs of CryoLife have continued unchanged since such date.

Except for the historical information contained in this report, the statements made by CryoLife are forward-looking statements that involve risks and uncertainties. All such statements are subject to the safe harbor created by the Private Securities Litigation Reform Act of 1995. CryoLife's future financial performance could differ significantly from the expectations of management and from results expressed or implied in the Press Releases. For further information on other risk factors, please refer to the "Risk Factors" contained in CryoLife's Form 10-K for the year ended December 31, 2004, CryoLife's Form S-3 (Registration No. 333-121406), as filed with the Securities and Exchange Commission ("SEC") and any subsequent SEC filings. CryoLife disclaims any obligation or duty to update or modify these forward-looking statements.

ITEM 9.01 FINANCIAL STATEMENTS AND EXHIBITS.

(a) Financial Statements.

(b) Pro Forma Financial Information.

(c) Exhibits.

Exhibit Number	Description
99.1	Press Release dated May 5, 2005

SIGNATURES

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

CRYOLIFE, INC.

Date: May 5, 2005

By: /s/ D. Ashley Lee

Name: D. Ashley Lee
Title: Vice President, Chief Financial Officer and Treasurer

EXHIBIT INDEX

Exhibit Number	Description
99.1	Press Release dated May 5, 2005

EXHIBIT 99.1

[COMPANY LOGO]
NEWS RELEASE

FOR IMMEDIATE RELEASE

CONTACT: JOSEPH T. SCHEPERS
VICE PRESIDENT, CORPORATE COMMUNICATIONS
(770) 419-3355

CRYOLIFE FIRST QUARTER REVENUES INCREASE 17% OVER FIRST QUARTER 2004

- Tissue processing revenues increased 21% and BioGlue(R) revenues increased 14% in the first quarter of 2005, compared to the first quarter of 2004
- Financial position strengthened with $20 million convertible preferred offering and $15 million line of credit
- First cryopreserved osteoarticular (OA) allografts implanted in patients

ATLANTA...(MAY 5, 2005)...CRYOLIFE, INC. (NYSE: CRY) announced today that first quarter revenues of 2005 increased 17% to $17.7 million, compared to $15.1 million in the first quarter of 2004. Net loss in the first quarter of 2005 was $1.4 million, or $0.06 per basic and diluted common share. This compares to a net loss of $7.0 million in the first quarter of 2004, or $0.32 per basic and diluted common share.

"Since January 2005, the Company has made significant progress. There was strong growth in BioGlue(R) and tissue processing revenues, tissue processing gross margins improved greatly, and our financial position was strengthened," stated Steven G. Anderson, President and CEO, CryoLife, Inc.

Tissue processing revenues increased 21% to $7.5 million in the first quarter of 2005, compared to $6.2 million in the first quarter of 2004. Cardiac tissue processing revenues were $3.8 million in the first quarter of 2005, compared to $3.4 million in the first quarter of 2004. Vascular tissue processing revenues were $2.7 million in the first quarter of 2005, compared to $2.5 million in the first quarter of 2004. Orthopaedic revenues were $1.1 million in the first quarter of 2005 compared to $309,000 in the first quarter of 2004.

Mr. Anderson stated, "Our recent AATB accreditation, the introduction of cryopreserved osteoarticular (OA) allografts, and the pending implants of cryopreserved Clearant-Processed orthopaedic tissues are key factors to the recovery of our tissue processing program."

[COMPANY ADDRESS]

BioGlue sales for the first quarter of 2005 increased 14% to $9.9 million, compared to $8.6 million in the first quarter of 2004. "The BioGlue syringe product line is a key factor driving increased BioGlue sales in the U.S. and internationally," stated Anderson. The Company expects to introduce a spreader tip for the syringe delivery device during the second quarter of 2005 and a ten milliliter BioGlue syringe in the second half of 2005.

Total tissue processing and product gross margin in the first quarter of 2005 increased to 55% from 27% in the first quarter of 2004, and from 49% in the fourth quarter of 2004. Tissue processing margin improved to 22% in the first quarter of 2005, compared to (46%) in the first quarter of 2004 and 6% in the fourth quarter of 2004.

General, administrative, and marketing expenses were $10.1 million in the first quarter of both 2005 and 2004.

Research and development expenses were $921,000 in the first quarter of both 2005 and 2004.

In the second quarter of 2005, BioGlue revenues are expected to be $9.7 to $10.5 million and tissue processing revenues are expected to be $6.9 to $7.9 million. Bioprosthetic cardiovascular and vascular device revenues are expected to be approximately $300,000 in the second quarter of 2005. Total tissue processing and product revenues for the second quarter of 2005 are expected to be $16.9 to $18.7 million.

The Company expects tissue processing and product revenues to increase to between $71.0 and $78.0 million in 2005. The Company expects BioGlue revenues to be $40.0 to $42.0 million; tissue processing revenues to be $30.0 to $35.0 million. Bioprosthetic cardiovascular and vascular device revenues are expected to be approximately $1.0 million in 2005.

The Company expects gross margins in the second quarter of 2005 to be similar to the first quarter of 2005, with an increase in gross margins in the second half of 2005 resulting from tissue processing improvement initiatives scheduled to be implemented during the second and third quarters of 2005.

The Company expects general, administrative, and marketing expenses to be $10.0 to $11.0 million in the second quarter of 2005, and $42.0 to $45.0 million for the full year 2005. The Company expects research and development expenses to be approximately $1.0 million in the second quarter of 2005 and approximately $4.0 million for the full year 2005.

As of March 31, 2005, the Company had approximately $26.1 million in cash, cash equivalents, and marketable securities. Additionally, the Company has a $15.0 million line of credit with Wells Fargo Foothill.

In March 2005, the Company completed a $20 million offering of 400,000 shares of 6% convertible preferred stock at $50 per share. Upon conversion of the preferred stock, the Company is obligated to pay the preferred shareholders all unpaid dividends that would have accrued through April 1, 2008 (dividend make-whole payment). The dividend make-whole payment feature is considered to be an embedded derivative instrument and has been recorded at fair value on the balance sheet as a current liability. The Company will recognize future fluctuations in the fair value of this derivative as a component of other income (expense) in its statement of operations.

The Company will hold a teleconference call and live webcast at 11:15 a.m. Eastern Time, May 5, 2005, to discuss first quarter 2005 financial results followed by a question and answer session hosted by Steven G. Anderson, President and Chief Executive Officer.

To listen to the live teleconference please dial 973-409-9258 a few minutes prior to 11:15 a.m. No identification number is required. A replay of the teleconference will be available May 5 through May 10 and can be accessed by calling (toll free) 877-519-4471 or 973-341-3080. The identification number for the replay is 5963793.

The live webcast can be accessed by going to the Investor Relations section of the CryoLife web site at www.cryolife.com.

ABOUT CRYOLIFE

Founded in 1984, CryoLife, Inc. is a leader in the processing and distribution of implantable living human tissues for use in cardiovascular and vascular surgeries throughout the United States and Canada. The Company's BioGlue Surgical Adhesive is FDA approved as an adjunct to sutures and staples for use in adult patients in open surgical repair of large vessels and is CE marked in the European Community and approved in Canada for use in soft tissue repair and approved in Australia for use in vascular and pulmonary sealing and repair. The Company also manufactures the SG Model #100 vascular graft, which is CE marked for distribution within the European Community.

Statements made in this press release that look forward in time or that express management's beliefs, expectations or hopes are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These future events may not occur as and when expected, if at all, and, together with the Company's business, are subject to various risks and uncertainties. These risks and uncertainties include that the Company's 2005 revenues and expenses may not meet its expectations, the first cryopreserved

Clearant-Processed orthopaedic tissue may not be implanted this month, if ever, that either or both of the spreader tip for the BioGlue syringe delivery device and the ten milliliter BioGlue syringe may not be available for sale when expected, if ever, the possibility that the FDA could impose additional restrictions on the Company's operations, require a recall, or prevent the Company from processing and distributing tissues or manufacturing and distributing other products, that the protein hydrogel products under development, such as BioLastic, BioFoam, BioDisc and the bioresorbable stent, may not be commercially feasible, that the Company may not have sufficient borrowing or other capital availability to fund its business, that pending litigation cannot be settled on terms acceptable to the Company, that the Company may not have sufficient resources to pay punitive damages (which are not covered by insurance) or other liabilities in excess of available insurance, the possibility of severe decreases in the Company's revenues and working capital, that to the extent the Company does not have sufficient resources to pay the claims against it, it may be forced to cease operations or seek protection under applicable bankruptcy laws, changes in laws and regulations applicable to CryoLife and other risk factors detailed in CryoLife's Securities and Exchange Commission filings, including CryoLife's Form 10-K filing for the year ended December 31, 2004, its registration statement on Form S-3 (Reg. No. 333-121406) and the Company's other SEC filings. The Company does not undertake to update its forward-looking statements.

For additional information about the company, visit
CryoLife's web site: www.cryolife.com.

CRYOLIFE, INC.
Unaudited Financial Highlights
(In thousands, except per share data)

	Three Months Ended March 31,	
	2005	2004
Revenues:		
Products	$ 10,127	$ 8,859
Human tissue preservation services	7,538	6,225
Research grants	--	2
Total revenues	17,665	15,086
Costs and expenses:		
Products	2,116	1,947
Human tissue preservation services	5,899	9,103
General, administrative, and marketing	10,056	10,148
Research and development	921	921
Interest expense	55	43
Interest income	(75)	(66)
Change in valuation of derivative	(118)	--
Other expense, net	130	16
Total costs and expenses	18,984	22,112
Loss before income taxes	(1,319)	(7,026)
Income tax expense	38	--
Net loss	$ (1,357)	$ (7,026)
Effect of preferred stock	(46)	--
Net loss applicable to common shares	$ (1,403)	$ (7,026)
Loss per common share:		
Basic	$ (0.06)	$ (0.32)
Diluted	$ (0.06)	$ (0.32)
Weighted average common shares outstanding:		
Basic	23,440	22,241
Diluted	23,908	22,241
Revenues from:		
BioGlue	$ 9,871	$ 8,643

Cardiovascular	3,750	3,430
Vascular	2,716	2,486
Orthopaedic	1,072	309
Total preservation services	7,538	6,225
Bioprosthectic devices	256	216
Research grants	--	2
Total revenues	$ 17,665	$ 15,086
International revenues	$ 2,474	$ 2,092
Domestic revenues	15,191	12,994
Total revenues	$ 17,665	$ 15,086

CRYOLIFE, INC.
Financial Highlights
(In thousands)

	March 31, 2005	Dec. 31, 2004
	(Unaudited)	
Cash and cash equivalents, marketable securities, at market, and restricted cash and securities	$ 26,128	$ 9,232
Trade receivables, net	9,238	8,293
Other receivables	8,091	3,957
Deferred preservation costs, net	9,402	8,822
Inventories	4,716	4,767
Total assets	94,608	73,261