**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): February 2, 2010**

# 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))

**Section 8 Other Events**

**Item 8.01 Other Events.**

On February 2, 2010, CryoLife, Inc. ("CryoLife") issued a press release and updated its website to announce that it had increased its ownership stake in Medafor, Inc. ("Medafor") to approximately 11% with its purchase of approximately 740,000 additional shares of the common stock of Medafor. CryoLife also updated the Frequently Asked Questions portion of the Medafor offer portion of its website. These documents are available at www.cryolife.com/medaforoffer and/or have otherwise been disseminated by CryoLife. The press release dated February 2, 2010 and the updated Frequently Asked Questions portion of the website are attached hereto as Exhibits 99.1 and 99.2, respectively.

This filing and the exhibits hereto are provided for informational purposes only and are not offers to purchase nor a solicitation of offers to sell shares of Medafor or CryoLife. Subject to future developments, CryoLife may file a registration statement and/or tender offer documents and/or proxy statement with the SEC in connection with the proposed combination. Shareholders should read those filings, and any other filings made by CryoLife with the SEC in connection with the combination, as they will contain important information. Those documents, if and when filed, as well as CryoLife's other public filings with the SEC, may be obtained without charge at the SEC's website at www.sec.gov and at CryoLife's website at www.cryolife.com.

**Section 9 Financial Statements and Exhibits**

**Item 9.01(d) Exhibits.**

(a) Financial Statements.
Not applicable.

(b) Pro Forma Financial Information.
Not applicable.

(c) Shell Company Transactions.
Not applicable.

(d) Exhibits.

| Exhibit Number | Description |
|---|---|
| 99.1 | Press Release dated February 2, 2010 |
| 99.2 | Frequently Asked Questions available at www.cryolife.com/medaforoffer |

**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: February 2, 2010

By: /s/ D.A. Lee

Name: D. Ashley Lee

Title: Executive Vice President, Chief Operating Officer and Chief Financial Officer

**EXHIBIT 99.1**

CryoLife®
Life Restoring Technologies℠

***N E W S  R E L E A S E***

***FOR IMMEDIATE RELEASE***

**Media Contacts:**

D. Ashley Lee
Executive Vice President, Chief Financial Officer and
Chief Operating Officer
Phone: 770-419-3355

Nina Devlin
Edelman
Phone: 212-704-8145

## CryoLife Increases Stake in Medafor, Inc. to Approximately 11 Percent

**ATLANTA, GA (February 2, 2010) -- CryoLife, Inc. (NYSE: CRY)**, an implantable biological medical device and cardiovascular tissue processing company, announced today that it has purchased approximately 740,000 additional shares of Medafor's common stock from Medafor shareholders for $2.00 per share. Based on the most recent information available to CryoLife, the company now owns approximately 11 percent of Medafor and continues to be Medafor's largest shareholder. CryoLife has proposed acquiring the remaining outstanding common stock of Medafor for $2.00 per share in a combination of cash and CryoLife stock, subject to completion of reasonable due diligence.

With its purchase of these additional shares of Medafor common stock, CryoLife now has the right to call a special shareholders meeting pursuant to Medafor's bylaws. CryoLife remains committed to entering into friendly negotiations with Medafor's board and management; however, in the event that Medafor's board continues to delay, a special shareholders meeting would afford CryoLife the opportunity to seek to replace the Medafor board in order to maximize value for all Medafor shareholders. CryoLife received a letter from Medafor's board on January 22, 2010 that stated that Medafor's board was considering its options. CryoLife has not heard from Medafor's board since that communication.

"We continue to believe that CryoLife has the resources and financial strength to help maximize the potential of Medafor's hemostatic technology and related products for the benefit of shareholders and patients," said Steven G. Anderson, CryoLife's chairman, president and chief executive officer. "We have provided a full and fair proposal to Medafor to acquire the company and have asked the Medafor board to engage in negotiations with us in order to realize the greatest value for its shareholders. Our objective is still to enter into a friendly negotiation with Medafor's management and board and we hope to hear from them soon. However, in the event that Medafor's board continues to drag its feet, we will evaluate all of our options including the right to call a special shareholders meeting that our increased stake affords us."

Medafor shareholders can find additional information about CryoLife and its proposal to acquire Medafor at www.cryolife.com/medaforoffer.

**ADDITIONAL IMPORTANT INFORMATION**

**This announcement is provided for informational purposes only and is not an offer to purchase nor a solicitation of an offer to sell shares of Medafor or CryoLife. Subject to future developments, CryoLife may file a registration statement and/or tender offer documents and/or proxy statement with the SEC in connection with the proposed combination. Shareholders should read those filings, and any other filings made by CryoLife with the SEC in connection with the combination, as they will contain important information. Those documents, if and when filed, as well as CryoLife's other public filings with the SEC, may be obtained without charge at the SEC's website at www.sec.gov and at CryoLife's website at www.cryolife.com.**

**About CryoLife, Inc.**

Founded in 1984, CryoLife, Inc. is a leader in the processing and distribution of implantable living human tissues for use in cardiac and vascular surgeries throughout the U.S. and Canada. The Company's CryoValve® SG pulmonary heart valve, processed using CryoLife's proprietary SynerGraft® technology, has FDA 510(k) clearance for the replacement of diseased, damaged, malformed, or malfunctioning native or prosthetic pulmonary valves. The Company's CryoPatch® SG pulmonary cardiac patch has FDA 510(k) clearance for the repair or reconstruction of the right ventricular outflow tract (RVOT), which is a surgery commonly performed in children with congenital heart defects, such as Tetralogy of Fallot, Truncus Arteriosus, and Pulmonary Atresia. CryoPatch SG is distributed in three anatomic configurations: pulmonary hemi-artery, pulmonary trunk, and pulmonary branch. 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. BioGlue is also CE marked in the European Community and approved in Canada and Australia for use in soft tissue repair. The Company's BioFoam® Surgical Matrix is CE marked in the European Community for use as an adjunct in the sealing of abdominal parenchymal tissues (liver and spleen) when cessation of bleeding by ligature or other conventional methods is ineffective or impractical. BIOGLUE *Aesthetic*™ Medical Adhesive is CE marked in the European Community for periosteal fixation following endoscopic browplasty (brow lift) in reconstructive plastic surgery and is distributed by a third party for this indication. CryoLife distributes HemoStase®, a hemostatic agent, in much of the U.S. for use in cardiac and vascular surgery and in many international markets for cardiac, vascular, and general surgery, subject to certain exclusions.

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

END

**EXHIBIT 99.2**

**ADDITIONAL IMPORTANT INFORMATION**

**This document is provided for informational purposes only and is not an offer to purchase nor a solicitation of an offer to sell shares of Medafor or CryoLife. Subject to future developments, CryoLife may file a registration statement and/or tender offer documents and/or proxy statement with the SEC in connection with the proposed combination. Shareholders should read those filings, and any other filings made by CryoLife with the SEC in connection with the combination, as they will contain important information. Those documents, if and when filed, as well as CryoLife's other public filings with the SEC, may be obtained without charge at the SEC's website at www.sec.gov and at CryoLife's website at www.cryolife.com.**

**Website FAQ**

**Why is CryoLife acquiring a stake in Medafor?**

We have acquired this significant stake in Medafor as a first step in our efforts to acquire full control of HemoStase and Medafor's hemostatic technology. We are taking this step in order to help HemoStase and related products realize their full potential. If we are successful, we believe that our experienced management team, strong direct sales force, international distribution network, and financial strength will allow us to drive additional growth of HemoStase and related products, and create value for CryoLife and Medafor shareholders. In the event we are unable to acquire control of Medafor in the near term, we believe we will be able to recover the value of this investment in the future.

**How much of Medafor does CryoLife now own?**

CryoLife believes it owns approximately 11 percent of the outstanding Medafor common stock and that it is now the largest single shareholder of Medafor, in addition to being Medafor's largest distributor.

**What are the terms of the proposal CryoLife made most recently to Medafor?**

On January 13, 2010, CryoLife sent a letter to Medafor's management and board requesting to enter into discussions with them regarding a potential acquisition by CryoLife of the remaining outstanding common stock of Medafor for $2.00 per share in a combination of cash and CryoLife stock, subject to completion of reasonable due diligence. This would provide Medafor shareholders with certain value through a cash component, as well as the opportunity to participate in future upside through continued ownership of the combined company under CryoLife leadership.

We believe this proposal to Medafor represents full and fair value, reflecting both the upside from the growth potential of HemoStase and the product's underlying technology, as well as the downside presented by the IP restrictions on this product.

Our proposal also represents a significant premium to the price at which we believe Medafor's own board and management have recently offered to convert debt into equity.

**What is the breakdown between cash and stock?**

Negotiations with the Medafor board would allow us to determine the right mix of cash and stock. We believe a cash/stock offer is appropriate and attractive, as the cash component would provide Medafor shareholders with immediate and certain value, while the stock portion would allow shareholders to participate in future upside through continued ownership of the combined company. We think the prospects for CryoLife are strong and that Medafor shareholders will be able to realize additional value by owning our stock. It is also important to note that ownership of CryoLife stock would provide shareholders with further liquidity, as they would be able to trade this stock on the New York Stock Exchange. That said, given the current economic climate, we recognize that cash may be more important to some shareholders, and we are therefore prepared to evaluate how this is best addressed.

**What has been the reaction of Medafor's board to the recent CryoLife proposal?**

CryoLife received a letter from Medafor's board on January 22, 2010 that stated that Medafor's board was considering its options. CryoLife has not heard from Medafor's board since that communication. CryoLife remains committed to entering into friendly negotiations with Medafor's board and management, but, in the event that Medafor's board continues to delay, we may consider additional actions to facilitate a transaction with Medafor that would not require the approval of current board members.

**Why did CryoLife choose to make this proposal public?**

CryoLife has made every effort to work with Medafor as partners in an amicable and productive manner. We have made numerous attempts to engage with Medafor's management and board about a potential value-creating acquisition of the company by CryoLife. Prior to Medafor's most recent communication asking us for additional time, Medafor had summarily rejected all of our overtures and refused to negotiate with us. By providing our fellow Medafor shareholders with complete and timely information about our proposal, we hope to encourage Medafor's management and board to come to the table.

**Is the proposal made to the Medafor board available to Medafor shareholders?**

Not at this time. It is our hope that by making our proposal public, we will encourage Medafor's management and board to engage in discussions with us, or at least remove any legal barriers that would prevent us from purchasing additional shares from Medafor shareholders.

**What can Medafor shareholders who wish to sell their shares to CryoLife do?**

We encourage shareholders to make their voices heard to Medafor's management and board by contacting them directly.

**Why is CryoLife purchasing additional shares from some investors but not making its proposal available to all?**

We have purchased some additional shares from Medafor shareholders in order to bring our holding to over 10 percent and to obtain the additional right of being able to call a special shareholders meeting. At this time, we remain hopeful that we can engage in friendly negotiations with Medafor's board about our proposal. While we may make some additional purchases of Medafor stock from time to time, we encourage shareholders to make their voices heard to Medafor's management and board by contacting them directly. If Medafor's board refuses to enter into negotiations with us, we will consider our other options.

**How does CryoLife intend to effect an acquisition of Medafor without agreement from their management/board if Medafor refuses to negotiate?**

It is our hope that having demonstrated our commitment to a value-creating transaction by publicly announcing our proposal, Medafor's management and board will agree to engage in discussions with us. Further, we believe that as a substantial shareholder of Medafor, we have a right to a voice in Medafor's management, and we will exercise that right to its fullest potential in order to remove any impediments that currently block Medafor shareholders from being able to sell their shares to us. If necessary, we may consider additional actions to facilitate a transaction with Medafor that would not require the approval of current board members.

**Why should Medafor sell itself to CryoLife?**

Medafor needs to accelerate its rollout of HemoStase and the underlying hemostatic technology. Such a rollout inherently requires a significant outlay of capital. We think CryoLife can facilitate this rollout in a way that would prevent the need for repeatedly accessing traditional equity markets. Accessing equity markets will likely produce unnecessary further dilution for Medafor's current shareholders. We note that current management has increased outstanding shares by more than 13 million shares since 2005 (at that time there were only 7.7 million shares outstanding), and has not been able to generate an exit strategy that provides value to existing Medafor shareholders. At the same time, as Medafor's largest distributor, we feel that integrating our two companies would produce the greatest revenue growth and profitability for this technology, and increase returns for both Medafor and CryoLife shareholders.

**How has Medafor failed to help HemoStase reach its full potential? What will CryoLife do differently?**

Medafor has failed to maximize the potential of HemoStase and the product's underlying technology for its shareholders. Medafor's capital constraints prevent it from conducting significant research and development and investing in its sales force and distribution network in a meaningful way. With significantly greater resources, CryoLife would remedy this.

Our management team has over 150 years combined experience in the medical device business. We have a direct sales force in the U.S. and an international distribution network comprised of both direct employees and third party representatives who are focused on cardiac, vascular and general surgeons. HemoStase is a perfect complement to CryoLife's BioGlue technology; together BioGlue and HemoStase offer a full range of products to our surgeon customers to assist them in the control and prevention of bleeding. We have already demonstrated our ability to sell HemoStase (having achieved $6 million in sales in 2009) and have the resources available to us to ensure that HemoStase and related products properly penetrate the market.

**How did CryoLife come to this current proposal?**

The proposal price results from a detailed analysis of Medafor, its products, and the market conducted by CryoLife in conjunction with its financial and legal advisors. The valuation is consistent with comparable company valuations, similar M&A transactions, and other relevant metrics and methodologies. We believe our proposal to Medafor represents full and fair value, reflecting both the upside from the growth potential of HemoStase and the product's underlying technology, as well as the downside presented by the significant IP restrictions on this product. Of course, our analysis is based upon the best information available to us. We remain open to negotiating our proposal further with Medafor's management and board, and have indicated our desire to enter into discussions and consider further information about Medafor. Any final offer will be contingent upon the conclusion of reasonable due diligence.

In the event that Medafor's board does not engage in negotiations with us, we plan to provide additional detail with regard to our valuation of Medafor directly to shareholders.

**Does CryoLife's Medafor stake give CryoLife any additional powers outside those of a normal shareholder?**

Minnesota corporate law gives special rights to persons who own 3% or more of the common stock in Medafor. Thus, CryoLife has the right to propose amendments to the Articles of Incorporation or bylaws of Medafor at a regularly scheduled meeting of shareholders, and if a meeting has not been held during the last 15 months, CryoLife can demand one.

Additionally, as an owner of more than 10% of Medafor's outstanding shares, CryoLife has the right to call a special shareholders meeting pursuant to Medafor's bylaws. CryoLife remains committed to entering into friendly negotiations with Medafor's board and management, but, in the event that Medafor's board continues to delay, a special shareholders meeting would afford CryoLife the opportunity to seek to replace the Medafor board in order to maximize value for all Medafor shareholders.

**What are CryoLife's next steps?**

We hope to begin negotiations with the Medafor board. If necessary, however, we may consider additional actions to facilitate a transaction with Medafor that would not require the approval of current board members.

**When does CryoLife plan to communicate with Medafor shareholders?**

Outside of this information, if we are unable to meet with or reach agreement with the Medafor board in a timely fashion, we plan to continue to communicate with Medafor shareholders directly about our offer for Medafor and our strategy for the company going forward.

**What is the timing for this process?**

If Medafor's board agrees to negotiate with us and we ultimately reach agreement, we believe this process could take several months. If Medafor's board refuses to negotiate with us, then we will evaluate our options.

**Who can shareholders contact if they have questions?**

You may contact Nina Devlin at Edelman at 212-704-8145 for more information. You may also leave a question at the following email address medaforinfo@cryolife.com and someone will contact you.

*Statements made in this document 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 statements include those regarding future actions we may take with respect to Medafor, our efforts to acquire full control of HemoStase and Medafor's hemostatic technology, our ability to help HemoStase realize its full potential and drive additional sales of HemoStase and related products, and create value and increase returns for CryoLife and Medafor shareholders, our belief that we will be able to recover the value of our investment in Medafor, our plans to communicate with Medafor shareholders about our offer for Medafor and our strategy for the company going forward at a future date, and our beliefs regarding the potential timing of a transaction. These future events may not occur as and when expected, if at all, and, together with our business, are subject to various risks and uncertainties. These risks and uncertainties include that any transaction with Medafor may not occur or may be delayed due to circumstances and events beyond our control, including legal impediments, we may not be able to realize the anticipated benefits of a transaction with Medafor, our plans to acquire Medafor may change, our plans to communicate publicly regarding the proposed transaction may change and may be influenced by various legal and regulatory considerations, and Medafor's management may act in ways that differ from our current expectations. The timing of and our ability to communicate with Medafor shareholders may be impacted by the actions of Medafor management. Also, the success of any transaction between CryoLife and Medafor is subject to risks facing both companies. These risks include that CryoLife is significantly dependent on revenues from BioGlue and there are a variety of risks affecting BioGlue, CryoValve SG pulmonary heart valves and other SynerGraft processed tissues and products may not be accepted by the marketplace, the CryoValve SG pulmonary heart valve has a one year shelf life, the CryoPatch SG has a one year shelf life, we are dependent on the availability of sufficient quantities of tissue from human donors, the CryoValve SG pulmonary heart valve post-clearance study requested by the FDA may not provide the expected positive results, our products and tissues we process and preserve have allegedly caused and may in the future cause injury to patients, and we have been and may be exposed to tissue processing and product liability claims and additional regulatory scrutiny as a result, the possibility that the FDA could impose additional restrictions on our operations, issue a 483, or warning letter, or require a recall, or prevent us from processing and distributing tissues or manufacturing and distributing other products, our failure to adequately comply with government regulations could result in loss of revenues and customers as well as additional compliance expense, our ability to borrow under our credit facility may be limited, the credit facility limits our ability to pursue significant acquisitions, the financial and credit liquidity crisis may adversely affect our ability to borrow money or raise capital, the current economic crisis and future economic crises may adversely affect our business and financial condition, there are limitations on our use of net operating loss carry-forwards that could result in our inability to use them fully or at all, adverse regulatory action outside of the U.S. could affect our business, physicians have been and may be reluctant to implant or use our preserved tissues or products, our existing insurance policies may not be sufficient to cover our actual claims liability, current economic conditions may impact demand for our tissues and products, intense competition may affect our ability to operate profitably, we may be unable to obtain adequate insurance at a reasonable cost or at all, uncertainties related to patents and protection of proprietary technology may adversely affect the value of our intellectual property, uncertainties related to patents and protection of proprietary technology for products distributed by us may adversely affect our ability to distribute those products, we are dependent on key personnel, we may not be successful in obtaining necessary clinical results and regulatory approvals for products and services in development, and our new products and services may not achieve market acceptance, we may be unable to effectively leverage our existing sales force to sell HemoStase, the lawsuit we filed against Medafor regarding our distribution agreement with Medafor may continue to adversely impact our relationship with Medafor and could hamper or prevent us from distributing HemoStase, Medafor may in the future attempt to terminate our distribution agreement, rapid technological change could cause our services and products to become obsolete, extensive government regulation may adversely affect our ability to develop and sell products and services, we have experienced operating losses and negative cash flows in the past, and we must continue to address the underlying causes in order to continue to operate profitably and generate positive cash flows, investments in new technologies and acquisitions of products or distribution rights may not be successful, if we are not successful in expanding our business activities in international markets, we will be unable to pursue one of our strategies for increasing our revenues, continued deflation of foreign currencies relative to the U.S. dollar could materially and adversely impact our foreign revenues, and future healthcare policies, healthcare reimbursement methods, and healthcare reimbursement policies may affect the availability, amount, and timing of our revenues, financial condition, and profitability. These risks and uncertainties include the risk factors detailed in our Securities and Exchange Commission filings, including our Form 10-K filing for the year ended December 31, 2008, our Form 10-Q filing for the quarter ended March 31, 2009, our Form 10-Q filing for the quarter ended June 30, 2009, our Form 10-Q filing for the quarter ended September 30, 2009, and the Company's other SEC filings. Medafor's business is also subject to a number of risks, including the risk that HemoStase does not have adequate intellectual property protection, that additional regulatory approvals may not be obtained in a timely fashion, if at all, and that product liability lawsuits could be filed in connection with the use of HemoStase. In addition, the acquisition of Medafor by CryoLife, if it occurs, could result in unexpected costs or liabilities to CryoLife due to potential non-compliance by Medafor under applicable laws and regulations, although CryoLife is currently not aware of any material non-compliance, or due to other factors that we are not currently able to predict, as we have not had the opportunity to perform a due diligence review with respect to Medafor. The Company does not undertake to update its forward-looking statements. In addition, the calculation of the estimated percentage of Medafor's outstanding shares owned by CryoLife is based on 20,950,445 shares outstanding, the number of outstanding shares shown on Medafor's shareholder list as updated on January 21, 2010. This calculation does not take into account any shares that may have been repurchased or issued by Medafor since that date. As a result, CryoLife's actual percentage ownership of Medafor's outstanding common stock may be greater or less than 11%.*