
**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): September 18, 2009

CRYOLIFE, INC.

(Exact name of registrant as specified in its charter)

Florida
(State or Other Jurisdiction
of Incorporation)

1-13165
(Commission File Number)

59-2417093
(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))
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Section 1 Registrant's Business and Operations

Item 1.02 Termination of a Material Definitive Agreement.

CryoLife, Inc. ("CryoLife" or the "Company") and Medafor, Inc. ("Medafor") are parties to an exclusive distribution agreement (the "Agreement") whereby CryoLife distributes Hemostase, an absorbable blood clotting agent manufactured and developed by Medafor. On September 18, 2009, Medafor informed CryoLife of its belief that CryoLife has materially breached its duties and obligations under the Agreement and gave CryoLife notice of its intent to terminate the Agreement if the breach is not cured within 30 days. While Medafor contends that a material breach has occurred because CryoLife has pursued regulatory approval to distribute Hemostase in Hong Kong, CryoLife believes a court would find that a material breach of the Agreement has not occurred, and that, in the event a breach has occurred, that CryoLife would be able to cure it within 30 days of CryoLife's receipt of notice. As such, CryoLife does not believe the Agreement will terminate on October 18, 2009.

The Agreement has a three-year term from its effective date of May 1, 2008 and will automatically renew for an additional three-year period if CryoLife makes minimum purchases as designated under the Agreement; however, there is no contractual obligation for CryoLife to make minimum purchases. Per the terms of the Agreement, CryoLife is the exclusive distributor of Hemostase in the U.S. for cardiac and vascular surgery (excluding Department of Defense hospitals) and the exclusive distributor internationally (excluding China and Japan) for cardiac, vascular, and general surgery, other than orthopaedic and ear, nose and throat surgery.

As previously discussed in the Company's Forms 10-Q for the quarters ended March 31, 2009 and June 30, 2009, CryoLife has filed a lawsuit against Medafor alleging that Medafor has violated the Agreement by, among other things, entering into exclusive distribution agreements with other companies with respect to distribution territories reserved for CryoLife per the terms of the Agreement.

The Agreement is filed as Exhibit 10.1 to the Company's Form 10-Q for the quarter ended June 30, 2008 and is incorporated herein by reference.

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. These statements include CryoLife's belief that a court would find that a material breach of the Agreement has not occurred, and that CryoLife would be able to cure any alleged breach of the Agreement, and CryoLife's belief that the Agreement will not terminate on October 18, 2009. These statements are subject to a number of risks that are outside CryoLife's control, including the risk that Medafor will not act reasonably in this matter or that a court could disagree with CryoLife's interpretation of the Agreement and its rights thereunder. For further information on further risk factors impacting CryoLife's relationship with Medafor and CryoLife's business, please refer to "Risk Factors" contained in CryoLife's Form 10-K for the year ended December 31, 2008, as filed with the SEC, and any subsequent SEC filings. CryoLife disclaims any obligation or duty to update or modify these forward-looking statements.

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: September 24, 2009

By: /s/ D. Ashley Lee

Name: D. Ashley Lee

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