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 2, 2005

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

FLORIDA (State or Other Jurisdiction (Commission File Number) of Incorporation)

1-13165

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))

SECTION 1 REGISTRANT'S BUSINESS AND OPERATIONS. ITEM 1.01. ENTERING INTO A MATERIAL DEFINITIVE AGREEMENT.

On April 15, 2005, David M. Fronk replaced Dr. Lynch as the Company's Vice President, Regulatory Affairs and Quality Assurance. On May 2, 2005, the Compensation Committee of the Company's Board of Directors increased Mr. Fronk's annual base salary by \$14,775 to \$240,000, and granted him a 66-month option to acquire up to 5,000 shares of the Company's common stock at \$6.16 per share. The options vest 20% per year over 5 years.

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 4, 2005

By: /s/ D. Ashley Lee Name: D. Ashley Lee Title: Executive Vice President, Chief Operating Officer and Chief Financial Officer