

CRYOLIFE, INC.
1655 Roberts Blvd., NW
Kennesaw, Georgia 30144
770-419-3355

September 1, 2015

VIA EDGAR

Ms. Heather Percival
Division of Corporation Finance
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, D.C. 20549

Re: CryoLife, Inc. (the "Company")
Registration Statement on Form S-3, as amended by Amendment No. 1 to Form S-3
File Number 333-206119

Dear Ms. Percival:

Pursuant to Rule 461 promulgated under the Securities Act of 1933, as amended, the undersigned respectfully requests that the effective date for the above-referenced Registration Statement, as amended by that certain Amendment No.1 to Form S-3 (the "Registration Statement"), be accelerated so that the Registration Statement may become effective at 5:00 p.m., Eastern Standard Time, on September 3, 2015, or as soon thereafter as is practicable.

The Company hereby acknowledges that:

- 1) should the Securities and Exchange Commission (the "Commission") or the staff, acting pursuant to delegated authority, declare the Registration Statement effective, it does not foreclose the Commission from taking any action with respect to the Registration Statement;
 - 2) the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the Registration Statement effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the Registration Statement; and
 - 3) the Company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.
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Please direct any questions concerning this matter to Joe Alley, the Company's outside counsel, at 404-873-8688.

Very truly yours,

CRYOLIFE, INC.

By: /s/ D. Ashley Lee

Name: D. Ashley Lee

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

Officer

cc: Roger T. Weitkamp, Associate General Counsel, CryoLife, Inc.
B. Joseph Alley, Jr., Arnall Golden Gregory LLP