



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

April 25, 2012

**VIA EDGAR AND FACSIMILE (202) 772-9218**

Ms. Amanda Ravitz  
Assistant Director  
Division of Corporation Finance  
U.S. Securities and Exchange Commission  
100 F Street, NE  
Washington, D.C. 20549

Re: **CryoLife, Inc.**  
**Registration Statement on Form S-3**  
**Filed February 22, 2012**  
**File Number 333-179629**

Dear Ms. Fisher:

Pursuant to Rule 461 promulgated under the Securities Act of 1933, as amended, we hereby request that the effectiveness of the above-referenced Registration Statement on Form S-3 of CryoLife, Inc. (the "Company") be accelerated so that the Registration Statement may become effective at 5:00 p.m., Eastern Standard Time, on April 27, 2012, or as soon thereafter as possible.

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.

Please direct any questions concerning this matter to Joe Alley, the Company's outside counsel, at 404-873-8688.

Very truly yours,

CRYOLIFE, INC.

/s/ Steven G. Anderson  
Steven G. Anderson

President, Chief Executive Officer and Chairman of the Board of Directors

cc: Jeffrey W. Burris, CryoLife, Inc.  
Tom Jones, United States Securities and Exchange Commission  
Daniel Morris, Special Counsel, United States Securities and Exchange Commission  
B. Joseph Alley, Jr., Arnall Golden Gregory LLP

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