UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 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) December 15, 2006

REGENERATION TECHNOLOGIES, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware (State or Other Jurisdiction 0-31271 (Commission File Number) 59-3466543 (IRS Employer

of Incorporation)

Identification No.)

11621 Research Circle, Alachua, Florida (Address of Principal Executive Offices)

32615 (Zip Code)

Registrant s telephone number, including area code: (386) 418-8888

Not Applicable

(Former Name or Former Address, if Changed Since Last Report)

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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:

- " 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))

Item 1.01 Entry into a Material Definitive Agreement.

On December 15, 2006, Regeneration Technologies, Inc. (the Company) and CryoLife, Inc. (CryoLife) entered into an Exchange and Service Agreement.

According to the Exchange and Service Agreement, CryoLife will cease accepting donated human orthopedic tissues for processing on January 1, 2007 and will work to transition existing arrangements for recovery of human orthopedic tissue to the Company. Likewise on January 1, 2007, the Company will cease accepting donated human cardiovascular tissues for processing and will work to transition its arrangements for recovery of human cardiovascular tissue to CryoLife. Certain physical assets will also be transferred between the parties. No cash was exchanged in the transaction.

The Company will continue to distribute its existing cardiovascular tissue inventory and CryoLife will continue to distribute its existing orthopedic tissue inventory through June 30, 2008. After that date, CryoLife will become entitled to distribute the Company s remaining cardiovascular tissue inventory and the Company will become entitled to distribute CryoLife s remaining orthopedic tissue inventory through December 31, 2008. Under the Exchange and Service Agreement, from July 1, 2008 through December 31, 2016, CryoLife has agreed not to market or solicit orders for certain human orthopedic tissues for sports injuries and the Company has agreed not to market or solicit orders for human cardiac and vascular tissues.

In connection with the implementation of the Exchange and Service Agreement, the Company expects to recognize certain accounting charges in the fourth quarter of 2006, including charges for employee severance payments.

A copy of the press release announcing the Exchange and Service Agreement is furnished herewith as Exhibit 99.1.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

99.1 Press Release dated December 19, 2006.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

REGENERATION TECHNOLOGIES, INC.

Date: December 20, 2006 By: /s/ Thomas F. Rose

Name: Thomas F. Rose

Title: Vice President and Chief Financial Officer

EXHIBIT INDEX

99.1 Regeneration Technologies, Inc. press release dated December 19, 2006.