December 12, 2006	
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): December 9, 2006	
OSIRIS THERAPEUTICS, INC.	
(Exact Name of Registrant as Specified in Charter)	
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OSIRIS THERAPEUTICS, INC.

Form 8-K

# **Delaware** (State or other jurisdiction of incorporation)

# 001-32966

71-0881115

(Commission File Number)

(IRS Employer Identification No.)

**2001 Aliceanna Street, Baltimore, Maryland** (Address of principal executive offices)

21231 (Zip Code)

Registrant s telephone number, including area code: (410) 522 - 5005

#### Not Applicable

(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:

- o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14d-2(b))
- o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- o Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

#### ITEM 7.01 Regulation FD Disclosure

On December 9, 2006, Osiris Therapeutics, Inc. issued a follow-on press release announcing updates on the Phase II trial evaluating Prochymal for the treatment of acute graft vs. host disease. The study found that patients were twice as likely to have total clinical resolution of their disease when Prochymal was added to steroid therapy, compared to reported results for steroids alone. The study also found that patients experiencing this complete response had a survival rate of over 90% at day 120. The press release is attached hereto as an exhibit to this Current Report on Form 8-K and is being filed pursuant to this Item 8.01 as Exhibit 99.1 to this Current Report on Form 8-K.

The information included herein, including Exhibit 99.1 furnished herewith, shall not be deemed to be filed for purposes of Section 18 of the Securities Act of 1934, as amended (the Exchange Act ), or otherwise subject to the liabilities of that section, nor shall it be incorporated by reference into any filing pursuant to the Securities Act of 1933, as amended, or the Exchange Act, regardless of any incorporation by reference language in any such filing, except as expressly set forth by specific reference in such filing.

#### ITEM 9.01. Financial Statements and Exhibits

(d) Exhibits.

99.1 Registrant s press release dated December 9, 2006

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#### **SIGNATURES**

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

OSIRIS THERAPEUTICS, INC.

Dated: December 12, 2006 By: /s/ CARY J. CLAIBORNE

Cary J. Claiborne Chief Financial Officer

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# EXHIBIT INDEX

# Exhibit No. Description

99.1 Registrant s press release dated December 9, 2006

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