Raptor Pharmaceutical Corp
Form 424B3
July 27, 2011

Prospectus Supplement No. 4 Filed Pursuant to Rule 424(b)(3)
Registration No. 333-162374

Prospectus Supplement No. 4 dated July 26, 2011
(To Prospectus dated December 1, 2010)

3,747,558 SHARES OF COMMON STOCK
SERIES A WARRANTS TO PURCHASE UP TO 1,873,779 SHARES OF COMMON STOCK
SERIES B WARRANTS TO PURCHASE UP TO 1,873,779 SHARES OF COMMON

This prospectus supplement no. 4 supplements that certain prospectus dated December 1, 2010, as supplemented by that certain prospectus supplement no. 1, dated January 14, 2011, prospectus supplement no. 2, dated April 13, 2011 and prospectus supplement no. 3, dated July 21, 2011 (collectively, the "Prospectus") of Raptor Pharmaceutical Corp., a Delaware corporation (the "Company") relating to the offering for sale of 3,747,558 units, consisting of (i) 3,747,558 shares of the Company's common stock, (ii) warrants to purchase an aggregate of up to 1,873,779 shares of the Company's common stock (and the shares of common stock issuable from time to time upon exercise of such warrants), exercisable, subject to its terms, at $2.45 per share, during the period beginning on June 20, 2010 and ending on December 22, 2014, and (iii) warrants to purchase an aggregate of up to 1,873,779 shares of the Company's common stock (and the shares of common stock issuable from time to time upon exercise of such warrants), exercisable, subject to its terms, at $2.45 per share, during the period beginning on June 20, 2010 and ending on June 22, 2011.

This prospectus supplement no. 4 contains the Current Report on Form 8-K filed by the Company with the Securities and Exchange Commission on July 25, 2011. This prospectus supplement no. 4 is not complete without, and may not be delivered or used except in connection with, the Prospectus. This prospectus supplement no. 4 is qualified by reference to the Prospectus except to the extent that the information in this prospectus supplement no. 4 updates and supersedes the information contained in the Prospectus, including any supplements or amendments thereto.

INVESTING IN THE COMPANY'S COMMON STOCK INVOLVES SUBSTANTIAL RISKS. SEE THE SECTION TITLED "RISK FACTORS" BEGINNING ON PAGE 9 OF THE PROSPECTUS TO READ ABOUT FACTORS YOU SHOULD CONSIDER BEFORE BUYING SHARES OF THE COMPANY'S COMMON STOCK.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THE PROSPECTUS OR THIS PROSPECTUS SUPPLEMENT NO. 4. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus supplement is July 26, 2011.

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): July 25, 2011

RAPTOR PHARMACEUTICAL CORP.

(Exact name of registrant as specified in its charter)

Delaware	000-25571	86-0883978
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

9 Commercial Blvd., Suite 200, Novato, California 94949
(Address of principal executive offices and Zip Code)

Registrant's telephone number, including area code: (415) 382-8111

(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))

Item 8.01 Other Events.

On July 25, 2011, Raptor Pharmaceutical Corp., a Delaware corporation (the "Company"), issued a press release announcing that its Phase 3 clinical trial of Delayed Release or DR Cysteamine, known as study drug RP103, for the treatment of nephropathic cystinosis, met the primary endpoint of non-inferiority compared to Cystagon®, immediate-release cysteamine bitartrate. The comparison was based on white blood cell ("WBC") cystine levels, the established efficacy surrogate biomarker and the sole primary endpoint in the clinical trial. Of 41 patients who completed the Phase 3 protocol, 38 were included in the evaluable data set. As specified in the Statistical Analysis Plan agreed upon with the US Food and Drug Administration, three patients that had WBC cystine levels above two while on Cystagon® during the clinical trial were excluded from the primary endpoint analysis (evaluable data set).

The Company's press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated by reference into this Item 8.01.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Exhibit Description	Filed Here with	Incorporated by Reference				
			Form	File No.	Exhibit	Filing Date	Filed By
99.1	Press release issued by the Company dated as of July 25, 2011	X					

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 hereunto duly authorized.

RAPTOR
PHARMACEUTICAL
CORP.

Date: July 25, 2011

By: /s/ Kim R. Tsuchimoto
Name: Kim R. Tsuchimoto
Title: Chief Financial Officer,
Treasurer and Secretary

Exhibit Index

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99.1	Press release issued by the Company dated as of July 25, 2011	X					

Exhibit 99.1

Raptor Pharmaceutical Meets Primary Endpoint
in its Phase 3 Clinical Trial of
DR Cysteamine for Nephropathic Cystinosis

Novato, California, July 25, 2011 – Raptor Pharmaceutical Corp. ("Raptor" or the "Company") (NASDAQ: RPTP), today announced that its Phase 3 clinical trial of Delayed Release or DR Cysteamine, known as study drug RP103 ("RP103"), for the treatment of nephropathic cystinosis, met the primary endpoint of non-inferiority compared to Cystagon®, immediate-release cysteamine bitartrate. The comparison was based on white blood cell ("WBC") cystine levels, the established efficacy surrogate biomarker and sole primary endpoint in the clinical trial. The Company also reported that there were no unexpected serious safety concerns experienced by patients in the trial attributable to RP103.

Nephropathic cystinosis is a severe ultra-orphan inherited condition which results in premature death if not treated. The current standard of care for cystinosis is oral Cystagon®, immediate-release cysteamine bitartrate, which must be taken strictly every 6 hours, including a middle-of-the-night dose. Lack of compliance with the strict dosing schedule of Cystagon® has been widely reported to be a significant challenge in the therapeutic management of cystinosis patients. RP103 is Raptor's proprietary, twice-daily formulation of cysteamine bitartrate, designed for reduced dose frequency and improved tolerability for the treatment of cystinosis. Raptor's pivotal Phase 3 clinical trial was designed as an outpatient study of the pharmacodynamics, pharmacokinetics, safety and tolerability of RP103 compared to Cystagon® in cystinosis patients. The clinical trial was conducted at eight clinical research centers in the US and Europe.

Of 41 patients who completed the Phase 3 protocol, 38 were included in the evaluable data set, 3 not being fully compliant with the protocol. The age range of study participants was 6-26 years, with 87% of patients below 16 years old. On average, the peak WBC cystine level measured in patients treated with Cystagon® was 0.54 ± 0.05 nmol ½ cystine/mg protein, compared to an average peak value of 0.62 ± 0.05 nmol ½ cystine/mg protein for patients treated with RP103. The mean difference was 0.08 nmol ½ cystine/mg protein, with a 95.8% confidence interval of 0.00-0.16 (one sided p=0.021). As stipulated in the Statistical Analysis Plan, the non-inferiority endpoint of the clinical trial would be achieved when the upper end of the confidence interval around the mean difference of WBC cystine levels did not exceed an absolute value of 0.3. The upper end of the confidence interval in the Phase 3 clinical trial was determined to be 0.16, thus achieving the non-inferiority endpoint.

"We are obviously very excited to have successfully met our primary endpoint of this study," said Christopher M. Starr, Ph.D. and CEO of Raptor "and we would like to sincerely thank all the study participants, families and study coordinators for their time and effort in helping us complete this study."

Additionally, the endpoint was achieved at a lower average daily dose of RP103, compared to Cystagon®. Patients enrolled in the study were required to be "well controlled" under the existing Cystagon® therapy. The starting dose of RP103 for patients in the Phase 3 clinical trial was initially set at 70% of their established dose of Cystagon®. The protocol allowed for a single RP103 dose increase of 25%, based on intermediate WBC cystine results, to reflect the current standard of care in establishing appropriate dosing of Cystagon® in cystinosis patients. Approximately one-third of patients remained at 70% of their starting Cystagon® dose throughout the study. The remaining two-thirds of the patients had their RP103 dose increased. On average, the total daily, steady-state dose of RP103 in patients in the Phase 3 clinical trial was 82% of their established, incoming dose of Cystagon®.

In the course of the study, seven serious adverse events ("SAEs") requiring a visit to the emergency room or hospital, were reported for seven individual patients. Of these seven SAEs, six were determined by the Principal Investigator to be unrelated to either RP103 or Cystagon®. One SAE, gastric intolerance, was graded as "possibly related" to RP103 and was subsequently resolved. Further analyses of non-serious adverse events ("AEs") are underway by the Company's statistical contractor.

The Company is conducting an ongoing, extension study in which all patients completing the Phase 3 clinical trial may elect to continue on RP103 treatment and are monitored for WBC cystine levels and safety parameters. The extension study will provide at least six months of safety data for each patient and will be part of Raptor's New Drug Application filing. Thirty-two patients have been on RP103 in the extension study for at least 6 months.

Additional Successful Bioequivalence Study Announced

In a related clinical trial, Raptor demonstrated bioequivalence between RP103 administered as whole capsules and administered as capsule contents sprinkled onto applesauce. As a significant number of cystinosis patients are too young to take whole capsules, this result may enable the Company to expand enrollment in the extension study to patients who are too young to swallow whole capsules and were therefore ineligible for the pivotal Phase 3 clinical trial protocol.

In addition to the planned submission of the clinical data for publication, Raptor will present the top line clinical data at the Canaccord Genuity Annual Growth Conference on August 9th in Boston, MA and at the Wedbush Securities Life Sciences Management Access Conference on August 16th in New York, NY.

About Nephropathic Cystinosis

Nephropathic cystinosis is an inborn metabolic error characterized by the abnormal transport of cystine, an amino acid, out of the lysosomes. Poor compliance with current treatments for nephropathic cystinosis can cause serious health consequences, including: renal failure and resultant need for a kidney transplant; growth failure; rickets and fractures; and photophobia and blindness. Symptom onset typically occurs within the first year of life, when cystine crystals accumulate in various tissues and organs, including the kidneys, brain, liver, thyroid, pancreas, muscles and eyes.

About Cysteamine and RP103

RP103 is Raptor's proprietary enteric-coated, microbead oral formulation of cysteamine bitartrate designed to potentially reduce dosing frequency and reduce gastrointestinal side effects associated with immediate-release cysteamine bitartrate, which is approved for sale by the US Food and Drug Administration ("FDA") and the European Medicines Agency ("EMA") to treat nephropathic cystinosis. Raptor has been granted orphan product designation for RP103 by the EMA and FDA.

In December 2007, Raptor obtained an exclusive, worldwide license from the University of California, San Diego for the development DR Cysteamine for nephropathic cystinosis and cysteamine for other potential indications including Huntington's Disease, and Non-alcoholic Steatohepatitis (“NASH”).

About Raptor Pharmaceutical Corp.

Raptor Pharmaceutical Corp. (NASDAQ: RPTP) (“Raptor”) seeks to research, produce, and deliver medicines that improve life for patients with severe, rare disorders. Raptor currently has product candidates in clinical development designed to potentially treat nephropathic cystinosis, Non-alcoholic Steatohepatitis (“NASH”), Huntington’s Disease (“HD”), aldehyde dehydrogenase deficiency (“ALDH2”), and thrombotic disorder.

Raptor’s preclinical programs are based upon bioengineered novel drug candidates and drug-targeting platforms derived from the human receptor-associated protein and related proteins that are designed to target cancer, neurodegenerative disorders and infectious diseases.

For additional information, please visit www.raptorpharma.com.

FORWARD LOOKING STATEMENTS

This document contains forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements relate to future events or our future results of operation or future financial performance, including, but not limited to the following statements: that Dr Cysteamine will reduce dose frequency and improve tolerability compared to immediate-release cysteamine; that Raptor will file a New Drug Application, if at all; that Raptor will be able to expand enrollment in the extension study to patients who are too young to swallow whole capsules; that Raptor will successfully submit the clinical data for publication, if at all; and that Raptor will be able to successfully develop RP103 or DR Cysteamine or any of its other product candidates. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, which may cause the Company's actual results to be materially different from these forward-looking statements. Factors which may significantly change or prevent the Company's forward looking statements from fruition include: that Raptor may be unsuccessful in developing any products or acquiring products; that Raptor's technology may not be validated as it progresses further and its methods may not be accepted by the scientific community; that Raptor is unable to retain or attract key employees whose knowledge is essential to the development of its products; that unforeseen scientific difficulties develop with the Company's process; that Raptor's patents are not sufficient to protect essential aspects of its technology; that competitors may invent better technology; that Raptor's products may not work as well as hoped or worse, that the Company's products may harm recipients; and that Raptor may not be able to raise sufficient funds for development or working capital. As well, Raptor's products may never develop into useful products and even if they do, they may not be approved for sale to the public. Raptor cautions readers not to place undue reliance on any such forward-looking statements, which speak only as of the date they were made. Certain of these risks, uncertainties, and other factors are described in greater detail in the Company's filings from time to time with the Securities and Exchange Commission (the "SEC"), which Raptor strongly urges you to read and consider, including: Raptor's annual report on Form 10-K filed with the SEC on November 22, 2010; and Raptor's quarterly report on Form 10-Q filed with the SEC on July 12, 2011; all of which are available free of charge on the SEC's web site at http://www.sec.gov. Subsequent written and oral forward-looking statements attributable to Raptor or to persons acting on its behalf are expressly qualified in their entirety by the cautionary statements set forth in Raptor's reports filed with the SEC. Raptor expressly disclaims any intent or obligation to update any forward-looking statements.

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