SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE TO

(Rule 14d-100)

Tender Offer Statement under Section 14(d)(1) or 13(e)(1) of the Securities Exchange Act of 1934 (Amendment No. 1)

ENZON PHARMACEUTICALS, INC.

(Name of Subject Company (Issuer))

ENZON PHARMACEUTICALS, INC.

(Names of Filing Persons (Issuer))

4% Convertible Senior Notes due 2013

(Title of Class of Securities)

293904 AE 8; 293904 AD 0

(CUSIP Numbers of Class of Securities)

Scott B. Waldman Enzon Pharmaceuticals, Inc. 685 Route 202/206 Bridgewater, New Jersey 08807 (908) 541-8600

Copy to:

Andrea Nicolas, Esq. Skadden, Arps, Slate, Meagher & Flom LLP 4 Times Square New York, New York 10036 (212) 735-3000

(Name, Address and Telephone Numbers of Person Authorized to Receive Notices and Communications on Behalf of Filing Persons)

| | Calculation of Filing Fee | | | | |
|-------|--|-----------------------------------|-------------------------------------|---|---|
| | Transaction Valuation* | | | Amount of Filing Fee** | |
| | \$99,999,750 | | | \$3,930 | |
| * | | \$750 per \$1,000 principal am | | te of \$133,333,000 aggregate principal amount of Enzon's 4% Convertible Senior Notes du \$39.30 for each \$1,000,000 of value, was calculated in accordance with Rule 0-11 of the second s | |
| ** | Previously Paid. | | | | |
| | Check the box if any part of the fee is offset as provided by Rule 0-11(a)(2) and identify the filing with which the offsetting fee was previously paid. Identify the previous filing by registration statemen number, or the Form or Schedule and the date of its filing. | | | | t |
| | Amount Previously Paid: | None | Filing Party: | Not applicable | |
| | Form or Registration No.: | Not applicable | Date Filed: | Not applicable | |
| | Check the box if the filing relates solely to | to preliminary communications | made before the commencement of a t | render offer. | |
| Check | the appropriate boxes below to designate an | ny transactions to which the stat | rement relates: | | |
| | third-party tender offer subject to Rule 14 | d-1. | | | |
| X | issuer tender offer subject to Rule 13e-4. | | | | |
| | going-private transaction subject to Rule | 13e-3. | | | |

amendment to Schedule 13D under Rule 13d-2.

Rule 133-14(i) (Cross-Border Issuer Tender Offer)
Rule 14d-1(d) (Cross-Border Third-Party Tender Offer)

Check the following box if the filing is a final amendment reporting the results of the tender offer:
*If applicable, check the appropriate box(es) below to designate the appropriate rule provision(s) relied upon:

AMENDMENT NO. 1 to SCHEDULE TO

This Amendment No. 1 (this "Amendment") amends and supplements the Tender Offer Statement on Schedule TO (the "Original Schedule TO" and together with this Amendment, the "Schedule TO") originally filed with the Securities and Exchange Commission (the "SEC") on December 8, 2008, by Enzon Pharmaceuticals, Inc., a Delaware corporation ("Enzon"). The Schedule TO relates to the offer by Enzon to purchase for cash up to \$133,333,000 aggregate principal amount of its 4% Convertible Senior Notes due 2013 (the "Notes") at a price not greater than \$750 nor less than \$700 per \$1,000 principal amount, plus accrued and unpaid interest thereon up to, but not including, the date of purchase upon the terms and subject to the conditions set forth in the Offer to Purchase, dated December 8, 2008 (the "Offer to Purchase") and in the related Letter of Transmittal, copies of which are filed as Exhibits (a)(1)(A) and (a)(1)(B), respectively, to the Original Schedule TO (which together constitute the "Offer"). This Amendment is hereby filed to satisfy the reporting requirements of Rule 13e-4(c)(3) under the Securities Exchange of Act of 1934, as amended.

Capitalized terms used and not defined herein shall have the meanings given to them in the Offer to Purchase and Schedule TO.

Item 1. Summary Term Sheet.

The information set forth in the Offer to Purchase is hereby amended and supplemented by adding the following language thereto:

On January 8, 2009, Enzon issued a press release announcing that the Expiration Date of the Offer had been extended. The Offer will expire at 5:00 pm, New York City time, on Wednesday, January 21, 2009.

A copy of the press release is attached hereto as Exhibit (a)(5)(C) and is incorporated herein by reference.

Item 4. Terms of the Transaction.

Item 4 of the Original Schedule TO is hereby amended and supplemented by incorporating by reference the information contained in Item 1 above.

| Item 1 | 12. | Exhi | bits. |
|--------|-----|------|-------|
|--------|-----|------|-------|

| (a)(1)(A)* | Offer to Purchase, dated December 8, 2008. |
|------------|--|
| (a)(1)(B)* | Form of Letter of Transmittal. |
| (a)(5)(A) | Press Release, dated December 3, 2008 (filed as Exhibit 99.1 to Enzon's Form 8-K filed on December 3, 2008 and incorporated herein by reference). |
| (a)(5)(B)* | Press Release, dated December 8, 2008. |
| (a)(5)(C)+ | Press Release, dated January 8, 2009. |
| (b) | Not applicable. |
| (d)(1) | Indenture, dated as of May 23, 2006, between Enzon Pharmaceuticals, Inc. and Wilmington Trust Company, as trustee (filed as Exhibit 4.1 to Enzon's Form 8-K filed on May 25, 2006 and incorporated herein by reference). |
| (d)(2) | First Supplemental Indenture, dated as of August 25, 2008, between Enzon Pharmaceuticals, Inc. and Wilmington Trust Company, as trustee (filed as Exhibit 4.1 to Enzon's Form 8-K filed on August 25, 2008 and incorporated herein by reference). |
| (d)(3) | Rights Agreement, dated May 17, 2002, between Enzon Pharmaceuticals, Inc. and Continental Stock Transfer & Trust Company, as rights agent (filed as Exhibit 1 to Enzon's Form 8-A12G filed on May 22, 2002 and incorporated herein by reference). |
| (d)(4) | First Amendment to the Rights Agreement, dated as of February 19, 2003, between Enzon Pharmaceuticals, Inc. and Continental Stock Transfer & Trust Company, as rights agent (filed as Exhibit 2 to Enzon's Form 8-A12G/A filed on February 20, 2003 and incorporated herein by reference). |

| (d)(5) | Second Amendment to the Rights Agreement, dated as of January 7, 2008, between Enzon Pharmaceuticals, Inc. and Continental Stock Transfer and Trust Company, as rights agent (filed as Exhibit 6 to Enzon's Form 8-A12G/A filed on January 8, 2008 and incorporated herein by reference). |
|--------|---|
| (d)(6) | 2001 Incentive Stock Plan, as amended and restated, of Enzon Pharmaceuticals, Inc. (filed as Exhibit 10.1 to Enzon's Form 8-K filed on May 19, 2006 and incorporated herein by reference). |
| (d)(7) | 2007 Employee Stock Purchase Plan (filed as Exhibit 10.1 to Enzon's Form S-8 filed on January 29, 2007 and incorporated herein by reference). |
| (d)(8) | 2007 Outside Director Compensation Plan, as amended (filed as Exhibit 10.1 to Enzon's Quarterly Report on Form 10-Q for the quarter ended June 30, 2007 filed on August 2, 2007 and incorporated herein by reference). |
| (g) | Not applicable. |
| (h) | Not applicable. |
| | |

 $^{\ ^*}$ Previously filed with the Original Schedule TO on December 8, 2008. + Filed herewith

SIGNATURE

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

ENZON PHARMACEUTICALS, INC.

By: /s/ Craig A. Tooman

Name: Craig A. Tooman

Title: Executive Vice President, Finance and Chief Financial Officer

Dated: January 8, 2009

EXHIBIT INDEX

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For Immediate Release

Contact: Craig Tooman EVP, Finance and Chief Financial Officer 908-541-8777

ENZON PHARMACEUTICALS EXTENDS TENDER OFFER FOR A PORTION OF ITS DEBT

BRIDGEWATER, NJ – January 8, 2009 – Enzon Pharmaceuticals, Inc. (Nasdaq: ENZN) ("Enzon") today announced that it has extended its "Modified Dutch Auction" tender offer for a portion of its 4% Convertible Senior Notes due 2013 (the "Notes").

The tender offer is now scheduled to expire at 5:00 pm, Eastern time, on Wednesday, January 21, 2009, unless Enzon further extends the tender offer. Tendered Notes may be withdrawn at any time on or prior to the expiration date of the tender offer.

As of today, there is \$270.5 million aggregate principal amount of Notes outstanding of which \$2,950,000 aggregate principal amount has been tendered and not withdrawn. Enzon expects to fund the purchase of Notes tendered with available cash on hand.

This announcement is for informational purposes only and is not an offer to buy, or the solicitation of an offer to sell, any Notes. The tender offer is being made solely by and subject to the terms and conditions set forth in an amended Schedule TO (including the amended offer to purchase and related letter of transmittal) that is being filed by Enzon today with the Securities and Exchange Commission. The Schedule TO contains important information and should be read carefully before any decision is made with respect to the tender offer. The offer to purchase and letter of transmittal are being delivered to holders of the Notes. Once the Schedule TO and other documents are filed with the SEC, they will be available free of charge on the SEC's website at www.sec.gov.

Enzon has retained Goldman, Sachs & Co. to serve as the dealer manager for the tender offer. Questions regarding the Offer may be directed to Goldman, Sachs & Co. at (800) 828-3182 or (212) 357-4692. Requests for documents, free of charge, in connection with the Offer may be directed to Global Bondholder Services Corp., the information agent for the Offer, at (866) 795-2200 (toll free) or, for banks and brokers, (212) 430-3774.

About Enzon

Enzon Pharmaceuticals, Inc. is a biopharmaceutical company dedicated to the development, manufacturing, and commercialization of important medicines for patients with cancer and other life-threatening conditions. Enzon has a portfolio of four marketed products, Oncaspar®, DepoCyt®, Abelcet® and Adagen®. The Company's drug development programs utilize several cutting-edge approaches, including its industry-leading PEGylation technology platform used to create product candidates with benefits such as reduced dosing frequency and less toxicity. Enzon's PEGylation technology was used to develop two of its products, Oncaspar and Adagen, and has created a royalty revenue stream from licensing partnerships for other products developed using the technology. Enzon also engages in contract manufacturing for several pharmaceutical companies to broaden the Company's

revenue base. Further information about Enzon and this press release can be found on the Company's web site at www.enzon.com.

Forward Looking Statements

There are forward-looking statements contained herein, which can be identified by the use of forward-looking terminology such as the words "believes," "expects," "may," "will," "should," "potential," "anticipates," "plans," or "intends" and similar expressions. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, events or developments to be materially different from the future results, events or developments indicated in such forward-looking statements. Such factors include, but are not limited to the timing, success and cost of clinical studies; the ability to obtain regulatory approval of products, market acceptance of, and continuing demand for, Enzon's products and the impact of competitive products and pricing. A more detailed discussion of these and other factors that could affect results is contained in our filings with the U.S. Securities and Exchange Commission, including our annual report on Form 10-K for the period ended December 31, 2007. These factors should be considered carefully and readers are cautioned not to place undue reliance on such forward-looking statements. No assurance can be given that the future results covered by the forward-looking statements will be achieved. All information in this press release is as of the date of this press release and Enzon does not intend to update this information.