UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934

Filed by the Registrant ⊠ Filed by a Party other than the Registrant o

Check the appropriate box:

- o Preliminary Proxy Statement
- o Confidential, For Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- o Definitive Proxy Statement
- Definitive Additional Materials
- o Soliciting Material Pursuant to §240.14a-12

ENZON PHARMACEUTICALS, INC.

(Name of Registrant as Specified in its Charter)

N/A

(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box):

 \boxtimes No fee required.

- o Fee computed on table below per Exchange Act Rules 14a-6(I)(4) and 0-11.
 - (1) Title of each class of securities to which transaction applies:
 - (2) Aggregate number of securities to which transaction applies:
 - (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11: Set forth the amount on which the filing fee is calculated and state how it was determined.
 - (4) Proposed maximum aggregate value of transaction:
 - (5) Total fee paid.
- Check box if any part of the fee is offset as provided by Exchange Act rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid:

- (2) Form, Schedule or Registration Statement No.:
- (3) Filing Party:

(4) Date Filed:

ENZON PHARMACEUTICALS, INC. c/o Continental Proxy Services 1 State Street, New York NY 10004 You May Vote Your Proxy When You View The Material On The Internet. You Will Be Asked To Follow The Prompts To Vote Your Shares.

> Enzon Pharmaceuticals, Inc. 20 Commerce Drive, Suite 135 Cranford, New Jersey 07016

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS to be held on Thursday,

August 9, 2018

*Stockholders are cordially invited to attend the 2018 Annual Meeting and vote in person.

Dear Stockholder,

The 2018 Annual Meeting of Stockholders (the "2018 Annual Meeting") of Enzon Pharmaceuticals, Inc. (the "Company") will be held at Club 101 on the Main Floor at 101 Park Avenue, New York, New York 10178 on Thursday, August 9, 2018 at 11:00 a.m., local time.

Proposals to be considered at the 2018 Annual Meeting:

- to elect three (3) directors, each for a one-year term expiring at the Company's next annual meeting of stockholders and until such director's successor is elected and qualified;
- (2) to ratify the appointment of EisnerAmper LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2018;
- (3) to approve, on an advisory basis, the compensation of the Company's named executive officers; and
- (4) to transact such other matters as may properly come before the 2018 Annual Meeting or any adjournment or postponement thereof.

The Company's Board of Directors has proposed and recommends that stockholders vote "FOR" each of the nominees to the Board of Directors listed in Proposal No. 1 and "FOR" Proposals Nos. 2 and 3.

Your electronic vote authorizes the named proxies to vote your shares in the same manner as if you marked, signed, dated, and returned the proxy card.

The Proxy Statement and our Annual Report on Form 10-K for the fiscal year ended December 31,

2017 are available online at:



Go to http://www.cstproxyvote.com Have your notice available when you access the above website. Follow the prompts to vote your shares.

CONTROL NUMBER

The Proxy Materials are available for review at: http://www.cstproxy.com/enzon/2018

ENZON PHARMACEUTICALS, INC.

20 Commerce Drive, Suite 135 Cranford, New Jersey 07016

Important Notice Regarding the Availability of Proxy Materials For the 2018 Stockholder Meeting to Be Held On Thursday, August 9, 2018

This communication presents only an overview of the more complete proxy materials that are available to you on the Internet. We encourage you to access and review all of the important information contained in the proxy materials before voting.

If you would like to receive a paper or e-mail copy of these documents, **you must request one**. There is no charge for such documents to be mailed to you. Please make your request for a copy as instructed below on or before July 30, 2018 to facilitate a timely delivery.

The following Proxy Materials for the 2018 Annual Meeting are available to you to review at: http://www.cstproxy.com/enzon/2018

- the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017;
- the Company's Proxy Statement for the 2018 Annual Meeting;
- the Proxy Card for the 2018 Annual Meeting; and
- any amendments to the foregoing materials that are required to be furnished to stockholders.

You may contact the Company at (732) 980-4500 or through an e-mail request to investor@enzon.com for directions to the 2018 Annual Meeting.

ACCESSING YOUR PROXY MATERIALS ONLINE

Have this notice available when you request a paper copy of the proxy materials or to vote your proxy electronically. You must reference your company ID., proxy number, and account number.

REQUESTING A PAPER COPY OF THE PROXY MATERIALS

By telephone please call 1-888-221-0691,

or

By logging on to http://www.cstproxy.com/enzon/2018

By email at: proxy@continentalstock.com

Please include the company name and your control number in the subject line.