

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

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, For Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- Definitive Proxy Statement
- Definitive Additional Materials
- 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):

- No fee required.
- 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  
Wednesday, June 2, 2021

**\*Stockholders are cordially invited to participate in the Virtual 2021 Annual Meeting  
and vote during the meeting.**

Dear Stockholder,

The 2021 Annual Meeting of Stockholders (the "2021 Annual Meeting") of Enzon Pharmaceuticals, Inc. (the "Company") will be held on Wednesday, June 2, 2021 at 11:00 a.m., local time. The annual meeting will be a completely "virtual" meeting of stockholders. You will be able to listen and participate in the virtual annual meeting as well as vote and submit your questions during the live webcast of the meeting by visiting <https://www.cstproxy.com/enzon/2021> and entering the 12-digit control number included in this Notice Regarding the Availability of Proxy Materials, on your proxy card or in the instructions that accompanied your proxy materials.

Proposals to be considered at the 2021 Annual Meeting:

- (1) 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, 2021;
- (3) to approve, on an advisory basis, the compensation of the Company's named executive officers;
- (4) to ratify the Section 382 Rights Plan adopted by the Board of Directors; and
- (5) to transact such other matters as may properly come before the 2021 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, 3 and 4.

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, 2020 are available online at:  
<https://www.cstproxy.com/enzon/2021>**



**[Vote Your Proxy on the Internet:](#)**

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

**The Proxy Materials are available for review at:  
<https://www.cstproxy.com/enzon/2021>**

CONTROL NUMBER



**ENZON PHARMACEUTICALS, INC.**  
20 Commerce Drive, Suite 135  
Cranford, New Jersey 07016

**Important Notice Regarding the Availability of Proxy Materials  
For the 2021 Stockholder Meeting to Be Held On  
Wednesday, June 2, 2021**

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 May 13, 2021 to facilitate a timely delivery.

The following Proxy Materials for the 2021 Annual Meeting are available to you to review at:  
<https://www.cstproxy.com/enzon/2021>

- the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2020;
- the Company's Proxy Statement for the 2021 Annual Meeting;
- the Proxy Card for the 2021 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](mailto:investor@enzon.com) for information on how to access the virtual 2021 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 <https://www.cstproxy.com/enzon/2021>  
or  
By email at: [proxy@continentalstock.com](mailto:proxy@continentalstock.com)**

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

