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

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of June 2023

Commission File Number: 001-40858

XORTX Therapeutics Inc.

3710 – 33rd Street NW, Calgary, Alberta, T2L 2M1

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F. Form 20-F [X] Form 40-F [X]

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly

XORTX Therapeutics Inc. (Registrant)

Date: June 23, 2023 By:

<u>/s/ Allen Davidoff</u> Allen Davidoff Chief Executive Officer Name: Title:

EXHIBIT INDEX

99.1 News Release dated June 23. 2023

XORTX Reminds Shareholders to Vote ahead of the Proxy Voting Deadline for the Company's Upcoming Annual and Special Meeting of Shareholders

The proxy voting deadline for XORTX shareholders to vote their proxies is 10:00 a.m. (Calgary time) on Monday, June 26, 2023.

- XORTX's board of directors recommends shareholders vote **FOR** the election of all director nominees, **FOR** the appointment of auditors of the ensuing year, and **FOR** the resolution to approve the Company's stock option plan.
- Shareholders who have questions or need assistance with voting their shares can contact Laurel Hill Advisory Group at 1-877-452-7184 or by e-mail at assistance@laurelhill.com.

CALGARY, Alberta, June 23, 2023 (GLOBE NEWSWIRE) -- XORTX Therapeutics Inc. ("XORTX" or the "Company") (NASDAQ: XRTX | TSXV: XRTX | Frankfurt: ANU), a late-stage clinical pharmaceutical company focused on developing innovative therapies to treat progressive kidney disease, would like to remind shareholders that they have until 10:00 a.m. (Calgary time) on Monday, June 26, 2023 to vote their shares for the Company's upcoming annual and special meeting of shareholders to be held on Wednesday, June 28, 2023 at 10:00 a.m. (Calgary time) (the "Meeting").

Dr. Allen Davidoff, CEO of XORTX stated, "XORTX has made substantial advances during the past year guided by our experienced and skilled R&D team and our broadly experienced board of directors. As the Company advances our late stage program in ADPKD toward the start of registration clinical trial initiation, the Company's reliance upon our board of directors individual licensing, partnering and commercialization skills will increase substantially. Shareholders are encouraged to vote and support the resolutions being voted at this year's Meeting to support a stable process toward licensing deal and the goal of building a high value company."

Shareholders are urged to carefully read the information circular in connection with the Meeting. A copy of the information circular and all other meeting materials is available on SEDAR at www.sedar.com and on XORTX's website at www.xortx.com. XORTX's board of directors recommends shareholders vote FOR all of the proposed resolutions.

YOUR VOTE IS IMPORTANT REGARDLESS OF THE NUMBER OF SHARES YOU OWN. PLEASE VOTE TODAY. THE PROXY CUT-OFF IS MONDAY, JUNE 26, 2023 AT 10 A.M. MOUNTAIN TIME.

Shareholder Assistance

Shareholders who have questions, or need assistance with voting their shares, should contact Laurel Hill Advisory Group, the proxy solicitation agent, by telephone at +1 877-452-7184 (North America toll free) or + 1 416-304-0211 (outside North America), or by email at assistance@laurelhill.com.

About XORTX Therapeutics Inc.

XORTX is a pharmaceutical company with two clinically advanced products in development: 1) our lead, XRx-008 program for ADPKD; and 2) our secondary program in XRx-101 for acute kidney and other acute organ injury associated with Coronavirus / COVID-19 infection. In addition, XRx-225 is a pre-clinical stage program for Type 2 Diabetic Nephropathy. XORTX is working to advance its clinical development stage products that target aberrant purine metabolism and xanthine oxidase to decrease or inhibit production of uric acid. At XORTX, we are dedicated to developing medications to improve the quality of life and future health of patients. Additional information on XORTX is available at www.xortx.com.

For more information, please contact:

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Neither the TSX Venture Exchange nor Nasdaq has approved or disapproved the contents of this news release. No stock exchange, securities commission or other regulatory authority has approved or disapproved the information contained herein.

Forward Looking Statements

This press release contains express or implied forward-looking statements pursuant to U.S. Federal securities laws. These forward-looking statements and their implications are based on the current expectations of the management of XORTX only, and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Except as otherwise required by law, XORTX undertakes no obligation to publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. More detailed information about the risks and uncertainties affecting XORTX is contained under the heading "Risk Factors" in XORTX's Registration Statement on Form F-1 filed with the SEC, which is available on the SEC's website, www.sec.gov (including any documents forming a part thereof or incorporated by reference

therein), as well as in our reports, public disclosure documents and other filings with the securities commissions and other regulatory bodies in Canada, which are available on www.sedar.com.