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 October 2022

Commission File Number: 001-40858

XORTX Therapeutics Inc.

Suite 2400 - 745 Thurlow Street, Vancouver, British Columbia, Canada, V6E 0C5

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 []

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):____

Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):____

Note: Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR.

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 authorized.

XORTX Therapeutics Inc. (Registrant)

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

Date: October 4, 2022

EXHIBIT INDEX

<u>99.1</u> <u>News Release dated October 4.</u> <u>2022</u>

XORTX Announces US\$5 Million Public Offering

CALGARY, Alberta, Oct. 04, 2022 (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, announces the pricing of an underwritten public offering of: (i) 1,400,000 common share units ("Common Share Units"), with each Common Share Unit consisting of one common share, no par value, and one warrant ("Warrant") to purchase one common share at a public offering price of US\$1.00 per Common Share Unit, and (ii) 3,600,000 pre-funded warrant units ("Pre-Funded Units" and together with the Common Share Units, the "Units"), with each Pre-Funded Unit consisting of one pre-funded warrant ("Pre-Funded Warrant") to purchase one common share and one Warrant to purchase one common share at a public offering price of US\$0.9999 per Pre-Funded Unit, for aggregate gross proceeds of US\$5 million, prior to deducting underwriting discounts and other offering"). The common shares and Warrants contained in the Common Share Units and the Pre-Funded Warrants and Warrants contained in the Pre-Funded Units are immediately separable upon issuance. The Warrants have an initial exercise price of US\$1.22 per share, will be immediately exercisable, and may be exercised for five years from the date of issuance. The Pre-Funded Warrants have an exercise price of US\$0.0001 per share, will be immediately exercisable, and will terminate once exercised in full. In addition, the Company has granted the underwriters a 45-day option to purchase up to an additional 750,000 common shares at the public offering price less the underwriting discounts.

The Offering is expected to close on or about October 6, 2022, subject to satisfaction of customary closing conditions. In connection with the Offering and subject to TSX Venture Exchange acceptance, the Company plans to enter into an agreement to reduce the exercise price of outstanding warrants to purchase up to 910,000 shares of common stock issued in the 2021 public offering (the "**Prior Warrants**") and held by investors in this Offering from US\$4.77 per share to US\$1.17 per share, effective upon the closing of the Offering. All other terms of the Prior Warrants will remain the same.

A.G.P./Alliance Global Partners is acting as sole book-running manager for the Offering.

The U.S. Securities and Exchange Commission (the "SEC") declared effective a registration statement on Form F-1 (File No. 333-267328) relating to these securities on September 22, 2022. A final prospectus relating to the Offering will be filed with the SEC. The Offering is being made only by means of the prospectus. Copies of the final prospectus relating to the Offering may be obtained, when available, by contacting A.G.P./Alliance Global Partners, 590 Madison Avenue, 28th Floor, New York, NY 10022, or by email at prospectus@allianceg.com. Investors may also obtain these documents at no cost by visiting the SEC's website at https://www.sec.gov. Prospective investors should read the prospectus and the documents incorporated by reference before making an investment decision.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

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.

For further information, please contact:

Allen Davidoff, CEO adavidoff@xortx.com or +1 403 455 7727 Nick Rigopulos, Director of Communications nick@alpineequityadv.com or +1 617 901 0785

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. For example, XORTX is using forward-looking statements when it discusses the expected mix of securities offered, the timing of the closing of the Offering, the satisfaction of customary closing conditions of the Offering and the possible offering of additional common shares and/or Warrants pursuant to the underwriters' option. 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. The Offering may not occur, may be delayed or may be completed with different terms than are currently contemplated. 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.