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 January 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 [X]

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.

SIGNATURES

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: January 20, 2022 By:

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

99.1 News Release dated January 20, 2022

XORTX Announces Appointment of Chief Technology Officer

CALGARY, Alberta, Jan. 20, 2022 (GLOBE NEWSWIRE) -- XORTX Therapeutics Inc. ("XORTX" or the "Company") (NASDAQ: XRTX | TSXV: XRTX | Frankfurt: ANU), a pharmaceutical therapeutics company focused on developing innovative therapies to treat progressive kidney disease, is pleased to announce the appointment of Dr. David MacDonald as Chief Technology Officer (CTO). Dr. MacDonald has an over 30-year record of achievement in drug development and leadership in pharma and biotech, achieving critical, value-inflection milestones for those companies.

Dr. Allen Davidoff, CEO of XORTX stated, "We are delighted to welcome Dr. MacDonald to the management team and into a leadership role with the Company. David brings to team C-Suite leadership, extensive regulatory and clinical experience as well as a strong background innovating technology in drug development - qualities that align with the clinical, regulatory and commercialization plans for the future."

Prior to XORTX, Dr. MacDonald held positions as CTO and later President of MSI Methylation Sciences Inc. a clinical-stage pharmaceutical company ("MSI"). As CTO David led R&D, pharmaceutical product and clinical development. Prior to his position at MSI, David acted as President and CEO of Active Pass Pharmaceutics. In addition, he has held leadership positions in several small and large pharma biotech companies during which he was responsible for a broad range of technical departments and stages of development covering basic research, IND-enabling studies, formulation, CMC, clinical trials, intellectual property, and regulatory submissions and inspections.

Dr. MacDonald is an inventor on over 20 patents issued globally and has published 14 manuscripts in peer reviewed journals. He obtained his Ph.D. in Chemistry from the University of Alberta where his research was focused on enzymology. https://www.linkedin.com/in/dmac36/.

In other news, the Company has issued an aggregate of 127,500 options to purchase common shares of the Company to certain officers, employees and consultants in accordance with the Company's stock option plan. The options are exercisable at a price of \$2.54 CAD per common share and expire five years from the date of grant.

About XORTX Therapeutics Inc.

XORTX Therapeutics Inc. is a pharmaceutical company with two clinically advanced products in development – XRx-008 for Autosomal Dominant Polycystic Kidney Disease (ADPKD), XRx-101 for acute kidney and other acute organ injury associated with Coronavirus / COVID-19 infection and XRx-225 is a pre-clinical stage program for Type 2 Diabetic Nephropathy (T2DN). 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 Therapeutics, we are dedicated to developing medications to improve the quality of life and future health of patients. Additional information on XORTX Therapeutics is available at www.xortx.com.

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

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