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**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 September 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  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.

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**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)

Date: September 1, 2022

By: /s/ Allen Davidoff  
Name: Allen Davidoff  
Title: Chief Executive Officer

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**EXHIBIT INDEX**

99.1 [News Release dated September 1, 2022](#)

## **XORTX Sponsored Study Selected for Presentation at the American Society of Nephrology – Kidney Week 2022**

### **Hyperuricemia is Associated with Accelerated Polycystic Kidney Disease (“PKD”) Injury**

CALGARY, Alberta, Sept. 01, 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 is pleased to announce acceptance of a study abstract for presentation at the American Society of Nephrology (“ASN”) Kidney Week 2022 meeting to be held the week of November 4, 2022. The title of the poster presentation selected by the Kidney Week Education Committee and following peer review is **“Raising Serum Uric Acid with a Uricase Inhibitor Worsens PKD in Rat and Mouse Models”** which will be presented during the ASN Session Title: Genetic Diseases of the Kidneys, by Dr. Charles Edelstein of the University of Colorado.

#### **About this Study**

Humans are predisposed to chronically high uric acid and gout because they lack uricase that converts uric acid to allantoin. In rodents uricase converts uric acid to allantoin and uricase inhibition raises serum uric acid. The aim of the study was to determine whether raising serum uric acid with the uricase inhibitor oxonic acid (OXO) was associated with worse PKD.

Dr. Allen Davidoff, CEO of XORTX, stated, “We are pleased to participating in the ASN annual meeting during Kidney Week 2022 with this poster presentation. Most importantly, results of this study show that increased serum uric acid can accelerate injury in two separate models of PKD in different species – a fundamental finding that we believe supports the XRx-008 program. These results and additional novel key discoveries from the study also provide XORTX with the opportunity to potentially further expand our patent portfolio, through a recent continuation of our formulation patent and a new provisional patent application. We anticipate further updated information near the time that the abstract for the ASN becomes public.”

#### **About the American Society of Nephrology – Kidney Week**

ASN represents more than 21,000 kidney health professionals working to help people with kidney diseases and their families. Source: <https://www.asn-online.org/>

The Kidney Week Conference, being held in Orlando, Florida, is attended by approximately 10,000 kidney professionals from across the globe. The world's premier nephrology meeting, Kidney Week provides participants exciting and challenging opportunities to exchange knowledge, learn the latest scientific and medical advances, and listen to engaging and provocative discussions with leading experts in the field. Source: <https://www.asn-online.org/education/kidneyweek/>

#### **American Society of Nephrology - Program and Abstracts**

The Kidney Week program is available on the ASN website. Abstracts will be available on the ASN website by October 14, 2022.

#### **About ADPKD**

ADPKD is a rare disease that affects more than 10 million individuals worldwide.<sup>1,2</sup> ADPKD is typically diagnosed based upon expansion of fluid-filled cysts in the kidneys. Over time, the increasing number and size of cysts can contribute to structural and functional changes to kidneys and is frequently accompanied by chronic pain which is a common problem for patients with ADPKD.<sup>3</sup> Expansion of cysts is thought to compress healthy functioning tissue surrounding the cysts and contribute to further loss of kidney function, fibrosis, impaired nutrient exchange and impaired kidney function, accompanied later by end-stage renal disease.<sup>1</sup> Health consequences of high uric acid have been reported to be increased in ADPKD individuals, including increased incidence of kidney stones<sup>5</sup> and gout.<sup>6,7</sup> For individuals with progressing ADPKD, treatment recommendations include anti-hypertensive treatment, dietary restrictions, and, for a limited percentage of suitable patients, pharmacotherapy.<sup>4</sup> New, more broadly applicable therapies to effectively slow decline of kidney function in ADPKD are needed.

#### **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](http://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.*

## References:

1. Wiley C., Kamat S., Stelhorn R., Blais J., Analysis of nationwide data to determine the incidence and diagnosis of autosomal dominant polycystic kidney disease in the USA, *Kidney Disease*, 5(2): 107-117, 2019
2. Bergmann C., Guay-Woodford L.M., Harris P.C., Horie S., Peters D.J., Torres V.E., Polycystic Kidney Disease, *Nat Rev Dis Primers*. 4(1): 50, 2018
3. <https://pkdcure.org/living-with-pkd/chronic-pain-management>
4. Gimpel C., Bermann C., Bockenbauer D., et al., International consensus statement of the diagnosis and management of autosomal dominant polycystic kidney disease in children and young people, *Nat Rev Nephrol* 15(11):713-726, 2019
5. Torres VE, et al, The association of nephrolithiasis and autosomal dominant polycystic kidney disease, *Am J Kidney Dis*, 1988, vol 11, 318-325
6. Newcombe, DS. Letter Gouty Arthritis and polycystic kidney disease, *Ann Intern Med*, 1973 vol 79, pg 605
7. Rivera JV Martinez, et al, Association of hyperuricemia and polycystic kidney disease, *Bol Asoc Med P R*, 1965 vol 7 251-263

## Forward Looking Statements

This press release may contain express or implied forward-looking statements pursuant to applicable securities laws. These forward-looking statements and their implications are based on the current reasonable 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 such forward-looking statements. The forward-looking statements in this press release include, but are not limited to, the results from the study supporting (i) the XRx-008 program and (ii) the potential expansion of XORTX's patent portfolio. Except as otherwise required by law, XORTX undertakes no obligation to publicly release any revisions or updates to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. The risks and uncertainties that could impact these forward-looking statements of XORTX generally are contained in the Company's most recently filed Annual Information Form and the Management Discussion and Analysis for its most recent financial reporting period filed on the Company's SEDAR profile ([www.sedar.com](http://www.sedar.com)) and under the heading "Risk Factors" in XORTX's annual report on Form F-20F filed with the United States Securities and Exchange Commission ("SEC") available on the SEC's website, [www.sec.gov](http://www.sec.gov).