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XORTX Shares Findings of Diabetes Study in Youths Supporting High Uric Acid Advances Kidney Disease Progression

Study Provides Further Support Expanding XrX-008 Potential Market

CALGARY, Alberta, April 16, 2019 (GLOBE NEWSWIRE) -- XORTX Therapeutics Inc. (**"XORTX"** or the "**Company**") (CSE: XRX; OTCQB: XRTXF), a biopharmaceutical company focused on developing innovative therapies to treat progressive kidney disease, congratulates the TODAY study team and Dr. Petter Bjornstad on successful completion of their study and findings in youths with Type 2 Diabetes ("T2D"). The findings show for the first time that high uric acid levels are common in young patients with T2D nephropathy ("T2DN") and that high serum uric acid levels ("SUA") are an independent risk factor for progression of kidney disease in this newly described and vulnerable group. In addition, the effects of SUA as an independent risk factor on high blood pressure and protein excretion (albuminuria/ proteinuria) into the urine are also described[1].

Dr. Allen Davidoff, CEO of XORTX, stated, "The results of the TODAY study align with other recent studies that show that SUA is increasingly recognized as a serious risk factor for high blood pressure in T1D, T2D and in the general population. This work identifies, for the first time, a growing population of young individuals with T2D, ~25% of whom are at risk for a concerning combination of high blood pressure and increased albumin excretion indicating the onset of kidney disease. Importantly, the presence of increased uric acid levels, despite pre-existing metformin treatment for their diabetes, is an independent risk factor for aggressively progressing kidney disease. This seven-year, longitudinal study has successfully demonstrated a relationship between SUA, increased risk of high blood pressure and increased risk of urinary albumin excretion in young, T2D patients."

Historically, SUA levels have been measured only as a secondary confirmation of the cause of a gout attack. For this reason, data on the association of circulating uric acid levels and their association to metabolic, cardiovascular (CVD) or kidney disease progression is sparse. This study shows for the first time that SUA levels above normal may be driving kidney disease progression early in the disease process that leads proteinuria in young adults with T2DN. The importance of this study in T2DN youth is that DN and cardiovascular disease are leading causes of morbidity and mortality in type 2 diabetes, and develop at an alarming rate in adolescents with T2DN[2-4], increased uric acid concentrations in serum are an independent risk factor for this disease process.

The incidence of T2D is increasing worldwide. At present, there are few therapeutic options to treat progressive kidney disease in the nearly 10 million individuals with diabetic nephropathy in the United States and greater than 100 million people worldwide[5]. Current

projections suggest that in the next 15 years the population of individuals with diabetes will grow from ~350 million today to nearly 550 million by 2035. T2D is increasingly diagnosed in youth and now accounts for 20% to 50% of new-onset diabetes case patients[6]. By deduction, the population of individuals with T2DN is expected to rise proportionately to ~175 million individuals in the next 15 years, many of whom will be youths or young adults.

T2DN is a common complication of diabetes and the leading cause of chronic kidney disease in the developed world. Approximately 40% of persons with diabetes develop T2DN, manifested as albuminuria and/or decreased glomerular filtration rate. Even mild degrees of albuminuria and decrease in glomerular filtration rate are associated with significantly increased risks of cardiovascular disease, end-stage renal disease, and premature deaths[7].

Dr. Bjornstad is a clinical researcher and an assistant professor of pediatrics and medicine in the department of pediatrics, division of endocrinology and department of medicine, division of nephrology at the University of Colorado School of Medicine. He is a NIH and JDRF funded translational researcher with a track record of research potential and success. Dr. Bjornstad is a key opinion leader and researcher on the importance of T2DN and enhanced need for therapeutic options in aggressively advancing forms of DN. The TODAY study, published April 7, 2019, furthers the concept that when left untreated uric acid levels in youths with T2DN are a serious risk factor toward rapid progression of kidney disease.

References:

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About XORTX Therapeutics Inc.

XORTX Therapeutics Inc. is a biopharmaceutical company focused on developing innovative therapies to treat progressive kidney disease. XORTX has lead programs to develop treatments for progressive kidney disease due to diabetes, diabetic nephropathy and

polycystic kidney disease. Secondary programs focus on developing therapies for health consequences that accompany pre-diabetes, diabetes and cardiovascular disease. 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

or Erik Matthews, Corporate Communications & Investor Relations
erik@xortx.com or +1 747 203 5240

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