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# XORTX Announces Results from Mount Sinai's COVID-19 Clinical Study

## Early, High Uric Acid is Independently Associated with Acute Kidney Injury and Mortality in COVID-19

CALGARY, Alberta, Oct. 14, 2021 (GLOBE NEWSWIRE) -- XORTX Therapeutics Inc. ("XORTX" or the "Company") (CSE: XRX | NASDAQ: XRTX), a pharmaceutical therapeutics company focused on developing innovative therapies to treat progressive kidney disease, is pleased to announce and share the results of an American Society of Nephrology Kidney Week abstract by Dr. Steven Coca and team at Mount Sinai Hospital Network and Icahn School of Medicine, that will be published online Friday, October 15, 2021. This study was sponsored by XORTX Therapeutics Inc. and the reported findings support the provisional patent and applications filed by XORTX announced March 2020 and March 2021.

This clinical study of patients hospitalized due to COVID-19 between March 1, 2020 and December 31, 2020 characterized the association between high serum uric acid levels with major adverse kidney events (MAKE), as well as cardiac injury. Since its emergence, COVID-19 has been reported to be associated in some individuals with acute injury to kidney, cardiovascular, neurological and other body systems.<sup>1</sup> The abstract presented online for the upcoming American Society of Nephrology presents data supporting the conclusions that *"In patients admitted to the hospital for COVID-19, higher uric acid levels were independently associated with MAKE and mortality in a dose-dependent manner. In addition, hyperuricemia was associated with higher procalcitonin and troponin levels."*

Procalcitonin concentrations and troponin concentrations are often used as markers for interpretation of severity of sepsis and heart injury, respectively.<sup>2,3</sup>

Dr. Steven Coca commented, "Many factors are likely operative in contributing to acute kidney injury (AKI) in patients hospitalized with COVID. The findings from our study highlight the importance of ordering a serum uric acid level in hospitalized patients on admission or at the latest at the first onset of clinical AKI, as hyperuricemia may be a modifiable (i.e., treatable) risk factor for exacerbation of kidney injury."

Dr. Allen Davidoff stated, "XORTX is pleased to be able to bring attention to this important work and acceptance of this peer-reviewed abstract as well as its presentation at the American Society of Nephrology Kidney Week meeting. The data from this clinical study supports our contention that hyperuricemia could be a key factor in acute kidney injury and now multi-organ injury in individuals hospitalized with COVID-19 infection."

Definition: MAKE Criteria is defined as: MAKE (major adverse kidney events) is a **composite of persistent renal function decline** (>25% decline in eGFR), new requirement for hemodialysis, and death. MAKE was assessed 30-, 60-, or 90-days following

AKI diagnosis.

## **About COVID-19 and Acute Kidney Injury**

Acute kidney injury (AKI) has been identified as an independent risk factor for patients in-hospital mortality due to COVID-19<sup>5</sup>. Recent data from the United States indicates that 25-35% of patients hospitalized with COVID-19 develop AKI.<sup>6-8</sup> Up to 20% of those need renal replacement therapy (RRT), and the mortality rate in patients that experience AKI in the setting of COVID-19 is several-fold higher than patients without AKI.<sup>7</sup> Moreover, proteinuria (69-85%) and hematuria (50-65%) are common in COVID-19.<sup>6-8</sup> In previous peer reviewed studies, viral infections such as influenza, when severe, can produce increased pulmonary cell debris, endothelial cell debris and serum uric acid (SUA) levels in the circulation as well as increased cytokine expression. Coronavirus infection appears to follow this pattern.

XORTX is developing XRx-101 - a therapy designed to decrease high serum uric acid levels and inhibit purine metabolism by xanthine oxidase for the treatment and prevention of AKI in individuals with acute kidney injury.

## **References:**

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## **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 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](http://www.xortx.com).

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