



# Phase 2 Placebo-Controlled, Double-Blind, Multicenter Study to Evaluate the Efficacy, Safety, and Tolerability of DCR-PHXC Solution for Injection (subcutaneous use) in Patients with Primary Hyperoxaluria

04/04/2025 11:40:08

## Main Information

**Primary registry identifying number**

LBCTR2020043435

**Protocol number**

DCR-PHXC-201

**MOH registration number**

**Study registered at the country of origin**

No

**Study registered at the country of origin: Specify**

Study registered in clinicaltrials.gov

**Type of registration**

Prospective

**Type of registration: Justify**

N/A

**Date of registration in national regulatory agency**

15/02/2019

**Primary sponsor**

Dicerna Pharmaceuticals, Inc

**Primary sponsor: Country of origin**

US

**Date of registration in primary registry**

27/04/2020

**Date of registration in national regulatory agency**

15/02/2019

**Public title**

Phase 2 Placebo-Controlled, Double-Blind, Multicenter Study to Evaluate the Efficacy, Safety, and Tolerability of DCR-PHXC Solution for Injection (subcutaneous use) in Patients with Primary Hyperoxaluria

**Acronym**

**Scientific title**

Phase 2 Placebo-Controlled, Double-Blind, Multicenter Study to Evaluate the Efficacy, Safety, and Tolerability of DCR-PHXC Solution for Injection (subcutaneous use) in Patients with Primary Hyperoxaluria

**Acronym**

PHYOX2

**Brief summary of the study: English**

This is a 6-month randomized, placebo-controlled, double-blind study of DCR-PHXC in patients with primary hyperoxaluria (PH1 and PH2). Potential participants are screened over an up-to- 6-week period prior to randomization to DCR-PHXC or placebo. The proposed study is designed to evaluate the efficacy, safety, tolerability, and PK of DCR-PHXC versus placebo in patients with PH1 and PH2.

**Brief summary of the study: Arabic**

DCR- PHXC أشهر ، في المرحلة الثانية، متعددة المراكز ومزدوجة التعمية، محكمة بدواء وهمي لتقييم فعالية و سلامة محلول الحقن بدراسة منتهيا (تحت الجلد) ودرجة تحمله لدى المرضى الذين يعانون من فرط أوكسالات البول الأولي PHXC

**Health conditions/problem studied: Specify**

DCR-PHXC is designed to selectively reduce LDHA messenger ribonucleic acid (mRNA) and lactate dehydrogenase (LDH) activity in the liver, and subsequently decrease liver oxalate production. DCR-PHXC is being developed as a treatment for PH, an ultra-rare autosomal recessive





disease characterized by excessive production of oxalate in the liver.

**Interventions: Specify**

DCR-PHXC is a synthetic RNAi drug that consists of a double-stranded oligonucleotide conjugated to GalNAc ligands. DCR-PHXC is a sterile formulation of drug substance (DCR-L1360) in WFI, intended for SC administration. DCR-PHXC is not commercially available in any country. The placebo comparator is 0.9% normal saline for injection.

**Key inclusion and exclusion criteria: Inclusion criteria**

- 24-hour Uox excretion  $\geq 0.7$  mmol (adjusted per 1.73 m<sup>2</sup> body surface area [BSA] in participants < 18 years of age) in both collections performed in the screening period. Of the first 24 participants enrolled, at least 12 (50%) must have at least one 24-hour Uox excretion  $\geq 1.6$  mmol (adjusted per 1.73 m<sup>2</sup> BSA in participants aged < 18 years).
- Less than 20% variation between the two 24-hour urinary creatinine excretion values [mmol/24 hr/kg] derived from the two 24-hour urine collections in the screening period.
- Estimated glomerular filtration rate (eGFR) at screening  $\geq 30$  mL/min normalized to 1.73 m<sup>2</sup> BSA calculated using Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) formula in participants aged  $\geq 18$  years (Levey & Stevens, 2010), or the formula by Schwartz in participants aged 6 to 17 years, (Schwartz et al., 2009; National Kidney Foundation, 2002). In Japan, the formula by Uemura et al. will be used for participants aged 6 to 17 years.

**Key inclusion and exclusion criteria: Gender**

Both

**Key inclusion and exclusion criteria: Specify gender**

**Key inclusion and exclusion criteria: Age minimum**

6

**Key inclusion and exclusion criteria: Age maximum**

99

**Key inclusion and exclusion criteria: Exclusion criteria**

- Renal or hepatic transplantation (prior or planned within the study period)
- Current dialysis or anticipated requirement for dialysis during the study period
- Plasma oxalate > 30  $\mu$ mol/L
- Documented evidence of clinical manifestations of systemic oxalosis (including preexisting retinal, heart, or skin calcifications, or history of severe bone pain, pathological fractures, or bone deformations)
- Liver function test (LFT) abnormalities: Alanine aminotransferase (ALT) and/or aspartate aminotransferase (AST) >1.5 times upper limit of normal (ULN) for age and gender.

**Type of study**

Interventional

**Type of intervention**

Pharmaceutical

**Type of intervention: Specify type**

N/A

**Trial scope**

Other

**Trial scope: Specify scope**

**Study design: Allocation**

Randomized controlled trial

**Study design: Masking**

Blinded (masking used)

**Study design: Control**

Placebo

**Study phase**

2

**Study design: Purpose**

Treatment

**Study design: Specify purpose**

N/A

**Study design: Assignment**

Parallel

**Study design: Specify assignment**

N/A

**IMP has market authorization**

No

**IMP has market authorization: Specify**

**Name of IMP**

DCR-PHXC

**Year of authorization**

2020

**Month of authorization**

1

**Type of IMP**



Others

**Pharmaceutical class**

Synthetic double-stranded (hybridized duplex) RNA oligonucleotide conjugated to GalNAc .

**Therapeutic indication**

DCR-PHXC is designed to selectively reduce LDHA messenger ribonucleic acid (mRNA) and lactate dehydrogenase (LDH) activity in the liver, and subsequently decrease liver oxalate production. DCR-PHXC is being developed as a treatment for PH, an ultra-rare autosomal recessive disease characterized by excessive production of oxalate in the liver.

**Therapeutic benefit**

Patients with PH are predisposed to the development of multiple and recurrent urinary tract (urolithiasis) and kidney (nephrolithiasis) stones. This deposition of calcium oxalate in the renal parenchyma produces tubular toxicity and renal damage. At present, no therapies are approved by regulatory authorities for the treatment of patients with PH. A number of supportive therapies are used in an attempt to mitigate some of the effects of the disease. DCR-PHXC treatment has the potential benefit to reduce or eliminate the excess oxalate production in the liver and thus avoid the need for a combined liver and kidney transplantation in patients not already on renal replacement therapy.

**Study model**

N/A

**Study model: Explain model**

N/A

**Study model: Specify model**

N/A

**Time perspective**

N/A

**Time perspective: Explain time perspective**

N/A

**Time perspective: Specify perspective**

N/A

**Target follow-up duration**

**Target follow-up duration: Unit**

**Number of groups/cohorts**

**Biospecimen retention**

Samples with DNA\*\*

**Biospecimen description**

Samples may be stored for a maximum of 5years (or according to local regulations) following the last participant's last visit for the study at a facility selected by the sponsor to enable further analysis of immune responses to DCR-PHXC.

**Target sample size**

36

**Actual enrollment target size**

**Date of first enrollment: Type**

Actual

**Date of first enrollment: Date**

28/10/2019

**Date of study closure: Type**

Actual

**Date of study closure: Date**

30/01/2021



<b>Recruitment status</b> Recruiting	<b>Recruitment status: Specify</b>
<b>Date of completion</b>	
<b>IPD sharing statement plan</b> No	<b>IPD sharing statement description</b> Participants will be assigned a unique identifier by the Sponsor. Any participant records or data sets that are transferred to the Sponsor will contain the identifier only; participant names or any information which would make the participant identifiable will not be transferred
<b>Additional data URL</b>	
<b>Admin comments</b>	
<b>Trial status</b> Approved	

Secondary Identifying Numbers	
Full name of issuing authority	Secondary identifying number
1.US NCT	NCT03847909
2.WHO Universal	U1111-1224-6881

Sources of Monetary or Material Support
Name
Dicerna pharmaceuticals inc. 87 Cambridgepark Drive Cambridge, MA 02140 US

Secondary Sponsors
Name
N/A



## Contact for Public/Scientific Queries

Contact type	Contact full name	Address	Country	Telephone	Email	Affiliation
Public	Chadi Safa	Beirut	Lebanon	0096171251819	chadi.safa@clinart.net	Clinart Mena
Scientific	Chebl Mourani	Beirut	Lebanon	009611290090	cheblmourani@gmail.com	Hotel Dieu de France

## Centers/Hospitals Involved in the Study

Center/Hospital name	Name of principles investigator	Principles investigator speciality	Ethical approval
Hotel Dieu De France	Chebl Mourani	Pediatric Nephrology	Approved
Saint George University Hospital	Pauline Abou Jaoude	Pediatric Nephrology	Approved

## Ethics Review

Ethics approval obtained	Approval date	Contact name	Contact email	Contact phone
Hotel Dieu de France	01/10/2019	Nancy Alam	nancy.alam@usj.edu.lb	01421000
Saint George Hospital University Medical Center	29/11/2019	Sandra Berberi	smberbari@stgeorgehospital.org	01 1 44 16 30



Countries of Recruitment	
Name	
Australia	
Canada	
France	
Germany	
Italy	
Japan	
Netherlands	
New Zealand	
Poland	
Romania	
Spain	
United Kingdom	
United States of America	
Lebanon	

Health Conditions or Problems Studied		
Condition	Code	Keyword
Primary Hyperoxaluria	Nephrotic syndrome, other (N04.8)	PHYOX

Interventions		
Intervention	Description	Keyword
DCR-PHXC	DCR-PHXC is a synthetic RNAi drug that consists of a double-stranded oligonucleotide conjugated to GalNAc ligands. DCR-PHXC is a sterile formulation of drug substance (DCR-L1360) in WFI, intended for SC administration. DCR-PHXC is not commercially available in any country.	DCR-PHXC
Placebo	The placebo comparator is 0.9% normal saline for injection.	Placebo



## Primary Outcomes

Name	Time Points	Measure
To assess the efficacy of DCR-PHXC in reducing urinary oxalate burden in patients with PH (types 1 and 2)	The proportion of participants with a reduction from baseline in 24-hour Uox of at least 70%, based on a TWS AUC and/or reaching normalization or near-normalization of 24-hour Uox on at least 2 consecutive visits, starting from Day 90. Normalization of Uox is defined as < 0.46 mmol/24 hours; near-normalization is defined as $\geq 0.46$ to < 0.60 mmol/24 hours (values adjusted per 1.73 m <sup>2</sup> BSA in participants aged < 18 years).	24-hour Uox

## Key Secondary Outcomes

Name	Time Points	Measure
To evaluate the effect of DCR-PHXC on stone burden in patients with PH	Percent change in the summed surface area and number of kidney stones identified via kidney ultrasound from Baseline to Day 180	Number of Kidney stone
To evaluate the effect of DCR-PHXC on plasma oxalate in patients with PH	Percent change in plasma oxalate from Baseline to Day 180 (for adults only)	Plasma Oxalate
To evaluate the effect of DCR-PHXC on eGFR	Rate of change in eGFR from Baseline to Day 180	eGFR
To assess the safety of DCR-PHXC in patients with PH	AE and SAE; change from Baseline in 12-lead ECG, physical examination findings, vital signs, and clinical laboratory tests	12 Lead ECG, Physical Examination test, Vital signs, Clinical Laboratory test.
To characterize the PK of DCR-PHXC in patients with PH	Population and individual PK parameters for DCR-PHXC	PK



## Trial Results

**Summary results**

**Study results globally**

**Date of posting of results summaries**

**Date of first journal publication of results**

**Results URL link**

**Baseline characteristics**

**Participant flow**

**Adverse events**

**Outcome measures**

**URL to protocol files**