Clinical trial results:
A Phase 2a, Randomised, Double-Blind, Placebo-Controlled, Two-Part Study to Assess the Efficacy, Safety, Tolerability, and Pharmacokinetic Profiles of Inhaled Doses of NOC-100 in Adult Participants with Chronic Cough or Acute Cough, including Cough due to Postinfectious COVID-19

Summary

EudraCT number	2020-004715-27
Trial protocol	DE
Global end of trial date	06 November 2023

Results information

Result version number	v1 (current)
This version publication date	14 December 2024
First version publication date	14 December 2024

Trial information

Trial identification

Sponsor protocol code	NOC100-C-201

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Nocion Therapeutics, Inc.
Sponsor organisation address	15 Main Street, #247, Watertown, United States, MA 02472
Public contact	Clinical Trials Information, Nocion Therapeutics, Inc., +1 617803 2445, clinicaltrials@nociontx.com
Scientific contact	Clinical Trials Information, Nocion Therapeutics, Inc., +1 617803 2445, clinicaltrials@nociontx.com

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	27 June 2023
Is this the analysis of the primary completion data?	Yes
Primary completion date	04 May 2022
Global end of trial reached?	Yes
Global end of trial date	06 November 2023
Was the trial ended prematurely?	Yes

Notes:

General information about the trial

Main objective of the trial:

Part 1:
To evaluate the safety and tolerability of escalating nebulised inhaled doses of NOC 100 (single and 2 consecutive QD doses) in participants with chronic cough (CC).

Part 2:
To evaluate the treatment effect of nebulised inhaled doses of NOC 100 as determined by visual analogue scale (VAS) score for cough severity in participants with acute cough (AC).

To evaluate the safety and tolerability of nebulised inhaled doses of NOC 100 in participants with AC.

Protection of trial subjects:

Prior to initiation of any study-specific procedures, participants received a copy of the Informed Consent Form (ICF) that summarized, in non-technical terms, the purpose of the study, the procedures to be carried out, and the potential hazards. The Principal Investigators (PIs) or their representatives explained the nature of the study to the participants, in non-technical terms, and answered all questions regarding the study. Participants reviewed, signed, and dated the ICF. Participants received a copy of the fully signed ICF.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	29 April 2021
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	United Kingdom: 21
Country: Number of subjects enrolled	Germany: 20
Worldwide total number of subjects	41
EEA total number of subjects	20

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0

Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	23
From 65 to 84 years	18
85 years and over	0

Subject disposition

Recruitment

Recruitment details: -

Pre-assignment

Screening details:

Adult male and females with chronic cough were screened against the eligibility criteria between 28 to 7 days prior to Day -2.

Period 1

Period 1 title	Overall study (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor

Arms

Are arms mutually exclusive?	No
Arm title	NOC-100

Arm description:

Subjects randomized to receive NOC-100

Arm type	Experimental
Investigational medicinal product name	NOC-100 Neubulized Solution
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Nebuliser solution
Routes of administration	Inhalation use

Dosage and administration details:

NOC-100 nebulized solution was administered via nebulizer for 2 consecutive days at each of 3 dose levels sequentially with 4 days wash-out in between.

Arm title	Placebo

Arm description:

Subjects randomized to receive placebo.

Arm type	Placebo
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Nebuliser solution
Routes of administration	Inhalation use

Dosage and administration details:

Matching placebo nebulized solution was administered via nebulizer for 2 consecutive days at each of 3 dosing periods with 4 days wash-out in between.

Number of subjects in period 1	NOC-100	Placebo
Started	41	38
Completed	37	37
Not completed	4	1
Physician decision	1	-
Consent withdrawn by subject	1	-
Adverse event, non-fatal	2	1

Baseline characteristics

Reporting groups	
Reporting group title	Overall study

Reporting group description: -

Reporting group values	Overall study	Total	
Number of subjects	41	41	
Age categorical Units: Subjects			
In utero		0	
Preterm newborn infants (gestational age < 37 wks)		0	
Newborns (0-27 days)		0	
Infants and toddlers (28 days-23 months)		0	
Children (2-11 years)		0	
Adolescents (12-17 years)		0	
Adults (18-64 years)		0	
From 65-84 years		0	
85 years and over		0	
Age continuous Units: years			
arithmetic mean	59.7		
standard deviation	± 10.91	-	
Gender categorical Units: Subjects			
Female	37	37	
Male	4	4	

End points

End points reporting groups

Reporting group title	NOC-100
Reporting group description:	
Subjects randomized to receive NOC-100	
Reporting group title	Placebo
Reporting group description:	
Subjects randomized to receive placebo.	

Primary: Adverse events

End point title	Adverse events[1]
End point description:	
End point type	Primary
End point timeframe:	
Treatment Emergent Adverse Events were recorded from first dose until last study visit.	

Notes:

[1] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.
Justification: Per protocol, the primary endpoint was the incidence of safety events, consequently, no additional formal statistical analyses were performed on primary endpoint data in this early phase study.

End point values	NOC-100	Placebo		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	41	38		
Units: Subjects				
Subjects with TEAEs	20	16		
Subjects without TEAEs	21	22		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events: From first dose to end of study visit.	
Assessment type	Systematic
Dictionary used	
Dictionary name	MedDRA
Dictionary version	23.1
Reporting groups	
Reporting group title	NOC-100
Reporting group description: Subjects randomized to receive NOC-100	
Reporting group title	Placebo
Reporting group description: Subjects randomized to receive placebo	

Serious adverse events	NOC-100	Placebo	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 41 (0.00%)	0 / 38 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	

Frequency threshold for reporting non-serious adverse events: 0 %

Non-serious adverse events	NOC-100	Placebo	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	20 / 41 (48.78%)	16 / 38 (42.11%)	
Injury, poisoning and procedural complications			
Joint dislocation			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Ligament sprain			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Vascular disorders			

Hypotension			
subjects affected / exposed	1 / 41 (2.44%)	2 / 38 (5.26%)	
occurrences (all)	1	2	
Phlebitis			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Cardiac disorders			
Atrial fibrillation			
subjects affected / exposed	1 / 41 (2.44%)	1 / 38 (2.63%)	
occurrences (all)	1	1	
Bradycardia			
subjects affected / exposed	2 / 41 (4.88%)	0 / 38 (0.00%)	
occurrences (all)	2	0	
Supraventricular extrasystoles			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Supraventricular tachycardia			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Nervous system disorders			
Head discomfort			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Headache			
subjects affected / exposed	6 / 41 (14.63%)	4 / 38 (10.53%)	
occurrences (all)	6	4	
Migraine			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Presyncope			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Tension headache			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
General disorders and administration site conditions			

Catheter site swelling			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Malaise			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Gastrointestinal disorders			
Diarrhoea			
subjects affected / exposed	1 / 41 (2.44%)	1 / 38 (2.63%)	
occurrences (all)	1	1	
Dysphagia			
subjects affected / exposed	0 / 41 (0.00%)	2 / 38 (5.26%)	
occurrences (all)	0	2	
Enteritis			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Haematochezia			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Nausea			
subjects affected / exposed	2 / 41 (4.88%)	1 / 38 (2.63%)	
occurrences (all)	2	1	
Paraesthesia			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Salivary hypersecretion			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Stomatitis			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Vomiting			
subjects affected / exposed	4 / 41 (9.76%)	0 / 38 (0.00%)	
occurrences (all)	4	0	
Respiratory, thoracic and mediastinal disorders			

Cough			
subjects affected / exposed	11 / 41 (26.83%)	11 / 38 (28.95%)	
occurrences (all)	11	11	
Pharyngeal hypoaesthesia			
subjects affected / exposed	2 / 41 (4.88%)	0 / 38 (0.00%)	
occurrences (all)	2	0	
Pharyngeal paraesthesia			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Skin and subcutaneous tissue disorders			
Rash			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Renal and urinary disorders			
Pollakiuria			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Musculoskeletal and connective tissue disorders			
Arthralgia			
subjects affected / exposed	1 / 41 (2.44%)	1 / 38 (2.63%)	
occurrences (all)	1	1	
Periarthritis			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Limb discomfort			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Infections and infestations			
Abscess			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
asymptomatic COVID-19			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
COVID-19			

subjects affected / exposed	2 / 41 (4.88%)	0 / 38 (0.00%)	
occurrences (all)	2	0	
Cystitis			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	
Urinary tract infection			
subjects affected / exposed	1 / 41 (2.44%)	0 / 38 (0.00%)	
occurrences (all)	1	0	
Viral upper respiratory tract infection			
subjects affected / exposed	0 / 41 (0.00%)	1 / 38 (2.63%)	
occurrences (all)	0	1	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
11 January 2021	Version 2 of the study protocol was prepared to address comments and recommendations of the BfArM and Ethics.
05 February 2021	Version 3 of the study protocol was prepared to address comments and recommendations of the BfArM and Ethics.
05 November 2021	Version 4 of the protocol was requested by the Sponsor and included updates to the following: study contacts, number of study participants, washout duration, safety assessments, inclusion and exclusion criteria, and Bitrex(R) administration.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

The number of occurrences of each adverse event was not detailed in the Clinical Study Report - this has been entered as equal to the number of subjects reporting each event.

Notes: