



## Clinical trial results:

**A randomised, double-blind, double-dummy, placebo and active-controlled, three-way crossover study to evaluate the safety, tolerability and efficacy of 28-day inhaled CHF 6001 DPI (1200 microgrammes daily) in subjects with COPD.**

### Summary

EudraCT number	2012-001005-25
Trial protocol	GB
Global end of trial date	25 October 2013

### Results information

Result version number	v1
This version publication date	12 July 2016
First version publication date	09 August 2015

### Trial information

#### Trial identification

Sponsor protocol code	CCD-1201-PR-0079
-----------------------	------------------

#### Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT01730404
WHO universal trial number (UTN)	-

Notes:

### Sponsors

Sponsor organisation name	Chiesi Farmaceutici SpA
Sponsor organisation address	Via Palermo, 26/A, Parma, Italy, 43122
Public contact	Oriana Esposito, Chiesi Farmaceutici S.p.A., 39 05211689204, o.esposito@chiesi.com
Scientific contact	Oriana Esposito, Chiesi Farmaceutici S.p.A., 39 05211689204, o.esposito@chiesi.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	25 October 2013
Is this the analysis of the primary completion data?	Yes
Primary completion date	25 October 2013
Global end of trial reached?	Yes
Global end of trial date	25 October 2013
Was the trial ended prematurely?	No

Notes:

---

**General information about the trial**

---

Main objective of the trial:

The primary objectives of the study are:

- to evaluate the effect of CHF 6001 DPI on biological markers of inflammation in induced sputum and in the blood, and on pulmonary function.
- to evaluate the safety and tolerability of CHF 6001 DPI after 28 days of inhaled dosing.
- to assess the blood PK profile of CHF6001 and its metabolite at steady-state in GOLD stage 2-3 COPD patients.

---

Protection of trial subjects:

The study was conducted in accordance with the Declaration of Helsinki, Good Clinical Practice (GCP) guidelines and local law requirements . Other than routine care, no specific measures for protection of trial subjects were implemented.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	04 October 2012
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: 55
Worldwide total number of subjects	55
EEA total number of subjects	55

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)	43
From 65 to 84 years	12
85 years and over	0

## Subject disposition

### Recruitment

Recruitment details: -

### Pre-assignment

Screening details:

Fifty-five patients were actually randomised into the study; following the randomization 13 patients were withdrawn due to adverse events (AE), and 5 patients withdrew their consent for participation. All 55 patients were analysed as part of the Safety population. Fifty-three patients were analysed as part of the modified ITT population.

### Period 1

Period 1 title	Overall trial by sequence (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor, Data analyst, Carer, Assessor

### Arms

Are arms mutually exclusive?	Yes
<b>Arm title</b>	Sequence C--R--P

Arm description:

- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001
- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast
- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Arm type	Experimental
Investigational medicinal product name	CHF 6001
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use

Dosage and administration details:

3 inhalations of CHF 6001 400 µg administered using Aerolizer® DPI; giving a total dose of 1200 µg of CHF 6001

Investigational medicinal product name	Roflumilast
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

1 tablet Roflumilast 500 µg; giving a total dose of 500µg of Roflumilast

Investigational medicinal product name	CHF 6001 placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 Placebo DPI	
Investigational medicinal product name	Roflumilast placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast Placebo	
<b>Arm title</b>	Sequence P--C--R

Arm description:

- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo
- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001
- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Arm type	Experimental
Investigational medicinal product name	CHF 6001
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 400 µg administered using Aerolizer® DPI; giving a total dose of 1200 µg of CHF 6001	
Investigational medicinal product name	Roflumilast
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast 500 µg; giving a total dose of 500µg of Roflumilast	
Investigational medicinal product name	CHF 6001 placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 Placebo DPI	

Investigational medicinal product name	Roflumilast placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast Placebo	
<b>Arm title</b>	Sequence R--P--C

Arm description:

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast
- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo
- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Arm type	Experimental
Investigational medicinal product name	Roflumilast
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast 500 µg; giving a total dose of 500µg of Roflumilast	
Investigational medicinal product name	Roflumilast placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast Placebo	
Investigational medicinal product name	CHF 6001 placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 Placebo DPI	
Investigational medicinal product name	CHF 6001
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 400 µg ; giving a total dose of 1200 µg of CHF 6001	
<b>Arm title</b>	Sequence C--P--R

Arm description:

- Test treatment (C):

3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

- Placebo (P):

3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

- Reference treatment (R):

3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Arm type	Experimental
Investigational medicinal product name	CHF 6001
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 400 µg; giving a total dose of 1200 µg of CHF 6001	
Investigational medicinal product name	CHF 6001 placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 Placebo DPI	
Investigational medicinal product name	Roflumilast placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast Placebo	
Investigational medicinal product name	Roflumilast
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast 500 µg; giving a total dose of 500µg of Roflumilast	
<b>Arm title</b>	Sequence P--R--C

Arm description:

- Placebo (P):

3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

- Reference treatment (R):

3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

- Test treatment (C):

3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Arm type	Experimental
Investigational medicinal product name	CHF 6001 placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 Placebo DPI	
Investigational medicinal product name	Roflumilast placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast Placebo	
Investigational medicinal product name	Roflumilast
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast 500 µg; giving a total dose of 500µg of Roflumilast	
Investigational medicinal product name	CHF 6001
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 400 µg ; giving a total dose of 1200 µg of CHF 6001	
<b>Arm title</b>	Sequence R--C--P

Arm description:

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast
- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001
- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Arm type	Experimental
----------	--------------



Investigational medicinal product name	Roflumilast
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast 500 µg; giving a total dose of 500µg of Roflumilast	
Investigational medicinal product name	CHF 6001
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 400 µg ; giving a total dose of 1200 µg of CHF 6001	
Investigational medicinal product name	CHF 6001 placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Inhalation powder
Routes of administration	Inhalation use
Dosage and administration details:	
3 inhalations of CHF 6001 Placebo DPI	
Investigational medicinal product name	Roflumilast placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use
Dosage and administration details:	
1 tablet Roflumilast Placebo	

<b>Number of subjects in period 1</b>	Sequence C--R--P	Sequence P--C--R	Sequence R--P--C
Started	10	10	8
Completed	6	7	4
Not completed	4	3	4
Consent withdrawn by subject	1	1	-
Adverse event, non-fatal	3	2	4

<b>Number of subjects in period 1</b>	Sequence C--P--R	Sequence P--R--C	Sequence R--C--P
Started	9	8	10
Completed	9	5	6
Not completed	0	3	4
Consent withdrawn by subject	-	1	2
Adverse event, non-fatal	-	2	2



## Baseline characteristics

---

### Reporting groups

---

Reporting group title	Sequence C--R--P
-----------------------	------------------

---

Reporting group description:

- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001
- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast
- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

---

Reporting group title	Sequence P--C--R
-----------------------	------------------

---

Reporting group description:

- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo
- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001
- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

---

Reporting group title	Sequence R--P--C
-----------------------	------------------

---

Reporting group description:

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast
- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo
- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

---

Reporting group title	Sequence C--P--R
-----------------------	------------------

---

Reporting group description:

- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Reporting group title	Sequence P--R--C
-----------------------	------------------

Reporting group description:

- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Reporting group title	Sequence R--C--P
-----------------------	------------------

Reporting group description:

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Reporting group values	Sequence C--R--P	Sequence P--C--R	Sequence R--P--C
Number of subjects	10	10	8
Age categorical			
Units: Subjects			
In utero			
Preterm newborn infants (gestational age < 37 wks)			
Newborns (0-27 days)			
Infants and toddlers (28 days-23 months)			
Children (2-11 years)			
Adolescents (12-17 years)			
Adults (18-64 years)			
From 65-84 years			

85 years and over			
-------------------	--	--	--

Age continuous Units: years arithmetic mean standard deviation	59.5 ± 7.25	61.7 ± 6.46	59.4 ± 5.71
Gender categorical Units: Subjects			
Female	5	4	5
Male	5	6	3

Reporting group values	Sequence C--P--R	Sequence P--R--C	Sequence R--C--P
Number of subjects	9	8	10
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days) Infants and toddlers (28 days-23 months) Children (2-11 years) Adolescents (12-17 years) Adults (18-64 years) From 65-84 years 85 years and over			
Age continuous Units: years arithmetic mean standard deviation	55.2 ± 7.14	60.5 ± 5.32	59.3 ± 5.79
Gender categorical Units: Subjects			
Female	3	5	3
Male	6	3	7

Reporting group values	Total		
Number of subjects	55		
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 standard deviation	-		
Gender categorical Units: Subjects			
Female	25		
Male	30		

### Subject analysis sets

Subject analysis set title	Test treatment - Safety population
Subject analysis set type	Safety analysis
Subject analysis set description: All randomised subjects who will take at least one administration of study medication	
Subject analysis set title	Reference treatment - Safety population
Subject analysis set type	Safety analysis
Subject analysis set description: All randomised subjects who will take at least one administration of study medication	
Subject analysis set title	Placebo - Safety population
Subject analysis set type	Safety analysis
Subject analysis set description: All randomised subjects who will take at least one administration of study medication	
Subject analysis set title	Test treatment - mITT population
Subject analysis set type	Modified intention-to-treat
Subject analysis set description: All randomised subjects who take at least one administration of study medication and with at least one post-baseline efficacy assessment	
Subject analysis set title	Reference treatment - mITT population
Subject analysis set type	Modified intention-to-treat
Subject analysis set description: All randomised subjects who take at least one administration of study medication and with at least one post-baseline efficacy assessment.	
Subject analysis set title	Placebo - mITT population
Subject analysis set type	Modified intention-to-treat
Subject analysis set description: All randomised subjects who take at least one administration of study medication and with at least one post-baseline efficacy assessment.	
Subject analysis set title	Test treatment - PK population
Subject analysis set type	Sub-group analysis
Subject analysis set description: All subjects from the safety population excluding subjects without any valid PK measurement and with major Protocol deviations affecting the PK evaluations	

Reporting group values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population
Number of subjects	42	49	43
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days)			

Infants and toddlers (28 days-23 months) Children (2-11 years) Adolescents (12-17 years) Adults (18-64 years) From 65-84 years 85 years and over			
Age continuous Units: years arithmetic mean standard deviation	±	±	±
Gender categorical Units: Subjects			
Female	16	21	16
Male	26	28	27

Reporting group values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population
Number of subjects	42	47	43
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days) Infants and toddlers (28 days-23 months) Children (2-11 years) Adolescents (12-17 years) Adults (18-64 years) From 65-84 years 85 years and over			
Age continuous Units: years arithmetic mean standard deviation	±	±	±
Gender categorical Units: Subjects			
Female	16	19	16
Male	26	28	27

Reporting group values	Test treatment - PK population		
Number of subjects	40		
Age categorical Units: Subjects			
In utero Preterm newborn infants (gestational age < 37 wks) Newborns (0-27 days) Infants and toddlers (28 days-23 months) Children (2-11 years) Adolescents (12-17 years)			

Adults (18-64 years) From 65-84 years 85 years and over			
Age continuous Units: years arithmetic mean standard deviation	$\pm$		
Gender categorical Units: Subjects			
Female	16		
Male	24		

---



## End points

---

### End points reporting groups

Reporting group title	Sequence C--R--P
-----------------------	------------------

Reporting group description:

- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001
- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast
- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

---

Reporting group title	Sequence P--C--R
-----------------------	------------------

Reporting group description:

- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo
- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001
- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

---

Reporting group title	Sequence R--P--C
-----------------------	------------------

Reporting group description:

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast
- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo
- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

---

Reporting group title	Sequence C--P--R
-----------------------	------------------

Reporting group description:

- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Reporting group title	Sequence P--R--C
-----------------------	------------------

Reporting group description:

- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Reporting group title	Sequence R--C--P
-----------------------	------------------

Reporting group description:

- Reference treatment (R):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast 500 µg; giving a total dose of 500 µg of Roflumilast

- Test treatment (C):  
3 inhalations of CHF 6001 400 µg + 1 tablet Roflumilast Placebo; giving a total dose of 1200 µg of CHF 6001

- Placebo (P):  
3 inhalations of CHF 6001 Placebo DPI + 1 tablet Roflumilast Placebo

After a 15 ±2 days run-in Period, patients were randomised to receive CHF 6001 1200µg using Aerolizer® DPI (T), Roflumilast 500µg (Daxas®) (R) or matched Placebo daily in the morning for 28 days, according to the above sequence. Each treatment period was separated from the other by a wash-out Period of 4-5 weeks.

Subject analysis set title	Test treatment - Safety population
----------------------------	------------------------------------

Subject analysis set type	Safety analysis
---------------------------	-----------------

Subject analysis set description:

All randomised subjects who will take at least one administration of study medication

Subject analysis set title	Reference treatment - Safety population
----------------------------	---

Subject analysis set type	Safety analysis
---------------------------	-----------------

Subject analysis set description:

All randomised subjects who will take at least one administration of study medication

Subject analysis set title	Placebo - Safety population
----------------------------	-----------------------------

Subject analysis set type	Safety analysis
---------------------------	-----------------

Subject analysis set description:

All randomised subjects who will take at least one administration of study medication

Subject analysis set title	Test treatment - mITT population
----------------------------	----------------------------------

Subject analysis set type	Modified intention-to-treat
---------------------------	-----------------------------

Subject analysis set description:

All randomised subjects who take at least one administration of study medication and with at least one post-baseline efficacy assessment

Subject analysis set title	Reference treatment - mITT population
Subject analysis set type	Modified intention-to-treat
Subject analysis set description: All randomised subjects who take at least one administration of study medication and with at least one post-baseline efficacy assessment.	
Subject analysis set title	Placebo - mITT population
Subject analysis set type	Modified intention-to-treat
Subject analysis set description: All randomised subjects who take at least one administration of study medication and with at least one post-baseline efficacy assessment.	
Subject analysis set title	Test treatment - PK population
Subject analysis set type	Sub-group analysis
Subject analysis set description: All subjects from the safety population excluding subjects without any valid PK measurement and with major Protocol deviations affecting the PK evaluations	

### Primary: Total cell count

End point title	Total cell count
End point description: Data from Day 21, Day 24 and Day 28 were averaged and change from baseline was used in the analyses and reported here (see Table 14.2.1.4).  This is an exploratory study therefore the objectives and the endpoints have not been identified as either primary or secondary.	
End point type	Primary
End point timeframe: Total cell count in sputum was performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: millions cells/g sputum				
arithmetic mean (standard deviation)	2.7301 ( $\pm$ 8.58667)	-0.6251 ( $\pm$ 17.58909)	1.0149 ( $\pm$ 13.52405)	

### Statistical analyses

Statistical analysis title	CHF 6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[1]</sup>
P-value	= 0.6544
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.912

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.605
upper limit	1.376

Notes:

[1] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Placebo - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[2]</sup>
P-value	= 0.0835
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.673
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.4292
upper limit	1.0564

Notes:

[2] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF 6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[3]</sup>
P-value	= 0.1875
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.355
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.8571
upper limit	2.1422

Notes:

[3] - This is a "proof of concept" study: no statistical hypothesis is included

## Secondary: Basophils

End point title	Basophils
End point description:	
End point type	Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: 10 <sup>9</sup> /L				
arithmetic mean (standard deviation)	-0.01 (± 0.028)	0 (± 0.03)	0 (± 0.023)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Basophils/Leukocytes

End point title Basophils/Leukocytes

End point description:

End point type Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	38	43	39	
Units: percent				
arithmetic mean (standard deviation)	0 (± 0.29)	-0.1 (± 0.24)	0 (± 0.27)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Eosinophils

End point title Eosinophils

End point description:

End point type Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: 10 <sup>9</sup> /L				
arithmetic mean (standard deviation)	0.01 (± 0.104)	0.02 (± 0.102)	0.07 (± 0.173)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Eosinophis/Leukocytes

End point title Eosinophis/Leukocytes

End point description:

End point type Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	38	43	39	
Units: percent				
arithmetic mean (standard deviation)	0.1 (± 1.39)	0 (± 1.27)	0.8 (± 2.06)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Erythrocytes

End point title Erythrocytes

End point description:

End point type Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: 10 <sup>12</sup> /L				
arithmetic mean (standard deviation)	0.015 (± 0.1844)	0.005 (± 0.2089)	0.022 (± 0.2293)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Hematocrit

End point title	Hematocrit
-----------------	------------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: ratio				
arithmetic mean (standard deviation)	-0.001 (± 0.0177)	-0.003 (± 0.0183)	-0.001 (± 0.0201)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Hemoglobin

End point title	Hemoglobin
-----------------	------------

End point description:

End point type	Secondary
End point timeframe:	
Routine hematology and chemistry were performed at screening and Day 28.	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: g/dL				
arithmetic mean (standard deviation)	-0.05 (± 0.567)	-0.15 (± 0.607)	-0.1 (± 0.669)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Leukocytes

End point title	Leukocytes
End point description:	
End point type	Secondary
End point timeframe:	
Routine hematology and chemistry were performed at screening and Day 28.	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: 10 <sup>9</sup> /L				
arithmetic mean (standard deviation)	0.35 (± 1.673)	0.39 (± 1.345)	0.33 (± 1.517)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Lymphocytes

End point title	Lymphocytes
End point description:	



End point type	Secondary
End point timeframe:	
Routine hematology and chemistry were performed at screening and Day 28.	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: 10 <sup>9</sup> /L				
arithmetic mean (standard deviation)	0.18 (± 0.439)	0.21 (± 0.457)	0.12 (± 0.453)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Lymphocytes/Leukocytes

End point title	Lymphocytes/Leukocytes
End point description:	
End point type	Secondary
End point timeframe:	
Routine hematology and chemistry were performed at screening and Day 28.	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	38	43	39	
Units: percent				
arithmetic mean (standard deviation)	1.5 (± 5.18)	1.3 (± 6.34)	0.6 (± 6.44)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Monocytes

End point title	Monocytes
End point description:	
End point type	Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed				
Units: 10 <sup>9</sup> /L				
arithmetic mean (standard deviation)	-0.04 (± 0.183)	0 (± 0.121)	-0.01 (± 0.176)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Monocytes/Leukocytes

End point title	Monocytes/Leukocytes
-----------------	----------------------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	38	43	39	
Units: percent				
arithmetic mean (standard deviation)	-0.8 (± 1.68)	-0.5 (± 1.46)	-0.6 (± 1.58)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Neutrophils

End point title	Neutrophils
-----------------	-------------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: 10 <sup>9</sup> /L				
arithmetic mean (standard deviation)	0.18 (± 1.479)	0.16 (± 1.237)	0.15 (± 1.325)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Neutrophils/Leukocytes

End point title      Neutrophils/Leukocytes

End point description:

End point type      Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	38	43	39	
Units: percent				
arithmetic mean (standard deviation)	-0.8 (± 5.58)	-0.6 (± 7.09)	-0.8 (± 6.69)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Platelets

End point title      Platelets

End point description:

End point type      Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: 10 <sup>9</sup> /L				
arithmetic mean (standard deviation)	2.25 (± 19.847)	13.44 (± 32.017)	-1.46 (± 23.999)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Alanine aminotransferase

End point title	Alanine aminotransferase
-----------------	--------------------------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	40	
Units: U/L				
arithmetic mean (standard deviation)	-1.19 (± 7.895)	-2.4 (± 6.13)	-0.94 (± 9.66)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Albumin

End point title	Albumin
-----------------	---------

End point description:

End point type	Secondary
End point timeframe:	
Routine hematology and chemistry were performed at screening and Day 28.	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: g/L				
arithmetic mean (standard deviation)	-0.5 (± 2.192)	-0.17 (± 2.533)	-0.2 (± 2.131)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Alkaline phosphatase

End point title	Alkaline phosphatase
End point description:	

End point type	Secondary
End point timeframe:	
Routine hematology and chemistry were performed at screening and Day 28.	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	40	
Units: U/L				
arithmetic mean (standard deviation)	-0.63 (± 9.352)	1.7 (± 9.028)	1.49 (± 7.882)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Aspartate aminotransferase

End point title	Aspartate aminotransferase
-----------------	----------------------------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	39	44	37	
Units: U/L				
arithmetic mean (standard deviation)	0.51 (± 8.583)	-1.2 (± 5.03)	0.7 (± 6.479)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Bilirubin

End point title	Bilirubin
-----------------	-----------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	40	
Units: µmol/L				
arithmetic mean (standard deviation)	-0.51 (± 3.948)	-0.48 (± 3.003)	0.01 (± 3.078)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Calcium

End point title	Calcium
-----------------	---------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	44	41	
Units: mmol/L				
arithmetic mean (standard deviation)	-0.01 (± 0.1175)	0.016 (± 0.0957)	-0.01 (± 0.0827)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Chloride

End point title	Chloride
-----------------	----------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	37	44	36	
Units: mmol/L				
arithmetic mean (standard deviation)	-0.14 (± 2.702)	-0.58 (± 2.281)	-0.23 (± 2.496)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Creatinine

End point title	Creatinine
End point description:	
End point type	Secondary
End point timeframe:	
Routine hematology and chemistry were performed at screening and Day 28.	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: µmol/L				
arithmetic mean (standard deviation)	-0.9 (± 6.183)	-0.18 (± 7.565)	-1.32 (± 6.274)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Gamma glutamyl transferase

End point title	Gamma glutamyl transferase
End point description:	
End point type	Secondary
End point timeframe:	
Routine hematology and chemistry were performed at screening and Day 28.	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	39	44	40	
Units: U/L				
arithmetic mean (standard deviation)	-1.44 (± 8.542)	-0.76 (± 11.551)	-1.37 (± 12.08)	

### Statistical analyses

No statistical analyses for this end point



**Secondary: Glucose**

End point title	Glucose
-----------------	---------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	39	44	40	
Units: mmol/L				
arithmetic mean (standard deviation)	0.187 (± 0.6213)	0.167 (± 0.5524)	0.212 (± 0.9286)	

**Statistical analyses**

No statistical analyses for this end point

**Secondary: Phosphate**

End point title	Phosphate
-----------------	-----------

End point description:

End point type	Secondary
----------------	-----------

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	40	
Units: mmol/L				
arithmetic mean (standard deviation)	0.039 (± 0.1867)	0.039 (± 0.1487)	0.028 (± 0.1309)	

**Statistical analyses**

No statistical analyses for this end point

### Secondary: Potassium

End point title Potassium

End point description:

End point type Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	40	
Units: mmol/L				
arithmetic mean (standard deviation)	-0.14 ( $\pm$ 0.3181)	-0.049 ( $\pm$ 0.523)	-0.124 ( $\pm$ 0.3382)	

### Statistical analyses

No statistical analyses for this end point

### Secondary: Protein

End point title Protein

End point description:

End point type Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	40	
Units: g/L				
arithmetic mean (standard deviation)	-0.09 ( $\pm$ 3.775)	0.27 ( $\pm$ 3.547)	0.43 ( $\pm$ 3.083)	

## Statistical analyses

No statistical analyses for this end point

### Secondary: Sodium

End point title Sodium

End point description:

End point type Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	40	45	41	
Units: mmol/L				
arithmetic mean (standard deviation)	0 ( $\pm$ 2.1)	-0.3 ( $\pm$ 2.09)	-0.2 ( $\pm$ 2.06)	

## Statistical analyses

No statistical analyses for this end point

### Secondary: Urate

End point title Urate

End point description:

End point type Secondary

End point timeframe:

Routine hematology and chemistry were performed at screening and Day 28.

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	35	40	36	
Units: $\mu$ mol/L				
arithmetic mean (standard deviation)	-2.94 ( $\pm$ 31.936)	-12.15 ( $\pm$ 37.216)	-11.09 ( $\pm$ 31.245)	

## Statistical analyses

No statistical analyses for this end point

### Other pre-specified: Neutrophils - absolute count

End point title	Neutrophils - absolute count
-----------------	------------------------------

End point description:

Data from Day 21, Day 24 and Day 28 were averaged and change from baseline was used in the analyses and reported here (see Table 14.2.1.5)

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

Neutrophil count in sputum was performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: millions neutrophils/g sputum				
arithmetic mean (standard deviation)	2.6588 ( $\pm$ 8.28804)	-0.647 ( $\pm$ 17.43528)	0.8679 ( $\pm$ 13.13533)	

## Statistical analyses

Statistical analysis title	CHF 6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[4]</sup>
P-value	= 0.565
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.879
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.5611
upper limit	1.3774

Notes:

[4] - This is a "proof of concept" study: no statistical hypothesis is included

Statistical analysis title	CHF 6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population

Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[5]</sup>
P-value	= 0.2238
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.358
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.823
upper limit	2.241

Notes:

[5] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[6]</sup>
P-value	= 0.0815
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.647
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.3958
upper limit	1.0587

Notes:

[6] - This is a "proof of concept" study: no statistical hypothesis is included

#### **Other pre-specified: Neutrophils - differential count**

End point title	Neutrophils - differential count
End point description:	
Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and reported here (see Table 14.2.1.9 of CSR))	
End point type	Other pre-specified
End point timeframe:	
Neutrophil count in sputum was performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.	

<b>End point values</b>	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: percent				
arithmetic mean (standard deviation)	0.4409 ( $\pm$ 14.89339)	-5.5694 ( $\pm$ 13.66577)	-1.0944 ( $\pm$ 16.06526)	

## Statistical analyses

<b>Statistical analysis title</b>	CHF 6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[7]</sup>
P-value	= 0.1779
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.953
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.888
upper limit	1.023

Notes:

[7] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[8]</sup>
P-value	= 0.2549
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.957
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.885
upper limit	1.0339

Notes:

[8] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF 6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population

Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[9]</sup>
P-value	= 0.9277
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.996
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9208
upper limit	1.0783

Notes:

[9] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: Eosinophils - absolute count

End point title	Eosinophils - absolute count
End point description:	
Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and reported here (see Table 14.2.1.6 of CSR)	
End point type	Other pre-specified
End point timeframe:	
Eosinophil count in sputum was performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: millions eosinophils /g sputum				
arithmetic mean (standard deviation)	0.0117 (± 1.19362)	-0.0099 (± 0.08537)	0.0498 (± 0.30105)	

### Statistical analyses

Statistical analysis title	CHF 6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other
P-value	= 0.1521
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.241

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.0335
upper limit	1.7296

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[10]</sup>
P-value	= 0.5608
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.536
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.0626
upper limit	4.5957

Notes:

[10] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF 6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[11]</sup>
P-value	= 0.4489
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.449
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.0541
upper limit	3.7301

Notes:

[11] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: Eosinophils - differential count

End point title	Eosinophils - differential count
End point description:	
Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and are reported here (see Table 14.2.1.10 of CSR)	
End point type	Other pre-specified



End point timeframe:

Eosinophil count in sputum was performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.

<b>End point values</b>	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: percent				
arithmetic mean (standard deviation)	-0.6263 ( $\pm$ 6.22173)	0.5386 ( $\pm$ 2.328)	1.3458 ( $\pm$ 4.51746)	

### Statistical analyses

<b>Statistical analysis title</b>	CHF 6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[12]</sup>
P-value	= 0.2485
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.238
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.02
upper limit	2.8363

Notes:

[12] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[13]</sup>
P-value	= 0.9687
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.949
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.0639
upper limit	14.094

Notes:

[13] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF 6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[14]</sup>
P-value	= 0.2957
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.251
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.018
upper limit	3.5089

Notes:

[14] - This is a "proof of concept" study: no statistical hypothesis is included

#### Other pre-specified: Macrophages - absolute count

End point title	Macrophages - absolute count
End point description:	
Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and are reported here (see Table 14.2.1.7 of CSR)	
End point type	Other pre-specified
End point timeframe:	
Macrophage count in sputum was performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: millions macrophages/g sputum				
arithmetic mean (standard deviation)	0.1048 (± 0.70455)	0.0231 (± 0.77945)	0.0961 (± 1.01861)	

#### Statistical analyses

<b>Statistical analysis title</b>	CHF 6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[15]</sup>
P-value	= 0.9379
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.983
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.6379
upper limit	1.5159

Notes:

[15] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[16]</sup>
P-value	= 0.3588
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.808
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.5069
upper limit	1.2864

Notes:

[16] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF 6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[17]</sup>
P-value	= 0.4097
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.218
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.7549
upper limit	1.9643

Notes:

[17] - This is a "proof of concept" study: no statistical hypothesis is included

**Other pre-specified: Macrophages - differential count**

End point title	Macrophages - differential count
-----------------	----------------------------------

End point description:

Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and are reported here (see Table 14.2.1.11 of CSR)

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

Macrophage count in sputum was performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: percent				
arithmetic mean (standard deviation)	0.4879 ( $\pm$ 14.69496)	5.4444 ( $\pm$ 11.80631)	-0.7194 ( $\pm$ 14.45761)	

**Statistical analyses**

<b>Statistical analysis title</b>	CHF 6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[18]</sup>
P-value	= 0.9551
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.014
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.6219
upper limit	1.6526

Notes:

[18] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[19]</sup>
P-value	= 0.3048
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.296
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.7826
upper limit	2.1468

Notes:

[19] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF 6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[20]</sup>
P-value	= 0.3574
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.782
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.4586
upper limit	1.3338

Notes:

[20] - This is a "proof of concept" study: no statistical hypothesis is included

#### **Other pre-specified: Lymphocytes - absolute count**

End point title	Lymphocytes - absolute count
-----------------	------------------------------

End point description:

Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and are reported here (see Table of 14.2.1.8 CSR)

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

Lymphocyte count in sputum was performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.

<b>End point values</b>	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: millions lymphocytes/g sputum				
arithmetic mean (standard deviation)	-0.0017 ( $\pm$ 0.01046)	0.001 ( $\pm$ 0.00567)	0.0004 ( $\pm$ 0.00152)	

## Statistical analyses

<b>Statistical analysis title</b>	CHF 6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[21]</sup>
P-value	= 0.146
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	4.076
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.6
upper limit	27.6916

Notes:

[21] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[22]</sup>
P-value	= 0.2756
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	2.913
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.4121
upper limit	20.5843

Notes:

[22] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF 6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population

Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[23]</sup>
P-value	= 0.741
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.399
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.1817
upper limit	10.7785

Notes:

[23] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: Lymphocytes - differential count

End point title	Lymphocytes - differential count
End point description:	
Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and are reported here (see Table 14.2.1.12 of CSR)	
End point type	Other pre-specified
End point timeframe:	
Lymphocyte count in sputum was performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: percent				
arithmetic mean (standard deviation)	-0.047 (± 0.21348)	0.0046 (± 0.08674)	0.0222 (± 0.09268)	

### Statistical analyses

<b>Statistical analysis title</b>	CHF 6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[24]</sup>
P-value	= 0.1235
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	8.409

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.5454
upper limit	129.647

Notes:

[24] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[25]</sup>
P-value	= 0.3513
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	3.701
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.2237
upper limit	61.2316

Notes:

[25] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF 6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[26]</sup>
P-value	= 0.571
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	2.272
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.1244
upper limit	41.5049

Notes:

[26] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: IL-8 in sputum supernatant

End point title	IL-8 in sputum supernatant
End point description:	
Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and are reported here (see Table 14.2.1.13 of CSR)	
End point type	Other pre-specified



End point timeframe:

The level of IL-8 in sputum supernatant were performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: pg/mL				
arithmetic mean (standard deviation)	152.9594 ( $\pm$ 2546.18)	-923.286 ( $\pm$ 2862.978)	462.8729 ( $\pm$ 3054.962)	

### Statistical analyses

Statistical analysis title	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[27]</sup>
P-value	= 0.0039
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.718
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.5792
upper limit	0.8908

Notes:

[27] - This is a "proof of concept" study: no statistical hypothesis is included

Statistical analysis title	Roflumilast vs placebo
Comparison groups	Placebo - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[28]</sup>
P-value	= 0.0014
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.671
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.5333
upper limit	0.845

Notes:

[28] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[29]</sup>
P-value	= 0.602
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.07
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.8228
upper limit	1.3915

Notes:

[29] - This is a "proof of concept" study: no statistical hypothesis is included

#### Other pre-specified: IL-6 in sputum supernatant

End point title	IL-6 in sputum supernatant
End point description:	
Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and are reported here (see Table 14.2.1.14 of CSR)	
End point type	Other pre-specified
End point timeframe:	
The level of IL-6 in sputum supernatant were performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: pg/mL				
arithmetic mean (standard deviation)	54.1723 (± 212.7271)	17.2294 (± 137.5087)	-20.7899 (± 92.10865)	

#### Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[30]</sup>
P-value	= 0.0801
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.373
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9604
upper limit	1.9617

Notes:

[30] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[31]</sup>
P-value	= 0.7928
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.952
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.6502
upper limit	1.3932

Notes:

[31] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[32]</sup>
P-value	= 0.0724
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.442
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9652
upper limit	2.155

Notes:

[32] - This is a "proof of concept" study: no statistical hypothesis is included

**Other pre-specified: Neutrophil elastase in sputum supernatant**

End point title	Neutrophil elastase in sputum supernatant
-----------------	---

End point description:

Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and are reported here (see Table 14.2.1.15 of CSR)

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

The level of neutrophil elastase in sputum supernatant were performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: pg/mL				
arithmetic mean (standard deviation)	-215988 ( $\pm$ 1657361)	-575067 ( $\pm$ 1738260)	-473269 ( $\pm$ 1463202)	

**Statistical analyses**

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[33]</sup>
P-value	= 0.0773
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.7
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.4706
upper limit	1.0418

Notes:

[33] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[34]</sup>
P-value	= 0.0034
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.54
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.3623
upper limit	0.8049

Notes:

[34] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[35]</sup>
P-value	= 0.2322
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.297
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.8408
upper limit	1.9997

Notes:

[35] - This is a "proof of concept" study: no statistical hypothesis is included

#### **Other pre-specified: Myeloperoxidase in sputum supernatant**

End point title	Myeloperoxidase in sputum supernatant
End point description:	
Data from Day 21, Day 24 and Day 28 were averaged and change from baseline were used in the analyses and are reported here (see Table 14.2.1.16 of CSR)	
End point type	Other pre-specified

End point timeframe:

The level of myeloperoxidase in sputum supernatant were performed on Day 1 (baseline values), Day 21, Day 24 and Day 28.

<b>End point values</b>	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: ng/mL				
arithmetic mean (standard deviation)	-4.2085 ( $\pm$ 1347.198)	-402.997 ( $\pm$ 1347.198)	-402.997 ( $\pm$ 1604.78)	

## Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Placebo - mITT population v Test treatment - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[36]</sup>
P-value	= 0.0368
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.676
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.4693
upper limit	0.975

Notes:

[36] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[37]</sup>
P-value	= 0.0086
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.589
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.3997
upper limit	0.8672

Notes:

[37] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population

Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[38]</sup>
P-value	= 0.5117
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.149
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.7517
upper limit	1.7561

Notes:

[38] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: Change from baseline to Day 28 in serum fibrinogen

End point title	Change from baseline to Day 28 in serum fibrinogen
End point description:	
Data on change from baseline to Day 28 were used in the analyses and are reported here (see Table 14.2.2.4 of CSR)	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: ug/L				
arithmetic mean (standard deviation)	91.0237 (± 466.5769)	98.4042 (± 572.3796)	57.6753 (± 571.7863)	

### Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[39]</sup>
P-value	= 0.0646
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.889

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.7846
upper limit	1.0073

Notes:

[39] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[40]</sup>
P-value	= 0.4629
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.956
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.8456
upper limit	1.0801

Notes:

[40] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[41]</sup>
P-value	= 0.2416
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.93
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.8233
upper limit	1.051

Notes:

[41] - This is a "proof of concept" study: no statistical hypothesis is included

#### Other pre-specified: Change from baseline to Day 28 in serum CRP

End point title	Change from baseline to Day 28 in serum CRP
End point description:	
Data on change from baseline to Day 28 were used in the analyses and are reported here (see Table 14.2.2.1 of CSR)	
End point type	Other pre-specified



End point timeframe:

At Day 28

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: nmol/L				
arithmetic mean (standard deviation)	0.391 ( $\pm$ 44.4402)	15.331 ( $\pm$ 173.3361)	-72.364 ( $\pm$ 381.2791)	

### Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[42]</sup>
P-value	= 0.553
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.902
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.6382
upper limit	1.2746

Notes:

[42] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[43]</sup>
P-value	= 0.5279
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.898
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.6389
upper limit	1.2612

Notes:

[43] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[44]</sup>
P-value	= 0.9774
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.005
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.7182
upper limit	1.4057

Notes:

[44] - This is a "proof of concept" study: no statistical hypothesis is included

#### Other pre-specified: Change from baseline to Day 28 in blood IL-6

End point title	Change from baseline to Day 28 in blood IL-6
End point description:	
Data on change from baseline to Day 28 were used in the analyses and are reported here (see Table 14.2.2.2 of CSR)	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: pg/mL				
arithmetic mean (standard deviation)	0.3074 (± 1.32279)	0.281 (± 1.79656)	-1.0879 (± 2.77641)	

#### Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[45]</sup>
P-value	= 0.1517
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.13
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9549
upper limit	1.3375

Notes:

[45] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[46]</sup>
P-value	= 0.3013
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.091
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9229
upper limit	1.2908

Notes:

[46] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[47]</sup>
P-value	= 0.6741
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.035
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.8783
upper limit	1.2208

Notes:

[47] - This is a "proof of concept" study: no statistical hypothesis is included

**Other pre-specified: Change from baseline to Day 28 in blood IL-8**

End point title	Change from baseline to Day 28 in blood IL-8
End point description: Data on change from baseline to Day 28 were used in the analyses and are reported here (see Table 14.2.2.3 of CSR)	
End point type	Other pre-specified
End point timeframe: At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: pg/mL				
arithmetic mean (standard deviation)	0.0747 ( $\pm$ 4.90551)	-2.7426 ( $\pm$ 10.89529)	-3.8656 ( $\pm$ 7.08697)	

**Statistical analyses**

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[48]</sup>
P-value	= 0.0556
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.157
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9964
upper limit	1.3435

Notes:

[48] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[49]</sup>
P-value	= 0.8286
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.015
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.882
upper limit	1.1688

Notes:

[49] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[50]</sup>
P-value	= 0.0736
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.14
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.987
upper limit	1.3157

Notes:

[50] - This is a "proof of concept" study: no statistical hypothesis is included

#### **Other pre-specified: Change from baseline in pre-bronchodilator FEV1**

End point title	Change from baseline in pre-bronchodilator FEV1
End point description:	
Only data on change from Day 1 (baseline) to Day 28 are reported here (See tab. 14.2.3.1. of CSR).	
End point type	Other pre-specified
End point timeframe:	
At Day 9, Day 21, Day 24 and Day 28.	

<b>End point values</b>	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: liters				
arithmetic mean (standard deviation)	-0.054 ( $\pm$ 0.2149)	0.035 ( $\pm$ 0.1703)	-0.044 ( $\pm$ 0.2219)	

## Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[51]</sup>
P-value	= 0.6328
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	0.014
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.0447
upper limit	0.073

Notes:

[51] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[52]</sup>
P-value	= 0.0631
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	0.055
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.0031
upper limit	0.1121

Notes:

[52] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population

Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[53]</sup>
P-value	= 0.1789
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	-0.04
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.0996
upper limit	0.0189

Notes:

[53] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: Change from baseline in post-bronchodilator FEV1

End point title	Change from baseline in post-bronchodilator FEV1
End point description:	
Only data on change from Day 1 (baseline) to Day 28 are reported here (sse tab.	
End point type	Other pre-specified
End point timeframe:	
At Day 9, Day 21, Day 24 and Day 28.	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: liters				
arithmetic mean (standard deviation)	-0.067 (± 0.2459)	0.025 (± 0.1851)	-0.068 (± 0.2136)	

### Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[54]</sup>
P-value	= 0.8615
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	-0.005

Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.0652
upper limit	0.0547

Notes:

[54] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[55]</sup>
P-value	= 0.6931
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	0.012
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.0483
upper limit	0.0723

Notes:

[55] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[56]</sup>
P-value	= 0.5734
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	-0.017
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.078
upper limit	0.0435

Notes:

[56] - This is a "proof of concept" study: no statistical hypothesis is included

#### Other pre-specified: Change from baseline in pre-bronchodilator FVC

End point title	Change from baseline in pre-bronchodilator FVC
End point description:	
Only data on change from Day 1 (baseline) to Day 28 is reported here (see tab. 14.2.3.2 of CSR).	
End point type	Other pre-specified



End point timeframe:

At Day 1, Day 9, Day 21, Day 24 and Day 28.

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: Liter				
arithmetic mean (standard deviation)	-0.079 ( $\pm$ 0.2833)	0.06 ( $\pm$ 0.3552)	-0.109 ( $\pm$ 0.3519)	

### Statistical analyses

Statistical analysis title	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[57]</sup>
P-value	= 0.2267
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	0.058
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.0371
upper limit	0.154

Notes:

[57] - This is a "proof of concept" study: no statistical hypothesis is included

Statistical analysis title	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[58]</sup>
P-value	= 0.0292
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	0.105
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.0109
upper limit	0.1994

Notes:

[58] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[59]</sup>
P-value	= 0.3315
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	-0.047
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.1421
upper limit	0.0486

Notes:

[59] - This is a "proof of concept" study: no statistical hypothesis is included

#### **Other pre-specified: Change from baseline in post-bronchodilator FVC**

End point title	Change from baseline in post-bronchodilator FVC
End point description:	
Only data on change from Day 1 (baseline) to Day 28 is reported here (tab. 14.2.3.2 of CSR).	
End point type	Other pre-specified
End point timeframe:	
At Day 9, Day 21, Day 24 and Day 28.	

<b>End point values</b>	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: liters				
arithmetic mean (standard deviation)	-0.135 (± 0.3188)	0.007 (± 0.347)	-0.128 (± 0.2882)	

#### **Statistical analyses**

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[60]</sup>
P-value	= 0.6355
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	0.023
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.0743
upper limit	0.121

Notes:

[60] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[61]</sup>
P-value	= 0.4213
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	0.039
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.0578
upper limit	0.1368

Notes:

[61] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[62]</sup>
P-value	= 0.7455
Method	ANCOVA
Parameter estimate	least square mean
Point estimate	-0.016
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.115
upper limit	0.0827

Notes:

[62] - This is a "proof of concept" study: no statistical hypothesis is included

**Other pre-specified: Change from baseline to Day 28 in VC**

End point title	Change from baseline to Day 28 in VC
End point description:	
Only data on change from baseline to Day 28 are reported here (see tab. 14.2.4..1 of CSR)	
End point type	Other pre-specified
End point timeframe:	
At Day 1 and Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: liters				
arithmetic mean (standard deviation)	0.0013 ( $\pm$ 0.50406)	0.0612 ( $\pm$ 0.29528)	0.0853 ( $\pm$ 0.34144)	

**Statistical analyses**

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[63]</sup>
P-value	= 0.3709
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.984
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9494
upper limit	1.0198

Notes:

[63] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[64]</sup>
P-value	= 0.243
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.021

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9857
upper limit	1.0575

Notes:

[64] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[65]</sup>
P-value	= 0.0311
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.964
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9321
upper limit	0.9965

Notes:

[65] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: Change from baseline to Day 28 in IC

End point title	Change from baseline to Day 28 in IC
End point description:	
Only data on change from baseline to Day 28 are reported here (see tab 14.2.4.2).	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: liters				
arithmetic mean (standard deviation)	0.0354 (± 0.43351)	0.0312 (± 0.37439)	0.0017 (± 0.40019)	

### Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[66]</sup>
P-value	= 0.5088
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.982
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9314
upper limit	1.0362

Notes:

[66] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[67]</sup>
P-value	= 0.5606
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.985
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9341
upper limit	1.038

Notes:

[67] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[68]</sup>
P-value	= 0.9306
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.998
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9469
upper limit	1.0512

Notes:

[68] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: Change from baseline to Day 28 in RV

End point title	Change from baseline to Day 28 in RV
End point description:	
Only data on change from baseline to Day 28 are reported here (see tab. 14.2.4.3 of CSR)	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: liters				
arithmetic mean (standard deviation)	-0.0587 ( $\pm$ 1.08645)	0.016 ( $\pm$ 0.58512)	0.0097 ( $\pm$ 0.63798)	

### Statistical analyses

Statistical analysis title	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[69]</sup>
P-value	= 0.6873
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.011
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9583
upper limit	1.0664

Notes:

[69] - This is a "proof of concept" study: no statistical hypothesis is included

Statistical analysis title	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[70]</sup>
P-value	= 0.1946
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.965
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9152
upper limit	1.0186

Notes:

[70] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[71]</sup>
P-value	= 0.0796
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.047
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9944
upper limit	1.1024

Notes:

[71] - This is a "proof of concept" study: no statistical hypothesis is included

#### Other pre-specified: Change from baseline to Day 28 in FRC

End point title	Change from baseline to Day 28 in FRC
End point description:	
Data on change from baseline to Day 28 are reported here (see table 14.2.4.4 of CSR)	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: liters				
arithmetic mean (standard deviation)	-0.0726 (±	0.0607 (±	0.0867 (±	



**Statistical analyses**

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[72]</sup>
P-value	= 0.9914
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9635
upper limit	1.0383

Notes:

[72] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[73]</sup>
P-value	= 0.9262
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.998
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.962
upper limit	1.036

Notes:

[73] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population

Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[74]</sup>
P-value	= 0.9154
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.002
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9664
upper limit	1.0387

Notes:

[74] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: Change form baseline to Day 28 in TLC

End point title	Change form baseline to Day 28 in TLC
End point description:	
Only data on change from Day 1 (baseline) to Day 28 are reported here (See tab. 14.2.4.5. of CSR).	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: liters				
arithmetic mean (standard deviation)	-0.0564 (± 0.79366)	0.0723 (± 0.53586)	0.0956 (± 0.62812)	

### Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[75]</sup>
P-value	= 0.696
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.995

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9706
upper limit	1.0202

Notes:

[75] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other
P-value	= 0.3702 <sup>[76]</sup>
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.989
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9648
upper limit	1.0136

Notes:

[76] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHf6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[77]</sup>
P-value	= 0.6072
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.006
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9823
upper limit	1.0309

Notes:

[77] - This is a "proof of concept" study: no statistical hypothesis is included

#### Other pre-specified: Change from baseline to Day 28 in RV/TLC

End point title	Change from baseline to Day 28 in RV/TLC
End point description:	
Only data on change from Day 1 (baseline) to Day 28 are reported here (See tab. 14.2.4.6 of CSR).	
End point type	Other pre-specified

End point timeframe:

At Day 28

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: percent				
arithmetic mean (standard deviation)	0.1 ( $\pm$ 8.01)	-0.2 ( $\pm$ 4.38)	-0.4 ( $\pm$ 5.37)	

### Statistical analyses

Statistical analysis title	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[78]</sup>
P-value	= 0.3623
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.018
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9797
upper limit	1.057

Notes:

[78] - This is a "proof of concept" study: no statistical hypothesis is included

Statistical analysis title	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[79]</sup>
P-value	= 0.2407
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.978
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9416
upper limit	1.0155

Notes:

[79] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[80]</sup>
P-value	= 0.311
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.041
Confidence interval	
level	95 %
sides	2-sided
lower limit	1.0037
upper limit	1.0789

Notes:

[80] - This is a "proof of concept" study: no statistical hypothesis is included

#### **Other pre-specified: Change from baseline to Day 28 in ITV**

End point title	Change from baseline to Day 28 in ITV
End point description:	
Only data on change from Day 1 (baseline) to Day 28 are reported here (See tab. 14.2.4.7. of CSR).	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

<b>End point values</b>	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: liters				
arithmetic mean (standard deviation)	-0.0267 (± 0.91372)	-0.0112 (± 0.48576)	0.0822 (± 0.57956)	

#### **Statistical analyses**

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[81]</sup>
P-value	= 0.7135
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.994
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9604
upper limit	1.0282

Notes:

[81] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[82]</sup>
P-value	= 0.5332
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.99
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9572
upper limit	1.0231

Notes:

[82] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[83]</sup>
P-value	= 0.8037
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.004
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9713
upper limit	1.0381

Notes:

[83] - This is a "proof of concept" study: no statistical hypothesis is included

**Other pre-specified: Change from baseline to Day 28 in sGAW**

End point title	Change from baseline to Day 28 in sGAW
End point description:	
Only data on change from Day 1 (baseline) to Day 28 are reported here (See tab. 14.2.4.8. of CSR).	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: kPa/s				
arithmetic mean (standard deviation)	0 ( $\pm$ 0.2071)	0.0302 ( $\pm$ 0.1805)	0.0086 ( $\pm$ 0.27717)	

**Statistical analyses**

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[84]</sup>
P-value	= 0.4104
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.952
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.845
upper limit	1.0721

Notes:

[84] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	roflumilast vs placebo
Comparison groups	Placebo - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[85]</sup>
P-value	= 0.2505
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.071

Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9518
upper limit	1.2046

Notes:

[85] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[86]</sup>
P-value	= 0.0445
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.889
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.7925
upper limit	0.997

Notes:

[86] - This is a "proof of concept" study: no statistical hypothesis is included

#### Other pre-specified: Change from baseline to Day 28 in GAW

End point title	Change from baseline to Day 28 in GAW
End point description:	
Only data on change from Day 1 (baseline) to Day 28 are reported here (See tab. 14.2.4.9. of CSR).	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: kPa*s/liters				
arithmetic mean (standard deviation)	-0.0003 (± 0.17315)	-0.0388 (± 0.16972)	-0.0051 (± 0.08507)	

#### Statistical analyses



<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[87]</sup>
P-value	= 0.3202
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.056
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.947
upper limit	1.1782

Notes:

[87] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[88]</sup>
P-value	= 0.3705
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.952
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.855
upper limit	1.061

Notes:

[88] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[89]</sup>
P-value	= 0.0531
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.109
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9986
upper limit	1.2318

Notes:

[89] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: TDI scores on Day 28

End point title	TDI scores on Day 28
End point description: Only data on change from Day 1 (baseline) to Day 28 are reported here (See tab. 14.2.5.1. of CSR).	
End point type	Other pre-specified
End point timeframe: At Day 28	

End point values	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: integer				
arithmetic mean (standard deviation)	0.2 (± 0.7)	0.2 (± 0.57)	0 (± 0.42)	

### Statistical analyses

Statistical analysis title	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[90]</sup>
P-value	= 0.3202
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.056
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.947
upper limit	1.1782

Notes:

[90] - This is a "proof of concept" study: no statistical hypothesis is included

Statistical analysis title	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population

Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[91]</sup>
P-value	= 0.3705
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	0.952
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.855
upper limit	1.061

Notes:

[91] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population
Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[92]</sup>
P-value	= 0.0531
Method	ANCOVA
Parameter estimate	geometric LSM
Point estimate	1.109
Confidence interval	
level	95 %
sides	2-sided
lower limit	0.9986
upper limit	1.2318

Notes:

[92] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: Rescue drug use over the 28-day period

End point title	Rescue drug use over the 28-day period
End point description:	
Rescue drug use was expressed as mean number of puffs/day of salbutamol rescue medication. Data on table 14.2.6. of CSR are reported here.	
End point type	Other pre-specified
End point timeframe:	
Throughout the 28-day period	

<b>End point values</b>	Test treatment - mITT population	Reference treatment - mITT population	Placebo - mITT population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	47	43	
Units: puffs/day				
arithmetic mean (standard deviation)	1.71 ( $\pm$ 2.244)	2.11 ( $\pm$ 2.667)	1.99 ( $\pm$ 2.583)	

### Statistical analyses

<b>Statistical analysis title</b>	CHF6001 vs placebo
Comparison groups	Test treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	85
Analysis specification	Pre-specified
Analysis type	other <sup>[93]</sup>
P-value	= 0.1185
Method	ANOVA
Parameter estimate	least square mean
Point estimate	-0.23
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.521
upper limit	0.06

Notes:

[93] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	Roflumilast vs placebo
Comparison groups	Reference treatment - mITT population v Placebo - mITT population
Number of subjects included in analysis	90
Analysis specification	Pre-specified
Analysis type	other <sup>[94]</sup>
P-value	= 0.9173
Method	ANOVA
Parameter estimate	least square mean
Point estimate	0.01
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.269
upper limit	0.299

Notes:

[94] - This is a "proof of concept" study: no statistical hypothesis is included

<b>Statistical analysis title</b>	CHF6001 vs Roflumilast
Comparison groups	Test treatment - mITT population v Reference treatment - mITT population

Number of subjects included in analysis	89
Analysis specification	Pre-specified
Analysis type	other <sup>[95]</sup>
P-value	= 0.0904
Method	ANOVA
Parameter estimate	least square mean
Point estimate	-0.25
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.53
upper limit	0.04

Notes:

[95] - This is a "proof of concept" study: no statistical hypothesis is included

### Other pre-specified: FEV1 on Day 1

End point title	FEV1 on Day 1
End point description:	
FEV1, to assess potential occurrence of paradoxical bronchospasm on Day 1 (2-hour spirometry measurement). Absolute change values are reported here (sse table 14.3.9 of CSR)	
End point type	Other pre-specified
End point timeframe:	
On Day 1 (2-hour spirometry measurement)	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: liters				
arithmetic mean (standard deviation)	0.254 (± 0.1532)	0.246 (± 0.1853)	0.233 (± 0.158)	

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: Heart rate

End point title	Heart rate
End point description:	
Vital signs (HR and BP) were assessed after 5 min in supine position at pre-dose, 30 minutes, and 1, 2, 3, 6, 8 and 10 hours post-dose.	
Only data on Day 28, 10 hours post-dose are reported here (See tab. 14.3.6.1.1 of CSR).	
End point type	Other pre-specified
End point timeframe:	
At Day 1 and Day 28	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: bpm				
arithmetic mean (standard deviation)	73.9 (± 12.89)	76.6 (± 11.5)	74 (± 11.36)	

## Statistical analyses

No statistical analyses for this end point

## Other pre-specified: Systolic blood pressure

End point title	Systolic blood pressure
End point description: Vital signs (HR and BP) were assessed after 5 min in supine position at pre-dose, 30 minutes, and 1, 2, 3, 6, 8 and 10 hours post-dose. Only data from 10 hours post-dose measurement at Day 28 are reported here (sse table 14.3.6.2.1 of CSR).	
End point type	Other pre-specified
End point timeframe: On Day 1 and Day 28	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: mmHg				
arithmetic mean (standard deviation)	128.6 (± 18.99)	129.3 (± 16.73)	134.9 (± 16.47)	

## Statistical analyses

No statistical analyses for this end point

## Other pre-specified: Diastolic blood pressure

End point title	Diastolic blood pressure
End point description: Vital signs (HR and BP) were assessed after 5 min in supine position at pre-dose, 30 minutes, and 1, 2, 3, 6, 8 and 10 hours post-dose.	

Only data from 10 hours post-dose measurement at Day 28 are reported here (see table 14.3.6.3.1 of CSR).

End point type	Other pre-specified
End point timeframe:	
On Day 1 and Day 28	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: mmHg				
arithmetic mean (standard deviation)	73.6 (± 12.37)	72.1 (± 11.04)	74.6 (± 10.95)	

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: Body weight

End point title	Body weight
End point description:	
Only data at Day 28 are reported here (see table 14.3.8 of CSR).	
End point type	Other pre-specified
End point timeframe:	
On Day 1 and Day 28	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: kg				
arithmetic mean (standard deviation)	74.62 (± 16.446)	74.7 (± 15.971)	76.19 (± 16.868)	

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: 12-lead ECG HR

End point title	12-lead ECG HR
-----------------	----------------

End point description:

Triplicate serial 12-lead ECG was performed after 10 min in supine position at: pre-dose, 30 min, 1, 2, 3, 6, 8 and 10 hrs post-dose on Day 1 and Day 28.

Single 12-lead ECG was performed at screening while triplicate 12-lead ECG was performed after 10 min in supine position at pre-dose on Day 9, 21, 24 of each Period.

Only data from 10 hours post-dose measurement at Day 28 are reported here (see table 14.3.7.1.1 of CSR).

End point type	Other pre-specified
End point timeframe:	
At Day 1, Day 9, Day 21, Day 24 and Day 28	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: bpm				
arithmetic mean (standard deviation)	74.4 ( $\pm$ 12.22)	76 ( $\pm$ 11.5)	74.8 ( $\pm$ 11.22)	

## Statistical analyses

No statistical analyses for this end point

## Other pre-specified: 12-lead ECG PR

End point title	12-lead ECG PR
End point description:	
Triplicate serial 12-lead ECG was performed after 10 min in supine position at: pre-dose, 30 min, 1, 2, 3, 6, 8 and 10 hrs post-dose on Day 1 and Day 28.	
Single 12-lead ECG was performed at screening while triplicate 12-lead ECG was performed after 10 min in supine position at pre-dose on Day 9, 21, 24 of each Period.	
Only data from 10 hours post-dose measurement at Day 28 are reported here (see table 14.3.7.2.1 of CSR).	
End point type	Other pre-specified
End point timeframe:	
At Day 1, Day 9, Day 21, Day 24 and Day 28	

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: msec				
arithmetic mean (standard deviation)	155.9 ( $\pm$	153.3 ( $\pm$	157.9 ( $\pm$	



## Statistical analyses

No statistical analyses for this end point

## Other pre-specified: 12-lead ECG QRS

End point title	12-lead ECG QRS
-----------------	-----------------

End point description:

Triplicate serial 12-lead ECG was performed after 10 min in supine position at: pre-dose, 30 min, 1, 2, 3, 6, 8 and 10 hrs post-dose on Day 1 and Day 28.

Single 12-lead ECG was performed at screening while triplicate 12-lead ECG was performed after 10 min in supine position at pre-dose on Day 9, 21, 24 of each Period.

Only data from 10 hours post-dose measurement at Day 28 are reported here (see table 14.3.7.3.1 of CSR).

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 1, Day 9, Day 21, Day 24 and Day 28

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: msec				
arithmetic mean (standard deviation)	91.1 (± 10.4)	92.4 (± 9.96)	91.4 (± 9.81)	

## Statistical analyses

No statistical analyses for this end point

## Other pre-specified: 12-lead ECG QT

End point title	12-lead ECG QT
-----------------	----------------

End point description:

Triplicate serial 12-lead ECG was performed after 10 min in supine position at: pre-dose, 30 min, 1, 2, 3, 6, 8 and 10 hrs post-dose on Day 1 and Day 28.

Single 12-lead ECG was performed at screening while triplicate 12-lead ECG was performed after 10 min in supine position at pre-dose on Day 9, 21, 24 of each Period.

Only data from 10 hours post-dose measurement at Day 28 are reported here (see table 14.3.7.4.1 of CSR).

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 1, Day 9, Day 21, Day 24 and Day 28

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: msec				
arithmetic mean (standard deviation)	387.1 (± 25.61)	383.4 (± 25.29)	385.7 (± 26.75)	

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: 12-lead ECG QTcB

End point title	12-lead ECG QTcB
-----------------	------------------

End point description:

Triplicate serial 12-lead ECG was performed after 10 min in supine position at: pre-dose, 30 min, 1, 2, 3, 6, 8 and 10 hrs post-dose on Day 1 and Day 28.

Single 12-lead ECG was performed at screening while triplicate 12-lead ECG was performed after 10 min in supine position at pre-dose on Day 9, 21, 24 of each Period.

Only data from 10 hours post-dose measurement at Day 28 are reported here (see table 14.3.7.5.1 of CSR).

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 1, Day 9, Day 21, Day 24 and Day 28

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: msec				
arithmetic mean (standard deviation)	427.5 (± 18.06)	428.7 (± 15.91)	427.4 (± 18.25)	

### Statistical analyses

No statistical analyses for this end point

**Other pre-specified: 12-lead ECG QTcF**

End point title	12-lead ECG QTcF
-----------------	------------------

End point description:

Triplicate serial 12-lead ECG was performed after 10 min in supine position at: pre-dose, 30 min, 1, 2, 3, 6, 8 and 10 hrs post-dose on Day 1 and Day 28.

Single 12-lead ECG was performed at screening while triplicate 12-lead ECG was performed after 10 min in supine position at pre-dose on Day 9, 21, 24 of each Period.

Only data from 10 hours post-dose measurement at Day 28 are reported here (see table 14.3.7.6.1 of CSR).

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 1, Day 9, Day 21, Day 24 and Day 28

End point values	Test treatment - Safety population	Reference treatment - Safety population	Placebo - Safety population	
Subject group type	Subject analysis set	Subject analysis set	Subject analysis set	
Number of subjects analysed	42	49	43	
Units: msec				
arithmetic mean (standard deviation)	413.3 (± 14.05)	412.8 (± 14.24)	412.8 (± 15.65)	

**Statistical analyses**

No statistical analyses for this end point

**Other pre-specified: AUC0-t<sub>ss</sub> of CHF6001**

End point title	AUC0-t <sub>ss</sub> of CHF6001
-----------------	---------------------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	38			
Units: pg*h/ml				
geometric mean (geometric coefficient of variation)	16954 (± 42.1)			

## Statistical analyses

No statistical analyses for this end point

### Other pre-specified: AUC0-t,ss of CHF5956

End point title	AUC0-t,ss of CHF5956
-----------------	----------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	39			
Units: pg*h/mL				
geometric mean (geometric coefficient of variation)	1097 ( $\pm$ 78.9)			

## Statistical analyses

No statistical analyses for this end point

### Other pre-specified: AUC0-t,ss of CHF6095

End point title	AUC0-t,ss of CHF6095
-----------------	----------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	39			
Units: pg*h/mL				
geometric mean (geometric coefficient of variation)	322 ( $\pm$ 61.3)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: AUC0-24h,ss of CHF6001

End point title	AUC0-24h,ss of CHF6001
-----------------	------------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	33			
Units: pg*h/mL				
geometric mean (geometric coefficient of variation)	17344 ( $\pm$ 39.1)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: AUC0-24h,ss of CHF5956

End point title	AUC0-24h,ss of CHF5956
-----------------	------------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	34			
Units: pg*h/mL				
geometric mean (geometric coefficient of variation)	1193 ( $\pm$ 63.2)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: AUC0-24h,ss of CHF6095

End point title	AUC0-24h,ss of CHF6095
End point description: PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.	
End point type	Other pre-specified
End point timeframe: At Day 28	

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	27			
Units: pg*h/mL				
geometric mean (geometric coefficient of variation)	374 ( $\pm$ 49)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: Cmin,ss of CHF6001

End point title	Cmin,ss of CHF6001
End point description: PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.	
End point type	Other pre-specified

End point timeframe:

At Day 28

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	38			
Units: pg/mL				
geometric mean (geometric coefficient of variation)	486 ( $\pm$ 48.4)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: C<sub>max,ss</sub> of CHF6001

End point title	C <sub>max,ss</sub> of CHF6001
-----------------	--------------------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	38			
Units: pg/mL				
geometric mean (geometric coefficient of variation)	1204 ( $\pm$ 35.4)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: C<sub>max,ss</sub> of CHF5956

End point title	C <sub>max,ss</sub> of CHF5956
-----------------	--------------------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
End point timeframe:	
At Day 28	

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	39			
Units: pg/mL				
geometric mean (geometric coefficient of variation)	130 ( $\pm$ 60.1)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: C<sub>max,ss</sub> of CHF6095

End point title	C <sub>max,ss</sub> of CHF6095
End point description:	
PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	39			
Units: pg/mL				
geometric mean (geometric coefficient of variation)	49.4 ( $\pm$ 45.4)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: C<sub>av,ss</sub> of CHF6001

End point title	C <sub>av,ss</sub> of CHF6001
-----------------	-------------------------------



End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	33			
Units: pg/mL				
geometric mean (geometric coefficient of variation)	723 ( $\pm$ 39.1)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: Cav,ss of CHF5956

End point title	Cav,ss of CHF5956
-----------------	-------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	34			
Units: pg/mL				
geometric mean (geometric coefficient of variation)	49.7 ( $\pm$ 63.2)			

### Statistical analyses

No statistical analyses for this end point

**Other pre-specified: Cav,ss of CHF6095**

End point title	Cav,ss of CHF6095
-----------------	-------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	27			
Units: pg/mL				
geometric mean (geometric coefficient of variation)	15.6 (± 49)			

**Statistical analyses**

No statistical analyses for this end point

**Other pre-specified: Tmax,ss for CHF6001**

End point title	Tmax,ss for CHF6001
-----------------	---------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	38			
Units: hours				
median (full range (min-max))	1.78 (0.98 to 6.03)			

**Statistical analyses**

No statistical analyses for this end point

### Other pre-specified: Tmax,ss for CHF5956

End point title	Tmax,ss for CHF5956
-----------------	---------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	39			
Units: hours				
median (full range (min-max))	3 (0 to 8.02)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: Tmax,ss for CHF6095

End point title	Tmax,ss for CHF6095
-----------------	---------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	39			
Units: hours				
median (full range (min-max))	2.98 (0 to 6.03)			

## Statistical analyses

No statistical analyses for this end point

### Other pre-specified: T<sub>min,ss</sub> for CHF6001

End point title	T <sub>min,ss</sub> for CHF6001
-----------------	---------------------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	38			
Units: hours				
median (full range (min-max))	24 (9.75 to 24.2)			

## Statistical analyses

No statistical analyses for this end point

### Other pre-specified: T<sub>min,ss</sub> for CHF5956

End point title	T <sub>min,ss</sub> for CHF5956
-----------------	---------------------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	39			
Units: hours				
median (full range (min-max))	24 (8 to 24.2)			

## Statistical analyses

No statistical analyses for this end point

### Other pre-specified: T<sub>min,ss</sub> of CHF6095

End point title	T <sub>min,ss</sub> of CHF6095
-----------------	--------------------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	39			
Units: hours				
median (full range (min-max))	24 (5.98 to 24.2)			

## Statistical analyses

No statistical analyses for this end point

### Other pre-specified: T<sub>1/2,ss</sub> for CHF6001

End point title	T <sub>1/2,ss</sub> for CHF6001
-----------------	---------------------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	27			
Units: hours				
geometric mean (geometric coefficient of variation)	27.5 ( $\pm$ 43.9)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: T1/2,ss for CHF5956

End point title	T1/2,ss for CHF5956
End point description: PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.	
End point type	Other pre-specified
End point timeframe: At Day 28	

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	30			
Units: hours				
geometric mean (geometric coefficient of variation)	11 ( $\pm$ 77.1)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: T1/2,ss for CHF6095

End point title	T1/2,ss for CHF6095
End point description: PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.	
End point type	Other pre-specified
End point timeframe: At Day 28	

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	17			
Units: hours				
geometric mean (geometric coefficient of variation)	13.7 ( $\pm$ 128)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: CL/F, ss for CHF6001

End point title	CL/F, ss for CHF6001
End point description: PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.	
End point type	Other pre-specified
End point timeframe: At Day 28	

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	33			
Units: mL/min				
geometric mean (geometric coefficient of variation)	1153 ( $\pm$ 39.1)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: CL/F, ss for CHF5956

End point title	CL/F, ss for CHF5956
End point description: PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.	
End point type	Other pre-specified

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	34			
Units: mL/min				
geometric mean (geometric coefficient of variation)	16758 ( $\pm$ 63.2)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: CI/F, ss for CHF6095

End point title	CI/F, ss for CHF6095
-----------------	----------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

End point type	Other pre-specified
----------------	---------------------

End point timeframe:

At Day 28

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	27			
Units: mL/min				
geometric mean (geometric coefficient of variation)	53466 ( $\pm$ 49)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: Vz/F,ss for CHF6001

End point title	Vz/F,ss for CHF6001
-----------------	---------------------

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.



End point type	Other pre-specified
End point timeframe:	
At Day 28	

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	38			
Units: liters				
geometric mean (geometric coefficient of variation)	2636 ( $\pm$ 69.8)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: Vz/F<sub>ss</sub> for CHF5956

End point title	Vz/F <sub>ss</sub> for CHF5956
End point description:	
PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.	
End point type	Other pre-specified
End point timeframe:	
At Day 28	

<b>End point values</b>	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	30			
Units: liters				
geometric mean (geometric coefficient of variation)	15537 ( $\pm$ 97.7)			

### Statistical analyses

No statistical analyses for this end point

### Other pre-specified: Vz/F<sub>ss</sub> for CHF6095

End point title	Vz/F <sub>ss</sub> for CHF6095
-----------------	--------------------------------

---

End point description:

PK blood collection will be performed on Day 28 at pre-dose and at 15, 30, min, 1, 1.5, 2, 3, 4, 6, 8, 10 and 24 hrs postdose (on Day 29) of each study Period.

---

End point type	Other pre-specified
----------------	---------------------

---

End point timeframe:

At Day 28

---

End point values	Test treatment - PK population			
Subject group type	Subject analysis set			
Number of subjects analysed	17			
Units: liters				
geometric mean (geometric coefficient of variation)	53865 ( $\pm$ 123)			

### Statistical analyses

---

No statistical analyses for this end point

## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

Throughout the study (from run-in to follow-up)

Adverse event reporting additional description:

It was the responsibility of the Investigator to collect all AEs (both serious and non-serious), derived by spontaneous, unsolicited reports of patients, by observation and by routine open questioning

Assessment type	Systematic
-----------------	------------

### Dictionary used

Dictionary name	MedDRA
-----------------	--------

Dictionary version	14.0
--------------------	------

### Reporting groups

Reporting group title	Period of treatment with CHF6001 - Safety population
-----------------------	--

Reporting group description: -

Reporting group title	Period of treatment with roflumilast - Safety population
-----------------------	--

Reporting group description: -

Reporting group title	Period of treatment with placebo - Safety population
-----------------------	--

Reporting group description: -

Reporting group title	Period of wash out - Safety population
-----------------------	--

Reporting group description: -

Reporting group title	Followp up - Safety population
-----------------------	--------------------------------

Reporting group description: -

<b>Serious adverse events</b>	Period of treatment with CHF6001 - Safety population	Period of treatment with roflumilast - Safety population	Period of treatment with placebo - Safety population
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0
Gastrointestinal disorders			
Peritonitis			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0
Infections and infestations			
Gallbladder empyema			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences causally related to treatment / all	0 / 0	0 / 0	0 / 0
deaths causally related to treatment / all	0 / 0	0 / 0	0 / 0

<b>Serious adverse events</b>	Period of wash out - Safety population	Followp up - Safety population	
Total subjects affected by serious adverse events			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	
Gastrointestinal disorders			
Peritonitis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Gallbladder empyema			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 1 %

<b>Non-serious adverse events</b>	Period of treatment with CHF6001 - Safety population	Period of treatment with roflumilast - Safety population	Period of treatment with placebo - Safety population
Total subjects affected by non-serious adverse events			
subjects affected / exposed	32 / 42 (76.19%)	37 / 49 (75.51%)	30 / 43 (69.77%)
Vascular disorders			
Hot flush			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	0	1	0
General disorders and administration site conditions			
Catheter site haematoma			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	3 / 43 (6.98%)
occurrences (all)	0	1	3
Chest discomfort			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	1 / 43 (2.33%)
occurrences (all)	0	1	1
Exercise tolerance decreased			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	0	0	1
Feeling hot			

subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Malaise			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	0	0	1
Pain			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	0	0	1
Pyrexia			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Thirst			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	1	0	2
Vessel puncture site haematoma			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	0	0	0
Immune system disorders			
Seasonal allergy			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	1 / 42 (2.38%)	4 / 49 (8.16%)	6 / 43 (13.95%)
occurrences (all)	1	4	7
Chronic obstructive pulmonary disease			
subjects affected / exposed	3 / 42 (7.14%)	2 / 49 (4.08%)	4 / 43 (9.30%)
occurrences (all)	3	2	4
Dyspnoea			
subjects affected / exposed	4 / 42 (9.52%)	5 / 49 (10.20%)	3 / 43 (6.98%)
occurrences (all)	6	5	3
Haemoptysis			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	1	0	1
Wheezing			

subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	2 / 43 (4.65%)
occurrences (all)	0	1	2
Dysphonia			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	1	0	1
Nasal congestion			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	1 / 43 (2.33%)
occurrences (all)	0	1	1
Oropharyngeal pain			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Productive cough			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	0	0	1
Sputum increased			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	1	0	1
Dry throat			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	0	0	1
Epistaxis			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	0	1	0
Respiratory tract congestion			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Rhinorrhoea			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	0	1	0
Sinus congestion			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	1	0	0
Sputum discoloured			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	1	0	1
Psychiatric disorders			

Anxiety subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Depressed mood subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Insomnia subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Panic attack subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	1 / 43 (2.33%) 1
Terminal insomnia subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Investigations Blood cholesterol increased subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Gamma-glutamyltransferase increased subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Sputum abnormal subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Injury, poisoning and procedural complications Contusion subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Muscle strain subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	1 / 43 (2.33%) 1
Procedural site reaction subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Arthropod sting			

subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Foreign body			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	1	0	0
Joint injury			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	2	0	0
Joint sprain			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	0	0	1
Periorbital haematoma			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	1	0	0
Post procedural swelling			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Procedural vomiting			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	0	0	1
Sternal fracture			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Cardiac disorders			
Palpitations			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	1	0	0
Nervous system disorders			
Headache			
subjects affected / exposed	12 / 42 (28.57%)	17 / 49 (34.69%)	6 / 43 (13.95%)
occurrences (all)	15	19	9
Migrane			
subjects affected / exposed	1 / 42 (2.38%)	2 / 49 (4.08%)	0 / 43 (0.00%)
occurrences (all)	1	2	0
Dizziness			



subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	2 / 49 (4.08%) 2	0 / 43 (0.00%) 0
Dysgeusia subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Lethargy subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	1 / 43 (2.33%) 1
Sciatica subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Ear and labyrinth disorders Cerumen impaction subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Gastrointestinal disorders Diarrhoea subjects affected / exposed occurrences (all)	5 / 42 (11.90%) 8	10 / 49 (20.41%) 10	2 / 43 (4.65%) 2
Toothache subjects affected / exposed occurrences (all)	2 / 42 (4.76%) 3	2 / 49 (4.08%) 2	0 / 43 (0.00%) 0
Vomiting subjects affected / exposed occurrences (all)	2 / 42 (4.76%) 2	2 / 49 (4.08%) 2	0 / 43 (0.00%) 0
Nausea subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	3 / 49 (6.12%) 3	0 / 43 (0.00%) 0
Abdominal discomfort subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	3 / 49 (6.12%) 3	0 / 43 (0.00%) 0
Abdominal pain subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Constipation			

subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Dyspepsia			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	2 / 43 (4.65%)
occurrences (all)	0	1	2
Frequent bowel movements			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	1 / 43 (2.33%)
occurrences (all)	0	1	1
Abdominal distension			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Abdominal pain lower			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Abdominal pain upper			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	0	1	0
Food poisoning			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	0	1	0
Gastrooesophageal reflux disease			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	1	0	0
Lip dry			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	1 / 43 (2.33%)
occurrences (all)	0	0	1
Peritonitis			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Skin and subcutaneous tissue disorders			
Psoriasis			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	0	1	0
Rush			
subjects affected / exposed	1 / 42 (2.38%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	1	1	0

Dermal cyst subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Hyperhidrosis subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	1 / 43 (2.33%) 1
Skin discolouration subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Musculoskeletal and connective tissue disorders			
Back pain subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	2 / 49 (4.08%) 3	1 / 43 (2.33%) 1
Myalgia subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	2 / 49 (4.08%) 2	0 / 43 (0.00%) 0
Arthralgia subjects affected / exposed occurrences (all)	2 / 42 (4.76%) 2	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Joint swelling subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Musculoskeletal chest pain subjects affected / exposed occurrences (all)	2 / 42 (4.76%) 2	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Musculoskeletal pain subjects affected / exposed occurrences (all)	1 / 42 (2.38%) 1	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Arthritis subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Coccydynia subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Muscle spasms			

subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	0	1	0
Osteoarthritis			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	0	1	0
Pain in extremity			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	0	1	0
Infections and infestations			
Nasopharyngitis			
subjects affected / exposed	4 / 42 (9.52%)	4 / 49 (8.16%)	2 / 43 (4.65%)
occurrences (all)	4	4	2
Upper respiratory tract infection			
subjects affected / exposed	2 / 42 (4.76%)	2 / 49 (4.08%)	1 / 43 (2.33%)
occurrences (all)	2	2	1
Lower respiratory tract infection			
subjects affected / exposed	0 / 42 (0.00%)	1 / 49 (2.04%)	1 / 43 (2.33%)
occurrences (all)	0	1	1
Oral candidiasis			
subjects affected / exposed	2 / 42 (4.76%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	2	1	0
Rhinitis			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	1	0	0
Urinary tract infection			
subjects affected / exposed	1 / 42 (2.38%)	1 / 49 (2.04%)	0 / 43 (0.00%)
occurrences (all)	1	1	0
Gallbladder empyema			
subjects affected / exposed	0 / 42 (0.00%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	0	0	0
Gastroenteritis			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	1	0	0
Gingival abscess			
subjects affected / exposed	1 / 42 (2.38%)	0 / 49 (0.00%)	0 / 43 (0.00%)
occurrences (all)	1	0	0

Gingival infection subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Sinusitis subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	1 / 43 (2.33%) 1
Skin infection subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	1 / 43 (2.33%) 1
Tooth abscess subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	1 / 43 (2.33%) 1
Tooth infection subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Viral infection subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	0 / 43 (0.00%) 0
Viral upper respiratory tract infection subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	0 / 49 (0.00%) 0	0 / 43 (0.00%) 0
Metabolism and nutrition disorders Decreased appetite subjects affected / exposed occurrences (all)	0 / 42 (0.00%) 0	1 / 49 (2.04%) 1	2 / 43 (4.65%) 2

<b>Non-serious adverse events</b>	Period of wash out - Safety population	Followp up - Safety population	
Total subjects affected by non-serious adverse events subjects affected / exposed	32 / 48 (66.67%)	9 / 46 (19.57%)	
Vascular disorders Hot flush subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
General disorders and administration site conditions Catheter site haematoma			

subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Chest discomfort			
subjects affected / exposed	0 / 48 (0.00%)	1 / 46 (2.17%)	
occurrences (all)	0	1	
Exercise tolerance decreased			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Feeling hot			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Malaise			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Pain			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Pyrexia			
subjects affected / exposed	0 / 48 (0.00%)	1 / 46 (2.17%)	
occurrences (all)	0	1	
Thirst			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Vessel puncture site haematoma			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Immune system disorders			
Seasonal allergy			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Respiratory, thoracic and mediastinal disorders			
Cough			
subjects affected / exposed	7 / 48 (14.58%)	0 / 46 (0.00%)	
occurrences (all)	7	0	
Chronic obstructive pulmonary disease			

subjects affected / exposed	5 / 48 (10.42%)	1 / 46 (2.17%)
occurrences (all)	5	1
Dyspnoea		
subjects affected / exposed	4 / 48 (8.33%)	1 / 46 (2.17%)
occurrences (all)	4	1
Haemoptysis		
subjects affected / exposed	0 / 48 (0.00%)	1 / 46 (2.17%)
occurrences (all)	0	1
Wheezing		
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)
occurrences (all)	1	0
Dysphonia		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Nasal congestion		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Oropharyngeal pain		
subjects affected / exposed	2 / 48 (4.17%)	0 / 46 (0.00%)
occurrences (all)	3	0
Productive cough		
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)
occurrences (all)	1	0
Sputum increased		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Dry throat		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Epistaxis		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Respiratory tract congestion		
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)
occurrences (all)	1	0
Rhinorrhoea		

subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Synus congestion subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Sputum discoloured subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Psychiatric disorders Anxiety subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Depressed mood subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Insomnia subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Panic attack subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Terminal insomnia subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Investigations Blood cholesterol increased subjects affected / exposed occurrences (all)	1 / 48 (2.08%) 1	0 / 46 (0.00%) 0	
Gamma-glutamyltransferase increased subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Sputum abnormal subjects affected / exposed occurrences (all)	1 / 48 (2.08%) 1	0 / 46 (0.00%) 0	
Injury, poisoning and procedural complications			



Contusion			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Muscle strain			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Procedural site reaction			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Arthropod sting			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Foreign body			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Joint injury			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Joint sprain			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Periorbital haematoma			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Post procedural swelling			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Procedural vomiting			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Sternal fracture			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Cardiac disorders			
Palpitations			

subjects affected / exposed occurrences (all)	0 / 48 (0.00%) 0	0 / 46 (0.00%) 0	
Nervous system disorders			
Headache			
subjects affected / exposed	4 / 48 (8.33%)	0 / 46 (0.00%)	
occurrences (all)	4	0	
Migrane			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Dizziness			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Dysgeusia			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Lethargy			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Sciatica			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Ear and labyrinth disorders			
Cerumen impaction			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Gastrointestinal disorders			
Diarrhoea			
subjects affected / exposed	2 / 48 (4.17%)	0 / 46 (0.00%)	
occurrences (all)	2	0	
Toothache			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Vomiting			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Nausea			

subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Abdominal discomfort		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Abdominal pain		
subjects affected / exposed	2 / 48 (4.17%)	0 / 46 (0.00%)
occurrences (all)	2	0
Constipation		
subjects affected / exposed	3 / 48 (6.25%)	1 / 46 (2.17%)
occurrences (all)	3	1
Dyspepsia		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Frequent bowel movements		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Abdominal distension		
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)
occurrences (all)	1	0
Abdominal pain lower		
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)
occurrences (all)	1	0
Abdominal pain upper		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Food poisoning		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Gastrooesophageal reflux disease		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Lip dry		
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)
occurrences (all)	0	0
Peritonitis		

subjects affected / exposed occurrences (all)	1 / 48 (2.08%) 1	0 / 46 (0.00%) 0	
Skin and subcutaneous tissue disorders			
Psoriasis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Rush			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Dermal cyst			
subjects affected / exposed	0 / 48 (0.00%)	1 / 46 (2.17%)	
occurrences (all)	0	1	
Hyperhidrosis			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Skin discolouration			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Musculoskeletal and connective tissue disorders			
Back pain			
subjects affected / exposed	2 / 48 (4.17%)	1 / 46 (2.17%)	
occurrences (all)	2	1	
Myalgia			
subjects affected / exposed	0 / 48 (0.00%)	1 / 46 (2.17%)	
occurrences (all)	0	1	
Arthralgia			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Joint swelling			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Musculoskeletal chest pain			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Musculoskeletal pain			

subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Arthritis			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Coccydynia			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Muscle spasms			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Osteoarthritis			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Pain in extremity			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Infections and infestations			
Nasopharyngitis			
subjects affected / exposed	2 / 48 (4.17%)	1 / 46 (2.17%)	
occurrences (all)	2	1	
Upper respiratory tract infection			
subjects affected / exposed	3 / 48 (6.25%)	0 / 46 (0.00%)	
occurrences (all)	3	0	
Lower respiratory tract infection			
subjects affected / exposed	0 / 48 (0.00%)	1 / 46 (2.17%)	
occurrences (all)	0	1	
Oral candidiasis			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Rhinitis			
subjects affected / exposed	2 / 48 (4.17%)	0 / 46 (0.00%)	
occurrences (all)	2	0	
Urinary tract infection			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	

Gallbladder empyema			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Gastroenteritis			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Gingival abscess			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Gingival infection			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Sinusitis			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Skin infection			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Tooth abscess			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Tooth infection			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Viral infection			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	
Viral upper respiratory tract infection			
subjects affected / exposed	1 / 48 (2.08%)	0 / 46 (0.00%)	
occurrences (all)	1	0	
Metabolism and nutrition disorders			
Decreased appetite			
subjects affected / exposed	0 / 48 (0.00%)	0 / 46 (0.00%)	
occurrences (all)	0	0	

## More information

### Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
16 July 2012	<p>Substantial Amendment 01 was written following a request from the Medicines and Healthcare products Regulatory Agency (MHRA) to modify the exclusion criteria such that patients with known contraindications or hypersensitivity to roflumilast, tiotropium bromide, or salbutamol, and patients with moderate or severe hepatic impairment, would not be considered eligible for the study. The MHRA also requested that rationale to justify both the selected dose of CHF 6001 and duration of its use in this study be added.</p> <p>Requests made by the IEC to amend the Information Sheet and Informed Consent Form ( II of the protocol) were also addressed in this amendment, as follows:</p> <p>1. Information Sheet</p> <ul style="list-style-type: none"><li>• the language and terminology used were simplified;</li><li>• prohibited medications were included;</li><li>• information on the National Health Service Patient Advice and Liaison Service was added;</li><li>• it was included that patients should not donate blood during participation;</li><li>• it was included that participants should be advised to use 2 forms of contraception during the course of the study and for 3 months later.</li></ul> <p>2. Informed Consent Form</p> <ul style="list-style-type: none"><li>• the term 'patients' was amended to read 'patients' or 'participants'.</li></ul> <p>This amendment also added the evaluation of the systemic exposure to metabolite CHF 5956 to the pharmacokinetic assessments in this study. Preclinical studies and preliminary data from the human metabolic profiling of CHF 6001 suggest that its main metabolites are CHF 5956 and CHF 6095, though the investigation of systemic exposure to CHF 6001 metabolites had been focussed only on CHF 5956 which had appeared to be the most abundant compound. More recent preliminary toxicokinetic data had shown detectable concentrations of metabolite CHF 6095 in plasma samples from the rat and dog. Consequently, CHF 6095 was considered of interest and its evaluation was thus added to this protocol.</p>

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.

No limitations or caveats are reported in this study

Notes: