

**ClinicalTrials.gov PRS**  
*Protocol Registration and Results System*

ID: NP01-201 A New Modified-release Tablet Formulation of Prednisone (Lodotra®) in  
Patients With Nocturnal Asthma

NCT00686335

**Protocol Registration and Results Preview**

This is a rough approximation of how the Protocol Registration and Results will appear on the ClinicalTrials.gov public web site.

**A New Modified-release Tablet Formulation of Prednisone (Lodotra®) in Patients With Nocturnal Asthma (MONA)**

The safety and scientific validity of this study is the responsibility of the study sponsor and investigators. Listing a study does not mean it has been evaluated by the U.S. Federal Government. Read our [disclaimer](#) for details.

ClinicalTrials.gov Identifier:  
NCT00686335

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Recruitment Status: Completed  
Results First Posted: \*  
First Posted: \*  
Last Update Posted: \*

\* Date not available in PRS

**Sponsor:**

Horizon Pharma Ireland, Ltd., Dublin Ireland

**Information provided by (Responsible Party):**

Horizon Pharma Ireland, Ltd., Dublin Ireland

**Study Description**

## Brief Summary:

The purpose of the study is to evaluate in subjects suffering from nocturnal asthma, the efficacy and safety of modified release Prednisone on signs and symptoms.

Condition or disease	Intervention/treatment	Phase
Asthma	Drug: Lodotra Drug: Cortancyl	Phase 2

**Study Design**

Study Type: Interventional

Actual Enrollment: 12 participants

Allocation: Non-Randomized

Intervention Model: Single Group Assignment

Masking: None (Open Label)

Primary Purpose: Treatment

Official Title: A New Modified-release Tablet Formulation of Prednisone (Lodotra®) in Patients With Nocturnal Asthma

Study Start Date: June 2008

Actual Primary Completion Date: March 2010

Actual Study Completion Date: May 2010

**Arms and Interventions**

Arm	Intervention/treatment
Experimental: Lodotra  After the 4 week run-in period with immediate release prednisone	Drug: Lodotra  Administered with food at approximately 10 pm during the

<p>(Cortancyl), patients were switched to the identical dose of modified release prednisone tablets (Lodotra). Study medication for the Lodotra treatment period consisted of Lodotra in 2 dose strengths (5 mg and 1 mg prednisone per tablet). Patients were to take their tablets with or after the evening meal (at 10 pm +/- 30 minutes) for 4 weeks.</p>	<p>4 week treatment period; patients received the identical dose of Lodotra as received of IR prednisone during the run-in period.</p> <p>Other Names:</p> <ul style="list-style-type: none"> <li>modified release tablet formulation of prednisone</li> </ul>
<p>Active Comparator: Cortancyl</p> <p>During the 4 week run-in period, patients remained on their respective pre-study dose of prednisone or equivalent. However, patients were standardized to 5 mg and 1 mg tablets of immediate release prednisone (Cortancyl). Patients were to take their tablets with or after the morning meal (at 8am +/- 30 minutes) for 4 weeks.</p>	<p>Drug: Cortancyl</p> <p>Administered in the morning with food during the 4 week run-in period; patients remained on their respective pre-study dose of prednisone or equivalent standardized to 5 mg and 1 mg tablets of immediate release (IR) prednisone (Cortancyl).</p> <p>Other Names:</p> <ul style="list-style-type: none"> <li>immediate release prednisone tablets</li> </ul>

## Outcome Measures

Primary Outcome Measure:

- Total Number of Nocturnal Awakenings During the Last 2 Weeks of Treatment [Time Frame: 4 weeks and 8 weeks]

Variation in the total number of nocturnal awakenings during the last 2 weeks of run-in treatment with Cortancyl and the last 2 weeks of treatment with Lodotra.

## Eligibility Criteria

Ages Eligible for Study: 18 Years and older

Sexes Eligible for Study: All

Accepts Healthy Volunteers: No

### Criteria

Inclusion Criteria:

- The subject must be able to understand the terms of the written informed consent form, and must provide a dated and signed form before the start of any study procedure
- At least 18 years old
- Patient having a diagnosis of asthma dating back more than 6 months at the time of inclusion
- Asthma necessitating a continuous treatment by oral corticoids
- A minimum of 3 nocturnal awakenings due to asthma during the last screening week
- Stable dose of oral glucocorticoids for at least 4 weeks prior to inclusion into the study
- No change in asthma medication during the last 4 weeks prior to V0
- Non-smoker or ex-smoker (having stopped smoking more than one year previously and with a smoking history of less than 10 pack years )
- Female patients of childbearing potential must be using a medically accepted contraceptive regimen
- Able to perform the required study procedures including handling of medication containers and diaries

#### Exclusion Criteria:

- Poorly controlled asthma, defined as meeting at least one of the following within the 4 weeks prior to Visit V0:
  - hospital admission for asthma (including treatment in an emergency room),
  - a lower airway infection,
- Diagnosis of chronic obstructive pulmonary disease or other relevant lung diseases (e.g. history of bronchiectasis, cystic fibrosis, bronchiolitis, lung resection, lung cancer, active tuberculosis, interstitial lung disease)
- Clinically significant abnormalities of the hematological or biochemical constants
- Pregnancy or breastfeeding
- Participation in another clinical study within 30 days preceding Visit V0,
- Re-entry of patients previously enrolled in this trial,
- Suspected inability or unwillingness to comply with the study procedures
- Alcohol or drug abuse
- Need to take a non-authorized concomitant treatment (cf. list of medicaments not authorised during the study) in the course of the study
- Other disease requiring treatment with corticosteroids
- Subject is the investigator or any subinvestigator, research assistant, pharmacist, study coordinator, other staff or relative thereof directly involved in the conduct of the protocol
- Patient with a hospitalisation scheduled during the study period

- Any uncontrolled concomitant disease requiring further clinical evaluation (e.g. uncontrolled diabetes, uncontrolled hypertension, etc.)

## Contacts and Locations

### Locations

#### France

Hôpital Bichat  
Paris, France, 75018

### Investigators

Principal Investigator: Michel Aubier, Prof. Dr. Hôpital Bichat, Paris, France

## More Information

Responsible Party: Horizon Pharma Ireland, Ltd., Dublin Ireland  
 ClinicalTrials.gov Identifier: NCT00686335  
 Other Study ID Numbers: NP01-201  
 EudraCT-Number: 2007-007316-29  
 Last Verified: November 2012

Human Subjects Protection Review Board Status: Approved

## Study Results

### Participant Flow

Recruitment Details	Asthmatic patients, aged at least 18 years, suffering from severe persistent asthma, having nocturnal symptoms and receiving treatment with oral glucocorticoids were recruited from Hôpital Bichat between July 2008 and March 2010.
Pre-assignment Details	After a 4-week run-in period in which patients were treated with immediate release prednisone (Cortancy®) administered in the morning, all eligible patients (based on inclusion/exclusion criteria) were treated for 4 weeks

with an identical dose of Lodotra administered in the evening.

Arm/Group Title	Safety Population	Total (Not public)
▼ Arm/Group Description	all patients that started the run-in period with Cortancyl®	
<b>Period Title: Run-in Period</b>		
Started	12	12
Completed	7	7
Not Completed	5	5
<u>Reason Not Completed</u>		
Adverse Event	1	1
asthma exacerbation	1	1
violation of inclusion/exclusion criteri	3	3
(Not Public)	Not Completed =5 Total from all reasons =5	
<b>Period Title: Treatment Period</b>		
Started	7	7
Completed	7	7
Not Completed	0	0

**▶ Baseline Characteristics**

Arm/Group Title	Safety Population
▼ Arm/Group Description	all patients that started the run-in period with Cortancyl®
<b>Overall Number of Baseline Participants</b>	12
▼ Baseline Analysis Population Description [Not specified]	
Age, Categorical	12 participants
Measure Type: Count of Participants	
Unit of measure: participants	
Number Analyzed	
<=18 years	0 0%
Between 18 and 65 years	11 91.67%
>=65 years	1 8.33%

<b>Age, Continuous</b> Mean (Standard Deviation) Unit of measure: years	Number Analyzed	12 participants  48.9 (14.40)
<b>Sex: Female, Male</b> Measure Type: Count of Participants Unit of measure: participants	Number Analyzed	12 participants
	Female	11 91.67%
	Male	1 8.33%
<b>Region of Enrollment</b> Measure Type: Number Unit of measure: participants	Number Analyzed	12 participants
France		12

**Outcome Measures**

1. Primary Outcome

<b>Title:</b>	Total Number of Nocturnal Awakenings During the Last 2 Weeks of Treatment
<b>Description:</b>	Variation in the total number of nocturnal awakenings during the last 2 weeks of run-in treatment with Cortancyl and the last 2 weeks of treatment with Lodotra.
<b>Time Frame:</b>	4 weeks and 8 weeks

Outcome Measure Data [Note](#)

Analysis Population Description

The efficacy analysis population included all 7 patients who completed both study periods without major protocol deviations.

Arm/Group Title	Lodotra	Cortancyl
<b>Arm/Group Description:</b>	modified release prednisone	immediate release prednisone
Overall Number of Participants Analyzed	7	7
Mean (Standard Deviation) Unit of Measure: number of nocturnal awakenings	2.1 (4.41)	10.0 (5.45)

Statistical Analysis 1 [1 Note](#)

Statistical Analysis Overview	Comparison Group Selection	Lodotra, Cortancyl
	Comments	As this was an explorative study to collect data for a subsequent controlled study, no hypothesis testing was performed. All analyses were descriptive.
	Type of Statistical Test	Superiority or Other (legacy)
	Comments	[Not specified]
Statistical Test of Hypothesis	P-Value	 NOTE : A Method for the statistical test has been specified, but a P-Value has not been entered.
	Comments	As this was an explorative study to collect data for a subsequent controlled study, no hypothesis testing was performed. All analyses were descriptive.
	Method	Other [not applicable]
	Comments	As this was an explorative study, no hypothesis testing was performed. All analyses were descriptive.
Method of Estimation	Estimation Parameter	Mean Difference (Final Values)
	Estimated Value	-7.9
	Confidence Interval	(2-Sided) 95% -13.5 to -2.2

Parameter Dispersion	Type: Standard Deviation Value: 6.07
Estimation Comments	[Not specified]

## ► Adverse Events

Time Frame	Adverse event data were collected from the time the patient gave informed consent until the end of the follow-up visit or 30 days after last study drug administration, whichever occurred later.	
Adverse Event Reporting Description	Safety was evaluated by: <ul style="list-style-type: none"> <li>• recording of Adverse Events (AEs) and concomitant treatments at each visit</li> <li>• physical examination and vital sign measurements at each visit</li> <li>• laboratory safety assessments at visits V0 and V4</li> </ul>	
Source Vocabulary Name for Table Default	MedDRA (12.0)	
Collection Approach for Table Default	Systematic Assessment	
Arm/Group Title	Lodotra	Cortancyl
▼ Arm/Group Description	modified release prednisone	immediate release prednisone
<b>All-Cause Mortality</b>		
	<b>Lodotra</b>	<b>Cortancyl</b>
	Affected / at Risk (%)	Affected / at Risk (%)
Total	--- /---	--- /---
<b>▼ Serious Adverse Events</b>		
	<b>Lodotra</b>	<b>Cortancyl</b>
	Affected / at Risk (%)	Affected / at Risk (%)
Total	0/7 (0%)	1/12 (8.33%)
Respiratory, thoracic and mediastinal disorders		
asthma <sup>[1]</sup> † A	0/7 (0%)	1/12 (8.33%)

Vascular disorders		
arterial thrombosis <sup>[2]</sup> † A	0/7 (0%)	1/12 (8.33%)
<p>† Indicates events were collected by systematic assessment.  A Term from vocabulary, MedDRA (12.0)</p> <p>[1] 1 patient experienced 2 Serious Adverse Events (SAEs). Respiratory deterioration developed during run-in period;pt was withdrawn from study. 4 days later, pt experienced an asthma exacerbation and was hospitalized. The patient recovered.  [2] One patient experienced 2 serious adverse events. Arteritis was a baseline event which became serious during the run-in period due to hospitalization. Patient was discontinued from the study, surgery was performed, and patient recovered.</p>		
<p>▼ <b>Other (Not Including Serious) Adverse Events</b></p>		
Frequency Threshold for Reporting Other Adverse Events	1%	
	<b>Lodotra</b>	<b>Cortancyl</b>
	Affected / at Risk (%)	Affected / at Risk (%)
Total	6/7 (85.71%)	7/12 (58.33%)
Gastrointestinal disorders		
hernial eventration †A	1/7 (14.29%)	0/12 (0%)
General disorders		
influenza like illness † A	1/7 (14.29%)	1/12 (8.33%)
oedema †A	1/7 (14.29%)	0/12 (0%)
Infections and infestations		
bronchitis †A	0/7 (0%)	3/12 (25%)
fungal skin infection † A	0/7 (0%)	1/12 (8.33%)
sinusitis †A	0/7 (0%)	1/12 (8.33%)
Musculoskeletal and connective tissue disorders		
arthralgia †A	1/7 (14.29%)	0/12 (0%)
muscle spasms †A	0/7 (0%)	1/12 (8.33%)
pain in extremity †A	1/7 (14.29%)	0/12 (0%)
Nervous system disorders		

tremor † <sup>A</sup>	1/7 (14.29%)	0/12 (0%)
Psychiatric disorders		
anxiety † <sup>A</sup>	0/7 (0%)	1/12 (8.33%)
insomnia † <sup>A</sup>	2/7 (28.57%)	0/12 (0%)
Reproductive system and breast disorders		
menstrual disorder † <sup>A</sup>	1/7 (14.29%)	0/12 (0%)
Respiratory, thoracic and mediastinal disorders		
asthma † <sup>A</sup>	2/7 (28.57%)	2/12 (16.67%)
cough † <sup>A</sup>	1/7 (14.29%)	0/12 (0%)
dyspnoea † <sup>A</sup>	1/7 (14.29%)	0/12 (0%)
Surgical and medical procedures		
tooth extraction † <sup>A</sup>	1/7 (14.29%)	0/12 (0%)
Vascular disorders		
haematoma † <sup>A</sup>	0/7 (0%)	1/12 (8.33%)
<p>† Indicates events were collected by systematic assessment.  A Term from vocabulary, MedDRA (12.0)</p>		

## ► Limitations and Caveats

This was an explorative study to collect data for a subsequent controlled trial and therefore no hypothesis testing was performed. The size of the efficacy population (N=7) is too small to detect any statistically significant changes.

## ► More Information

### Certain Agreements

Principal Investigators are NOT employed by the organization sponsoring the study.

There IS an agreement between the Principal Investigator and the Sponsor (or its agents) that restricts the PI's rights to discuss or publish trial results after the trial is completed.

Anything concerning publication, information and communication is described under law number R5121-13 of the French Code de la Santé

Publique. Any information about results cannot be given without the  
accordance of Horizon Pharma (formerly Nitec Pharma).

**Results Point of Contact**

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