

# The use of APL510 to improve the length of day time sleep in subjects working permanent night-shifts

<b>Submission date</b> 15/01/2010	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
<b>Registration date</b> 15/01/2010	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 21/06/2016	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

Not provided at time of registration

## Contact information

### Type(s)

Scientific

### Contact name

Ms Rebecca Scoble

### Contact details

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## Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

## Study information

### Scientific Title

A double-blind placebo controlled crossover study to determine if melatonin can improve the length of day time sleep in subjects with transient misalignment of the sleep-wake cycle as a result of working permanent night-shifts

### Study objectives

The primary objective was to determine if APL510 tablets (containing 1.5 mg of melatonin) increased the length of daytime sleep following a night-shift.

The secondary objectives were:

1. To determine if APL510 tablets increased the maintenance of daytime sleep and reduced sleep latency and the number of episodes of disturbed sleep following a night-shift
2. To determine if APL510 had any 'residual' effect during the night-shift work period
3. To compare the adverse event (AE) profiles of APL510 and placebo

The trial was previously registered at Pharmaceutical Industry Clinical Trials Database (ABPI /CMR) - <https://www.cmrinteract.com/clintrial/default.htm>.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

South Birmingham Research Ethics Committee, 04/04/2005, ref: 05/Q2707/56

### Study design

Single centre double-blind placebo-controlled two-way crossover study

### Primary study design

Interventional

### Secondary study design

Randomised cross over trial

### Study setting(s)

Other

### Study type(s)

Treatment

### Participant information sheet

### Health condition(s) or problem(s) studied

Insomnia

### Interventions

This was a single centre, double-blind, placebo-controlled, two-way crossover study. Subjects included in the study worked one of two shift patterns: 4 nights working followed by 4 nights not working ("4 nights on, 4 nights off") and 3 nights working followed by 4 nights not working ("3 nights on, 4 nights off").

Subjects were randomised to one of two treatment sequences: either placebo followed by APL510 1.5 mg or APL510 1.5 mg followed by placebo. Subjects took study medication for one work shift period and then crossed over to the next randomised treatment. Subjects attended their final visit at the end of their second treatment period, although a further follow-up visit was available during the next work shift period for subjects who had ongoing adverse events (AEs) at the end of the second treatment period.

Scientific Contact Details - Lead Principal Investigator:

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### **Intervention Type**

Drug

### **Phase**

Phase II

### **Drug/device/biological/vaccine name(s)**

APL510

### **Primary outcome measure**

Mean total sleep time over the days on which diary entries were recorded.

Measured throughout the study and the data was averaged or tabulated after completion of the study.

### **Secondary outcome measures**

1. Mean number of daytime awakenings
2. Potential hangover effects

Measured throughout the study and the data was averaged or tabulated after completion of the study.

### **Overall study start date**

10/10/2005

### **Completion date**

19/04/2006

## **Eligibility**

### **Key inclusion criteria**

1. Male or female subjects aged 18 to 65 years working permanent night-shifts with at least three consecutive night-shifts in their shift pattern
2. A female subject could be included if:
  - 2.1. She was of non-child-bearing potential (e.g., post-menopausal for 1 year, had undergone bilateral tubal ligation, had undergone a hysterectomy or was physiologically incapable of becoming pregnant), or
  - 2.2. She was of childbearing potential practising an acceptable method of birth control defined as the use of oral or depot hormonal contraception, an intrauterine contraceptive device or a combination of both spermicidal and barrier methods of contraception (a partner having had a vasectomy was not an acceptable reason for inclusion), or
  - 2.3. Total abstinence from sexual intercourse was maintained
3. Provided written informed consent
4. No planned absences from work, other than rest days, for the duration the subject was in the study. Subjects could work additional night-shifts as overtime

**Participant type(s)**

Patient

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

Both

**Target number of participants**

44 evaluable subjects

**Key exclusion criteria**

1. Clinically significant unstable medical abnormality, chronic disease or history or presence of significant neurological, hepatic, renal, endocrine, cardiovascular, gastrointestinal, pulmonary, psychiatric, metabolic disease or malignancy or other clinically relevant abnormality which in the opinion of the Investigator would preclude successful participation in the study
2. A recent history (less than 2 years) of alcohol or drug abuse or current evidence of substance dependence or abuse as defined by Diagnostic and Statistical Manual of Mental Disorders-IV criteria, with the exception of nicotine dependence
3. Female subjects who were pregnant, not using an adequate form of contraception or breast-feeding
4. Subjects receiving vitamins B6 and B12 supplements (excluding multivitamin supplements at recommended dose)
5. Subjects with a known hypersensitivity to melatonin or any of the excipients in the formulation
6. Subjects receiving hypnotics, tricyclic antidepressants, monoamine oxidase inhibitors, serotonin reuptake inhibitors, lithium, beta-blockers, calcium channel blockers, central alpha-blockers, non-steroidal anti-inflammatory drugs (excluding occasional over-the-counter use), alprazolam, triazolam, neuroleptics, or barbiturates. Subjects receiving any of these compounds were eligible for entry provided the medication was stopped 2 weeks prior to study entry.
7. Subjects with a known history of impaired hepatic or renal function defined as transaminases greater than 2 x the upper limit of normal or creatinine clearance of less than 35 mL/min

8. Subjects with a known severe allergic or auto-immune disease (e.g., multiple sclerosis, rheumatoid arthritis, severe asthma and systemic lupus erythematosus)
9. Subjects who had received an experimental drug within the previous 3 months
10. Subjects using melatonin
11. Subjects, who, by virtue of the need to care for close family members, might have been subjected to intermittent disturbance during their daytime rest periods
12. Subjects who, in the opinion of the Investigator, were not capable of completing the study
13. Subjects who did not consent to their General Practitioner being informed of their participation in the study

Pregnant or breast feeding women were excluded as the preclinical data on melatonin in this group were not available at the start of the study. Subjects were advised that caution should be exercised when driving or operating any heavy or dangerous machinery within 6 hours of taking a dose of study medication.

**Date of first enrolment**

10/10/2005

**Date of final enrolment**

19/04/2006

## **Locations**

**Countries of recruitment**

England

United Kingdom

**Study participating centre**

**Alliance Pharmaceuticals Ltd**

Chippenham

United Kingdom

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## **Sponsor information**

**Organisation**

Alliance Pharmaceuticals Ltd (UK)

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**Sponsor type**  
Industry

**Website**  
<http://www.alliancepharma.co.uk>

**ROR**  
<https://ror.org/001zd1d95>

## **Funder(s)**

**Funder type**  
Industry

**Funder Name**  
Alliance Pharmaceuticals Ltd (UK)

## **Results and Publications**

**Publication and dissemination plan**  
Not provided at time of registration

**Intention to publish date**

**Individual participant data (IPD) sharing plan**

**IPD sharing plan summary**  
Not provided at time of registration