ROOM2

**# Title:**

> **Thermal Circadian rhythms in Arabidopsis**

1.Treatment schedule of light innoculation

**## Date: YYYY-MM-DD**

1. **start date? 2023-04-22**

> A point in time associated with the lifecycle of the dataset.

> Used mainly to cross-reference with other resources like Lab Notebooks or raw data.

> Date must be expressed in ISO format: **\*\*YYYY-MM-DD\*\*** (e.g 2023-03-25)

**## Purpose (Research Hypothesis)**

1. **Investigation of light stimulation on disease phenotype**
2. **Investigation of the circadian regulation of HIV-1**

> The overall rationale, reason, or intention for conducting a study that resulted in the the data set.

> Or the hypothesis that a study sets out to support (or disprove);

**## Abstract**

1. **13 participants provided with 1h of 10,000lx + 9 controls**
2. **Visit 0:Screening, Informed consent, Blood studies**
3. **Visit 1: Blood studies**
4. **Visit 2: Blood studies**

> A summary of the content of the dataset.

> Should include a brief information about the biological material, technique used

> and measurement/experimental conditions.

> The comprehensives details are to be recorded in sections below, here,

> we expect a short description that helps to understand the content of the dataset without its thorough examination.

**## Contributors**

**1.**

> List of persons making contribution to the creation of the dataset.

> Use `FirstName LastName` format, each contributor name should be in a separate line which starts with `-`.

> See the example entry bellow

- Ana Student

- Tom Thorough

- Diana Helpful

--- students template starts ---

--- propose sections Marked with # and their expected content ---

--- rather than definitions list the aspects which should be captured in this section

--- For example, look at the COHORTS section bellow

**---**

--- There are suggestions of other sections, complete the recommended content,

--- and feel free to add your own sections

**## COHORTS**

> Describe common characteristics withing groups of participants

> Typically include Demographics, Health Conditions, inclusion exclusion criteria

CONTROL

Shift workers aged 35-50 who have been shift workers for over 2 years

Exclusion: chronic disease, sleep influencing medication

GROUP1: Low light

Shift workers aged 35-50 who have been shift workers for over 2 years

Exclusion: chronic disease, sleep influencing medication

Intervention: LOW-LIGHT

GROUP2: Strong light

…

**data set 1: Active rotating NSWs shift workers that included 4-7 12h overnight shifts per month. 28 participants were recruited**

**Exclusion criteria: diagnosis of diabetes, liver disease, renal insufficiency, heart failure, coagulopathy, or any other severe systemic disease, history of cancer in any form, positive blood testes for HIV, HEP B/C, or if they’ve taken melatonin supplements**

**Notes: Study was initiated in the early follicular phase of the menstrual cycle for women**

**Conditions:**

**> Light**

* **n = 14**

**> Control**

* **n = 14**

**data set 2: (this graph comes from the first paper)**

**data set 3:Human osteosarcoma cell line U-2OS, PBMC & HEK293T**

* **n values range between 3 - 4 depending on the experiment**
* **Cell culture methodologies**
* **HIV-1 virus replication +/- GSK2981278 or +/- GSK805**
* **BMAL1 KD and BMAL1+CLOCK over expression**

**## INTERVENTIONS**

> What typically interventions description should contain

**> Time of intervention and its length**

**> Description of what the intervention is in detail i.e. is it light (length of exposure) / drug (concentrations) / genetic (what was modified)**

>

LOW-LIGHT

1.

* **Details of the light intervention schedule**

3.

* **There are multiple times of transfection procedures (i.e. HIV transfection / BMAL1 KD/OE). Include details in the readme**
  + **e.g. siRNA sequences**
  + **HIV-1 transfected virus information**
  + **transfection protocols**
* **HIV-1 virus replication +/- GSK2981278 or +/- GSK805**
* **BMAL1 KD and BMAL1+CLOCK over expression**
* **details of the entrainment method (i.e. they performed *in vitro* serum shock)**

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**## DATA COLLECTION AND ANALYSIS**

- Anthropometric parameters

- Metabolic parameters

- Lipid parameters

- Inflammation-associated parameters

- Assessment of sleep quality

- Expression of circadian transcription factors REV-ERBα and BMAL1 in peripheral blood mononuclear cells (PBMCs)