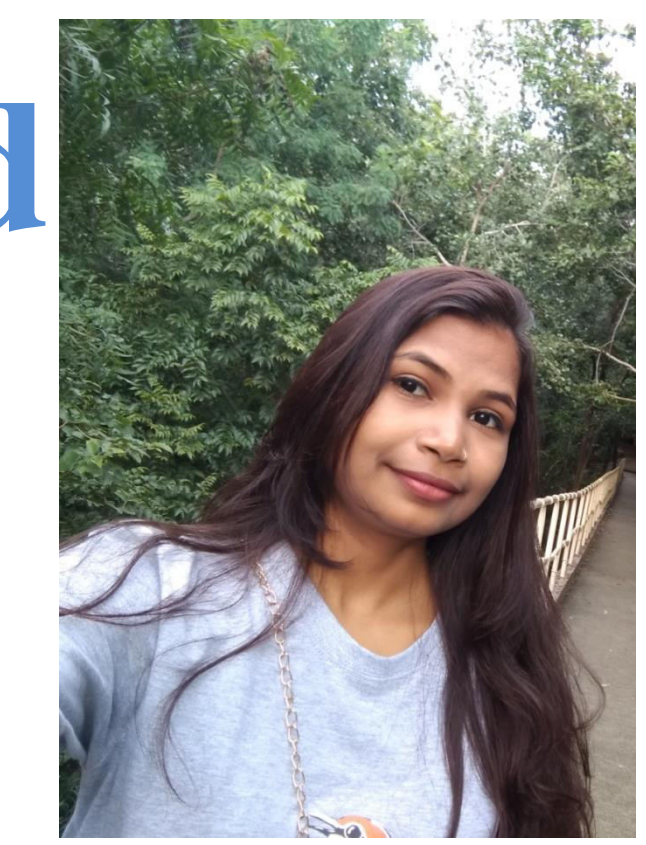
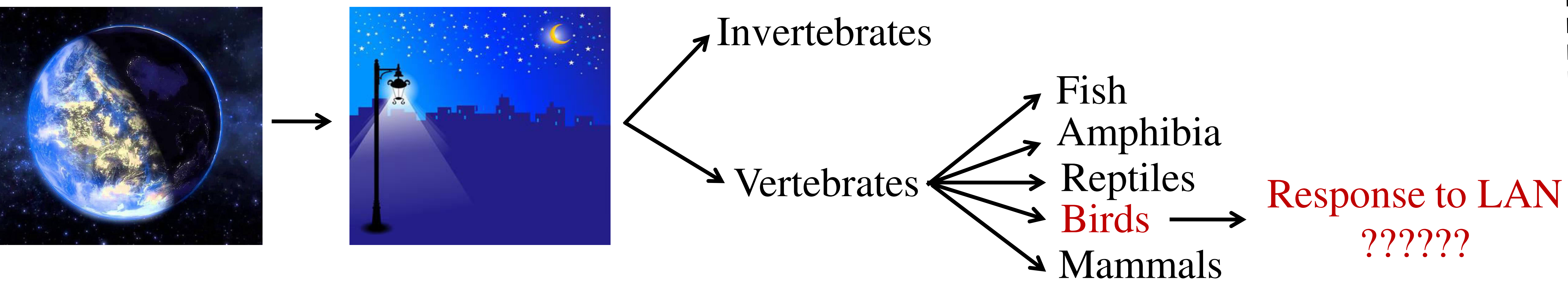


A comparative account of acute versus chronic exposure of LAN on behavior and physiology of resident Indian Weaver Bird

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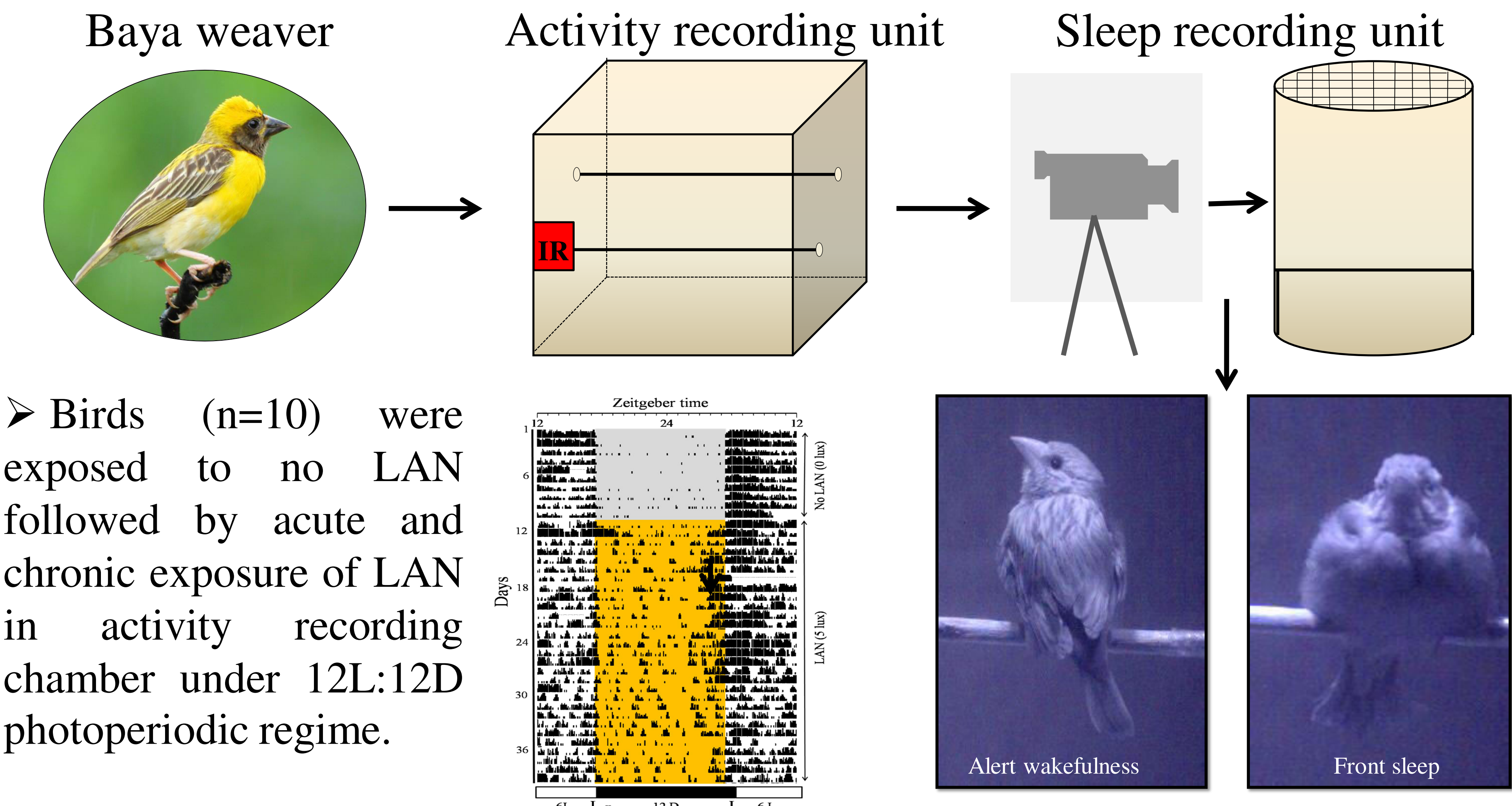


Research Question



Ideally the day and night on earth have specific illumination with standard differences between the two phases, but with the advent of electricity this difference has been continuously minimized. Because of this progression the natural ambience of the earth has been altered which has significant impact on the different life-forms sustained by the planet. To dissect the probable role of night light, we selected an avian model system, the baya weaver (*Ploceous philippinus*) which is an inhabitant of Southeast Asia. The basic objective was to study the acute and chronic response of LAN on behavior and physiology of birds.

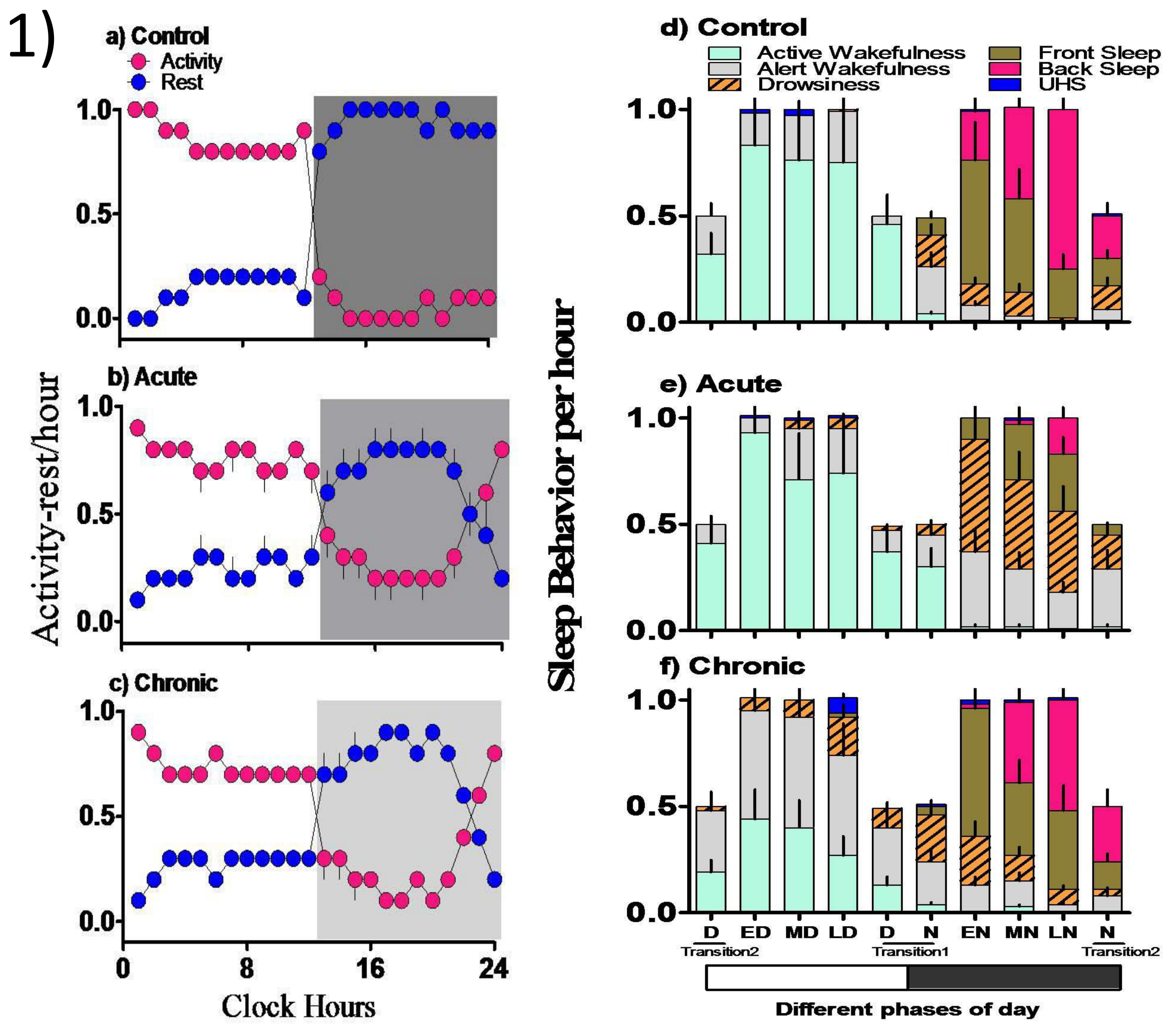
Study Methodology



Birds (n=10) were exposed to no LAN followed by acute and chronic exposure of LAN in activity recording chamber under 12L:12D photoperiodic regime.

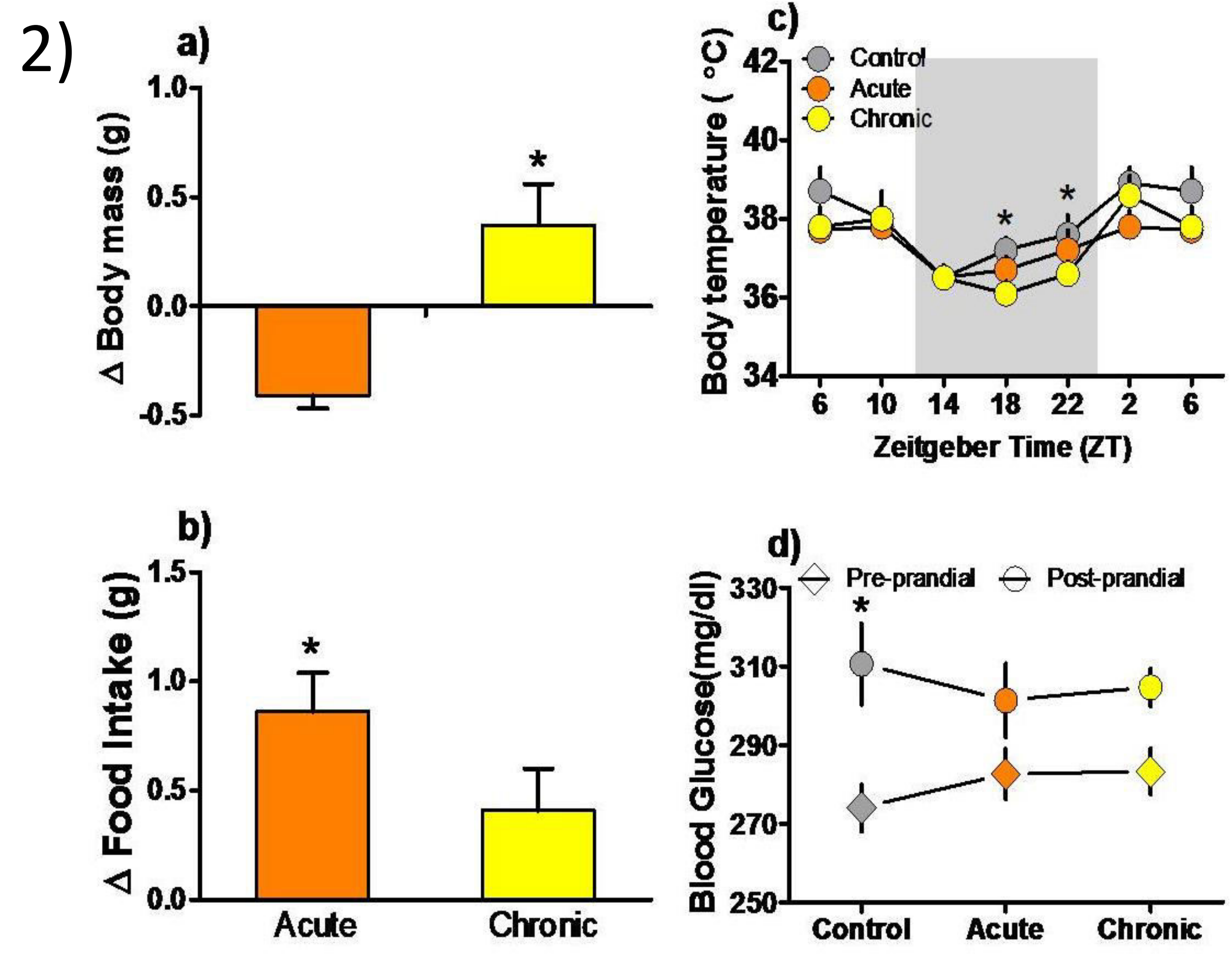
- Sleep was recorded in cylindrical sleep chamber with the help of a night vision camera.
- Parameters monitored during study are as follows:
 - ✓ Activity/rest Pattern
 - ✓ Sleep Behavior
 - ✓ Food intake
 - ✓ Body mass
 - ✓ Blood glucose
 - ✓ Body temperature

Results



➤ Acute exposure of LAN has significantly increased the night-time activity eventually reducing the duration of rest/sleep during night. It also resulted in higher food intake by the birds but there was reduction in body mass and body temperature.

➤ Chronic LAN exposure resulted in increased body mass and significant variation in body temperature rhythm.



Conclusion

➤ Acute exposure of LAN results in drastic changes in behavior and physiology of birds in comparison to chronic exposure.

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