

on Immune System Function and Space-Use by Irish Bats



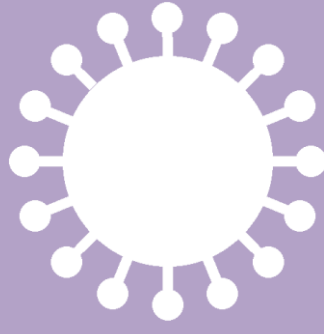
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Introduction

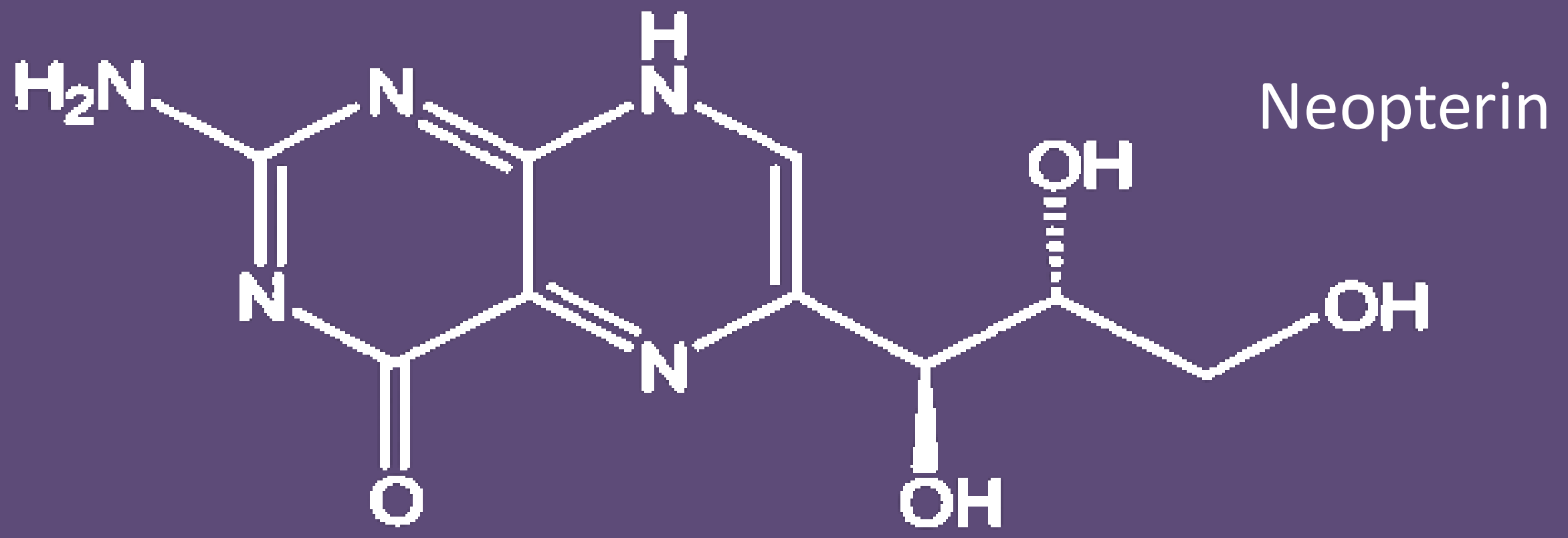
Artificial light is a growing pollutant, which disrupts and dysregulates nocturnal animals. It is suggested chronic exposure to ALAN may affect the immune systems¹ and space-use² of these animals.

Bats are prolific reservoirs of diseases, representing the highest risk for zoonotic spillover into humans³.



The intention of this project is to see how markers of immune activation and bat activity change along a gradient of artificial light.

Methodology



Audio Recording



Helminths

Results

A clear result was not obtained for either helminthiases or neopterin concentration



Why?



Neopterin

- Method was not appropriate for neopterin analysis of guano
- Bat-specific antibodies are not available for this purpose

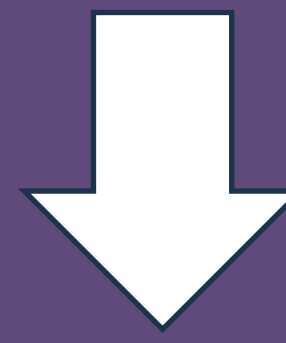
Helminths

- Not enough sample collected
- The roosts may have contained juveniles, which had not yet been exposed to helminths

Conclusion

The results of this study highlight the need for non-invasive, bat-specific methods for monitoring immune activation and space use.

Bat population health is integral to both ecosystem function and anthropogenic pressure that will increasingly shape bat populations.



Future research should prioritise developing bat-specific reagents and methodologies, so that continuous, non-invasive monitoring becomes achievable.

Acknowledgements

