



Urinary neopterin reveals sex differences in immune activation in greater spear-nosed bats

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Research question: Does neopterin concentration change with age in greater spear-nosed bats?



Methods













ELISA to estimate neopterin concentrations (178 samples)



Validation

Dilution series to assess linearity/parallelism to standards



Estimate NLR (161 samples) using blood smears



Estimate cortisol (105 samples) using ELISA

Correlates of interest



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Results



lde





Conclusion and Future Work

- Neopterin can be used as a biomarker of inflammation in bats
- Macrophage activation may be suppressed with age in males
- Sex differences in immune function possibly contribute to female-biased longevity

- Longitudinal studies of neopterin within each bat
- Evaluate expression of genes involved in neopterin production



