Preregistration

Preregistration for Eulemur rubriventer Gut Microbiome Study

Madi Philibert[1]

[1] University of British Columbia Okanagan

17. September 2025

Study Information

The relationship of paternal gut microbiome and hormone profiles on the degree of infant care in red-bellied lemurs	Preregistration for Eulemur rubriventer Gut Microbiome Study
Description	This research plans to take fecal and urine samples from males in breeding pairs from the point of conception to the end of child rearing, and repeat this across multiple years. The fecal samples will be used as a snapshot of the gut microbiome of the male, and the urine will be tested for hormone concentration, specifically focusing on the presence of oxytocin. These data will be compared to the behaviours exhibited by the males during child rearing to determine if there are any patterns between microbiome compositions, hormone concentrations, and increased paternal care.
Hypotheses	This project is still in its infancy, and at the time of taking the Productivity and Reproducibility course, no specific hypotheses have been defined yet.

Design Plan

Study type

Experiment. A researcher randomly assigns treatments to study subjects, this includes field or lab experiments. This is also known as an intervention experiment and includes randomized controlled trials.

Observational Study. Data is collected from study subjects that are not randomly assigned to a treatment. This includes surveys, natural experiments, and regression discontinuity designs.

Meta-Analysis. A systematic review of published studies.

Other. Please explain.

Blinding

No blinding is involved in this study.

For studies that involve human subjects, they will not know the treatment group to which they have been assigned.

Personnel who interact directly with the study subjects (either human or non-human subjects) will not be aware of the assigned treatments.

Personnel who analyze the data collected from the study are not aware of the treatment applied to any given group.

Study design

This will be an observational study. For the past several years, team members have been in the field collecting samples and documenting behaviour without interfering with the study population.

Randomization

Enter your response here.

Sampling Plan

Existing data

Registration prior to creation of data. As of the date of submission of this research plan for preregistration, the data have not yet been collected, created, or realized.

Registration prior to any human observation of the data. As of the date of submission, the data exist but have not yet been quantified, constructed, observed, or reported by anyone - including individuals that are not associated with the proposed study. Examples include museum specimens that have not been measured and data that have been collected by non-human collectors and are inaccessible.

Registration prior to accessing the data. As of the date of submission, the data exist, but have not been accessed by you or your collaborators. Commonly, this includes data that has been collected by another researcher or institution.

Registration prior to analysis of the data. As of the date of submission, the data exist and you have accessed it, though no analysis has been conducted related to the research plan (including calculation of summary statistics). A common situation for this scenario when a large dataset exists that is used for many different studies over time, or when a data set is randomly split into a sample for exploratory analyses, and the other section of data is reserved for later confirmatory data analysis.

Registration following analysis of the data. As of the date of submission, you have accessed and analyzed some of the data relevant to the research plan. This includes preliminary analysis of variables, calculation of descriptive statistics, and observation of data distributions. Please see https://cos.io/prereg for more information.

Explanation of existing data	Enter your response here.
Data collection procedures	Enter your response here.
Sample size	Enter your response here.
Sample size rationale	Enter your response here.
Stopping rule	Enter your response here.

Variables

Manipulated variables	Enter your response here.
Measured variables	Enter your response here.
Indices	Enter your response here.

Analysis Plan

Statistical models	Enter your response here.
Transformations	Enter your response here.
Inference criteria	
Data exclusion	Enter your response here.
Missing data	Enter your response here.
Exploratory analyses (optional)	Enter your response here.

Other

Other (Optional)	Enter your response here.

References