

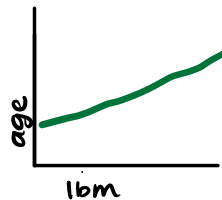
Energetic Constraints and Costs of Immune Activity in Blue Monkeys (*Cercopithecus mitis*)

INTRODUCTION

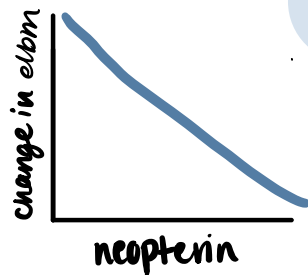
METHODS

Biomarker samples collected in Isecheno area of Kakamega forest on 41 juvenile monkeys (21 male and 20 female).

Creatinine as a measure of lbm, Neopterin as a measure of immune activity, c-peptide as a marker of energy balance. GLMM used on monthly averages for data analysis.



COSTS

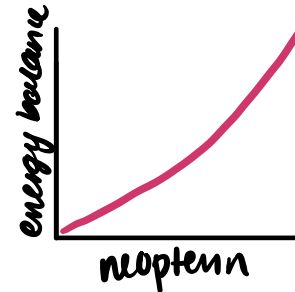


H3: Heightened immune activity has negative consequence on short-term growth

Higher immune activity followed by smaller change in estimate lean body mass (less growth)

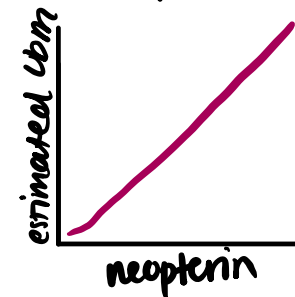
CONSTRAINTS

H1: Immune activity is energetically constrained

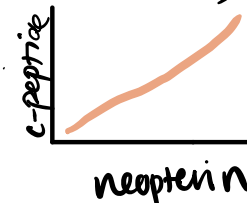
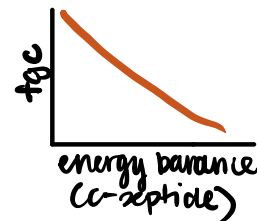


Immune activity increases with higher energy balance, suggesting an energetic constraint on immunity.

analysis (Behringer, Zysling Demas)...



MECHANISM OF CONSTRAINT



Low energy balance is associated w/ lower gc levels, which are immunosuppressive. Given this, gc may mediate the positive relationship between immune activity and energy balance. In a mediation analysis, we found that gc was not the mediating factor in this relationship.

↳ alternative explanation (Loehmler)