# Packages  
pacman::p\_load("lme4", "tidyverse", "MASS", "brms", "MCMCglmm", "quantreg","lmerTest", "emmeans", "latex2exp", "DHARMa", "tidybayes", "bayesplot", "rstanarm", "plotrix", "emmeans", "patchwork", "ggExtra")  
# Equation can be written in latex through markdown

# Statistical Analysis

where is the metabolic rate () for measurement *i* (i = 1 to , number of measurements) on individual *j* (j = 1 to , number of individuals) and day *k* (k = 1 to , number of days). We estimated a linear slope () for measurement time (, z-transformed); a linear slope for log transformed mass (, centered on mean, sc) and contrasts for the difference sex classes (), where and are for true sex and sex reversed animals, respectively. We also estimated different mass scaling relationships for the different sex classes (i.e., and , respectively). We included a random intercept () and slope for () for individual *j* across measurement occations. Deviations were sampled from a multivariate normal distribution (~, where **ID** is a (co)variance matrix with a random intercept and slope variance and their covariance). We also included a random day effect () (~ ).

# Results

# Bassiana

In total sample sizes ranged from 12 –15 (XX\_Female = 15)