**Model 1**

Biomass = Alpha[site]+ beta\*fire

Where:

With Priors:

* assume that the predictors have the same relationship with the response variable regardless of the site
* This is called a random intercept model, where the slopes are the same but the intercepts differ.
* Hierarchical lognormal model with site-specific random intercept

**Model 2**

Where:

With Priors:

* Add site-level covariates
* What factors about the sites themselves drive biomass?
  + Basal area, cumulative severity, density
* Building a plot-level and site-level model
  + Plot-level model stays the same as above
  + Adding a site-level sampling model
    - Using additional term to regress site effects on site-specific variables