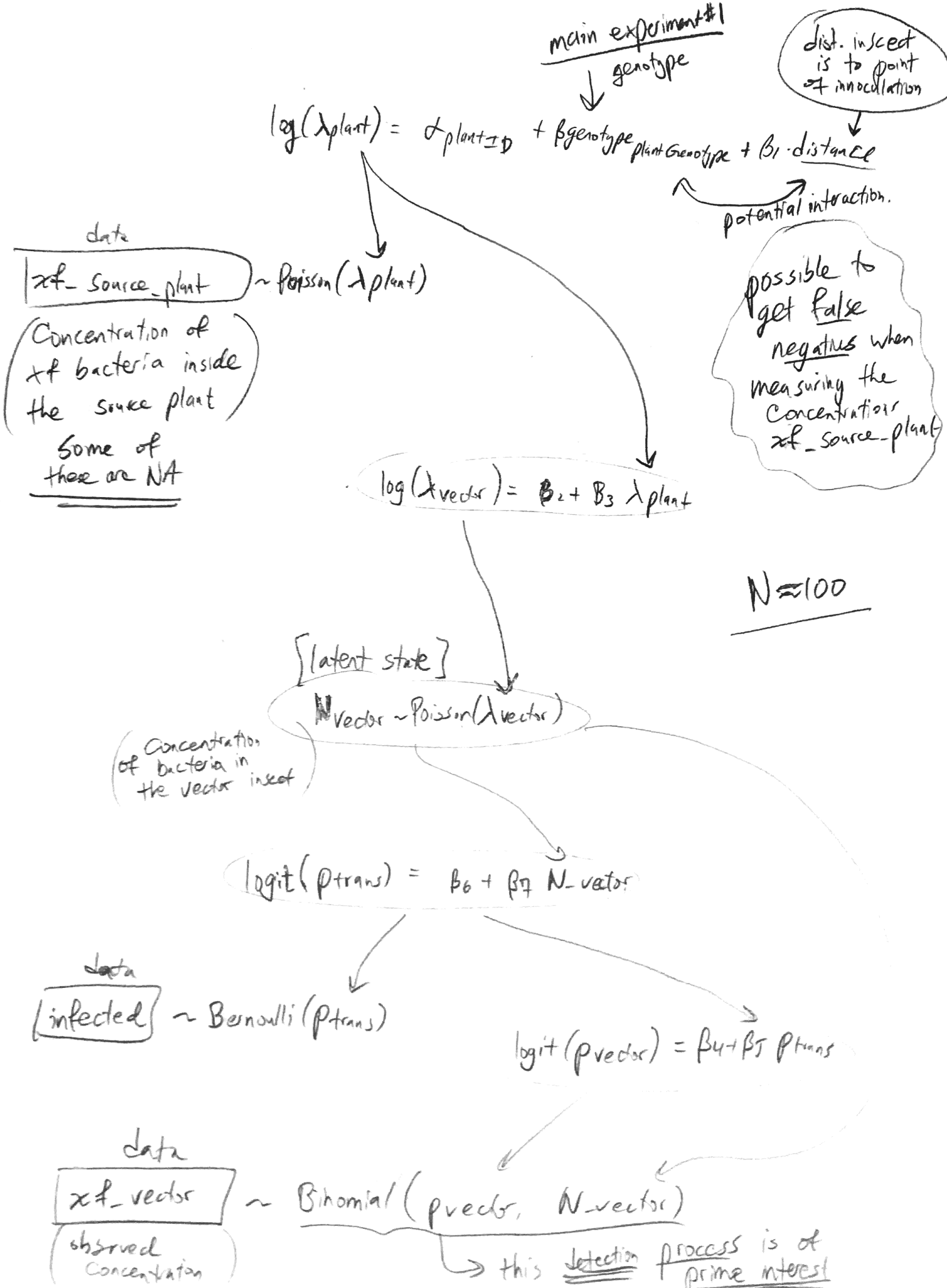
main experiment #1
genotype
dist. insect is to point of innoculation
$\log(\lambda_{plant}) = \alpha_{plant\_ID} + \beta_{genotype_{plantGenotype}} + \beta_1 \cdot distance$
potential interaction.
data
xf_source_plant ~ Poisson(λ_{plant})
(Concentration of xf bacteria inside the source plant)
Some of these are NA
possible to get false negatives when measuring the concentration xf_source_plant
$\log(\lambda_{vector}) = \beta_2 + \beta_3 \lambda_{plant}$
N=100
[latent state]
$N_{vector} \sim Poisson(\lambda_{vector})$
(Concentration of bacteria in the vector insect)
$logit(p_{trans}) = \beta_6 + \beta_7 N\_vector$
data
infected ~ Bernoulli(p_{trans})
$logit(p_{vector}) = \beta_4 + \beta_5 p_{trans}$
data
xf_vector ~ Binomial(p_{vector}, N_vector)
(observed concentration)
this detection process is of prime interest