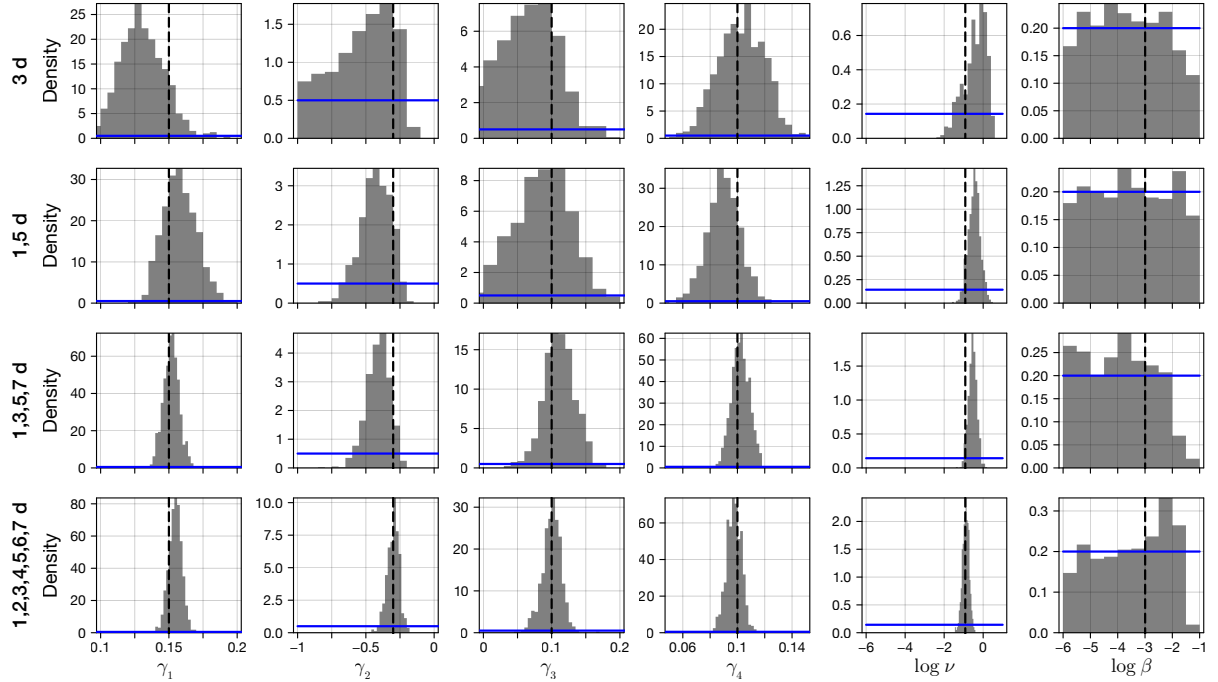


## S2 MCMC priors and results

The priors for each parameter are given in Table A. In Fig. A, we show marginal posterior distributions for all parameters corresponding to the analysis in Fig. 3 of the main text. In the main text, we present results for experiment termination times  $t = \{1 \text{ d}, 3 \text{ d}, 5 \text{ d}, 7 \text{ d}\}$ . In Fig. A, we additionally consider various other termination time sets, as indicated.

**Table A.** Parameters, parameter descriptions, and parameter priors used for analysis in the main text.

| Parameter    | Description                                | Prior               |
|--------------|--------------------------------------------|---------------------|
| $\gamma_1$   | Sensitive ( $x = 0$ ) growth rate off drug | Uniform( $-1, 1$ )  |
| $\gamma_2$   | Sensitive ( $x = 0$ ) growth rate on drug  | Uniform( $-1, 1$ )  |
| $\gamma_3$   | Resistant ( $x = 1$ ) growth rate off drug | Uniform( $-1, 1$ )  |
| $\gamma_4$   | Resistant ( $x = 1$ ) growth rate on drug  | Uniform( $-1, 1$ )  |
| $\log \nu$   | Adaptation speed                           | Uniform( $-6, 1$ )  |
| $\log \beta$ | Heterogeneity/diffusivity parameter        | Uniform( $-6, -1$ ) |



**Figure A. Marginal posterior distributions.** We show marginal posterior distributions for all parameters, for various sets of observation termination times. Shown also are the marginal prior distributions (blue) and the true values (black dashed).