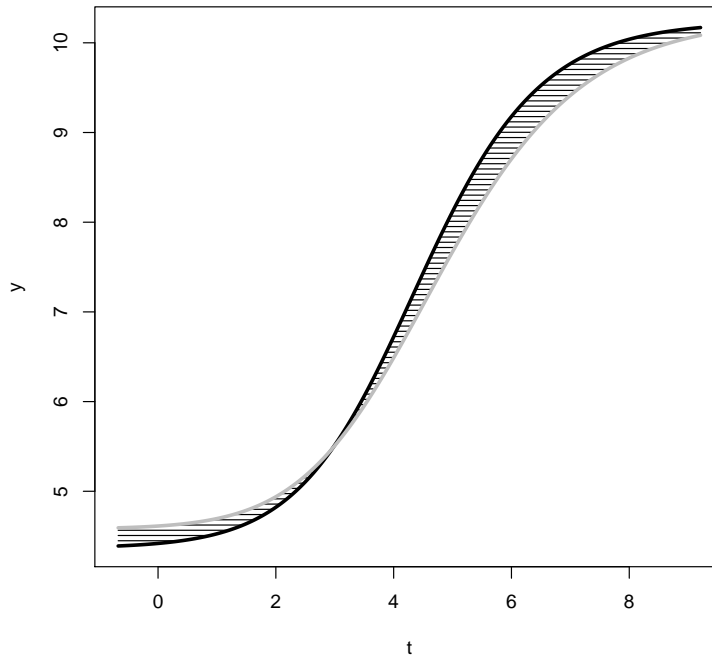
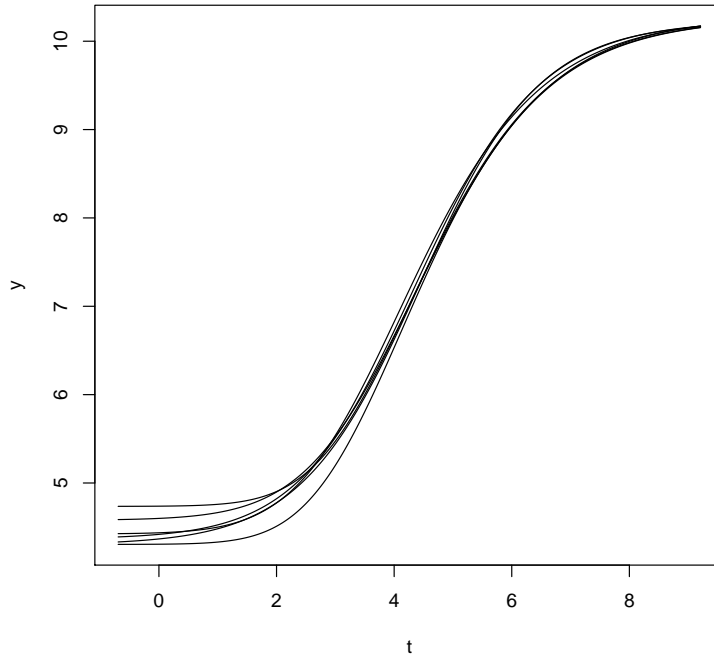


1 Web Figure 1



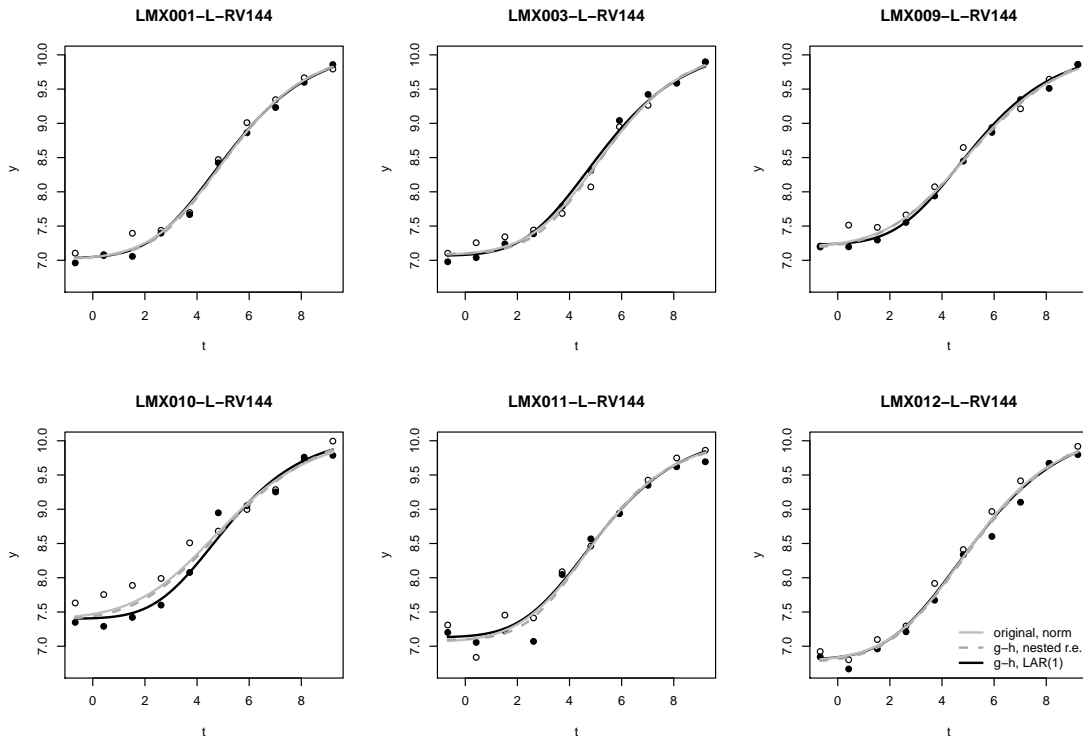
Area between curves.

2 Web Figure 2



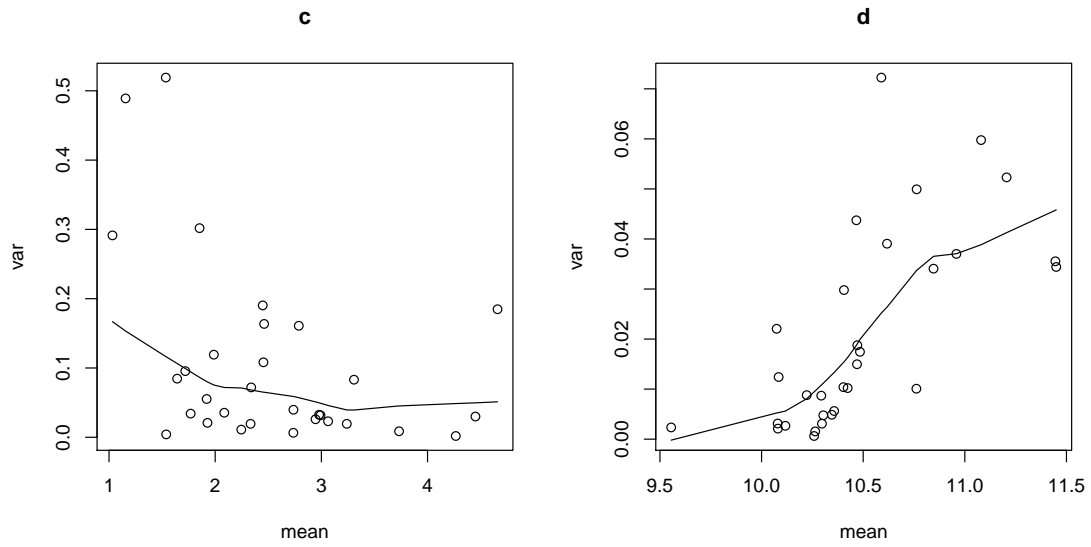
Simulation truth.

3 Web Figure 3



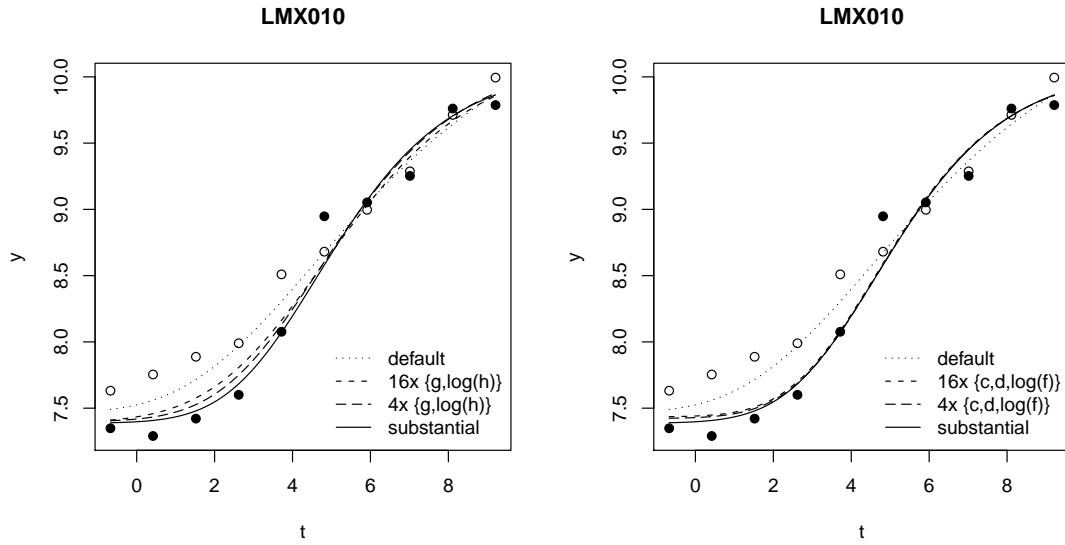
Concentration-response curves using posterior median parameter values for the motivation example.

4 Web Figure 4



Mean-variance relationship of the plate effect for *c* and *d*. The solid lines are lowess lines.

5 Web Figure 5



Sensitivity to prior specification under the g-h parameterization for the motivation example. Only results for the LMX010 plate are shown. The posterior medians of the parameters are plotted.

The default and the substantive fits in the two panels are identical. The left panel also shows fits from using substantive priors on c , d , and $\log(f)$ and less substantive priors on g and $\log(h)$. The right panel also shows fits from using using substantive priors on g and $\log(h)$ and less substantive priors on c , d , and $\log(f)$.