Figure S1: Optimal experiment design for the bursting gene expression model using the determinant of the FIM, D-optimality. (a) The D-optimality criteria for the FSP-FIM (blue), LNA-FIM (purple) and SM-FIM (green) for different sampling periods Δt. Orange triangles represent the D-optimality confirmed using 200 simulated data sets for each potential sampling period. Optimal sampling periods are given by black circles. (b) Comparison of the FSP-FIM at the the reference parameter set (x-axis) and the observed information (y-axis) for various sampling periods using the FSP-FIM (blue circles), LNA-FIM (purple squares), and SM-FIM (green crosses). Kinetic parameters are $k_{on} = 0.05$ min^{-1}, $k_{off} = 0.15$ min^{-1}, $k_r = 5$ molecules/min, and $\gamma = 0.05$ min^{-1}.