This repository contains MATLAB scripts to generate **Figures SM.6F – H**

* **FIGURE\_SM\_6\_4bins.m**  
  This is the **main script** to run the simulations from the saved intermediate gene expression level distributions.   
  You can modify or tune:
  + **Bin range** (lines 47 - 51)
  + **Simulation parameters** (e.g., number of simulations, time points for histogram output and violin plots)
* **SSA\_FIG\_SM\_6\_2.m**  
  (Same as above) This file implements the **stochastic simulation algorithm (SSA)** using Gillespie’s method.  
  You can tune **model parameters** (e.g., reaction rates) directly in this file.

**Additional notes**

* To correctly visualize the output distributions on a **logicle scale**, make sure to include the **@logicleTransform** folder in the same directory or MATLAB path.
* To generate **violin plots**, make sure to include the functions **Violin.m** and **violinplot.m** in the same directory or MATLAB path.