

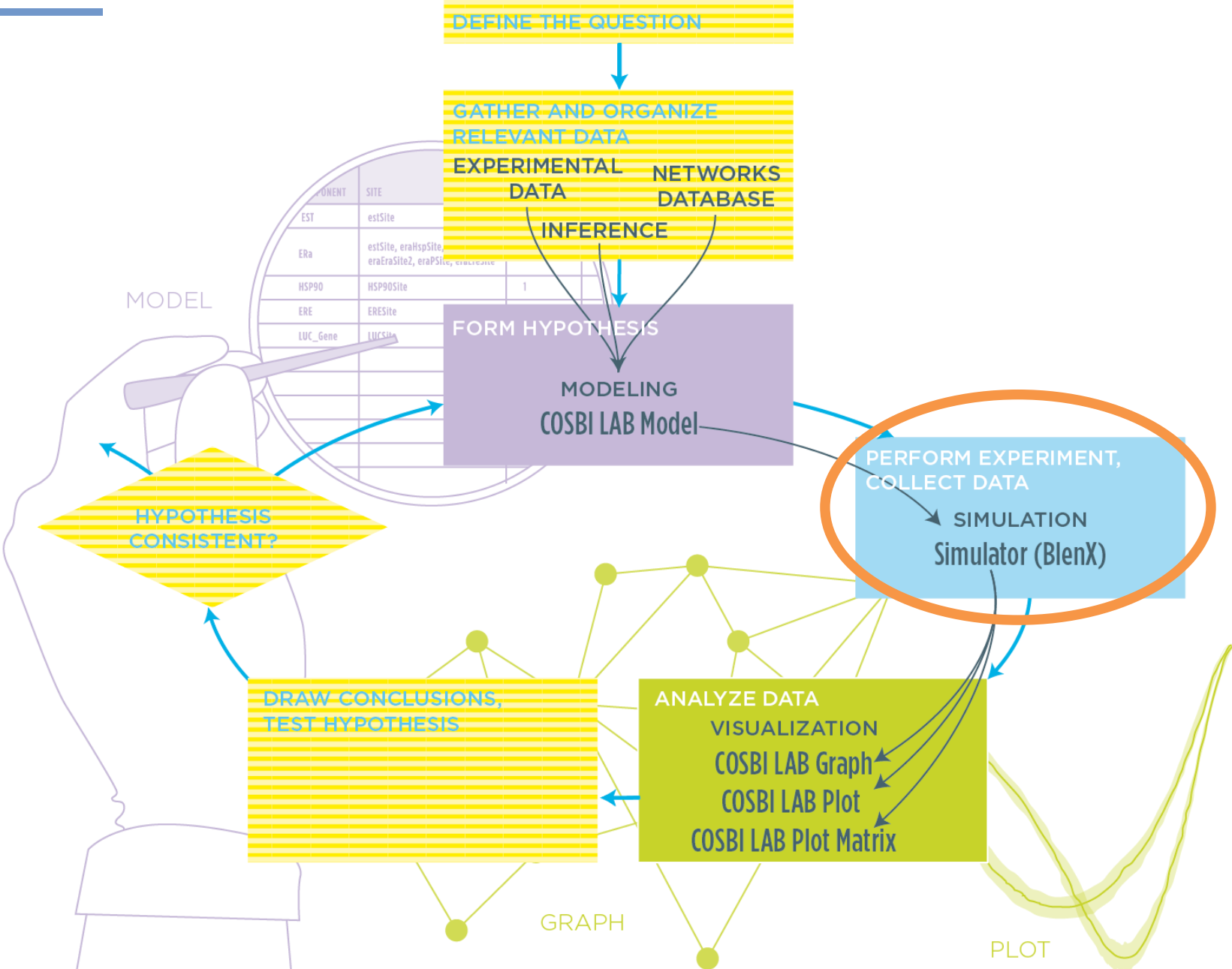


COSBI

Simulation



COSBI WORKFLOW



SIMULATION

COSBI LAB Simulation Wizard 1.0.0

Select Parameter to Scan

Simulation Path
Simulation Arguments
Parameter Scan
Configure Parameters
Set Environment
Number of Runs
Run Simulation

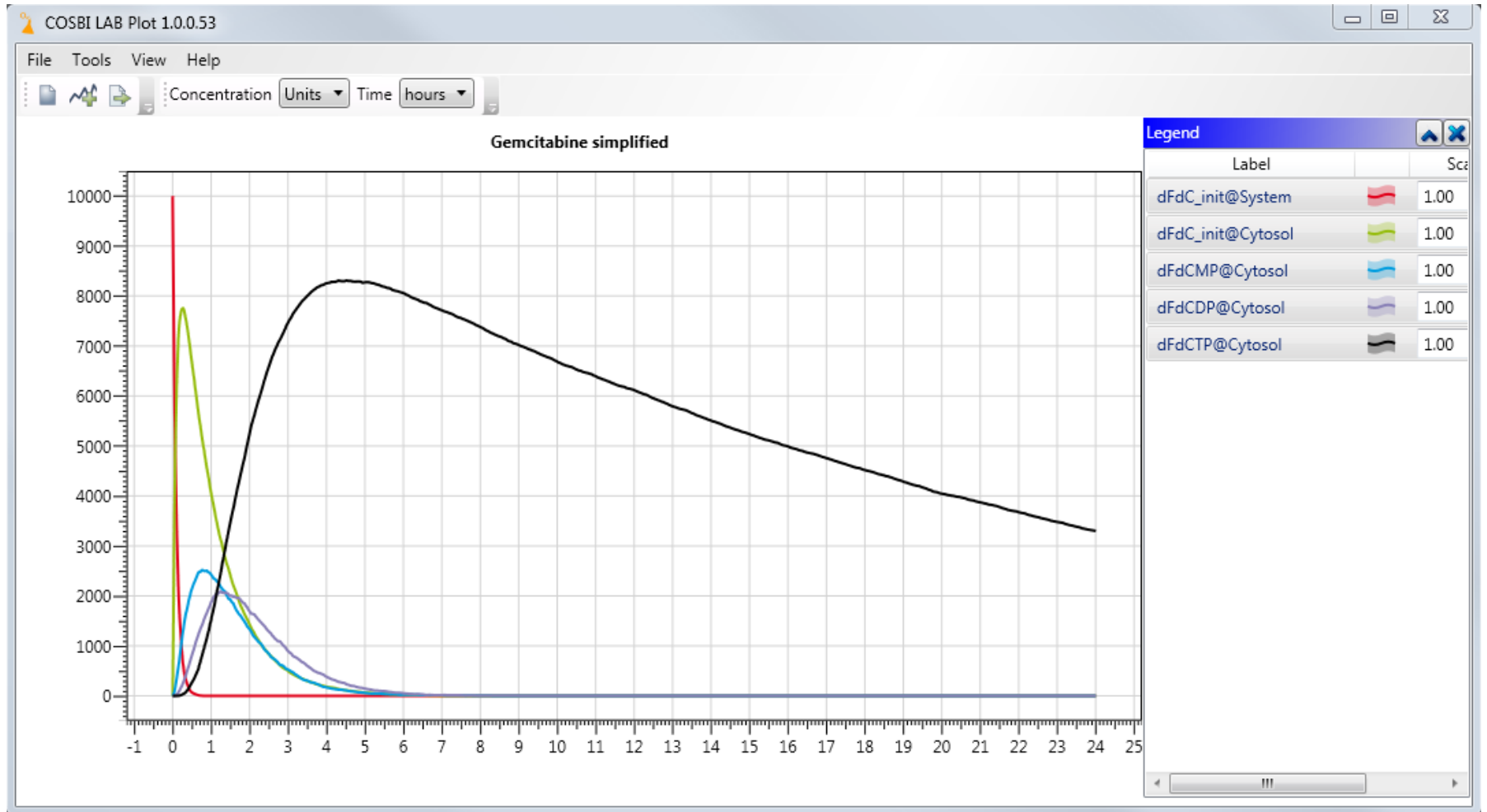
Scan	Parameter	Type	Unit of Measure
<input type="checkbox"/>	System_Volume	Volume	fl (10 ⁻⁹ mm ³)
<input type="checkbox"/>	Membrane_Volume	Volume	fl (10 ⁻⁹ mm ³)
<input type="checkbox"/>	Cytosol_Volume	Volume	fl (10 ⁻⁹ mm ³)
<input checked="" type="checkbox"/>	r_dFdCout_in	Rate	1/hours
<input type="checkbox"/>	r_dFdC_dCK	Rate	1/(Units*hours)
<input type="checkbox"/>	r_dFdCMP_NMPK	Rate	1/(Units*hours)
<input type="checkbox"/>	r_dFdCDP_NDPK	Rate	1/(Units*hours)
<input type="checkbox"/>	r_dFdC_CDA	Rate	1/(Units*hours)

1/hours]

Back Next Cancel

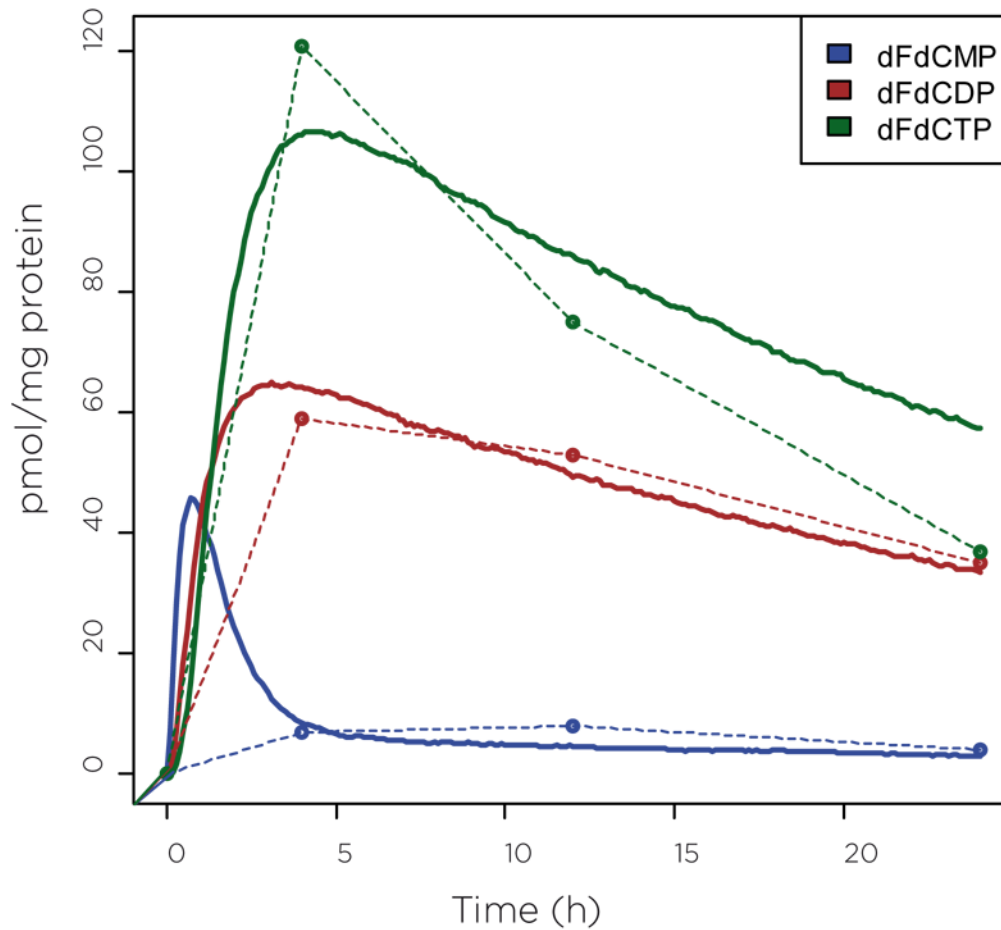
Back Next Cancel

VISUALIZE RESULTS



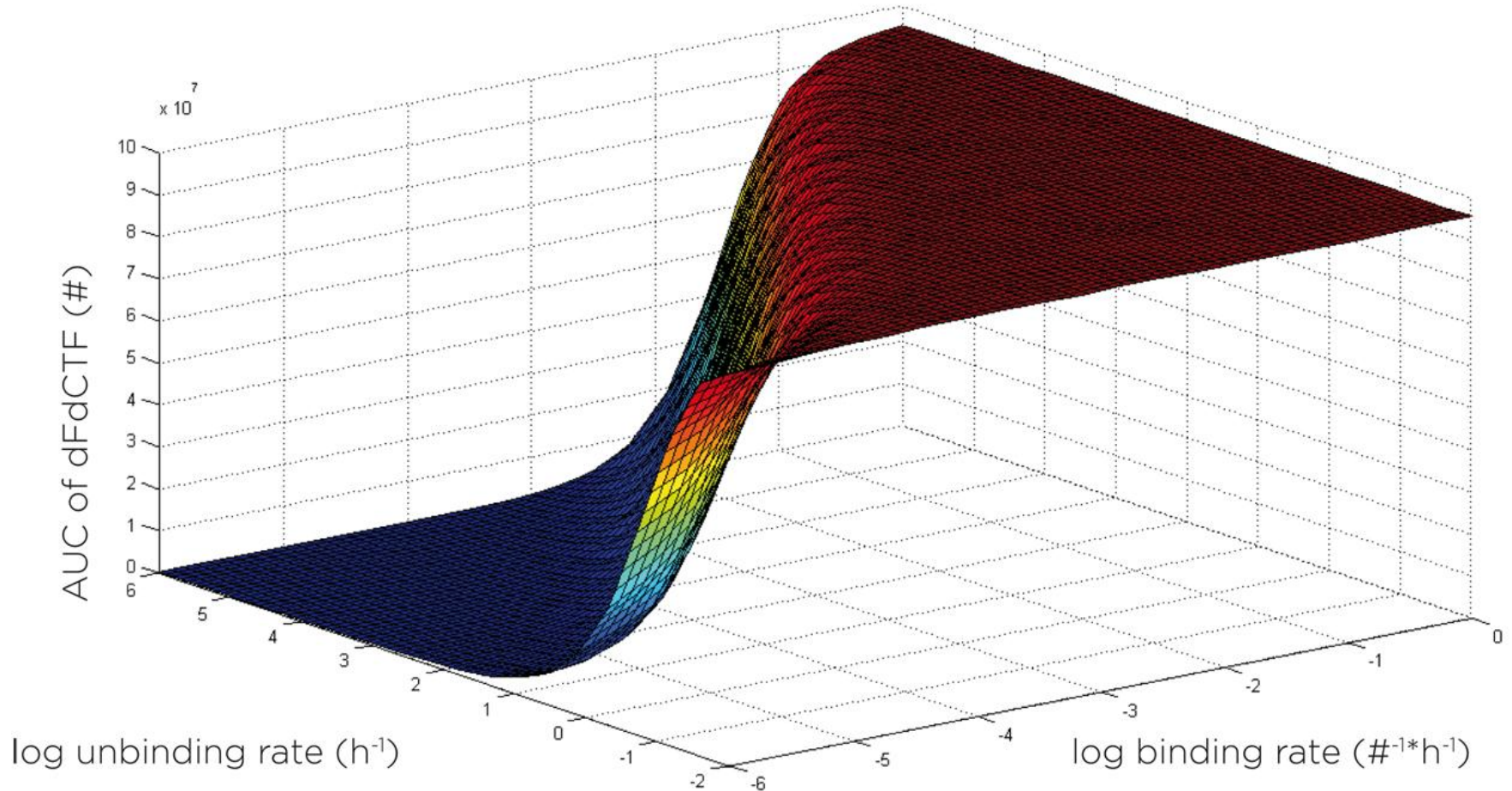
SIMULATION RESULTS PLOT

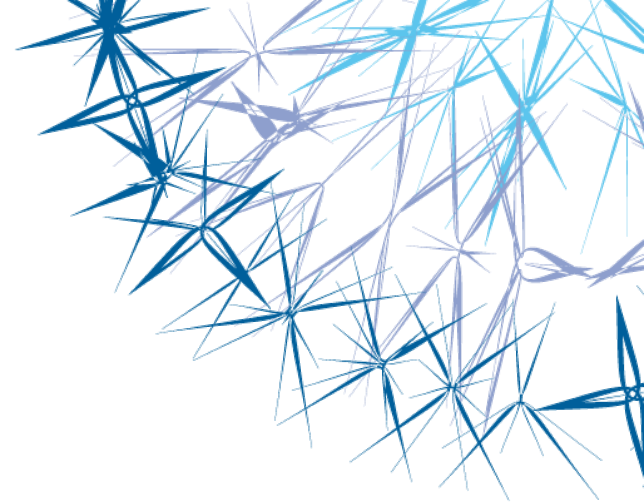
Intracellular concentration versus time



SENSITIVITY ANALYSIS

Accumulation of dFdCTP w.r.t. dCTP inhibition on dCK





Spatial simulation

P. Lecca, L. Dematte', A. Ihekwaba, C. Priami. Redi: a simulator of stochastic biochemical reaction-diffusion systems, *The Second International Conference on Advances in System Simulation (SIMUL 2010)*, 2010.

SPACE AND DIFFUSION

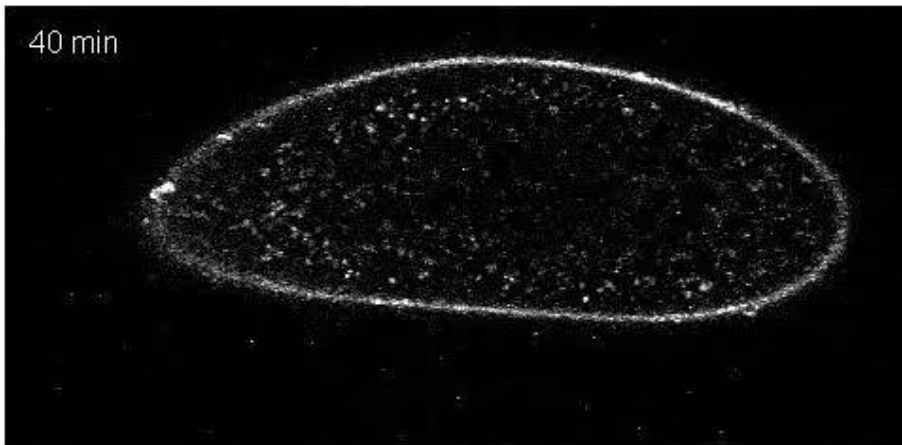


Reaction-diffusion simulator at the mesoscopic interaction scale.

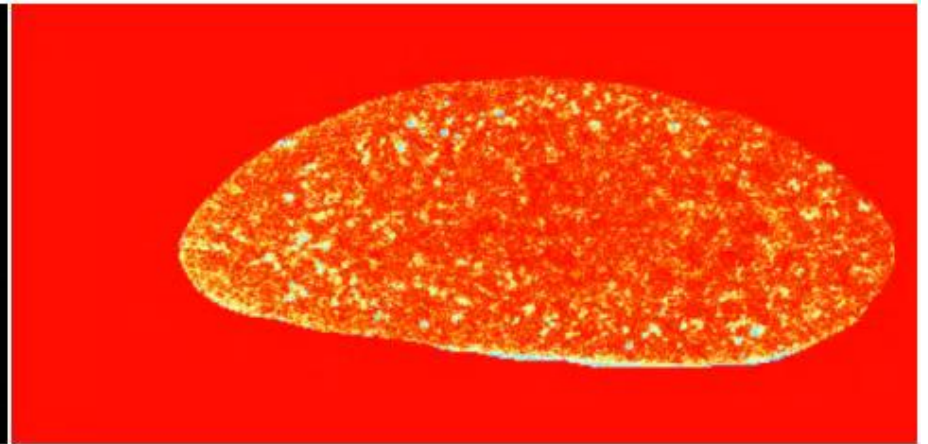
Space discretised variant of the Gillespie SSA.

Dynamically state-dependent diffusion coefficient.

BICOID SIMULATION



Experimental



Simulated