

Environment features	Surroundings nutrient concentration (M)	Nutrient diffusivity (dm ² s ⁻¹)	Volume of environment			
	10 ⁻²	10 ⁻⁷	1mm ³			
Gene network features	Transcription speed (s ⁻¹)	Translation speed (s ⁻¹)	Basal polymerase binding probability	Polymerase binding probability with activator	Ploymerase binding probability with repressor	
	10 ⁻¹	10 ⁻¹	10 ⁻²	0.5	0	
	Timestep for TF dynamics (s.)	k _{cat} BSTF (M ⁻¹ s ⁻¹)	k _{cat} BSTF (s ⁻¹)	mRNA degradation rate (s ⁻¹)	Protein degradation rate (s ⁻¹)	Sizer degradation rate (s ⁻¹)
	30	10 ²	10 ⁵	10 ⁻³	10 ⁻³	0.2
Energy processing features	Nutrient to energy rate	ATP basal cost per V=1m3 (ATP units/μm ³)	Basal metabolism allometry coefficient	Growth cost of one cascade	Nutrient cost of one cascade	
	30	10 ⁶	5.6	10 ⁻³	10 ²	
Cell features	Mutation rate per base (per gen.)	Daughter cells ratio	Lethal cell volume	Basal death rate		
	10 ⁻⁴	1:1	1	0.25		
Initial conditions	Initial sizer threshold	Initial cell volume (μm ³)	Initial number of transcripts	Initial number of cells	Theoretical simulation duration (s.)	
	100	30	5	500	10 ⁷	