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OPEN **Publisher Correction:** Combining Turing and 3D vertex models reproduces autonomous multicellular morphogenesis with undulation, tubulation, and branching

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This Article contains errors in the order of the Figures and Figure Legends. In the HTML version of the Article, Figures 8 and 9 were published in the reverse order, but not their accompanying legends. In the PDF version of the Article, the legends of Figures 8 and 9 only were published in the reverse order. The correct Figures 8 and 9 together with their accompanying legends appear below as Figures 1 and 2 respectively.

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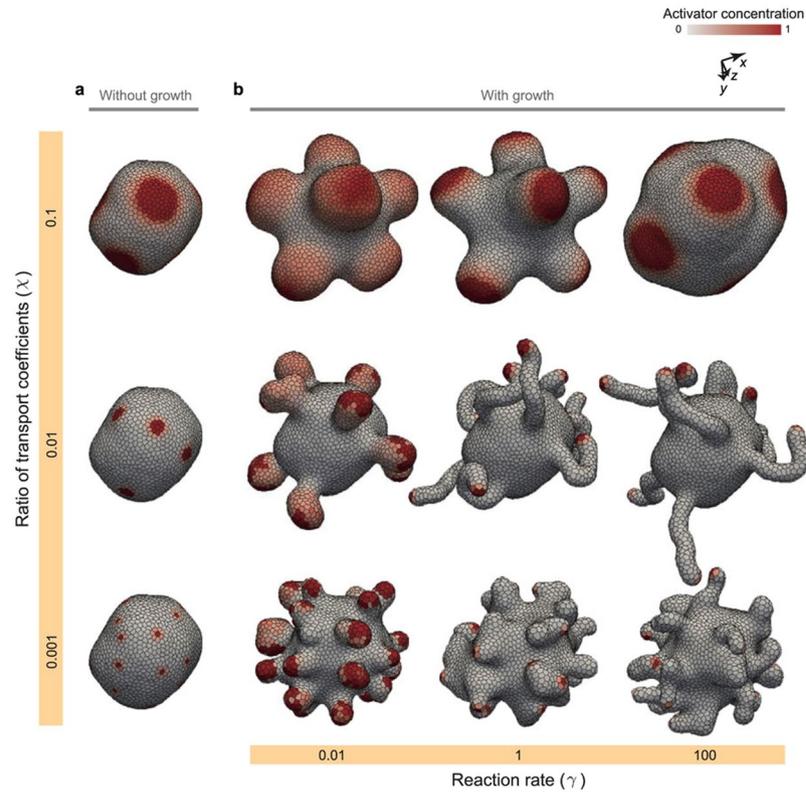


Figure 1. Morphology diagram. (a) Images of tissue patterns obtained by simulations without cell growth. (b) Morphology diagram of tissue shapes and patterns obtained by simulations with cell growth. In (a and b), cells are colored by their activator concentration. The steady tissue patterns in (a) were obtained by simulations during 2 cell cycles, in which physical parameters were set as $\gamma = 100$. The individual tissues in (b) were composed of about 4,000 cells, which were picked up on the growth process.

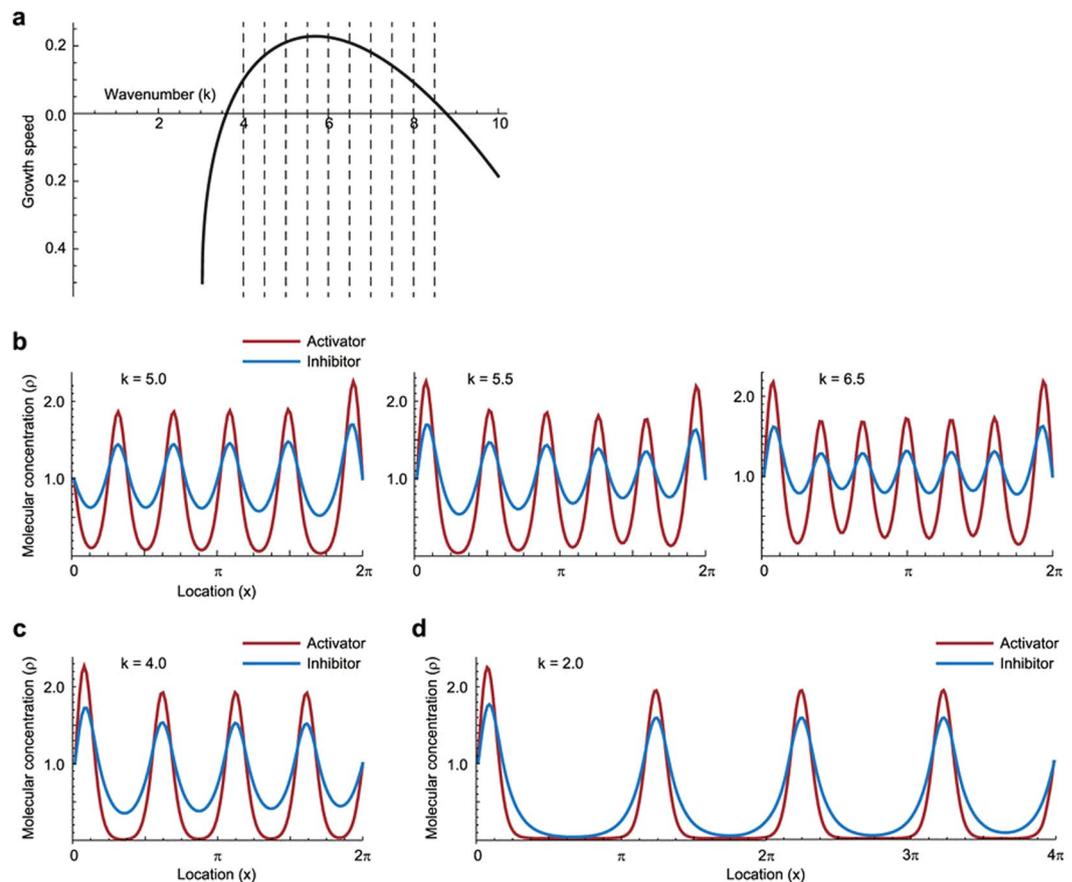


Figure 2. Multiple unstable mode of activator–inhibitor system in one-dimensional space. **(a)** Dispersion relation of the activator–inhibitor system. Growth speed of each wavenumber component is positive in the region of $4.0 \leq k \leq 8.5$. Dashed lines indicate the possible wavenumber components. **(b)** Example results of the numerical simulations for the activator–inhibitor system with respect to the different initial conditions. The initial conditions were set as a random distribution with the uniform white noise, the boundary condition was set as $\rho_A = \rho_I = 1$ at $x = 0, 2\pi$, and physical parameters were set as $D_A/\gamma = 0.01$ and $D_I/\gamma = 0.1$. Red and blue lines indicate activator and inhibitor, respectively. **(c)** Result of the numerical simulation from the initial condition with dominant number of waves 4. **(d)** Result of the numerical simulation with domain growth from the initial condition with dominant number of waves 4. The domain size grew from 2π to 4π . In **(c)** and **(d)**, the initial condition was set as periodic as $\rho_A = \rho_I = 1 + \sin 4x$.

Additionally, this Article contains typographical errors in the Modeling Example: Cell Growth Regulation by an Activator–inhibitor System and Results sections.

Under the subheading ‘Discrete Turing model for describing multicellular patterning’,

“Sect. 6 in Appendix”

should read:

“Appendix A”

Under the subheadings ‘Activator–inhibitor system’ and ‘Hysteresis in patterning emerges from the multiple unstable mode in activator–inhibitor system’,

“Sect. 7 in Appendix”

should read:

“Appendix B”

Under the subheading ‘Physical parameter setting’,

“Sect. 8 in Appendix”

should read:

“Appendix C”

Finally, under the subheading ‘Coupling patterning and deformation drives undulation, tubulation, and branching’

“As described in Sect. 3.4, the size of activator regions should be approximately proportional to $\chi^{1/4}\phi^{1/2}$; hence, the size in the case of $\chi = 0.1$ is expected to be about 1.8 times larger than that in the case of $\chi = 0.01$.”

should read:

“Based on linear approximation, the size of activator regions should be approximately proportional to $\chi^{1/4}\phi^{1/2}$; hence, the size in the case of $\chi = 0.1$ is expected to be about 1.8 times larger than that in the case of $\chi = 0.01$.”



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