Table 1. Parameter values used in the calculation

Parameter name	Notation	Numerical value
Gliding velocity	v_0	7μm/min
Diffusion coefficient	D	14 μm^2/min*
Diffusion coefficient in jammed state	D_s	0.35 μm^2/min
Rate constant for a cell to become sensitive	K_a	0.56 min^{-1}
Rate constant for jamming (stop state)	k_s	0 (Fig. 5), 0.42 min^{-1} (Figs. 4 and 6)
Rate to resume motion	k_m	0.042 min^{-1}
Internal reversal frequency (low-density limit)	K_0	0.14 min^{-1}
Increase of reversal frequency by C-signaling (relative)	$\Delta K_c/K_0$	2 (Figs. 4 and 5), 0.5 (Fig. 6)
Decrease of reversal frequency in streams (relative)	$\Delta K_{str}/K_0$	0.95
Initial density	n_0	1†
Cooperativity exponent for C-signaling	q	4‡
Critical density for C-signaling	n_c	1.05
Cooperativity exponent for streaming signaling	p	2
Critical density for streaming	n_{str}	2
Cooperativity exponent for stopping	q_S	6
Critical density for stopping	n_S	1.9 (Fig. 4), 5 (Fig. 6)
Alignment coefficient	α	98 μm^2/min
Turning coefficient	β_0	0.028 min^{-1}
Cooperativity exponent for turning	q_T	4
Critical density for turning	n_T	2.5

*Diffusion coefficient corresponds to ~20% fluctuations in velocity.

†Initial density is scaled to be equal to 1. The rest of the densities are dimensionless (in units of initial density). Numerically, we scaled v_0 and K_0 to be equal to one and performed the calculation in these dimensionless units.

‡It is essential for C-signaling to be cooperative for rippling. Remaining density dependencies are chosen to be of generic Hill's form. The results of the simulation are not sensitive to exact values of the other cooperativity exponents.