Table S1: Parameters used in flexible cell model

Symbol	Description	Value
L	Cell length	6.5 µm [4,33]
W	Cell width	0.5 µm [4,33]
N	Number of nodes per cell	7
N_a	Number of adhesion complexes	5 [14,22]
ρ	Cell density	1000 kg/m^3
k_l	Linear spring constant	Managed by Box2D
k_b	Angular spring constant/bending stiffness	10^{-17} N.m [33-35]
k_a	Substrate attachment spring constant	50-2000 pN/µm [20,21]
L_{max}	Bond breaking length	0.5 µm (cell width)
v^f	Mean speed of the cell	4 µm/min [40]
t_{step}	Simulation time step	5×10^{-3} sec
µ	Viscosity of the slime	10^{-3} kg/m.s
F^p	Propulsive force per cell	60 pN