Electronic Supplementary Material (ESI) for Soft Matter.

Supplementary Information for

Motion of microswimmers in cylindrical microchannels

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Supplementary Figures

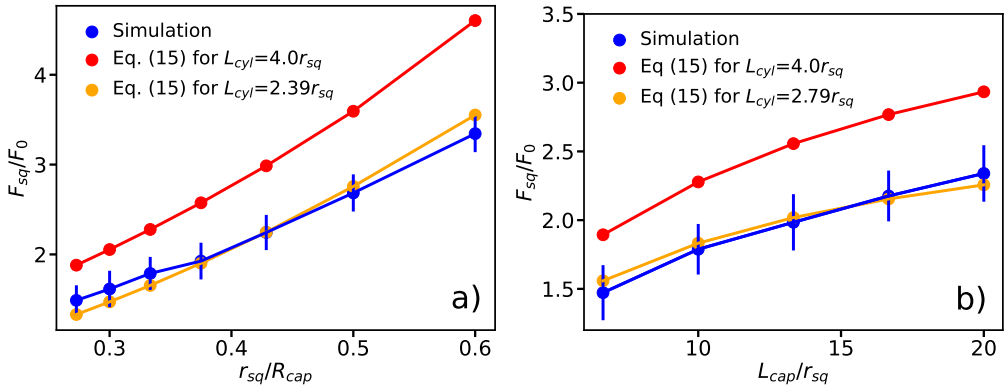

Figure S1: Propulsion force F_{sq} of a spring-fixed neutral spheroidal squirmer with $b_x = b_y$ and $b_z = 2b_x$ in an open capillary tube in comparison with the analytical prediction from Eq. (15) for (a) different confinements $D = r_{sq}/R_{cap}$ with $L_{cap} = 10r_{sq}$ and (b) various capillary lengths L_{cap} with $D = 0.33$. The red and orange lines show propulsion forces from the analytical solution in Eq. (16) for a cylindrical swimmer with radius $r_{cyl} = r_{sq}$, surface velocity $u_{cyl} = -B_1$ and two different lengths L_{cyl}. The force is normalized by $F_0 = 6\pi\eta r_{sq} v_0$ with $v_0 = 0.83B_1$, which is the bulk velocity of a spheroidal squirmer with the given eccentricity.