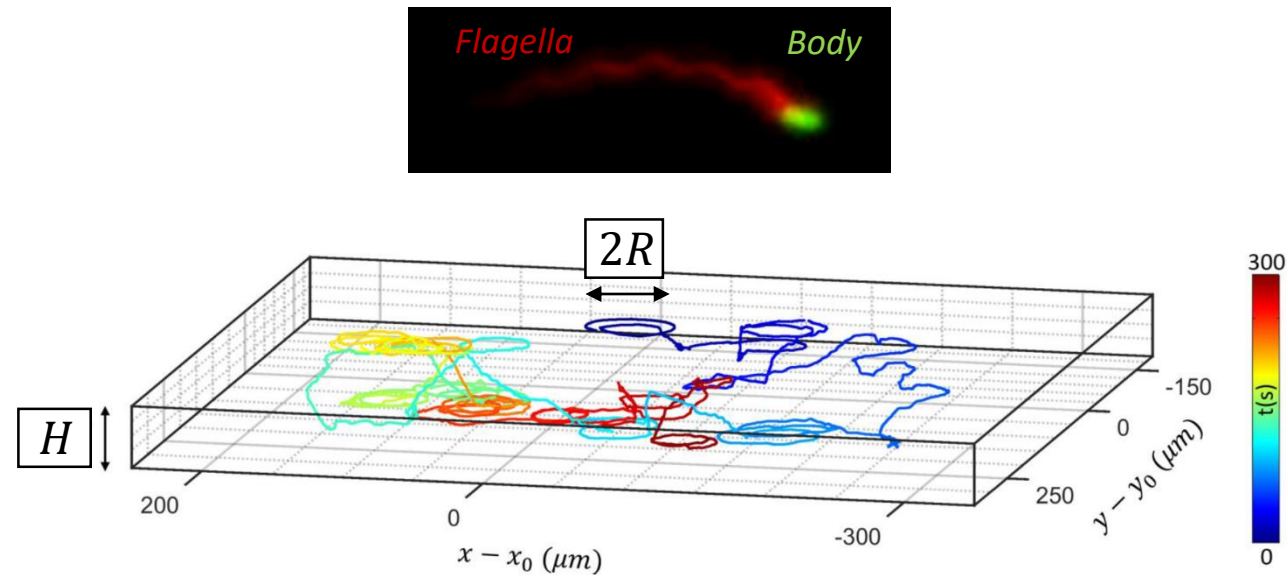
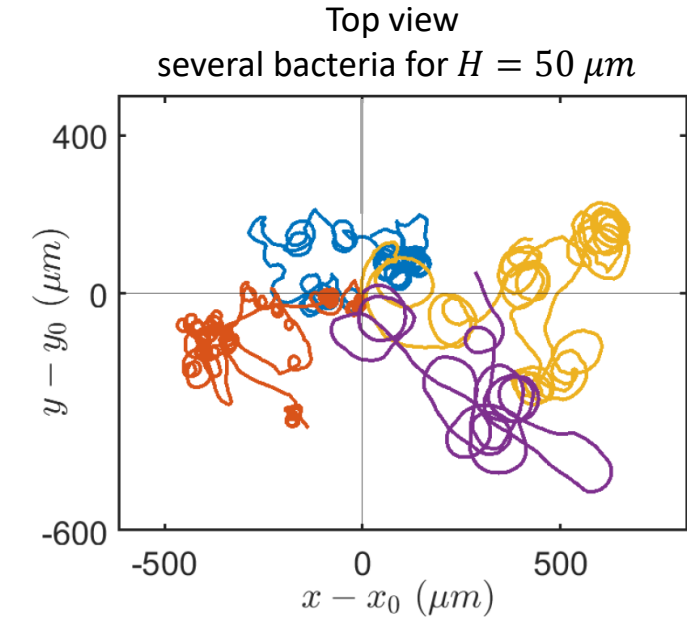


Microswimmers exploration under confinement

3D tracking of E. coli



Lateral dispersion



- Interplay bulk of height H / surface with gyration radius R .
- Impact on the lateral spreading ?

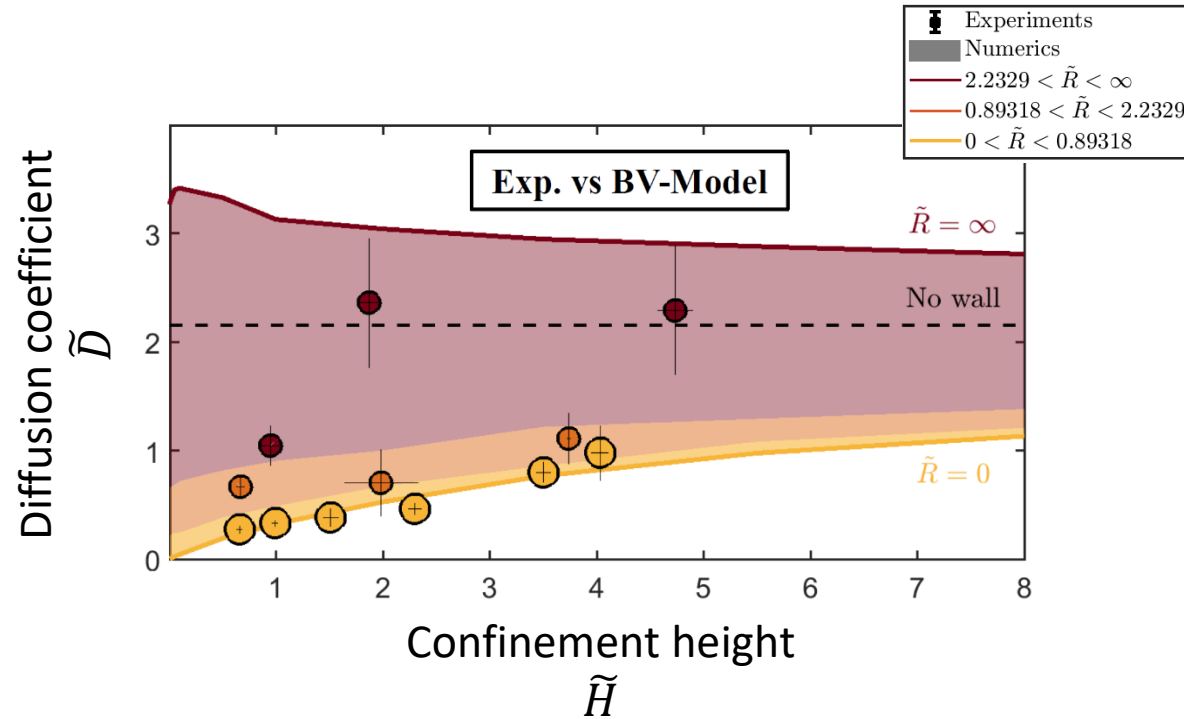
Lateral spreading under confinement

Dimensionless quantities

Confinement height $\tilde{H} = H/(V \tau_r)$

Gyration radius $\tilde{R} = R/(V \tau_r)$

Diffusion coefficient $\tilde{D} = D/(0.5 V^2 \tau_r)$



1. Exploration mainly increases with confinement height \tilde{H} .
2. Exploration increases with gyration radius \tilde{R} .
3. The BV-model predicts quantitatively the experimental outcomes.