Abstract Submitted for the DFD07 Meeting of The American Physical Society

Attraction of swimming microorganisms by solid surfaces ERIC LAUGA, UCSD, ALLISON BERKE, MIT, LINDA TURNER, Rowland Institute, HOWARD BERG, Harvard — Swimming microorganisms such as spermatozoa or bacteria are usually observed to accumulate near surfaces. Here, we report on an experiment aiming at measuring the distribution of smooth-swimming E. coli when moving in a density-matched fluid and between two glass plates. The distribution for the bacteria concentration is found to peak near the glass plates, in agreement with a simple physical model based on the far-field hydrodynamics of swimming cells.

Eric Lauga UC San Diego

Date submitted: 17 Jul 2007

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