Supplementary Material

Super low-dose lipopolysaccharide dysregulates neutrophil migratory decision-making

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Supplementary Figure 1. **Dose-response of dHL-60 cell migration toward fMLP and LTB4 chemoattractants.** Neutrophil (dHL-60 cells) migration counts toward 1, 10, 50, 100nM and 1μM concentrations of **(A)** fMLP and **(B)** LTB4 in the migration channels. n = 1. **(A)** Unstimulated dHL-60 cells preferentially migrate toward 10nM fmLP. **(B)** Unstimulated dHL-60 cells preferentially migrate toward 100nM LTB4.

Supplementary Figure 2. **Effects of high dose and super-low dose LPS on cell viability.** dHL-60 cell viability is increased by 2% when stimulated with super-low dose LPS in comparison to the unstimulated control whereas stimulation with high dose LPS has no impact.

Supplementary Video 1. **Unstimulated dHL-60 cells migrating toward fMLP and LTB4 within the μC3.** dHL-60 cells (blue) preferentially migrating toward fMLP (green) over LTB4 (red) within the μC3. Scale Bar = 500μm.

Supplementary Video 2. **dHL-60 cells stimulated with super-low dose LPS migrating toward fMLP and LTB4 within the μC3.** dHL-60 cells (blue) stimulated with super low-dose LPS [1 ng/mL LPS] preferentially migrating toward LTB4 over fMLP (green) within the μC3. Scale Bar = 500μm.

Supplementary Video 3. **dHL-60 cells stimulated with high dose LPS migrating toward fMLP and LTB4 within the μC3.** dHL-60 cells (blue) stimulated with high-dose LPS [100 ng/mL LPS] preferentially migrating toward fMLP (green) over LTB4 (red) within the μC3. Scale Bar = 500μm.

Supplementary Video 4. **Computational simulation of a dHL-60 cell migrating directionally within the μC3.**

Supplementary Video 5. **Computational simulation of a dHL-60 cell migrating non-directionally within the μC3.**

Supplementary Video 6. **Computational simulation of a dHL-60 cell displaying oscillatory migration within the μC3.**

Supplementary Video 7. **dHL-60 cells stimulated with super-low dose LPS migrating in the absence of chemoattractant within the μC3.** dHL-60 cells (blue) stimulated with super low-dose LPS [1 ng/mL LPS] displaying spontaneous migration in the absence of chemoattractant within the μC3. Scale Bar = 500μm.