

# High resolution microfluidic assay and probabilistic modelling reveal cooperation between T cells in tumour killing

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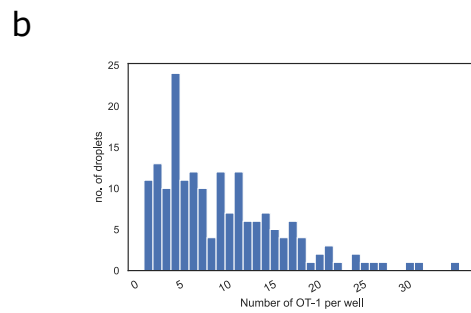
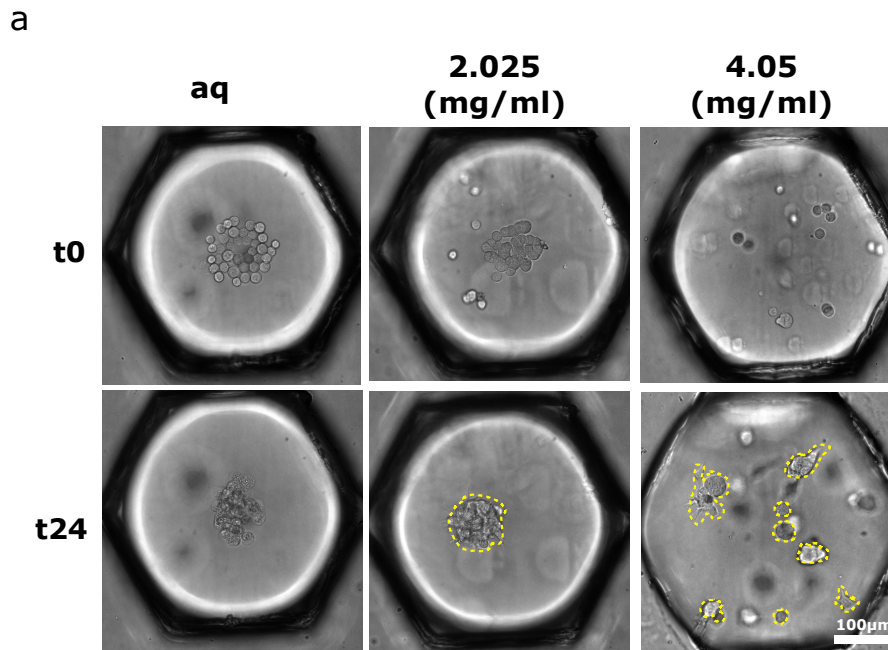
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\* Equal contributions

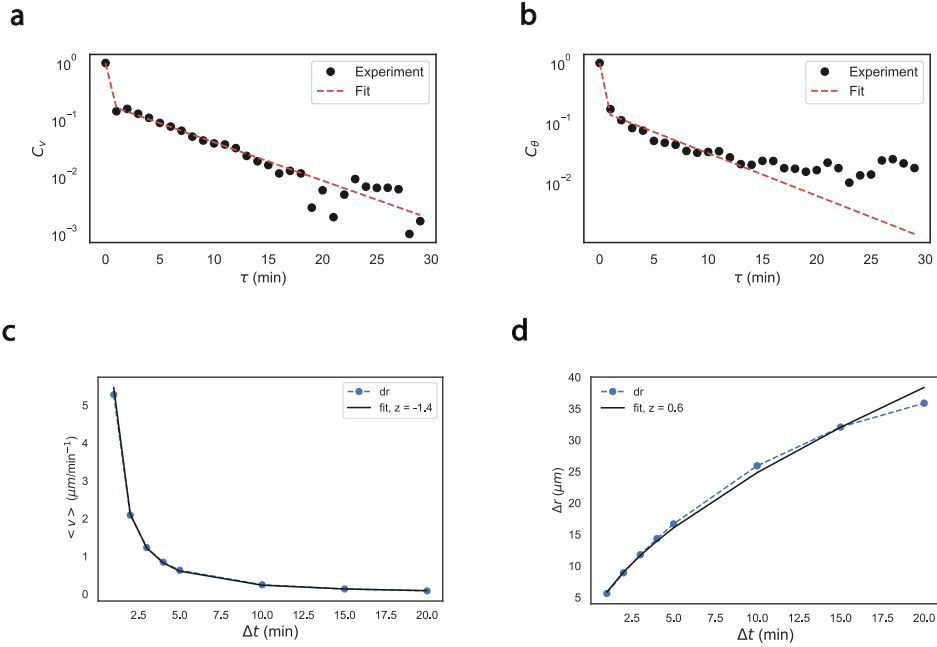
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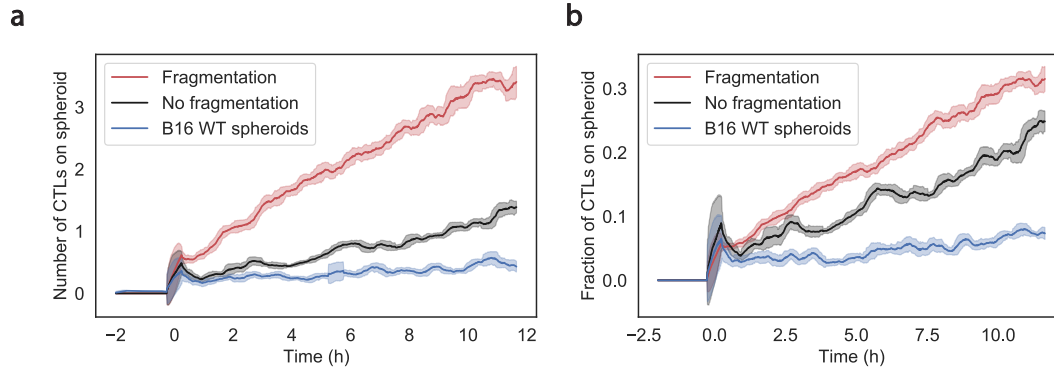
# I. SUPPLEMENTARY FIGURES



**Supplementary Fig. 1. a** Representative spheroids for different Matrigel concentrations at  $t_0$  and  $t_0 + 24h$  **b** Distribution of the number of CTLs per droplet ( $n = 151$ )

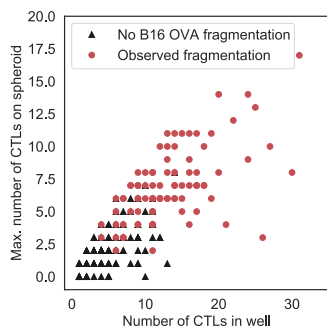


**Supplementary Fig. 2.** Velocity (a) and velocity-vector orientation (b) auto-correlation as a function of time. The experimental data (black dots) is fitted by a sum of two exponentials (dashed red line) in both cases. c Measured velocity as a function of the time-interval between two successive position measurements. The velocity scales as a power law. d Measured traveled distance as a function of the time-interval between two successive position measurements.



**Supplementary Fig. 3.** **a** Number of CTLs on the spheroid as a function of time for fragmenting spheroids (red), non-fragmenting spheroids (black) and with WT CTLs as a control (blue) **b** Fraction of CTLs on the spheroid as a function of time for fragmenting spheroids (red), non-fragmenting spheroids (black) and with WT CTLs as a control (blue)





**Supplementary Fig. 4.** Spheroid fate as a function of the number of CTLs per droplet and the maximum number of detected CTLs on the spheroid.