

Electronic Supplementary Information (ESI) for Analyst

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## Electronic Supplementary Information

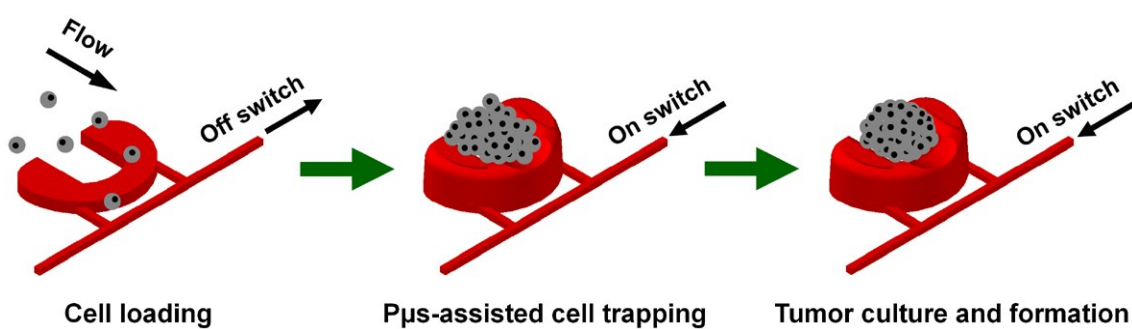
# An integrated microfluidic 3D tumor system for parallel and throughput chemotherapy evaluation

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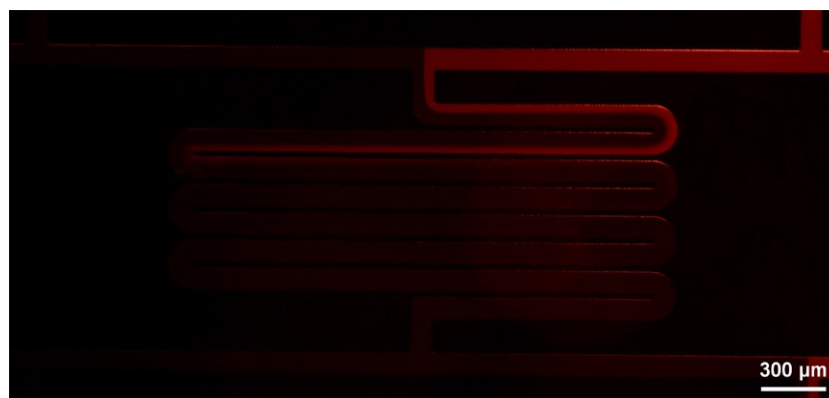
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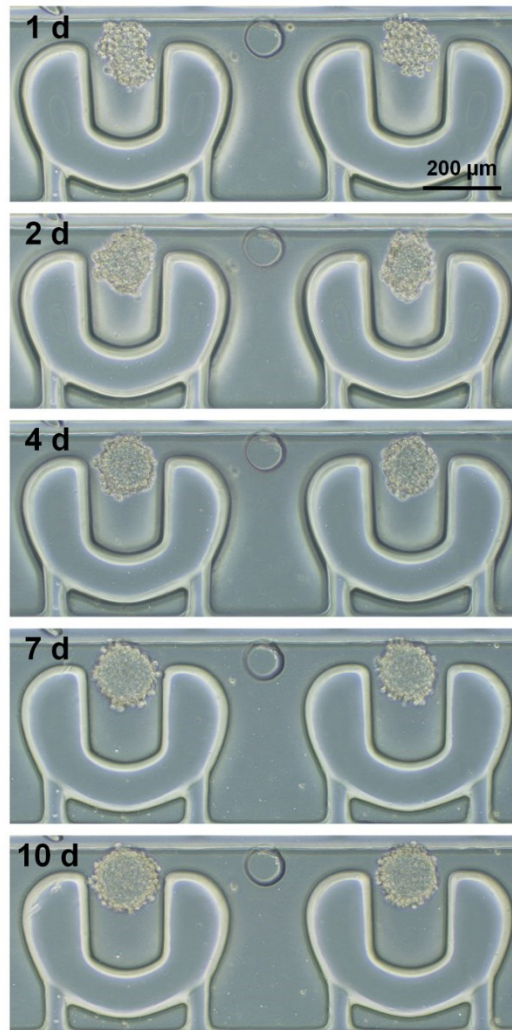
**Abstract.** This supplementary information provides all the additional information as mentioned in the text.



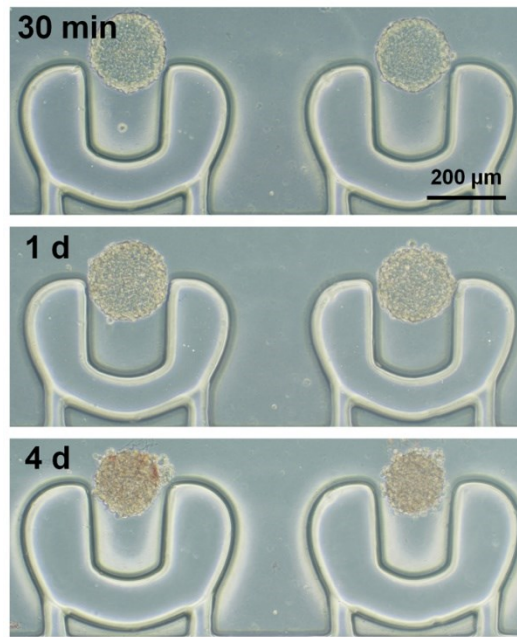
**Fig. S1** On/off switch of P $\mu$ S for cell trapping and localization, as well as 3D tumor culture and formation.



**Fig. S2** Fluorescence image of microfluidic chemical gradient production at a flow rate of 1  $\mu\text{L min}^{-1}$ . A fluorescence dye, i.e., rhodamine B (red) as the model drug was used here for visualization. The sufficient diffusive mixing of two source solutions (i.e., rhodamine B in  $\text{NaHCO}_3$  buffer and fresh  $\text{NaHCO}_3$  buffer) in a laminar flow condition was confirmed.



**Fig. S3** Optical images of U251 tumors at different times of cultivation in the microfluidic device.



**Fig. S4** Optical images of U251 tumors treated with VNR at the concentration of  $20 \mu\text{g mL}^{-1}$  in the microfluidic device.