Electronic Supplementary Material (ESI) for Lab on a Chip.

Compressive molding of engineered tissues via thermoresponsive hydrogel devices

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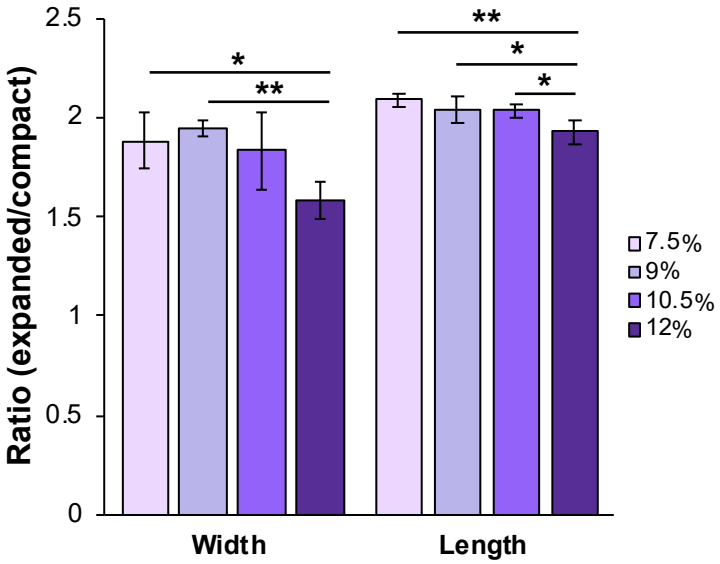
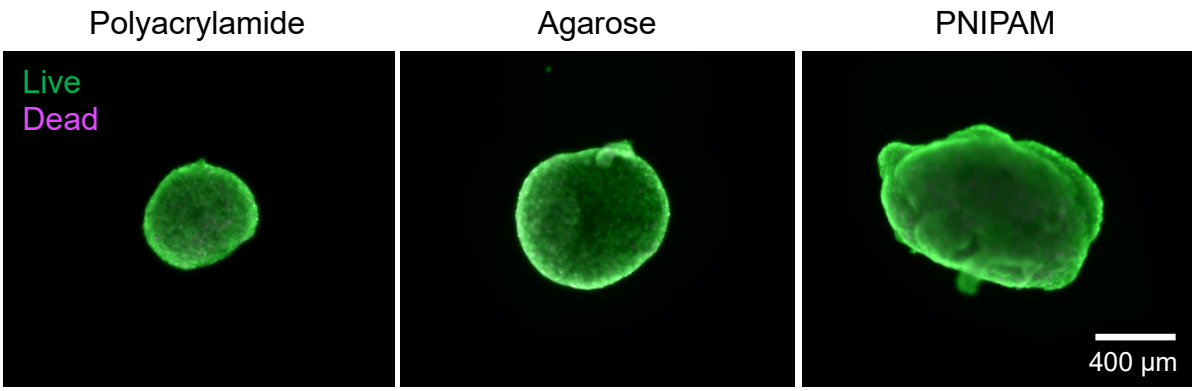
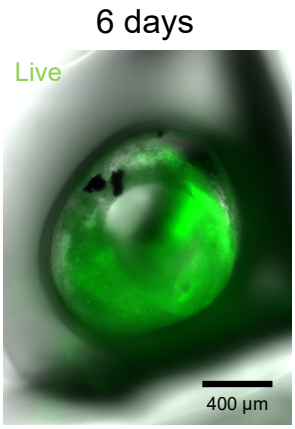
Supplementary Information



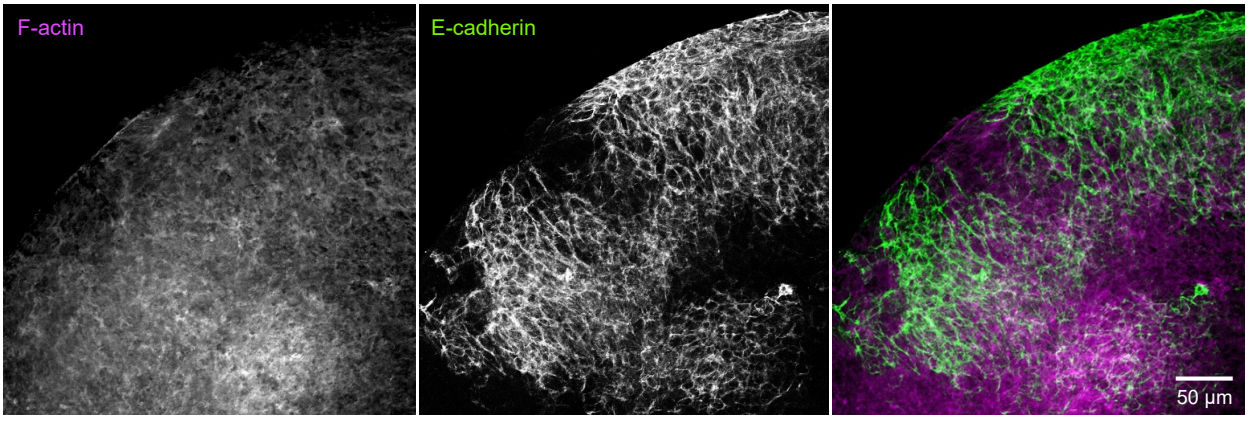
Supplementary Figure 1. Compaction ratios of varied PNIPAM formulations. CHyMs with rectangular cavities were fabricated with varying amounts of PNIPAM, from 7.5-12% in the final gel mixture. Degree of contraction was significantly different for varied formulations, but relatively robust across multiple formulations, with only the highest concentration of PNIPAM compacting slightly less (data presented as mean ± standard deviation; n = 4; *$p < 0.05$, **$p < 0.01$ by one-way ANOVA with Tukey post hoc comparisons).



Supplementary Figure 2. Viability of spheroids grown in various hydrogel microwells. T47D spheroids were formed and cultured in hydrogel microwells for 3 days before live/dead staining. Spheroids were then removed from microwells for imaging.



Supplementary Figure 3. Brain organoid viability in long-term culture. A brain organoid grown for 6 days a CHyM, with live staining on the final day of culture. (Compacted PNIPAM presents some light-scattering difficulties.)



Supplementary Figure 4. Early-stage brain organoids express E-cadherin before compression in CHyMs. 10-day old brain organoid stained for E-cadherin and filamentous actin (F-actin), shown at the organoid periphery.