

## Supporting Information

### A Tumor-on-a-Chip System with Bioprinted Blood and Lymphatic Vessel Pair

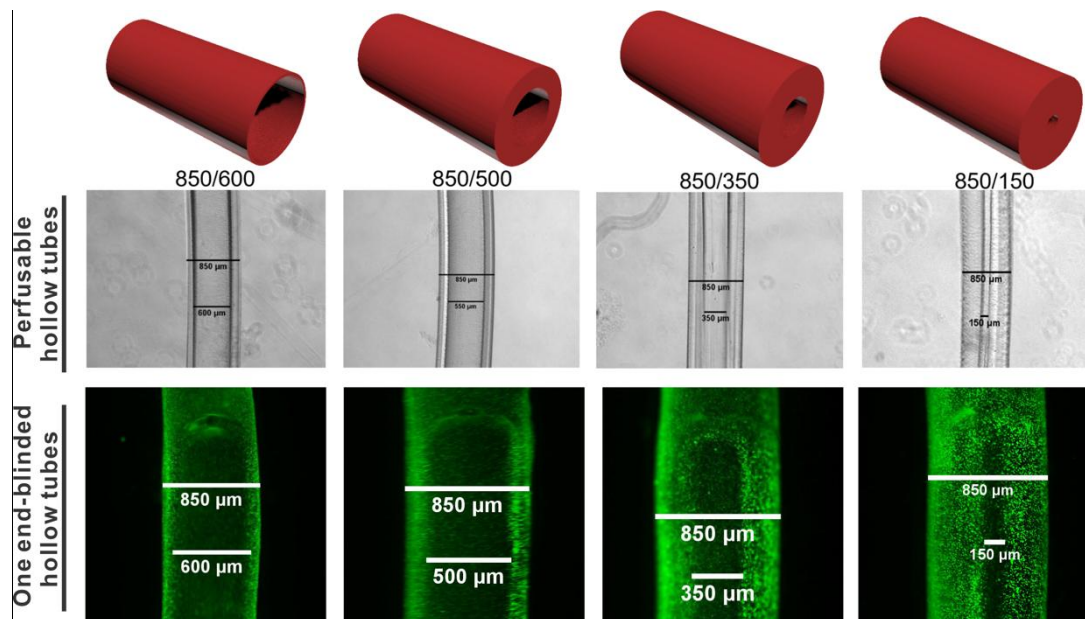
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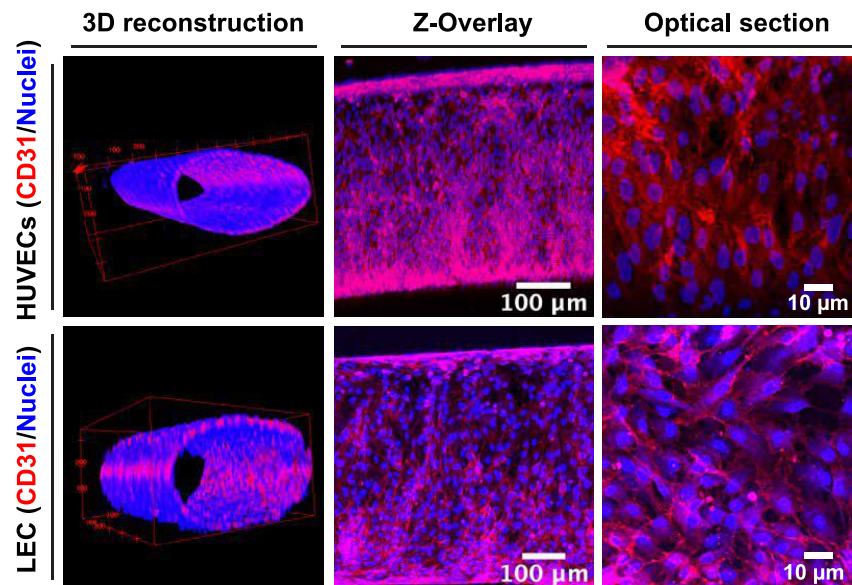
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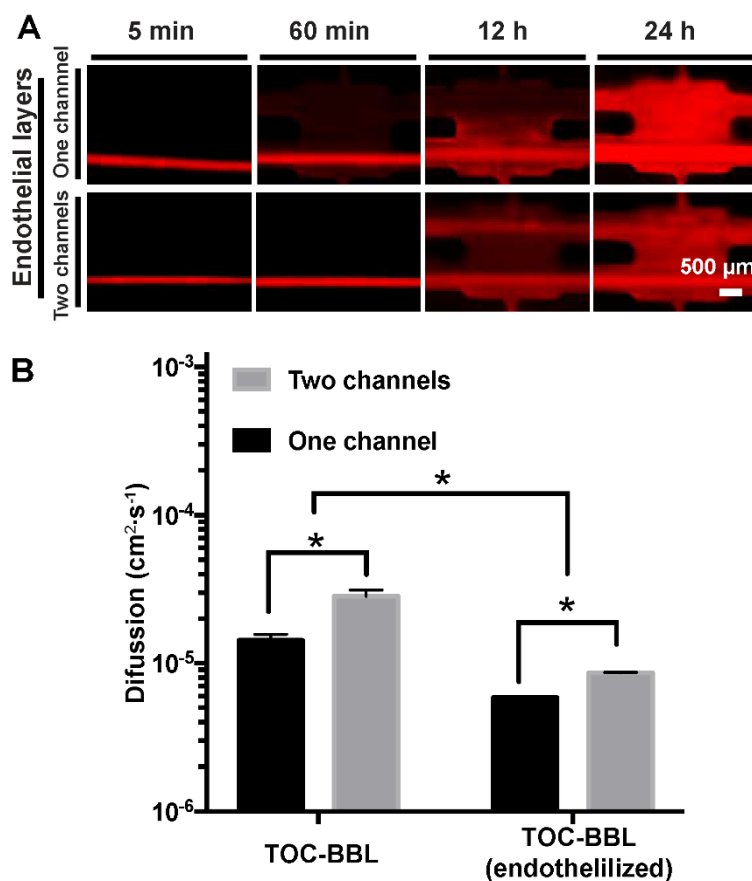
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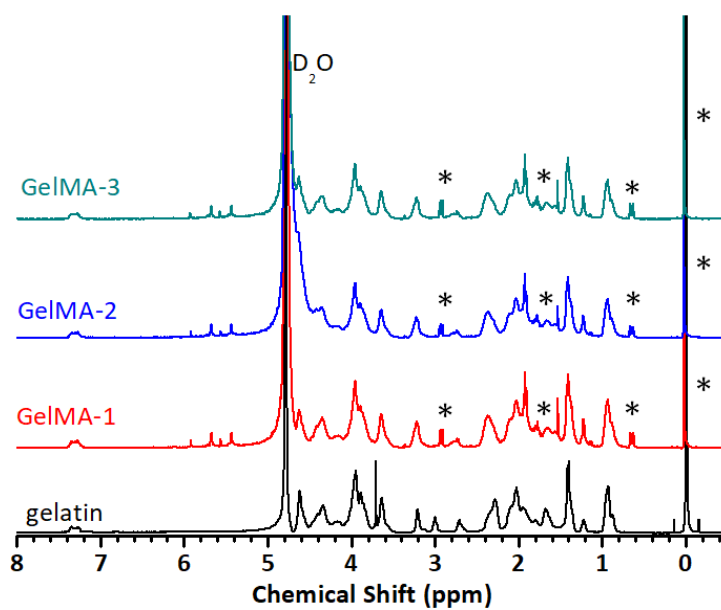
**Figure S1.** The different wall thicknesses in the bioprinted perfusable hollow tubes and one end-blinded hollow tubes.



**Figure S2.** Endothelialization of the bioprinted blood and lymphatic vessels after 4 days of culture.



**Figure S3.** Drug transport in the endothelial layers. A) FITC with different molecular weights were examined for their diffusion profiles in the TOC-BBL under the two-channel configuration. B) The diffusions of DOX was examined in one-/two-channel configurations in the HUVECs/LEC seeded tubes formed chips. C) The comparisons of diffusion constants of DOX measured in the TOC-BBL and endothelial layers. \*  $P < 0.01$ .



**Figure S4.**  $^1\text{H}$  NMR spectra of gelatin and GelMA samples. GelMA-1, GelMA-2, and GelMA-3 were three parallel samples.