

Supplementary Materials

for

‘Design and Implementation of Anatomically Inspired Mesenteric
and Intestinal Vascular Patterns for Personalized 3D Bioprinting’

by

Rachel Cadle, Dan Rogozea, Leni Moldovan, and Nicanor I.

Moldovan

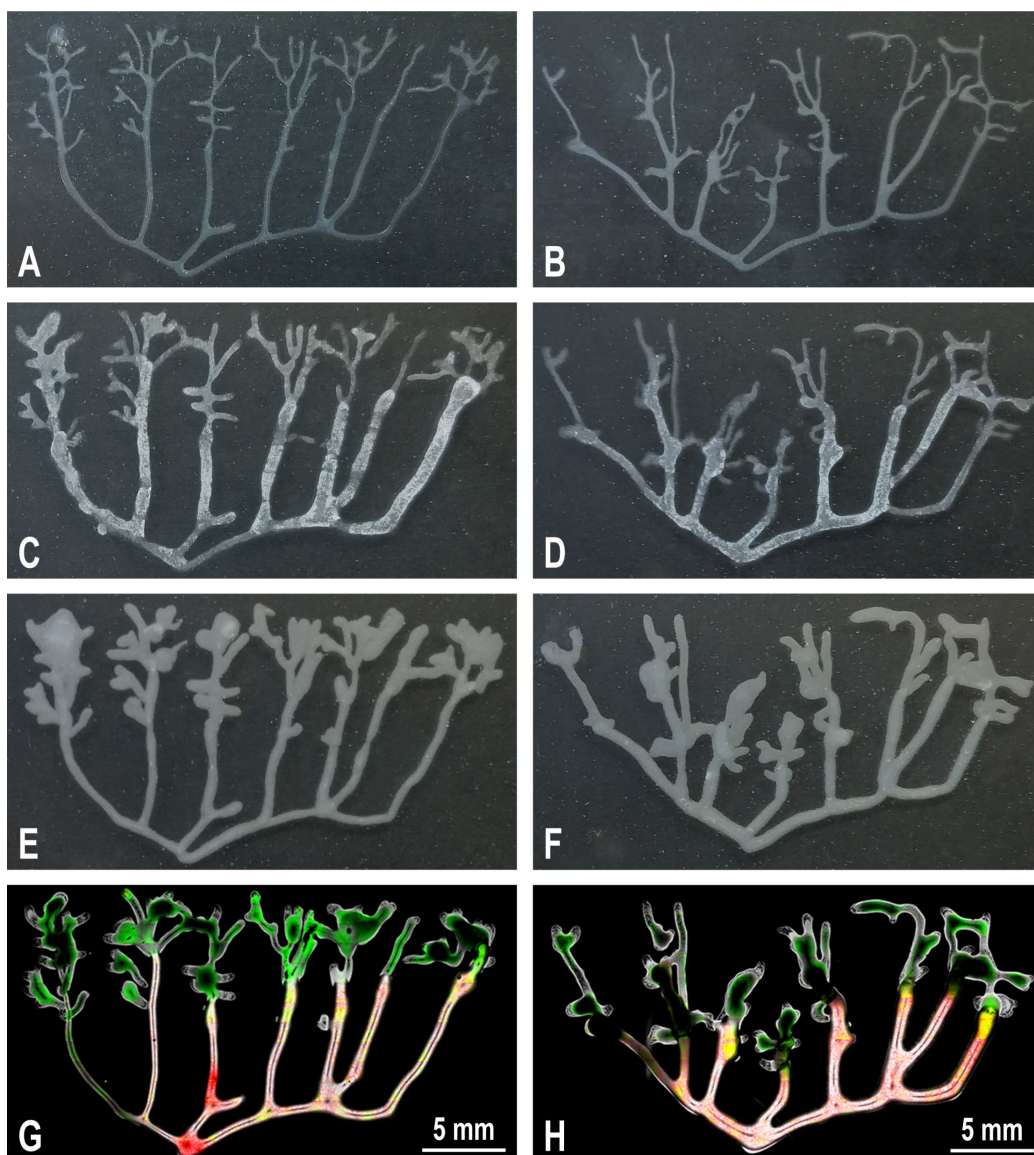


Figure S1. Printing with bioinks of the mesenteric vascular patterns. A-B, printing with acidic collagen hydrogel. **C-D,** printing with neutral collagen hydrogel. **E-F,** printing with alginate-nanocellulose hydrogel. **G-H,** printing with two-colors labeled EC in neutral collagen (1:1 with culture medium).

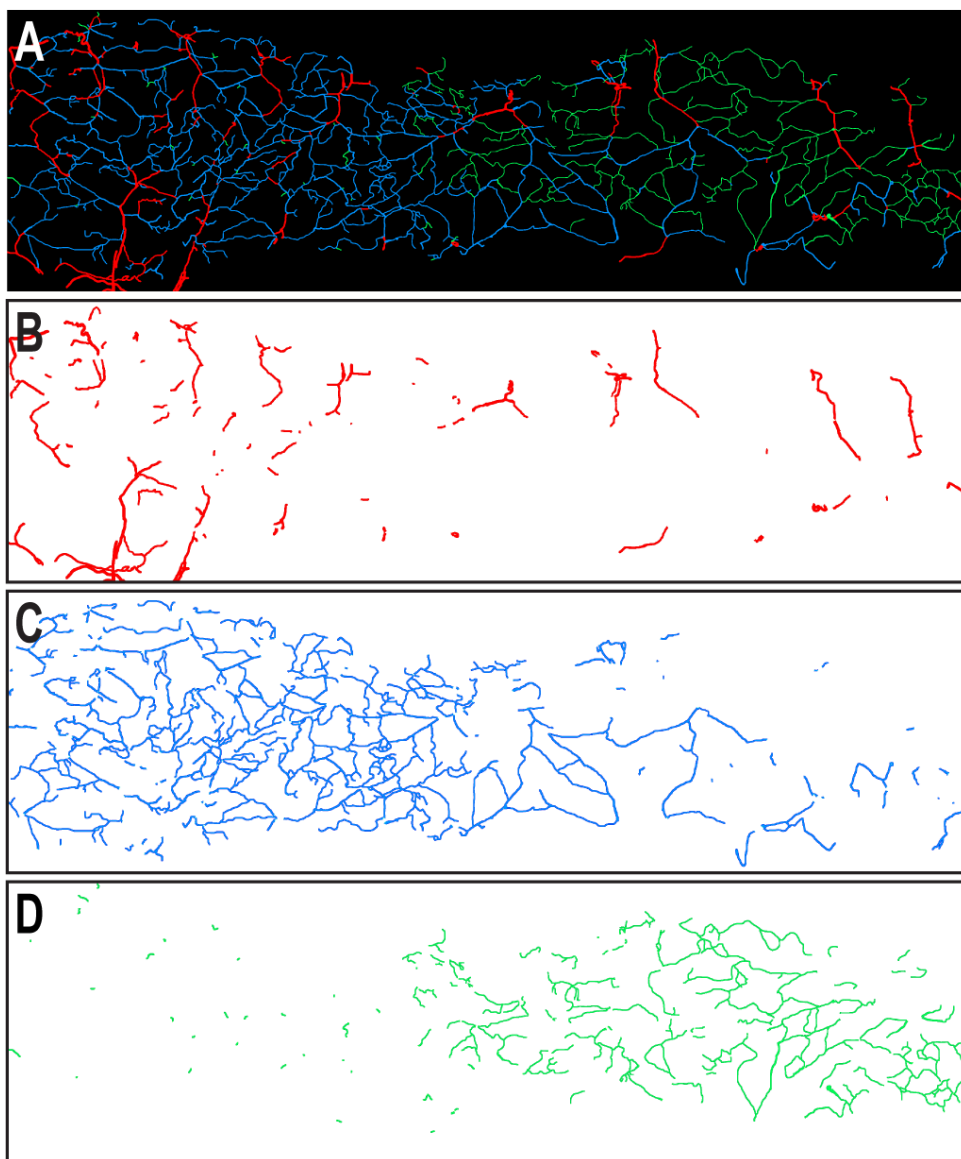


Figure S2. Additional processing of the mouse colon vascular pattern for direct-write printing. **A.** Reduction of generations from six to three by color re-assignment using VESGEN 2D. **B-D.** Separation of generations in separate files for .stl conversion. Note the gradient of branches distributions, from larger to the left to smaller ones to the right.

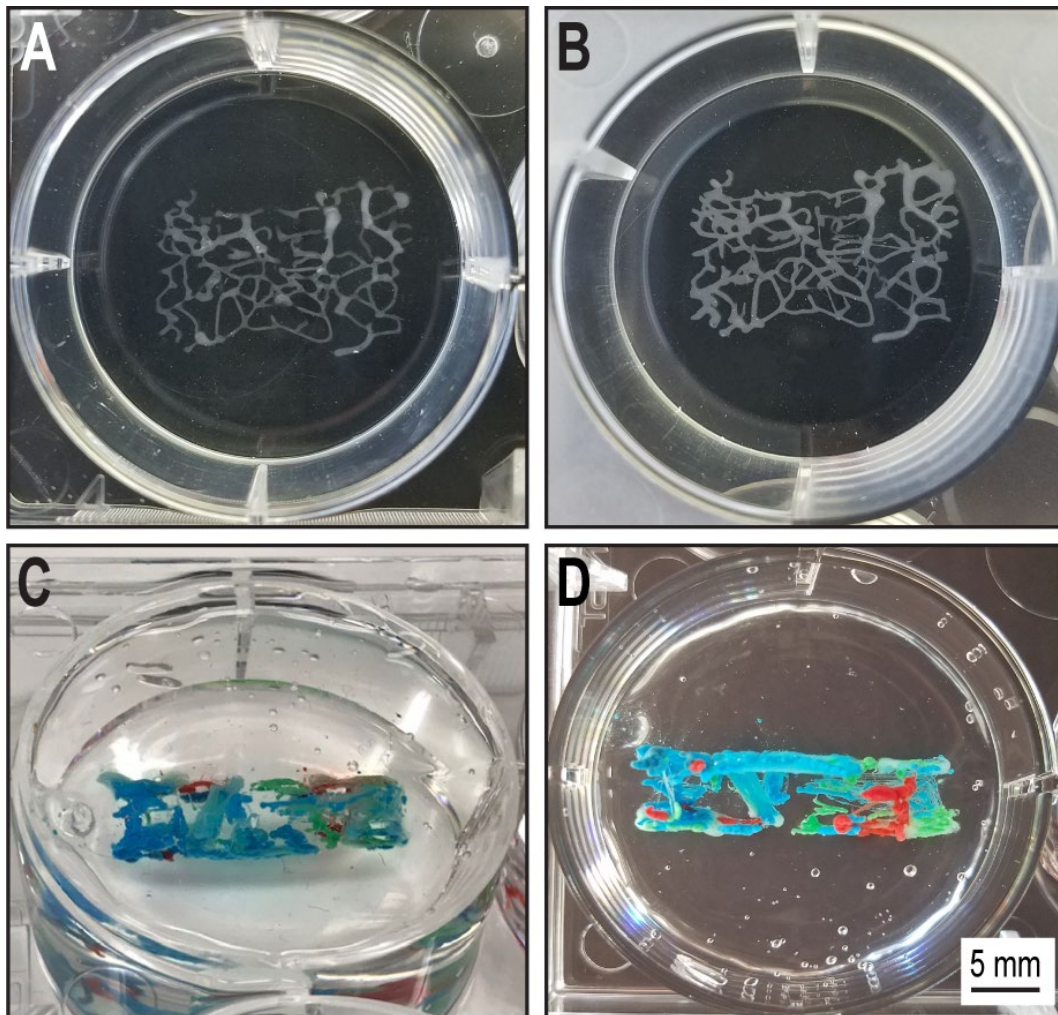


Figure S3. 3D Printing of the colonic vascular patterns with hydrogels. A-B. Surface printing with a neutral collagen and an alginate-nanocellulose bioink, respectively (for convenience, the branch generations were overlapped). C-D. Printing the cylindrical pattern from **Figure 7** in supporting hydrogel with the colored surrogate bioink, and imaged from top and the bottom, respectively. The wells are standard 6-well culture plate.