ADVANCED HEALTHCARE MATERIALS

Supporting Information

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Elongation of Fibers from Highly Viscous Dextran Solutions Enables Fabrication of Rapidly Dissolving Drug Carrying Fabrics

*John P. Frampton, David Lai, Maxwell Lounds, Kyeongwoon Chung, Jinsang Kim, John F. Mansfield, and Shuichi Takayama**

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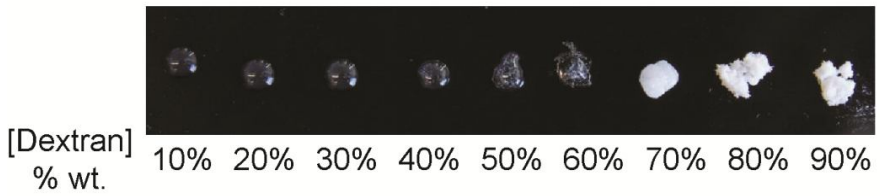

Figure S1. Dextran viscosity increases with increasing concentration. Concentrations of 40-60% wt/wt dextran in water are capable of forming fibers by elongation of the highly viscous dextran solution between two substrates. Concentrations of dextran of approximately 70% or above form solids that cannot be used for fiber elongation.

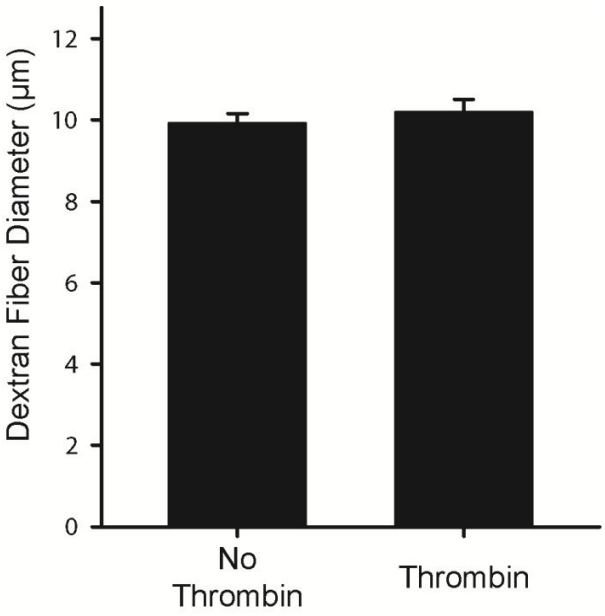

Figure S2. The mean fiber diameter in the dextran fabrics is similar with and without thrombin incorporation, indicating that proteins (and potentially other bioactive agents) can be incorporated without influencing the fabrication process.

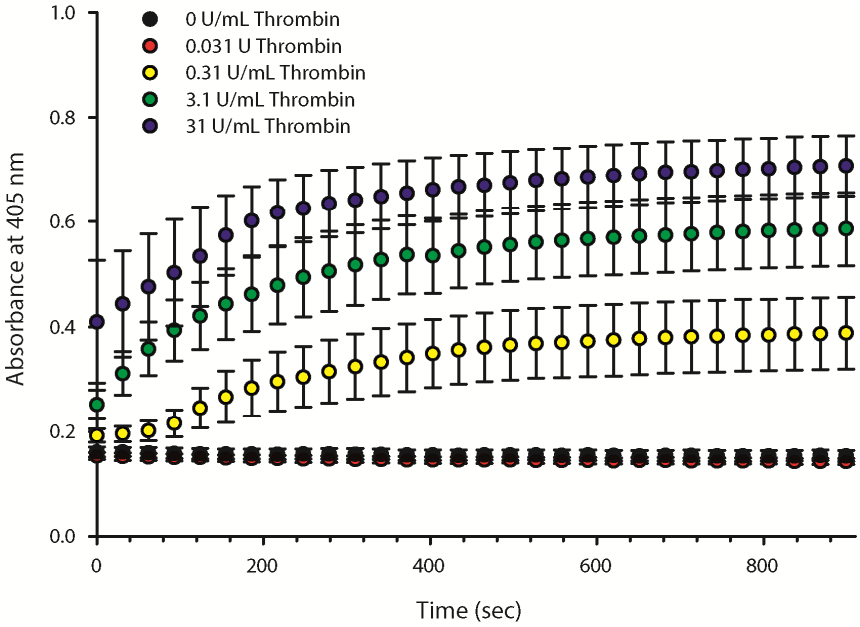

Figure S3. Calibration curves for the plasma coagulation assay. Fibrinogen is converted to insoluble strands of fibrin by thrombin, resulting in an increase in the absorbance at 405 nm over time. The data represent n>3 independent time-sequence assays for the various thrombin concentrations without dextran. A concentration of 31 U/mL was selected for subsequent tests comparing thrombin delivered in dextran fabrics with thrombin delivered in water.