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Supporting Information

Coumarin-grafted blue-emitting fluorescent alginate as a valuable tool for biomedical applications

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Figure S1. ¹H-NMR spectrum of compound AzOH (400 MHz, d₆-DMSO).



Figure S2. ¹H-NMR spectrum of compound AlgPa010 (400 MHz, D₂O).



Figure S3. ¹H-NMR spectrum of compound AlgPa025 (400 MHz, D₂O).



Fig S4. ¹H-NMR spectrum of compound AlgPa050 (400 MHz, D₂O).



Figure S5. Frequency-sweep amplitude tests of unmodified alginate (A), 1 wt% AlgFL005 (B), 1 wt% AlgFL010 (C) and 2wt% **AlgFL010** (D) hydrogel discs. G' (\bullet) and G'' (\blacktriangle) are storage and loss moduli, respectively.



Figure S6. Fluorescence of a 0.02 mM AzOH solution in 3:1 H₂O: t-BuOH incubated at 37 °C along 28 days.

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Figure S7. The fluorescence of the AlgFL010 hydrogel spots (blue) allowed to track their position relatively to the pre-spotted FITC-

PLL spots (green), which was crucial in optimising the printing parameters of the 3D microarray