# A robust protocol for decellularized human lung bioink generation amenable to 2D and 3D lung cell culture

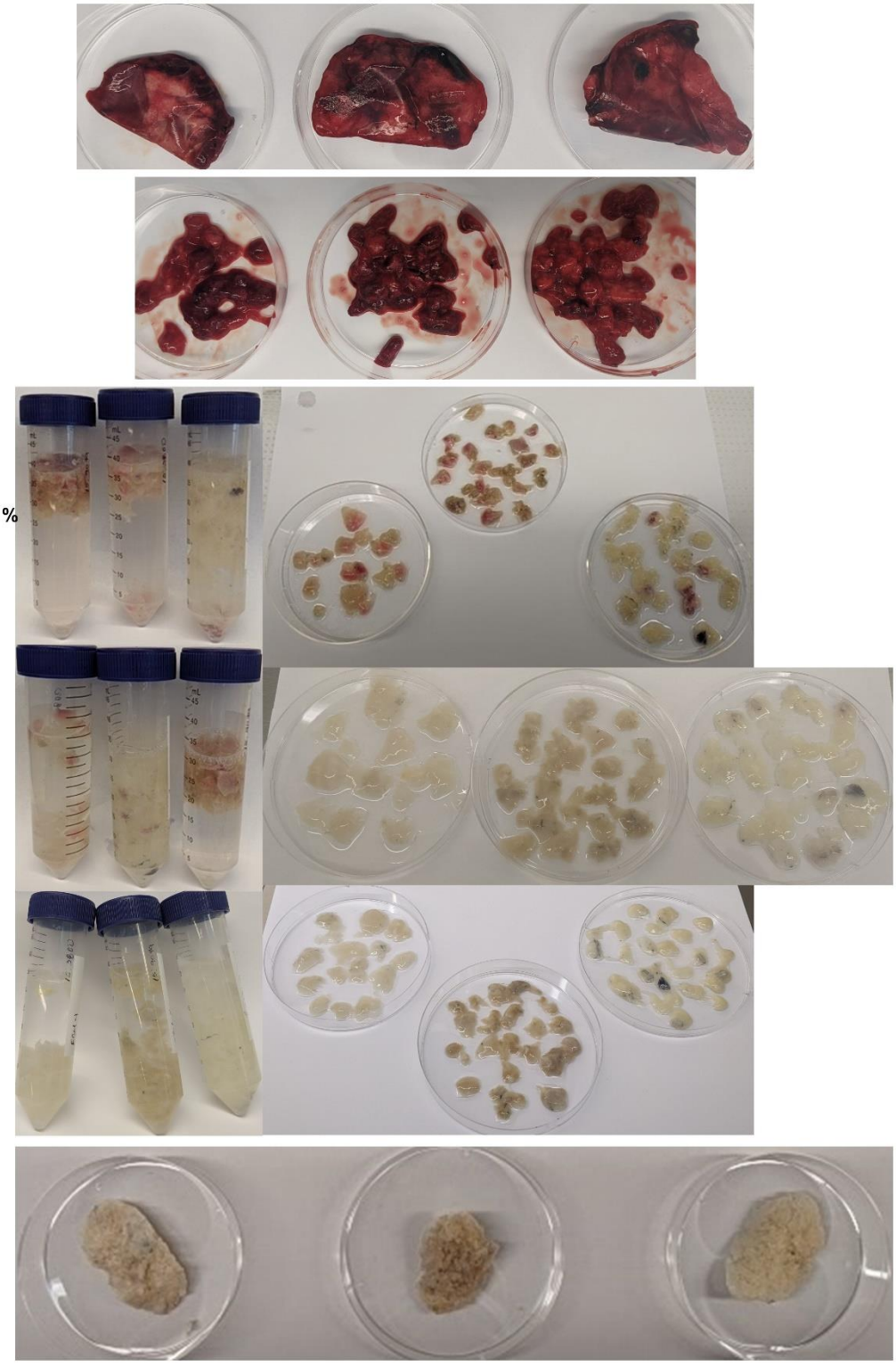


*Figure S1: macroscopic images from various decellularization process steps*

| | Slope | $t_{1/2}$ | $t_{95\%}$ | $t_{lag}$ |
|---|---|---|---|---|
| 10.0 mg/mL vs. 12.5 mg/mL | ns | ns | ns | ns |
| 10.0 mg/mL vs. 15.0 mg/mL | ns | ns | ns | ns |
| 10.0 mg/mL vs. 17.5 mg/mL | ns | ns | ns | ns |
| 10.0 mg/mL vs. 20.0 mg/mL | * | ** | **** | ** |
| 12.5 mg/mL vs. 15.0 mg/mL | ns | ns | ns | ns |
| 12.5 mg/mL vs. 17.5 mg/mL | ns | ns | ** | * |
| 12.5 mg/mL vs. 20.0 mg/mL | * | * | **** | ** |
| 15.0 mg/mL vs. 17.5 mg/mL | ns | ns | * | ns |
| 15.0 mg/mL vs. 20.0 mg/mL | ** | ** | **** | ** |
| 17.5 mg/mL vs. 20.0 mg/mL | ns | ns | ** | ns |

*Figure S2: A summary of statistical analysis and p-values for calculated turbidimetric gelation kinetics parameters in Table 1. * $p \leq 0.05$, ** $p \leq 0.01$, and **** $p \leq 0.0001$*

| | G' | G'' |
|---|---|---|
| 10.0 mg/mL vs. 12.5 mg/mL | ns | ns |
| 10.0 mg/mL vs. 15.0 mg/mL | ns | ns |
| 10.0 mg/mL vs. 17.5 mg/mL | * | * |
| 10.0 mg/mL vs. 20.0 mg/mL | ** | ** |
| 12.5 mg/mL vs. 15.0 mg/mL | ns | ns |
| 12.5 mg/mL vs. 17.5 mg/mL | ns | ns |
| 12.5 mg/mL vs. 20.0 mg/mL | * | * |
| 15.0 mg/mL vs. 17.5 mg/mL | ns | ns |
| 15.0 mg/mL vs. 20.0 mg/mL | ns | * |
| 17.5 mg/mL vs. 20.0 mg/mL | ns | ns |

*Figure S3: A summary of statistical analysis and p-values for G' and G'' in Figure 3e. * $p \leq 0.05$ and ** $p \leq 0.01$.*

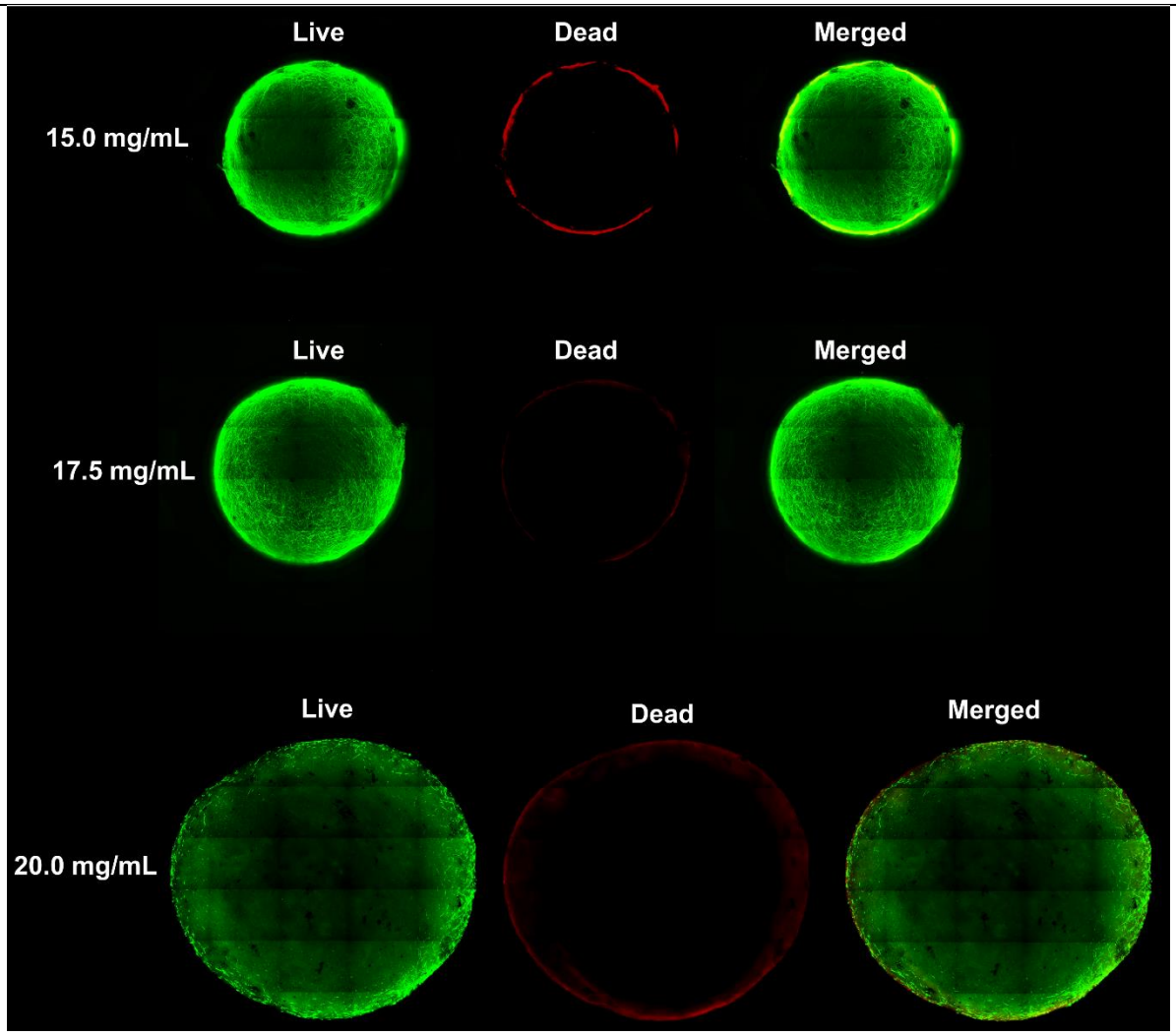


*Figure S4: Viability assays of cells incubated inside dECM hydrogels using the live and dead assay.*

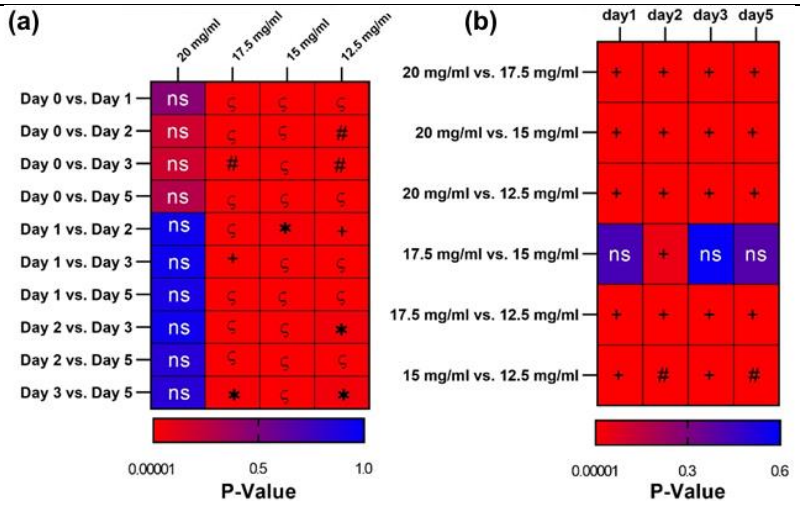


*Figure S5: (a) heat map of the p-values for each hydrogel over five days: this graph shows if the change in the diameter of the hydrogel is significantly changed over time and (b) heat map of the p-values analysis for hydrogels compared to each other over five days of 3D culture. P-Values: ✱ denotes for p values smaller than 0.05, ς denotes for p values smaller than 0.005, # denotes for p values smaller than 0.001, + denotes for p values smaller than 0.0001.*