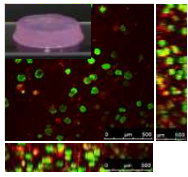
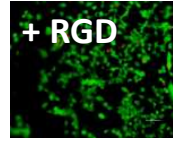
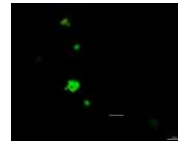
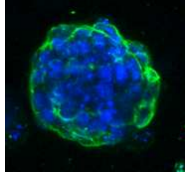


Triggered Differentiation of Stem Cells into Chondrocytes

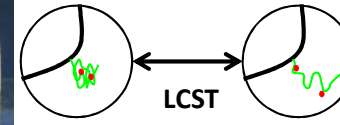
Patrick.King@Manchester.ac.uk (Prof. Aline Miller)



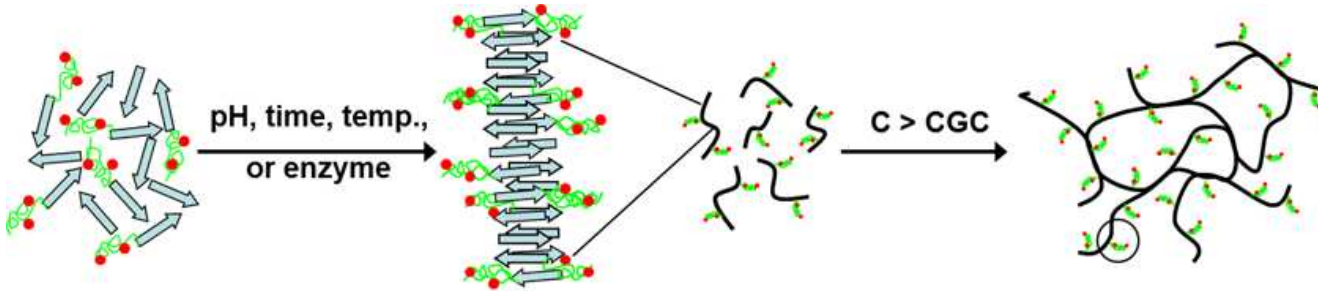
Hydrogels for (stem) cell culture



Functional hydrogels with cell-active FGs



Triggered exposure of cell-active FGs



Triggers:

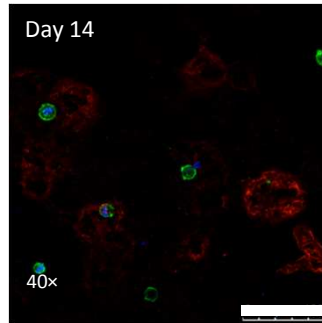
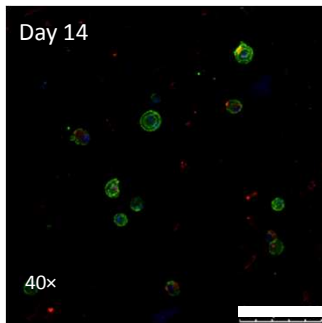
- Thermal
- Light
- Enzyme-cleavable

- ⇒ functionalised peptide
- ↻ responsive polymer
- biologically cell active peptide sequence, drug, etc...

Directed differentiation (Human MSC / Osteogenic)

Non-stimulated

Stimulated



Nuclei / F-actin / Collagen I

Pre-conditioning for differentiation (Rat CPC / Myogenic)

One week culture in hydrogel then cells recovered and differentiated

