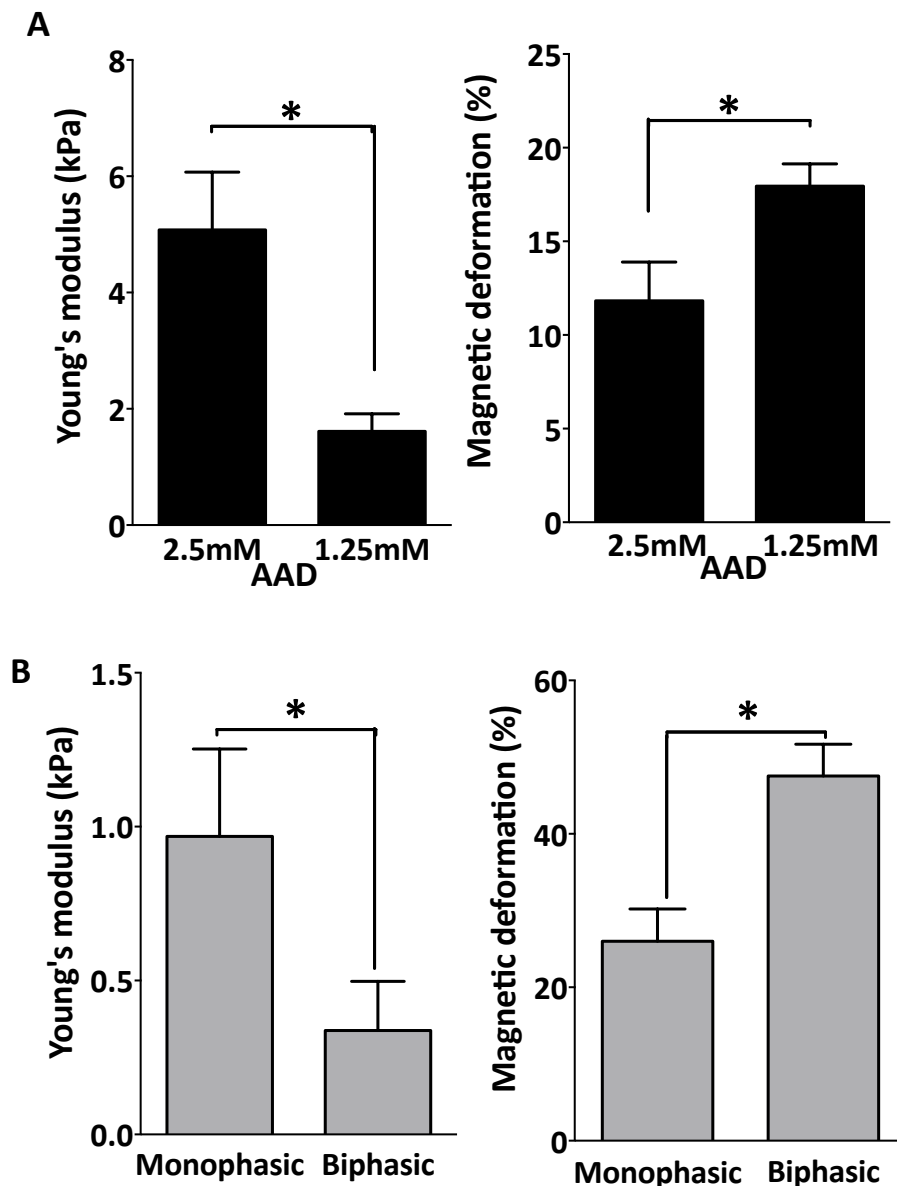


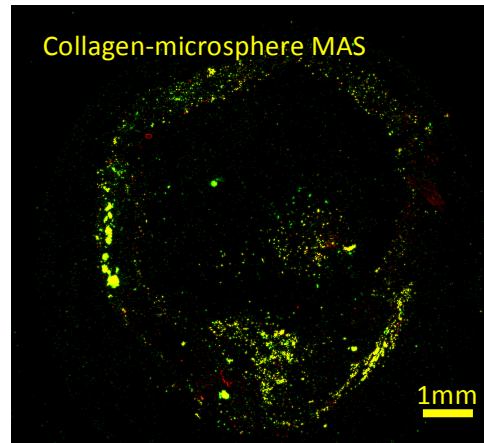
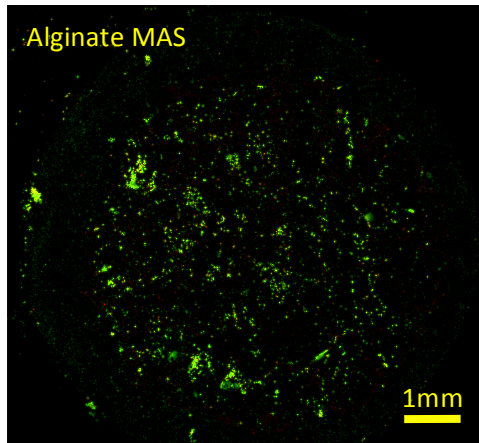
Development of Magnetically Active Scaffolds as Intrinsically-Responsive Bioreactors

Darina A Gilroy^{1,2}, Chris Hobbs^{3,4,5}, Valeria Nicolosi^{3,4,6}, Conor T Buckley^{1,3}, Fergal J O'Brien^{1,2,3}, Cathal J Kearney^{2,3} *

Mechanical Properties of alginate MAS



Supplemental 1. Evaluation of the mechanical properties of the alginate MAS. (A) Effect of reducing AAD concentration from 2.5mM to 1.25mM on Young's modulus (kPa) and magnetically-induced deformation of alginate MAS (0.75 wt% alginate; pre-lyophilisation; -20°C crosslinking) (Mean \pm SD; n = 4; *t*-test, * = $p < 0.05$). (B) Effect of phase change from monophasic to biphasic on Young's modulus (kPa) and magnetically-induced deformation of alginate MAS (0.75 wt% alginate; post-lyophilization; -20°C crosslinking) (Mean \pm SD; n = 4; *t*-test, * = $p < 0.05$).



Supplemental 2. Sample merged images of entire midplane cross section of (magnetically stimulated) alginate and collagen-microsphere MAS stained with live/dead® staining at day 7.