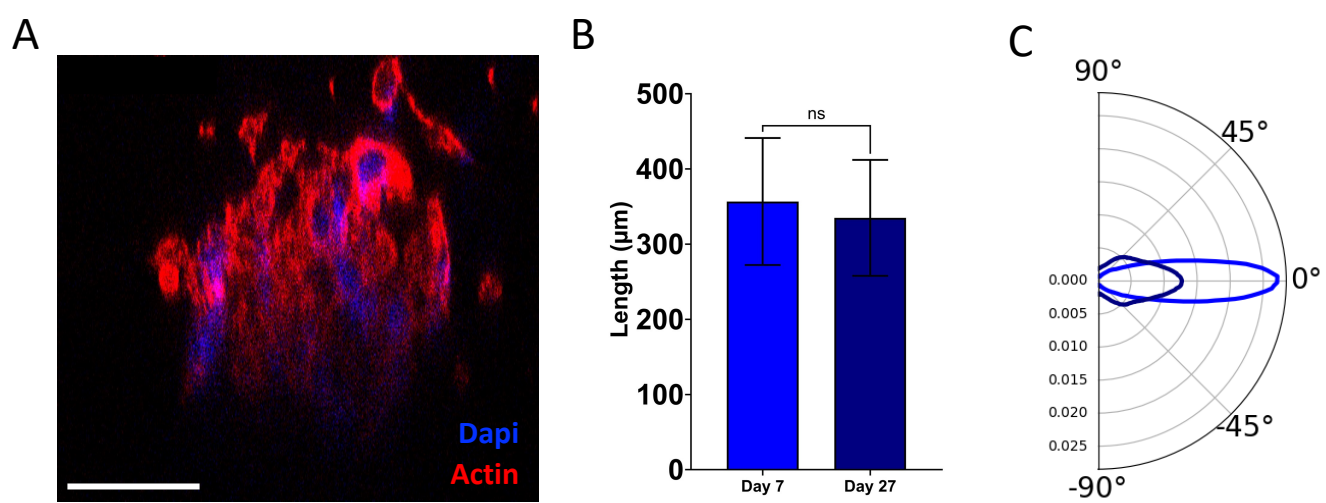
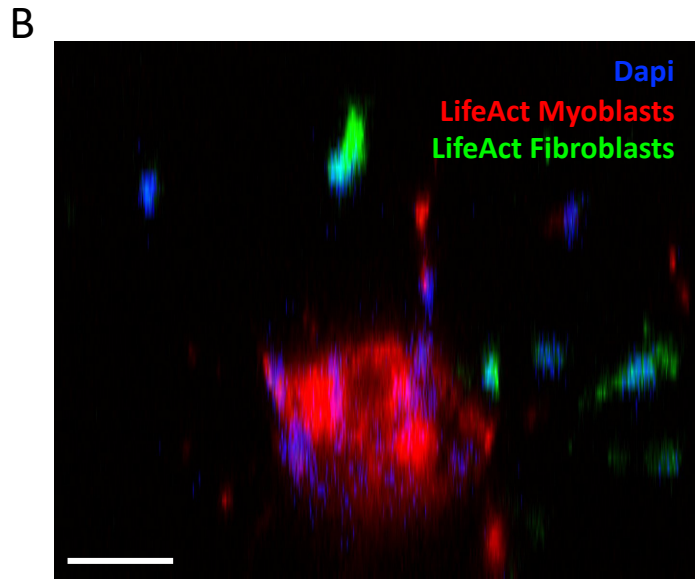
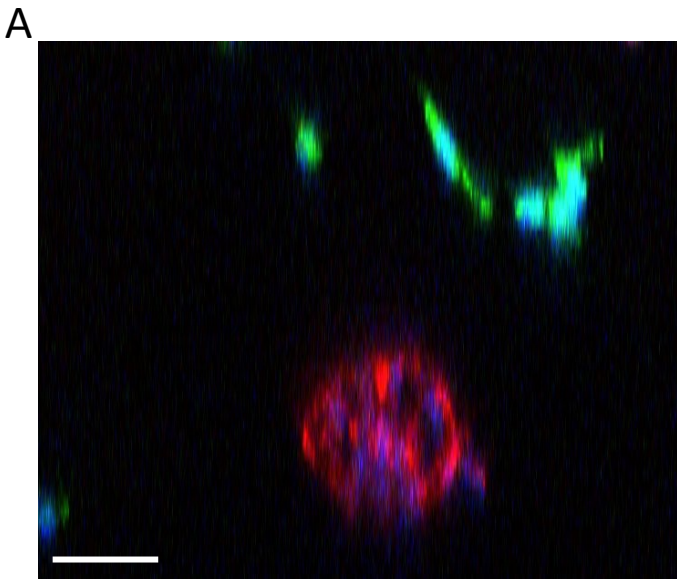


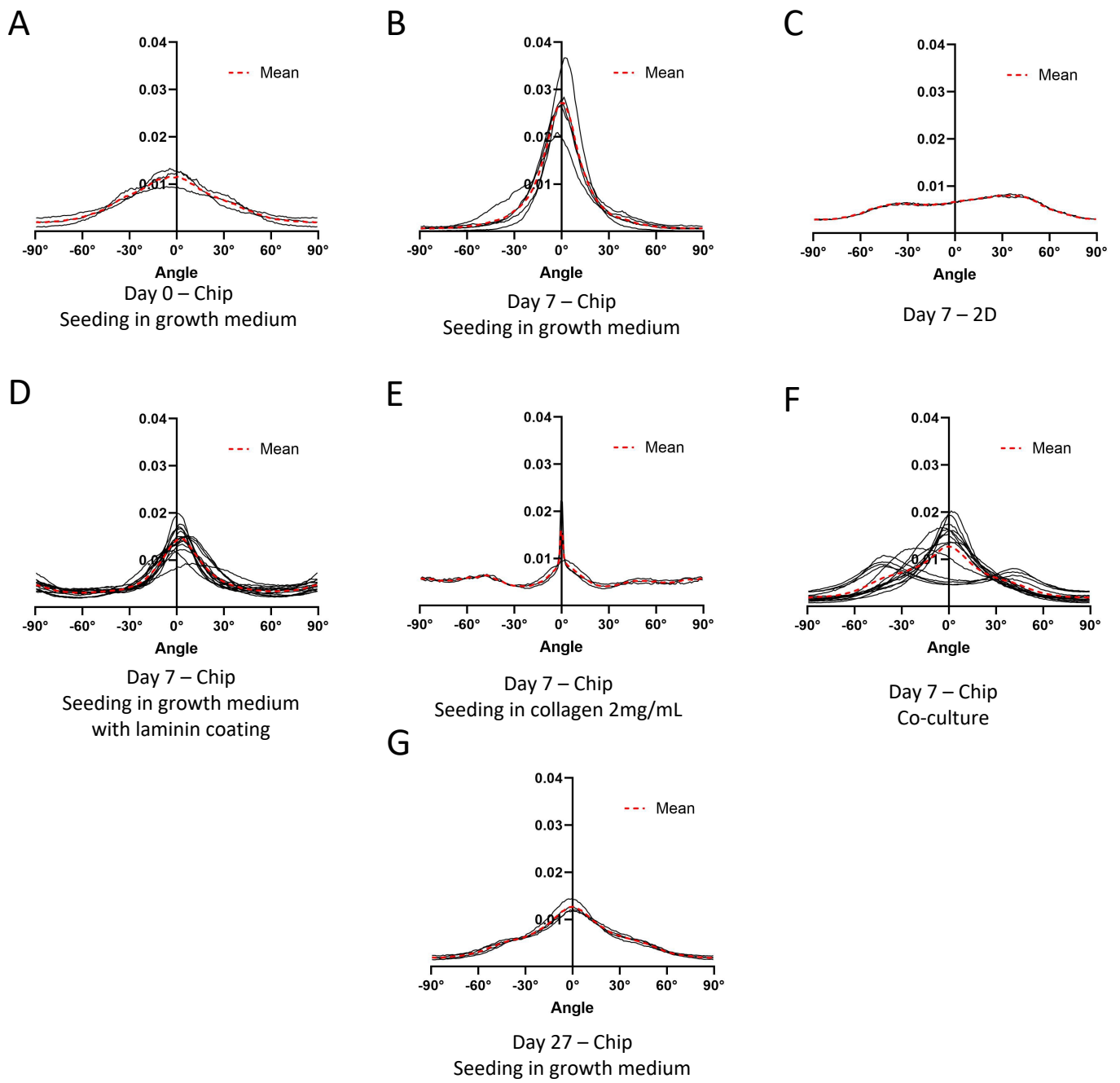
Supplementary Figure 1. Cross-sections of tissues cultured for 3 days in proliferation and 7 days in differentiation medium after being seeded (A) in growth medium, (B) in growth medium with laminin coating and (C) in collagen 2mg/mL (Scale bar= 50 μ m, nuclei in blue and actin in red)



Supplementary Figure 2. (A) Cross-section of a tissue cultured for 3 days in proliferation and 27 days in differentiation (Scale bar= 50μm, nuclei in blue and actin in red), (B) average length of the myotubes and (C) actin orientation distribution at days 7 and 27



Supplementary Figure 3. Cross-sections of tissues co-cultured with fibroblasts for (A) 3 days in proliferation, and (B) 3 days in proliferation and 27 days in differentiation (Scale bar= 50 μ m, nuclei in blue, LifeAct myoblasts in red and Lifeact fibroblasts in green)



Supplementary Figure 4. Raw data plots of the actin orientation distribution and the corresponding mean curve for (A) 3D tissues at day 0 and (B) day 7 of differentiation seeded in growth medium, (C) 2D tissues at day 7, (D) 3D tissues at day 7 seeded in growth medium with laminin coating, (E) 3D tissues at day 7 seeded in collagen 2mg/mL, (F) 3D tissues at day 7 co-cultured with fibroblasts and (G) 3D tissues at 27 day seeded in growth medium