



**INVIVO GEL**  
For Your RESEARCH

# INVIVO GEL For Your RESEARCH

GelMA based versatile bioink platform

## INVIVO Gel Lines

INVIVO GEL

INVIVO GEL Essential

INVIVO GEL VEGF

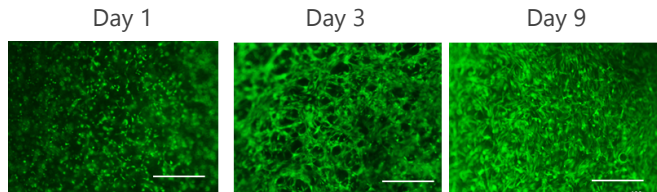
INVIVO GEL BMP-2

INVIVO GEL TGF- $\beta$

## INVIVO GEL

### Cell proliferation assay (Live & Dead assay)

#### ADSC Viability Test



Cell viability: Live/dead staining

Seeding density:  $6 \times 10^5$  cells/ml (ADSC)  
UV exposure time: 45sec  
Scale bar - 500um

INVIVO GEL showed excellent cell viability, promoting long term culture

#### 3D Vascularization Assay

MATERIALS: INVIVO-GEL (GelMA)

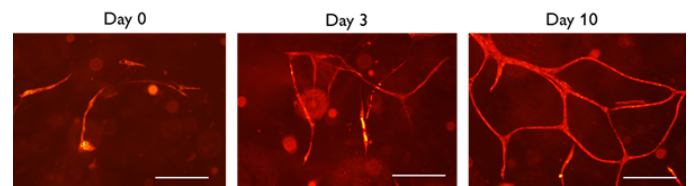
CONDITION

Seeding density:  $5 \times 10^5$  cells/ml (ADSC),  $1 \times 10^5$  cells/ml (RFP-HUVEC)

UV exposure time: 45sec

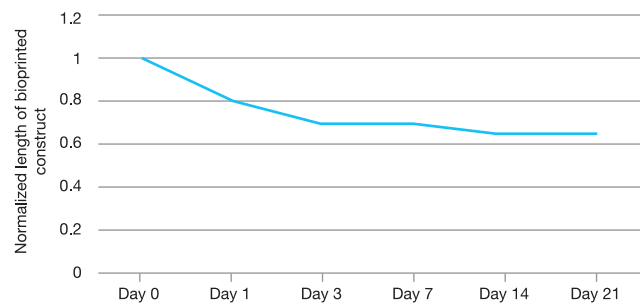
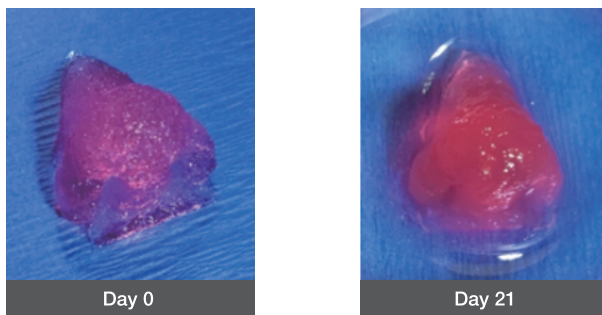
Scale bar - 100um

3D Vascularization test



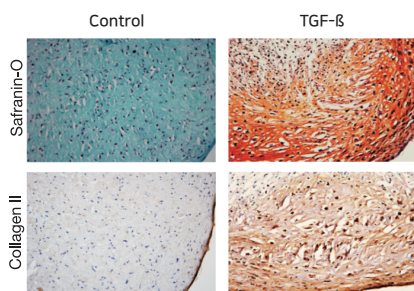
INVIVO GEL supported rapid HUVEC migration and 3D tubular network formation

### Structural stability



Structural stability maintained well after 21 days

## INVIVO GEL w/ GFs

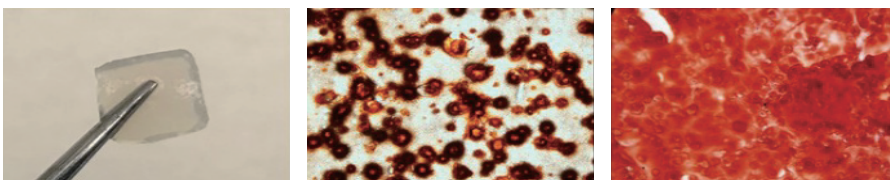


INVIVO GEL functionalized with TGF- $\beta$  shows significantly higher collagen II secretion compared to control

Printed INVIVO Gel containing MSCs

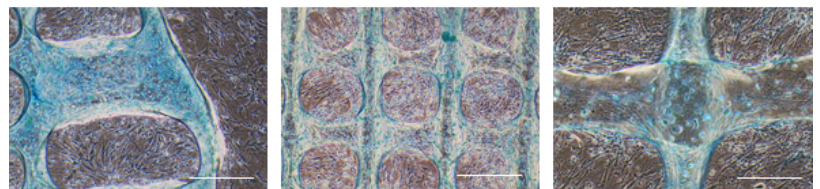
INVIVO Gel

INVIVO Gel BMP-2

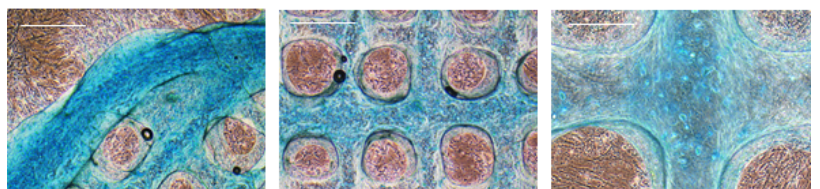


INVIVO GEL functionalized with BMP-2 strongly promotes osteogenic differentiation

Week 1



Week 2.5



Alcian Blue Staining (Proteoglycan) shows time dependent proteoglycan increase only inside the construct, showing excellent GF containment capability

