

Regenerative Medicine, Bioprinting, Wound Healing

Wound Healing

- 3D printed dressings using clinically relevant materials
- Hydrogel bioprinting for burn wound healing

Bone Tissue Engineering

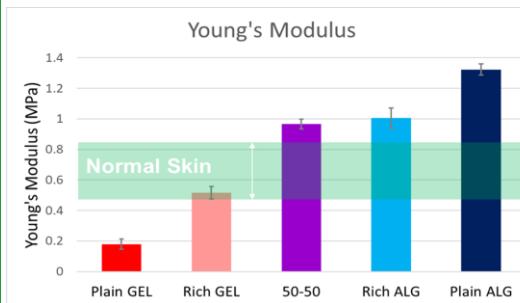
- 4D Printed Scaffolds for Vascularized Bone Regeneration
- Angiogenic pathways in bone regeneration
- Mechanical testing for non-load bearing bones

In Vitro Biological Evaluation

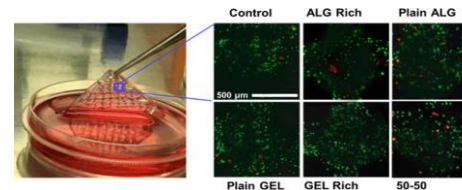
- Various cell viability and toxicity test
- Stem cell isolation
- Differentiation and tissue-specific functionality test

In Vivo Assessment

- Animal surgery with various animal models for wound healing and bone fracture
- Histology analysis and immunohistochemistry



- Non-invasive removal
- Non-adhesive contact
- The dressing remained intact after removal



Live-dead assay of cell-laden dressings

3D Printed Dressings Using Gelatin-Alginate Hydrogels

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Keywords

- Bioprinting, wound healing, burn wound, cranial bone regeneration, 4D printing, hydrogels, biological evaluation

Collaborative Interests

- Tissue engineering, controlled release materials, *in vitro* and *in vivo* biological evaluation