E. Thomas Pashuck, PhD - Cell-Responsive Biomaterials
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What our lab does:
- We develop hydrogels that are designed to better recapitulate human tissues to model and regenerate tissues
- Our hydrogel platform is designed to be adaptable to a range of tissues and therapeutic targets

How we do this:
- We design gels that are responsive to biomolecules secreted by cells
- We identify sequences that are specifically cleaved by individual cell types
- We have developed techniques to quantify cell-material interactions to enable improved biomaterials design

Why we are investigating this area:
- The inability to recreate biological tissues in the lab is a huge impediment to model diseases in the lab
- Cell-responsive biomaterials are promising injectable biomaterials for treating traumatic injury.

www.pashucklab.com/publications

Biomaterials for in vitro models and in vivo therapies
- Controlled cell-material interactions
- Cell-specific biomaterials
- Multiple cell types to mimic tissues

Cell-responsive biomaterials

Hydrogels for regenerative medicine

Quantifying cell-material interactions

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