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GenAssist

Assisted Muscle Regeneration

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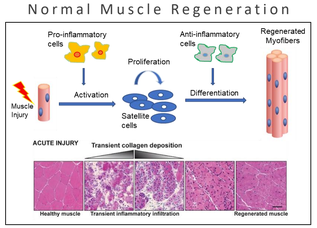
Volumetric Muscle Loss (VML)

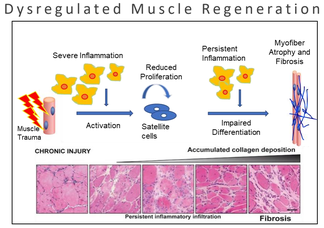
- Resulted in >75% of all medical evacuations from Operation Iraqi Freedom & Operation Enduring Freedom
- Causes 50% - 70% of total military injuries
- Leads to ~80% of delayed amputations

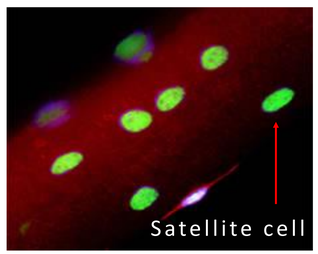
How trauma impairs regeneration

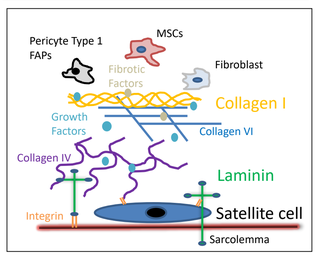
Normal Muscle Regeneration



Dysregulated Muscle Regeneration





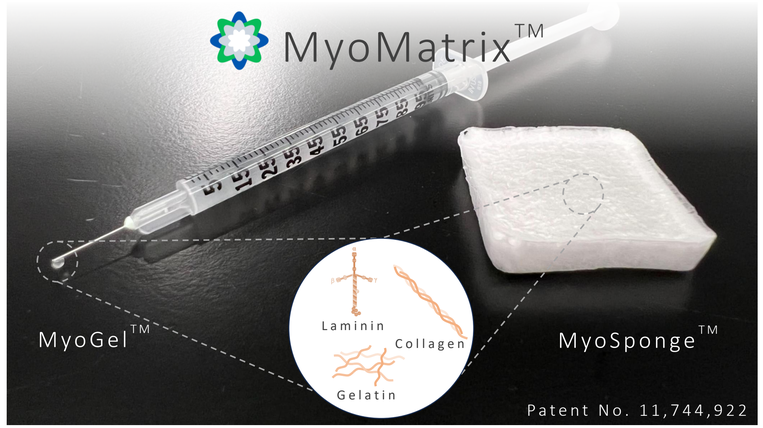


Others can't regenerate muscle

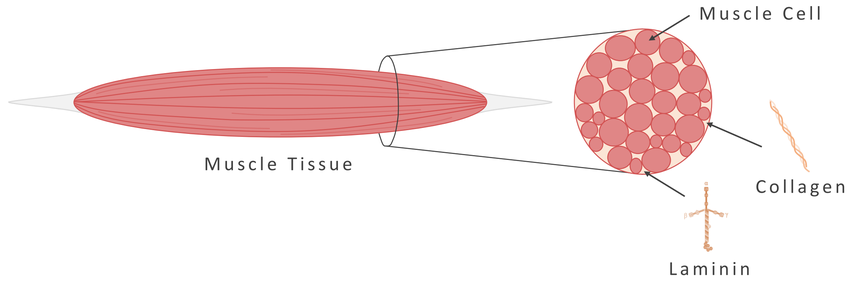
Urinary Bladder Matrix

Small Intestine Submucosa

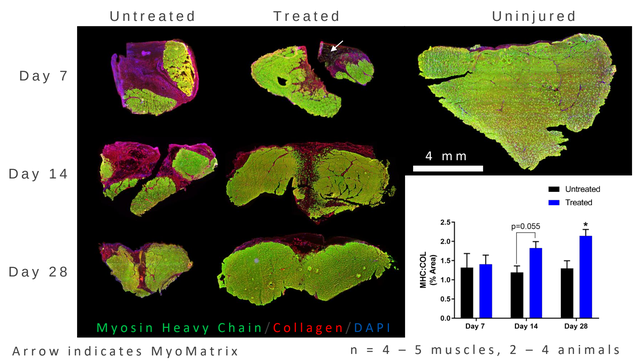
- Designed for different application
- Nonspecific collection of proteins in uncontrolled proportions
- Failed clinically to regenerate muscle



MyoMatrix™ recreates the natural protein structure that supports muscle cells



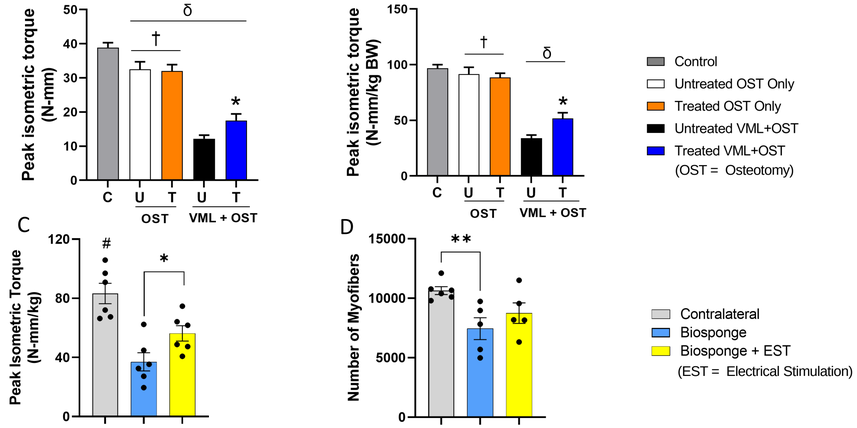
MyoMatrix™ restores muscle architecture



Arrow indicates MyoMatrix

n = 4 – 5 muscles, 2 – 4 animals

MyoMatrix™ recovers muscle function



A track record of progress and success

Funding

- NSF Phase I SBIR
- $440,000 grants
- $65,000 investment

Validation

- 6 publications
- 200 customer interviews

Intellectual Property

- 1 granted patent
- 1 pending patent

Muscle regeneration experts

Joe Beggs
CEO, Founder

Koyal Garg, PhD
CSO, Founder

Gabe Haas, MA
CTO, Founder

Chris McAndrew, MD, MSc
Orthopedic Trauma Surgeon

Sam Beran, MD, MBA
Cosmetic Plastic Surgeon

Kenneth Bertram, MD, Ph.D
COO, WFIRM

Matthew MacEwan, Ph.D
Cofounder and CSO, Acera

Works Cited

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2. Haas, Gabriel, et al. "Biomimetic sponges improve muscle structure and function following volumetric muscle loss." *Journal of Biomedical Materials Research Part A* 109.11 (2021): 2280-2293.
3. Dunn, Andrew, et al. "Biomimetic sponges improve functional muscle recovery following composite trauma." *Journal of Orthopaedic Research®* 40.5 (2022): 1039-1052.
4. West, Charles, et al. "Combined application of biosponges and an antifibrotic agent for the treatment of volumetric muscle loss." *American Journal of Physiology-Cell Physiology* 324.6 (2023): C1341-C1352.
5. Johnson, D., et al. "Treatment of volumetric muscle loss in female rats with biomimetic sponges." *Eur Cell Mater* 46 (2023): 24-39.
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