



# Biomedical Engineering Graduate Program & Research Newsletter

School of Science and Engineering | Saint Louis University

## Promotions and Appointments

Congratulations to **Silviya Zustiak, Ph.D.** was promoted to Full Professor effective July 1<sup>st</sup>!



M. Flanagan, Q. Gan, #S. Sheth, R. Schafer, #S. **Ruesing**, L. E. Winter, K. Toth, \***S. P. Zustiak**, \*A. M. Montaña, “Hydrogel delivery device for the in-vitro and in-vivo sustained release of active rhGALNS enzyme”, *Pharmaceuticals*, 2023, In press (IF: 5.215)

## Publications

Charles West\*, **Connor Tobo\***, Jeffrey Au, **David Johnson**, M. Abdul Mottaleb, Jessica Robinson, Saloni Shringarpure, David W. Griggs, and **Koyal Garg**, \*co-first authors, “Combined application of biosponges and antifibrotic agent for the treatment of volumetric muscle loss”, *American Journal of Physiology*, 2023, 324:6. C1341-C1352.  
<https://journals.physiology.org/doi/full/10.1152/ajpcell.00092.2023>

Ziemkiewicz, N., Au, J., Chauvin, HM., **Garg, K.**, “Electrically stimulated eccentric contraction training enhances muscle mass, function, and size following volumetric muscle loss”, *J Orthop Res.* 2023; 1- 11.  
doi:10.1002/jor.25591

## Grants Awarded

**PI Gary Bledsoe Ph.D.**, was awarded an SSE Seed grant titled “Distal Tibia Fractures Treated with Locked Intramedullary Nailing: Comparison of Reduction with Plating Versus Reduction Without Plating” from SLU School of Science and Engineering for \$15,000.

**PI Koyal Garg, Ph.D.**, received the Institute of Translational Neuroscience (ITN) research award of \$10,000 for the project “Improving Functional Recovery from Traumatic Injuries through Enhanced Myofiber Innervation”.

**PI Silviya Zustiak, Ph.D.** and PI Paul Jelliss, PhD received a \$3,000 FIRE SSE grant (renewal) for their project “Synthesis and optimization of poly-(DMA/SBMA) polymer as a lubricous coating for microgels: towards application in the treatment of knee osteoarthritis.”

## Recent Graduates

Congratulations to **Nicolas Corker**, advisor **Dr. Zustiak**, who successfully defended his master's thesis "Development of Imageable Nanocomposite Hydrogel Microspheres for Multi-Drug Delivery Applications" on Monday June 12<sup>th</sup>.



Congratulations to **Shabnam Nejat**, advisor **Dr. Zustiak**, who successfully defended her master's thesis "Glioblastoma Spheroid Invasion and Motility in Dual-Stiffness Polyethylene Glycol Hydrogels" on Wednesday June 28<sup>th</sup>. She graduated with Distinction!



## Conference Presentations

### NIBIB 2023 Training Grantees Meeting

**Hamidreza Moheimani**, a postdoc in Dr. Zustiak's lab presented a poster titled: "*Autoclaved alginate hydrogels as cell scaffolds of varying viscoelasticity*".