



# Biomedical Engineering Graduate Program & Research Newsletter

School of Science and Engineering | Saint Louis University

## Grants Awarded

Congratulations to **Koyal Garg, Ph.D.**, who was awarded an R15 renewal grant entitled “*Proregenerative Immunotherapies for Volumetric Muscle Loss*” by the National Institute of General Medical Sciences (NIGMS) in the amount of ~\$403,000. **Silviya Zustiak, Ph.D.** and Richard DiPaolo, Ph.D. will serve as co-investigators on this 3-year project that will combine regenerative biomaterials with immunomodulatory factors to boost muscle recovery following traumatic injury.

## Student Proposal Defenses

Congratulations to **Prathamesh Bhagvath, advisor Dr. Andrew Hall**, who successfully passed his oral examination for his Ph.D. degree on the “*Procedure Automation in Image-Guided Robotic Spine Surgery*” and advanced to doctoral candidacy on Friday, August 5<sup>th</sup>.

Congratulations to **Samuel Stealey, advisor Dr. Silviya Zustiak**, who successfully passed his oral examination for his Ph.D. degree on the “*Development of Nanocomposite Hydrogel and Microgel Drug Delivery Devices*” and advanced to doctoral candidacy on Wednesday, September 7<sup>th</sup>.

Congratulations to **Nicholas Corker, advisor Dr. Silviya Zustiak**, who successfully passed his oral examination for his master’s degree on the “*Fabrication and Characterization of Nanocomposite Microgel Drug Delivery Devices*” and advanced to master candidacy on Thursday, September 8<sup>th</sup>.

Congratulations to **Shabnam Nejat, advisor Dr. Silviya Zustiak**, who successfully passed her oral examination for her master’s degree on “*Glioblastoma Spheroid Motility in Dual-Stiffness Hydrogels*” and advanced to master candidacy on Friday, September 16<sup>th</sup>.

## Symposiums and Conference Presentations

Pictured below, **Dr. Silviya Zustiak** with Co-Directors Marvin Meyers, Fran Sverdap, Jaffre Atman, Grame Thomas, and Blythe Janowiak Mulligan, organized the inaugural *Research Symposium for the Institute for Drug and Biotherapeutic Innovation (IDBI)* at Saint Louis University. The symposium was held on Friday, September 23<sup>rd</sup> and provided opportunities for institute trainees to share their research. The symposium featured an invited speaker Shaun

Stauffer, Director of the Center for Therapeutics Discovery at the Cleveland Clinic Lerner Research Institute and was attended by over 100 IDBI members and collaborators!



**PhD student Samuel Stealey, advisor Dr. Silviya Zustiak**, gave an oral presentation titled “*Development of Nanosilicate–Hydrogel Composites for Sustained Delivery of Charged Biopharmaceuticals*” at the Institute for Drug and Biotherapeutic Innovation Symposium on September 23<sup>rd</sup>.



**PhD student David Johnson, advisor Dr. Koyal Garg**, presented his research on “*Regenerative Rehabilitation for Enhancing Muscle Recovery Following Volumetric Muscle Loss*” at the Medical Rehabilitation Research Resource (MR3) Network Retreat regarding Rehabilitation Clinical Trials: Innovations, Designs, and Tribulations on Thursday, September 29 via zoom.

Undergraduate researcher **Ether Dharmesh, advisor Dr. Silviya Zustiak**, presented a poster titled “*Microfluidic Fabrication and Characterization of Radiopaque Barium Sulfate Polyethylene Glycol-Based Hydrogel Microspheres*”, at the Institute for Drug and Biotherapeutic Innovation Symposium on September 23<sup>rd</sup>.

