

SLU BIOMEDICAL ENGINEERING NEWSLETTER



SAINT LOUIS UNIVERSITY

DEPARTMENT OF BIOMEDICAL
ENGINEERING

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SLU ATHLETICS STRAIGHT A BREAKFAST

BME Department Chair, Dr. Gary Bledsoe, and Associate Chair, Dr. Silviya Zustiak, had the honor of attending the SLU Athletics Straight A Breakfast, which recognized student-athletes who earned all "As" in either the Spring 2023 or Fall 2023 semesters. Students were asked to invite a faculty member who has made an impact on their lives during their time at SLU. Congratulations to these hardworking students and the faculty who supported them!



James Baker (EE/Track and Field), Irmak Gokcen (BME/Volleyball), and Abby Kieffer (BME/Track and Field). Not pictured - Max Babich (BME/Baseball) who recognized Dr. Natasha Case.

2024 COMMENCEMENT

SLU School of Science and Engineering students attended the 2024 Pre-commencement Ceremony on May 17, 2024. Congratulations to all our seniors and graduate students for their hard work and accomplishments. BME wishes everyone the best in their future academic and career endeavors!



BME Graduate Students

Top Row: David Johnson, Grace Yost, Connor Tobo, Alli Faber

Bottom Row: Gabbie Coronado, Olivia Widdoes, Parul Nigam, Ahmed Mahmoud



BME Undergraduate Students



Graduates from Dr. Zustiak's Lab

L to R: James Baker, Ether Dharmesh, Silviya Zustiak, Parul Nigam, Eya Ferchichi, Alli Faber



Graduates from Dr. Garg's Lab

L to R: David Johnson, Koyal Garg, Connor Tobo

SLU HONORS PROGRAM BANQUET

BME graduates, Grace Almgren and Ether Dharmesh, completed SLU's honors program and recognized Assistant Professor, Dr. Marta Cooperstein, and Associate BME Chair and Professor, Dr. Silviya Zustiak as having supported them through their time at SLU. They all celebrated at a banquet on May 13, 2024. Congratulations to all!



L to R: Marta Cooperstein, Grace Almgren, Ether Dharmesh, Silviya Zustiak

Congratulations!



L to R: Koyal Garg, Connor Tobo, Jamshid Tadiwala, Avantika Jain, David Johnson



David Johnson, Ph.D. candidate, successfully defended his dissertation titled, "Synergistic Strategies for Enhancing Muscle Recovery: Incorporating Bioscaffolds, Physical Rehabilitation, and Stem Cells" on May 2, 2024.

Connor Tobo, graduate student, successfully defended his master's thesis titled, "Optimizing Localized Delivery of Biological Cargo Via Gelatin Nanoparticles For Tissue Repair" on April 30, 2024.



L to R: Connor Tobo, David Johnson, Koyal Garg, Avantika Jain

NEW APPOINTMENT

Dr. Silviya Zustiak became a Professor, Secondary Appointment in the Department of Biochemistry and Molecular Biology, School of Medicine, SLU.

NEW GRANT

Dr. Zustiak is a co-investigator on a newly awarded \$300,000 grant funded by Mid-America Transplant Society. The interdisciplinary team she is a part of includes faculty from the Department of Chemistry, BME, and the School of Medicine. The primary investigator is Mustafa Nazzal (Abdominal Transplant Center).

The grant titled, "The Use of Nanocomposite Materials Tagged with Deferoxamine to Facilitate Iron Chelation and Mitigation of Ferroptosis and Ischemia Reperfusion Injury of Livers using Novel Nanoparticles" will run from July 2024 through June 2027.



NEW PUBLICATION

Emily Luc (M.S. in BME, 2023) and Philomena Jombo (M.S. in BME, 2023), contributed to a collaborative publication with Dr. Irma Kuljanishvili (secondary BME faculty) and Dr. Silviya Zustiak who are co-corresponding authors.

Luc, E., Aziz, B., Kim, Y., Lespasio, M., **Jombo, P., Zustiak S.P.,** Kuljanishvili, I., "Cell Spreading and Viability on Single-Walled Carbon Nanotube / Zinc Oxide Nanowire Heterostructures Synthesized by Chemical Vapor Deposition," *Frontiers in Carbon*, in press 2024

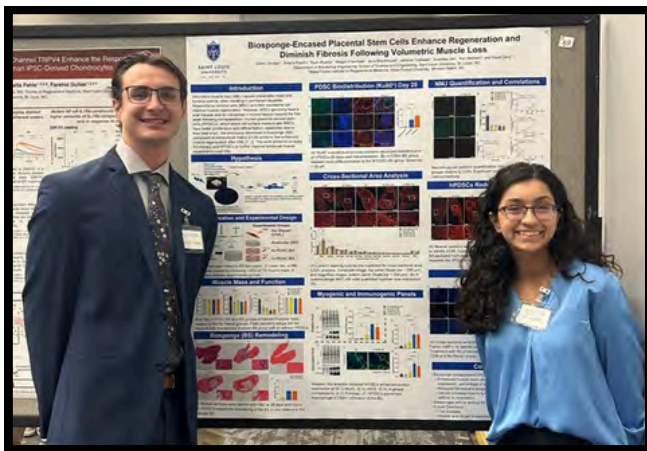
Click [here](#) to read the full article which will appear in a special issue about "Women in Carbon Science and Technology."

POSTER PRESENTATIONS

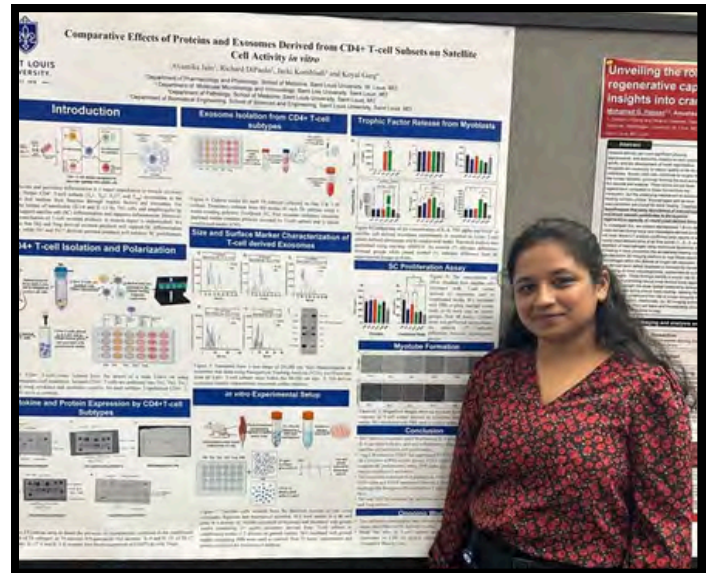
Students from Dr. Garg's Lab presented posters at the Musculoskeletal Research Center Symposium at Washington University in St. Louis on May 15, 2024.



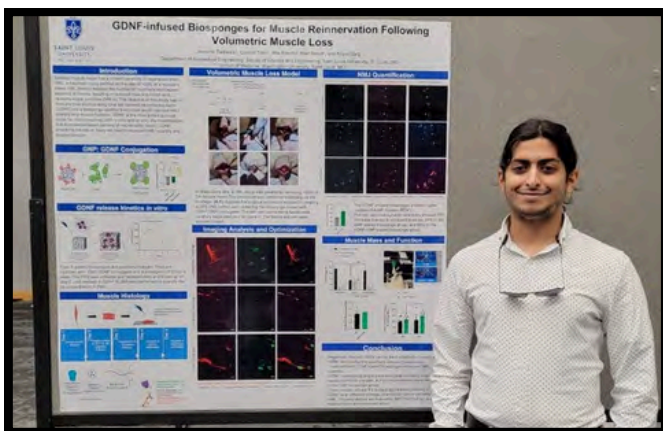
Johnson D., Ridolfo A., Mueller R., Chermack M., Brockhouse J., Tadiwala J., Jain A., Bertram K., and Garg K., "Biosponge-Encased Placental Stem Cells Enhance Regeneration and Diminish Fibrosis Following Volumetric Muscle Loss."



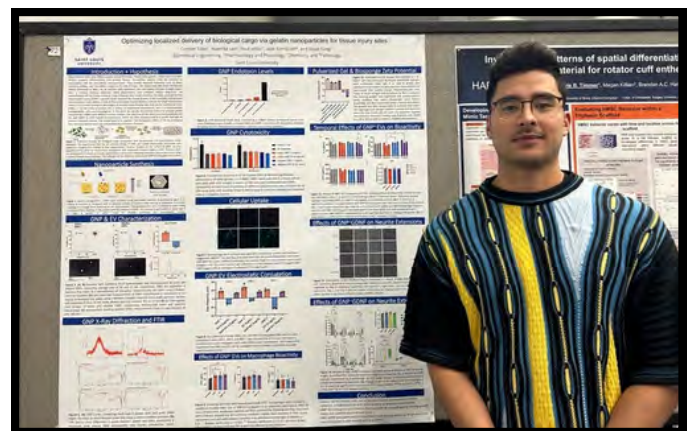
Jain A., DiPaolo R., Kornbluth J., and Garg K., "Comparative Effects of Proteins and Exosomes Derived from CD4+ T-cell Subsets on Satellite Cell Activity in vitro."



Tadiwala J., Tobo C., Ridolfo M., Garg K., "GDNF-infused Biosponges for Muscle Reinnervation Following Volumetric Muscle Loss."



Tobo C., Jain A., Jelliss P., Kornbluth J., and Garg K., "Optimizing localized delivery of biological cargo via gelatin nanoparticles for tissue injury sites."



MEDLAUNCH DEMO DAY 2024

MEDLaunch is a student-driven, biomedical, and entrepreneurship incubator in the Chafeitz Center for Entrepreneurship at SLU. To read more about MEDLaunch, click [here](#). Working in multidisciplinary teams to innovate solutions in areas of surgical devices, health information technology, and medical diagnostics, five teams pitched their ideas at MEDLaunch Demo Day on May 1, 2024 at the Cortex. Thank you to the BME students who participated in this event! A special thanks to two BME students, **Ether Dharmesh and Abby Kieffer** who served on the executive board as President and Vice President respectively of Curriculum and Recruitment. For more information about this year's projects, click [here](#)!



Congrats to the HandTronix team for winning funding from MEDLaunch for their pitch!



MEDLaunch Cohort 2023–2024

*BME students are in bold

Project: HandTronix

Members: **Talon Krieger, Katie Woehlert, Natalie Phelps, Gerard Pena**, John Melulis

Project: Quick Naloxone

Members: Kirti Madhu, Harshu Pande, Claire Schoenekase, **Katheryn Gurski, Olivia King, Rahul Jasthi, Caiden Gagliano**

Project: Ohm Ring

Members: Joel Hwang, **Gabbie Coronado, Daniel Kim**

Project: Aspiricare

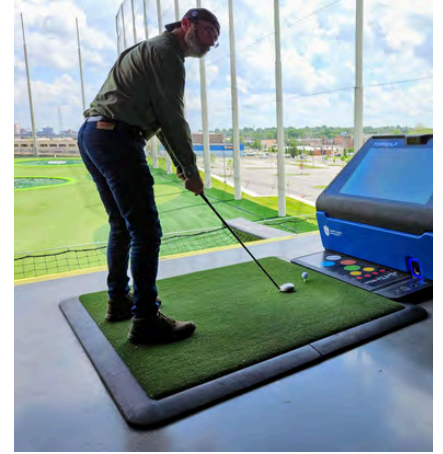
Members: **Saloni Shringapure**, Varshith Reddy Legala, MacKenzie Hertel, Anika Karumuri, Wasi Gema

Project: MindTrack

Members: Ben Sloan, Ben Schneider, Lexxy Ahn, Edward Chau

GRADUATE STUDENT TOP GOLF SOCIAL EVENT

BME graduate students and faculty enjoyed an afternoon at Top Golf on May 7, 2024. There was a great turnout on this warm spring day. Take a look at the pictures below!



UNDERGRADUATE STUDENT SPOTLIGHT



Saloni Shringarpure, BME senior, was recently highlighted in SLU News as a 2024 graduate. Read the full article [here](#) to learn more about why Saloni decided to study biomedical engineering, what she has been doing since becoming EMT certified, and what she plans to do next.



GRADUATE STUDENT SPOTLIGHT

*Excellence in
Research*

Congratulations to 2024 graduate, David Johnson, Ph.D., who was recently awarded the School of Science and Engineering 2024 Graduate Student Excellence in Research Award, which included a monetary prize of \$750. David has worked in Dr. Koyal Garg's Musculoskeletal Tissue Engineering Lab. David's long-term goal is to improve the quality of life of patients suffering from musculoskeletal injuries.



ATTENTION 2024 GRADUATES AND BME ALUMNI

Did you graduate this year? Are you a SLU BME Alumni? If so, we'd like to invite you to fill out the form below to give us your updated contact information (email) and tell us where you have landed after graduation. With your permission, we would love to highlight your career achievements and stay connected with you in the future!



[BME ALUMNI FORM](#)

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