

SLU BIOMEDICAL ENGINEERING NEWSLETTER



SAINT LOUIS UNIVERSITY

DEPARTMENT OF BIOMEDICAL
ENGINEERING

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GRANTS AWARDED



Dr. Alex Reiter received the 2024 SLU Health Research Grant of \$15,000 for his project "Noninvasive assessment of in vivo tissue loads in a small animal model." This is a collaborative project with **Dr. Koyal Garg**.

Dr. Reiter also received the 2024 SLU President's Research Fund Grant of \$25,000 for his project "Assessment of tendon behavior for enhancing the treatment of Achilles tendon rupture." This is a collaborative project with Dr. Patrick Corrigan in the Physical Therapy and Athletic Training Department.

DEAN'S TRAVEL AWARD

Congratulations to **David Johnson, Ph.D. Candidate**, for receiving the Dean's Travel Award of \$350.00 on behalf of the Dean's Office for the School of Science and Engineering. This award supported David's travel expenses for the International Symposium on Regenerative Rehabilitation in Boston.

Current SSE graduate students can apply for this award. Please see this [link](#). Thank you to SSE for assisting with travel funding for our graduate students!





PUBLICATIONS

In collaboration with Washington University in St. Louis, **Dr. Silviya Zustiak's lab** had the following article published:

S. G. Zambuto, S. S. Kolluru, **E. Ferchichi**, H. Rudewick, D. G. Fodera, K. M. Myers, **S. P. Zustiak**, M. L. Oyen. "Evaluation of gelatin bloom strength on gelatin methacryloyl hydrogel properties," Journal of the Mechanical Behavior of Biomedical Materials, 2024, 154, 106509 (IF: 3.9)

<- Click the image to check out the article!

CONFERENCE PRESENTATIONS

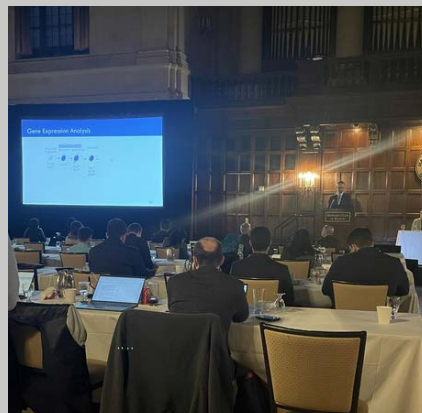
Dr. Garg was the inaugural speaker for the Bioengineering and Regenerative Medicine in Surgery seminar series at Washington University in Saint Louis School of Medicine on March 27th. She presented a talk titled, "Regenerative and Rehabilitative Strategies for Functional Muscle Recovery Following Trauma."



David Johnson attended the 10th Annual International Symposium on Regenerative Rehabilitation in Boston, MA, March 7-9, 2024 where he gave an oral presentation titled, "Combined Regenerative Rehabilitation Improves Recovery Following Volumetric Muscle Loss Injury in a Rat Model."

Authors:

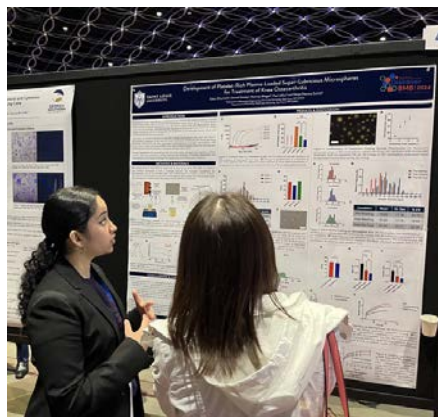
D. Johnson, C. Tobo, J. Au, A. Nagarapu, N. Ziemkiewicz, H. Chauvin, J. Robinson, S. Shringarpure, J. Tadiwala, J. Brockhouse, C. A. Flaveny, and K. Garg



POSTER PRESENTATIONS

AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY ANNUAL MEETING

Ether Dharmesh from **Dr. Zustiak's** lab attended the American Society for Biochemistry and Molecular Biology Annual Meeting from March 23-26 in San Antonio, Texas where she presented a poster.



E. Dharmesh, S. Stealey, M. Baghat, P. Jelliss, S. P. Zustiak, "Development of Platelet-Rich Plasma-Loaded Super-Lubricious Microgels for Treatment of Knee Osteoarthritis," American Society for Biochemistry and Molecular Biology Annual Meeting, March 23-26, 2024, San Antonio, TX Best Poster Award, 1st Place, Chemical Biology Category



AMERICAN CHEMICAL SOCIETY SPRING MEETING

Dr. Zustiak's lab also had another poster presented by one of their collaborators in the chemistry department!

M. Baghat, **S. Stealey, S. P. Zustiak**, P. Jelliss, "Dye-incorporated Polymers with Functionalities for Both Lubricity and Adhesion and Their Coating of PEG-based Hydrogel Microspheres for Application in the Treatment of Knee Osteoarthritis," (Poster), American Chemical Society Spring Meeting, March 17-21, 2024, New Orleans, LA

CONFERENCE AWARDS



Congratulations to **Ether Dharmesh** from **Dr. Zustiak's lab** for winning 1st place for a Best Poster Award. She was one of the 6 category winners (chemical biology category) out of 295 participants in the ASBMB Undergraduate Poster Competition.



INTERNATIONAL WOMEN'S DAY

International Women's Day was celebrated on March 8th. BME would like to acknowledge our female faculty and a few current female students in BME for their recent accomplishments. We'd also like to acknowledge all of the women in the SLU BME program who are working hard to empower other women and inspire those around them!

Click on each person to get to know more about them through their faculty profiles!



**Marta
Cooperstein, Ph.D.**



Yan Gai, Ph.D.



**Silviya
Zustiak, Ph.D.**



Koyal Garg, Ph.D.



**Natasha
Case, Ph.D.**

INTERNATIONAL WOMEN'S DAY

COMMUNITY OUTREACH

Graduate student **Olivia Widdoes** from **Dr. Sell's** lab was featured in the Saint Louis Science Center's member magazine for combining her science and art passions into a 3-D model of the human brain! Check out the full profile beginning on page 10.

Click the image to read all about her project! ->



INTRODUCE A GIRL TO ENGINEERING DAY

Introduce a Girl to Engineering Day was hosted by SLU SSE on February 28, 2024 to promote outreach to high school girls interested in STEM. Graduate BME student **Gabriella Coronado** and undergraduate BME student **Kaitlyn Vallejo** (junior, pictured below) had the pleasure of participating in a student panel and helping in an engineering challenge throughout the day.



UNDERGRADUATE STUDENT SPOTLIGHT

Congratulations to **Andrea Sedano** (junior) for her acceptance into the 2024 Summer Undergraduate Research Fellowship (SURF) program at Stanford University's School of Engineering!



Andrea will join 34 other SURF scholars for a summer full of engaging research, community building, professional development, and excursions from the Stanford campus. Her summer research will focus on developing polymer materials and devices for soft electronics that can be used for robotic and biomedical applications.

We are excited for Andrea to represent SLU BME and the School of Science and Engineering in this exciting program! Congratulations, Andrea!

UPCOMING SYMPOSIUMS



Wednesday, April 24, 2024
4:00 - 7:00pm
Saint Louis University's Busch Student Center



The **Undergraduate Student Showcase** is coming up! This is an opportunity for our undergraduates to showcase their research and design projects from their capstone experiences in the engineering, science and aviation programs. Industry partners, faculty, staff, alumni, families, peers, and members of the SLU Community are invited to attend. Light refreshments and drinks will be served! Register to attend by clicking on the picture above!

UPCOMING SEMINARS

Time: 3:30-4:45 PM
Location: BME 1004

**4/10 Nicola Pozzi, Ph.D. Professor,
Biochemistry and Molecular Biology**



**4/17 Omar Tahri, Ph.D.
Professor, University of Burgundy**



**4/24 Maxwell Adolphson, Yang Lab
(Washington University in St Louis),
Electrical Engineering**



**5/1 Vinieth N. Bijanki, M.S. Research
Scientist, Orthopaedic Surgery**

SOCIAL MEDIA UPDATES

Have you checked out our new “Get to Know the Professor Series” yet? Tune in now to get to know Dr. Bledsoe and Dr. Zustiak as they give students advice, talk about their careers, and even provide some fun facts about themselves! Check back soon for future interviews and follow us on social media so you don’t miss any exciting news!



Click the image for Dr. Bledsoe’s interview!



Click the image for Dr. Zustiak’s interview!



NEW WEBSITE FOR GRADUATE STUDENT RESOURCES

Are you currently a BME graduate student? Take a look at our new website for helpful information such as program information, funding opportunities, travel policies, and other useful links for graduate students!

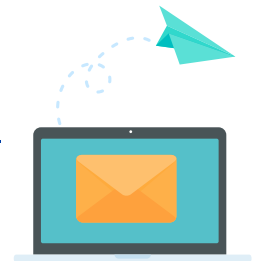


Note: You must be logged into your SLU account for access.

[Click here to visit the website!](#)

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