

Curriculum Vitae

**Peyton Panovich**

1<sup>st</sup> year PhD Student  
University of Michigan  
Department of Biomedical Engineering  
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DYNAMED Lab  
North Campus Research Complex, Building 520 Room 2353A  
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**Education**

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**University of Michigan** Ann Arbor, Michigan  
Doctor of Philosophy in Biomedical Engineering Expected Spring 2028

**University of Kansas** Lawrence, Kansas  
Bachelor of Science in Chemical Engineering Spring 2023  
Minor in Business, Minor in Biomedical Engineering  
Honors Program

**Research Experience**

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**University of Michigan, Graduate Student** Ann Arbor, Michigan  
*Department of Biomedical Engineering* 2023-Present  
Research Mentor: Dr. Alexandra Piotrowski-Daspit  
Exploration of polymeric nanoparticles for delivery to multiple organs in vivo with a focus on engineering decoy nanoparticles for improved target tissue tropism

**University of Kansas, Undergraduate Researcher** Lawrence, Kansas  
*Department of Pharmaceutical Science* 2021-2023  
Research Mentors: Dr. Cory Berkland and Grant Downes  
Functionalization and synthesis of pro-insulin for antigen-specific immunotherapy for Type 1 Diabetes

**Johns Hopkins University, REU Summer Scholar** Baltimore, Maryland  
*Department of Chemical and Biological Engineering* Summer 2022  
Research Mentors: Dr. Sangmoo Jeong and Alli Abolarin  
Role of serine and glycine modulation on the metabolic behavior of acute myeloid leukemia for use in combination therapies for synergistic therapeutic efficacy

**University of Nebraska Lincoln, REU Summer Scholar** Lincoln, Nebraska  
*Department of Biological Systems Engineering* Summer 2021  
Research Mentors: Dr. Angela Pannier and Kari Heck  
Optimization of loading plasmid DNA into bacterial outer membrane vesicles for oral vaccine and gene delivery platform.

## Curriculum Vitae

**University of Kansas, Undergraduate Researcher** Lawrence, Kansas  
*Department of Bioengineering* 2020- 2021  
Research Mentors: Dr. Kenneth Fischer and Dr. Nolan Norton  
Segmentation of thumb metacarpal and trapezium bones from MRI scans for development of 3-D models and analysis of osteoarthritic risk of micropipette operation.

**University of Kansas, Undergraduate Researcher** Lawrence, Kansas  
*Department of Chemical Engineering* 2019-2020  
Research Mentors: Dr. Mei He and Dr. Shaobo Ruan  
Investigation of UV light treatment for increased exosome secretion of cells

**University of Kansas Medical Center, Biotechnology Program** Kansas City, Kansas  
*Department of Cancer Biology* 2018-2019  
Research Mentors: Dr. Prasad Dandawate and Dr. Shrikant Anant  
Cucurbitacin B and I inhibits colon cancer cell growth by targeting the Notch signaling pathway

### Publications

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Dandawate, P., Subramaniam, D., **Panovich, P.**, Standing, D., Krishnamachary, B., Kaushik, G., Thomas, S. M., Dhar, A., Weir, S. J., Jensen, R. A., & Anant, S. (2020). Cucurbitacin B and I inhibits colon cancer growth by targeting the Notch signaling pathway. *Scientific Reports*, 10(1), 1.

### Presentations

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**Institute for Nano Biotechnology In-House Symposium, Johns Hopkins University** August 2022  
Oral presentation on “Effect of Serine/Glycine on Metabolic Behavior of Acute Myeloid Leukemia”

**Annual C.A.R.E.S Symposium, Johns Hopkins University** July 2022  
Oral presentation on “Effect of Serine/Glycine on Metabolic Behavior of Acute Myeloid Leukemia”

**Annual Biomedical Engineering Society Meeting** October 2021  
Poster presentation on “Optimization of Loading Plasmid DNA into Bacterial Outer Membrane Vesicles”

**Summer Research Program Symposium, University of Nebraska-Lincoln** July 2021  
Poster presentation on “Optimization of Loading Plasmid DNA into Bacterial Outer Membrane Vesicles”

**University of Kansas Undergraduate Research Symposium, University of Kansas** April 2021  
Oral presentation on “Developing 3-D Models of Thumb Carpometacarpal Joints to Analyze Impact of Pipette Operation”

**INTEL International Science and Engineering Fair, Phoenix Arizona** May 2019  
Poster presentation on “The Effect of Cucurbitacin B and I on Colon Cancer Cell Proliferation”

## Abstracts at Scholarly Meetings

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**Peyton Panovich**<sup>1\*</sup>, Kari Heck<sup>2</sup>, Amanda E. Ramer-Tait<sup>3</sup>, Angela K. Pannier<sup>2</sup> (2021): Optimization of Loading Plasmid DNA into Bacterial Outer Membrane Vesicles, *Biomedical Engineering Society Annual Meeting*: Orlando, FL (virtual attendance)

## Leadership

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Biomedical Engineering Graduate Student Council 2023-Present  
*Social Committee Member*

- Organized inter departmental mixers between chemical engineering, biomedical engineering, and pharmaceutical science departments

SELF Engineering Leadership Program 2021-2023  
*Junior-Admit Fellow*

- Executed “Undergraduate Research Involvement Fair” as personal capstone project
- Room and Space lead for High School Design planning committee

Engineering Student Council 2021-2022  
*Vice President of Finance*

- Directed Funding Advisory Committee for School of Engineering
- Distributed funding to student organizations

Engineering Student Council 2020-2021  
*EXPO Finance Chair*

- Assisted in organizing Engineering Expo event for elementary and middle school students
- Tabulated and monitored budget throughout the project

## Awards and Honors

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Tau Beta Pi Engineering Honors Society 2021-Present

- Engineering honor society recognized by esteemed scholarship and honorary character across all engineering disciplines

Undergraduate Research Award 2021

- Research scholarships awarded to students pursuing creative independent research projects during their undergraduate education at the University of Kansas

STEMMY Nominee 2020 & 2021

- Recognizes exemplary female scientists in Kansas City Area to increase gender diversity in STEM fields

Dean’s Honor Roll All Semesters 2019-2023

- Awarded to top 10% of students within their field of study at the University of Kansas

BioGENEius Finalist 2019

- Sponsored by the Biotechnology Institute, the BioGENEius challenge awards scholarships to high school aged students pursuing early careers in biotechnology research

## Professional Memberships

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- American Society of Engineering Educators
- Biomedical Engineering Society
- American Institute of Chemical Engineers
- Society of Women Engineers

## References

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University of Michigan  
Department of Biomedical Engineering  
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Cory Berkland, PhD

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Sangmoo Jeong, PhD

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Angela Pannier, PhD

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