Katherine Mueller
University of Wisconsin-Madison
Madison, WI 53711
kmueller22@wisc.edu
(303) 775-8187

EDUCATION

2016 – Present PhD student in Cellular and Molecular Biology, Matriculated September 2016
UW Madison

2011 – 2016 B.A. in Biology and Biochemistry, June 2016 (Summa Cum Laude)
B.M. in Voice Performance, June 2016 (Summa Cum Laude)
Lawrence University, Appleton, WI

RESEARCH INTERESTS

I am interested in exploring advances in genomic medicine and immunotherapy, with the intent of developing engineered cell therapies for cancer. My ultimate goal is to become a research scientist in molecular biology.

RESEARCH APPOINTMENTS AND PROJECTS

2016 – Present **Graduate Research Assistant,** UW Madison. PhD student in the lab of Dr. Krishanu Saha, Project focused on developing *in vitro* systems to study CAR T cell interactions with solid tumors

- CRISPR-Cas9 genome editing in human cells (HEK, primary T cells, cancer lines)
- Plasmid cloning
- Development of cancer/T cell co-culture systems
- Optical Metabolic Imaging
- Flow Cytometry
- Phlebotomy and T cell isolation

2014 - 2016 **Research Assistant,** Lawrence University, Appleton, WI. Worked under the direction of Dr. Elizabeth A. De Stasio, Project focused on identifying targets of the transcription factor DAF-19.

- Confocal and fluorescence microscopy on transgenic *C. elegans*
- Identification of specific neurons and other anatomical structures in *C. elegans* from confocal data
- Classical genetics and strain construction
- Protein purification

PUBLICATIONS

*Piscopo, N.J., ***Mueller, K.P.** *Das, A., Hematti, P., Murphy, W.L., Palacek, S.P., Capitini, C.M., and Saha, K. (2017), Bioengineering Solutions for Manufacturing Challenges in CAR T Cells. Biotechnol. J., 1700095. Doi:10.1002/biot.2017000095
*Denotes equal coauthorship

De Stasio, E.A., **Mueller, K.P.,** Bauer, R., et al. (2018), An expanded role for the RFX transcription factor DAF-19, with dual functions in ciliated and non-ciliated neurons. GENETICS vol. 208 no. 3 1083-1097;https://doi.org/10.1534/genetics.117.300571

UNDERGRADUATE HONORS THESIS (awarded Summa Cum Laude)

Mueller, K. *Activation of Target Gene Expression in Neurons by the C. elegans RFX Transcription Factor, DAF-19*. Honors Thesis. Lawrence University, 2016.

PRESENTATIONS

Mueller, K., Piscopo, N., Das, A., Walker, K., Alvarz-Garcia, Y., Stallcop, L., Beebe, D., Capitini, C., Saha, K., 2017, Non-destructive High Content Analysis of Heterogeneity in CAR T cell Immunotherapies, Stem Cell and Regenerative Medicine Center Fall Conference, Madison, WI
*Awarded best poster

Mueller, K., Piscopo, N., Das, A., Walker, K., Alvarz-Garcia, Y., Stallcop, L., Beebe, D., Capitini, C., Saha, K., 2017, Non-destructive High Content Analysis of Heterogeneity in CAR T cell Immunotherapies, NSF Cellular Biomanufacturing Workshop, Fairfax, VA

Mueller, K., Piscopo, N., Das, A., Beebe, D., Capitini, C., Saha, K., 2017, Assaying Heterogeneity from Gene Modification during the Manufacture of CAR T-cell Immunotherapies, Hilton Head Regenerative Medicine Workshop, Hilton Head, SC

Mueller, K., Phirke, P., Sugiaman-Trapman, D., Swoboda, P., De Stasio, E.A., 2015, Activation of Target Gene Expression in Neurons by the RFX Transcription Factor, DAF-19, 20th International *C. elegans* Meeting, Los Angeles CA

Mueller, K., Scholtz, S., Bice, S., Stinson, L., Phirke, P., Sugiaman-Trapman, D., Swoboda, P., De Stasio, E.A., 2016, Activation and Repression of Target Genes by the C. elegans RFX Transcription Factor DAF-19, The Allied Genetics Conference, Orlando FL

SCHOLARSHIPS AND GRANTS

2017 - Present	Biotechnology Training Program Appointment (NIH T32 grant)
2015	Monticello Grant supporting summer research for women scientists
2015	Mellon Senior experience grant supporting research
2011	Richard Warch Honor Scholarship
2011	Community Engagement Scholarship

AWARDS AND HONORS

2017	Gregory F. Daniels Outstanding Poster Award (SCRMC Fall Conference)
2017	NSF travel award to Hilton Head Regenerative Medicine Workshop
2017	Phi Kappa Phi Honors Society
2016	Phi Beta Kappa Honors Society
2015	Pi Kappa Lambda Honors Society
2015	GSA travel award to 2015 International *C. elegans* conference
2012 – 2013	Student Associate to the President as writing mentor
2012 – 2016	Dean's List
2012	Freshman Studies Writing Prize for best essay in freshman class

TEACHING EXPERIENCE

2012 – 2016	Writing tutor
2014 – 2016	Genetics tutor
2015 – 2016	Cell biology tutor, introductory biology tutor, and confocal microscopy assistant

LEADERSHIP, COMMUNITY OUTREACH, AND VOLUNTEER WORK

2017 - Present	Student Leadership Committee for CMaT Engineering Research Center
2017	Morgridge Summer Science Camp for rural WI high schoolers
2016 – Present	Collaboration with Field Day Labs to create CRISPR game for high school students
2016	Wisconsin Science Festival with GWIS
2014 – 2015	Appleton Medical Center volunteer

RELEVANT COURSES

Graduate: Carcinogenesis and Tumor Cell Biology; Eukaryotic Molecular Biology; Fundamentals of Stem Cell and Regenerative Biology; Stem Cell Bioengineering; Foundations of Innovation in Stem Cell Industries; Responsible Conduct of Research; Chemical Biology; Intro to Biostatistics; Foundations of Biotechnology

Undergraduate: Cells to Organisms; Organisms to Ecosystems; Experimental Analysis; Genetics; Cell Biology; Molecular Biology; Developmental Biology; Microbiology; Biochemistry; Organic Chemistry; Inorganic Chemistry; Medicinal Chemistry; Physics; Calculus I-III

REFERENCES

Dr. Krishanu Saha; Assistant Professor of Biomedical Engineering; Wisconsin Institute for Discovery Room 4164, 330 North Orchard Street, Madison WI, 53715; email: ksaha@wisc.edu

Dr. Elizabeth A. De Stasio; Raymond H. Herzog Professor of Science/Professor of Biology; Thomas Steitz Hall of Science Room 331 Biology, Appleton WI, 54911; email: elizabeth.a.destasio@lawrence.edu

Dr. Brian Piasecki; Assistant Professor of Biology; Thomas Steitz Hall of Science Room 330 Biology, Appleton WI, 54911; email: brian.p.piasecki@lawrence.edu