



Nicole
Jandick

CONTACT INFORMATION:

Address: VMRI Building 3
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EDUCATION:

2017-Present: Ph.D., Molecular, Cellular, and Developmental Biology
Iowa State University, Ames IA, United States

2013-2017: B.S., Genetics
Iowa State University, Ames IA, United States

RESEARCH EXPERIENCE:

2018-Present: Graduate Research Assistant
Supervisor: Cathy L. Miller

- Investigated the use of mammalian orthoreovirus as a therapeutic for HER2+ breast cancer.
- Designed and recovered a recombinant replicating mammalian orthoreovirus that expresses HER2 peptides.
- Interpreted results based on data obtained via western blot, immunofluorescence, plaque assay and reverse genetics.
- Mentored multiple veterinary, undergraduate and graduate students.

2015-2016: Science Undergraduate Laboratory Intern
Supervisor: Tanya Prozorov and Nastaran Hashemi

- Evaluated magnetotactic bacteria for cell survival via immunofluorescence.
- Inspected and tested a design for placenta-on-a-chip.

TEACHING EXPERIENCE:

Graduate Teaching Assistant:

2022: MICRO 302L: Introduction to Microbiology Laboratory

- Facilitated students learning of microbiology laboratory techniques.
- Prepared and designed experiments for students.

2021: MICRO310L: Medical Microbiology Laboratory

- Developed rubrics for major assignments.
- Guided students understanding of virus evolution.
- Clarified students' analysis of experimental data, allowing for conclusions to be drawn.

Undergraduate Teaching Assistant:

2015: BIO313L: Genetics Laboratory

- Guided students in developing experimental techniques such as: pipetting, western blots, PCR, experimental design.
- Graded laboratory notebooks and quizzes.

2015: BIO312: Ecology

- Facilitated students understanding of principles of ecology dealing with organisms, populations, communities, and ecosystems.
- Developed study guides and facilitated study groups.

ORAL PRESENTATIONS:

2020: Nicole A. Jandick and Cathy L. Miller

Investigating mammalian orthoreovirus oncolysis, HER2 pathway modification, and dual therapy in HER2+ breast cancer cells

American Society for Virology: Reoviruses and their hosts virtual workshop

Jun. 16, 2020

Nicole A. Jandick and Cathy L. Miller

Investigating mammalian orthoreovirus oncolysis, HER2 pathway modification, and dual therapy in HER2+ breast cancer cells

American Society for Virology Abstract Accepted as Flash Talk + Poster Presentation (meeting canceled due to COVID-19 pandemic).

Jun. 15, 2020

2019: Nicole A. Jandick, Nicolette S. Kirner, and Cathy L. Miller

Cancer therapy goes viral

3 Minute Thesis Competition, Ames, IA

Oct. 23, 2019

Nicole A. Jandick, Nicolette S. Kirner, and Cathy L. Miller

Analyzing genetic subtypes of breast cancer receptive to treatment with mammalian orthoreovirus

American Society for Virology, Minneapolis, MN

Jul. 20, 2019

Nicole A. Jandick, Nicolette S. Kirner, and Cathy L. Miller

Mammalian orthoreovirus as an oncolytic therapy and vaccine candidate for HER2 positive breast cancer

Holden Comprehensive Cancer Center Retreat, Coralville, IA

Jun. 19, 2019

Nicole A. Jandick, Nicolette S. Kirner, and Cathy L. Miller

Investigating breast cancer subtype vulnerability to oncolytic mammalian orthoreovirus

POSTER PRESENTATIONS:

- 2022: Nicole A. Jandick and Cathy L. Miller
Development and investigation of a HER2 peptide-expressing recombinant mammalian orthoreovirus as an oncovaccine for HER2+ breast cancer
College of Veterinary Medicine Research Day, Ames, IA
Aug. 16, 2022
- Nicole A. Jandick and Cathy L. Miller
Creation and investigation of a HER2 peptide-expressing recombinant mammalian orthoreovirus as an oncovaccine for HER2+ breast cancer
All Iowa Virology Symposium, Ames, IA
Mar. 4, 2022
- 2021: Nicole A. Jandick and Cathy L. Miller
HER2 peptide expressing mammalian orthoreovirus (S1/HER2nhd) as a vaccine candidate against recurrence in patients with HER2 expressing breast cancer.
International Oncolytic Virus Conference, Hybrid meeting
Nov. 8, 2021
- Alexandrea S. Paulson, Nicole A. Jandick, and Cathy L. Miller
Investigating recombinant mammalian orthoreovirus expressing HER2 peptides as a HER2+ breast cancer vaccine
College of Veterinary Medicine Research Day, Ames, IA
Aug. 11, 2021
- 2020: Nicole A. Jandick and Cathy L. Miller
Development of a recombinant mammalian orthoreovirus that expresses HER2 peptides as a vaccine candidate for HER2 positive breast cancer
College of Veterinary Medicine Research Day, Ames, IA
Aug. 7, 2020
- Nicole A. Jandick and Cathy L. Miller
Investigating mammalian orthoreovirus oncolysis, HER2 pathway modification, and dual therapy in HER2+ breast cancer cells
American Society for Virology Abstract Accepted as Flash Talk + Poster Presentation (meeting canceled due to COVID-19 pandemic).
Jun. 15, 2020
- 2019: Nicole A. Jandick, Nicolette S. Kirner, and Cathy L. Miller
Mammalian orthoreovirus as a potential therapy for HER2+ breast cancer.
College of Veterinary Medicine Research Day, Ames, IA
Aug. 9, 2019

- 2018: Nicolette S. Kirner, Nicole A. Jandick, and Cathy L. Miller
Mammalian orthoreovirus as an oncolytic therapy and vaccine candidate for HER2 positive breast cancer
College of Veterinary Medicine Research Day, Ames, IA
Aug. 10, 2018
Nicolette S. Kirner, Nicole A. Jandick, and Cathy L. Miller
Mammalian orthoreovirus as an oncolytic therapy and vaccine candidate for HER2 positive breast cancer
Boehringer-NIH National Veterinary Scholars Symposium.
College Station, TX
Aug. 2-4, 2018
- 2016: Nicole A. Jandick, Rajeendra Pemahiaka, Farrokh Sharifi, and Nastaran Hashemi
Organ-on-a-chip: Understanding drug permeability
SULI Summer Poster Session, Ames, IA
Aug. 5, 2016
- 2015: Nicole A. Jandick, Emre Firlar, and Tanya Prozorov
Investigation of cellular functions of *M.magneticum* AMB-1: Fluorescent microscope study
SULI Summer Poster Session, Ames, IA
Jul. 31, 2015
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AWARDS:

- 2022: College of Veterinary Medicine Graduate Student of the Year
- 2022: Laura and Russ Talbot Graduate Fellowship
- Nominated by faculty
- 2022: Iowa State University Women's Club Scholarship
- Demonstrate qualities of leadership and character that contribute to university and/or community life
- 2021: Teaching Excellence Award
- Top 10% of teaching assistants
- Nominated by Faculty
- 2021: Freese Veterinary Medicine Microbiology Scholarship
- Dedicated work ethic
- Nominated by Faculty
- 2021: Veterinary Microbiology and Preventive Medicine Travel Award
- 2020: 2nd Place poster in College of Veterinary Medicine Research Day
- Judged by College of Veterinary Medicine Faculty
- 2019: Veterinary Microbiology and Preventive Medicine Travel Award
- 2019: Graduate and Professional Student Senate Travel Award
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MENTORING:

- 2021: Abdullah Aljohani, Graduate student

- Guided learning of virology and molecular biology laboratory techniques
- Aided in teaching how to design experiments and plan a daily schedule

2021: Alexandrea Paulson, Veterinary student

- Developed experimental plan and daily schedule
- Facilitated learning of common molecular biology laboratory techniques
- Assisted in development of abstract and poster for CVM Research Day

2018-2019: Jennifer Vander Lee, Undergraduate student

- Assisted with editing veterinary application materials relating to research
- Trained in general molecular biology laboratory techniques

2018: Nicolette Kirner, Veterinary student

- Set daily and monthly experimental goals
- Organized daily schedule
- Assisted with editing abstract and poster for CVM Research Day

SERVICE:

Trainings:

2022-2023: Graduate College Emerging Leader Academy

2022: Mental Health First Aid Training

Student Associations:

2020-2022: President, College of Veterinary Medicine Association of Graduate Students, ISU

2020-2022: Secretary, Molecular Cellular and Developmental Graduate Student Organization, ISU

2018- 2019: Secretary, College of Veterinary Medicine Association of Graduate Students, ISU

2017- 2020: Member, iBio Symposium Event Coordinator, Molecular Cellular and Developmental Graduate Student Organization, ISU

2018- 2020: President, Alpha Sigma Kappa-Women in Technical Studies- Epsilon Alumnae Chapter, ISU

Student Committees:

2022: Graduate Student Representative, Search Committee for Associate Dean of Research and Graduate Studies, College of Veterinary Medicine, ISU

2021-2022: Student Leadership Committee, College of Veterinary Medicine, ISU

2019-2022: Graduate Student Representative, Student Faculty Relations Committee,
College of Veterinary Medicine, ISU

2020- 2022: Graduate Student Representative, Computer, Library and Information
Management Committee, College of Veterinary Medicine, ISU

Professional Associations:

2019- Present: Student Member, American Society for Virology

REFERENCES:

Cathy L. Miller, Ph.D.
Professor
Dept. of Veterinary Microbiology and Preventive Medicine
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