

Nick D. Pokorzynski, Ph.D.

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EDUCATION

- 2015 – 2020 Ph.D., Molecular Biosciences
Washington State University
College of Veterinary Medicine
School of Molecular Biosciences
- 2009 – 2013 B.Sc., Biochemistry, Molecular Biology/Biotechnology
Michigan State University
College of Natural Science
Department of Biochemistry and Molecular Biology

RESEARCH AND PROFESSIONAL EXPERIENCE

- 2021 - Present Postdoctoral Research Associate
Project: Regulation of bacterial carbon source prioritization during stress
Department of Microbial Pathogenesis
Yale School of Medicine, New Haven, CT
Advisor: Dr. Eduardo Groisman
- 2020 – 2021 Postdoctoral Research Associate
Project: Host-cell contribution to intracellular bacterial stress responses
Department of Pathology and Microbiology
University of Nebraska Medical Center, Omaha, NE
Advisor: Dr. Rey Carabeo
- 2019 (4 mos) Graduate Student Intern
Project: Control of host signaling pathways by the microbiome during colitis
Research and Early Development (gRED), Biomarker Discovery OMNI
Genentech, Inc., South San Francisco, CA
Advisor: Dr. Mary Keir, Dr. Jordan Mar
- 2015 – 2020 Graduate Research Assistant
Project: Iron-dependent regulation of tryptophan biosynthesis in *Chlamydia*
School of Molecular Biosciences, College of Veterinary Medicine
Washington State University, Pullman, WA
Advisor: Dr. Rey Carabeo
- 2012 – 2013 Undergraduate Laboratory Assistant
Project: Characterization of *Chlamydomonas* lipid biosynthesis mutants
Department of Biochemistry and Molecular Biology, College of Natural Science
Michigan State University, East Lansing, MI
Advisor: Dr. Christoph Benning

TEACHING EXPERIENCE

2017 (5 mos) Teaching Assistant
Washington State University, Pullman, WA
Course: MBIOS 430 – Combined Immunology and Virology Laboratory
Advisor: Dr. Phil Mixter

FELLOWSHIPS AND EXTRAMURAL FUNDING

2018 - 2020 NIH Ruth L. Kirschstein Predoctoral National Research Service Award
F31-AI136295
Direct Costs: \$94,130.00

2015 – 2017 NIH Protein Biotechnology Training Program Trainee
T32-GM008336

2015 – 2017 Achievement Reward for College Scientists (ARCS) Fellowship
Seattle Chapter

PEER-REVIEWED PUBLICATIONS

6. Kryptou E, Townsend II GE, Gao X, Tachiyama S, Liu J, **Pokorzynski ND**, Goodman AL, Groisman EA (2023) Bacteria require phase separation for fitness in the mammalian gut. *Science*. 379, 6637.
5. Mar JS, Ota N, **Pokorzynski ND**, Peng Y, Jauchico A, Sangaraju D, Skippington E, Lekkerkerker A, Rothenberg ME, Tan M-W, Yi T, Keir M (2023) IL-22 alters gut microbiota composition and function to increase aryl hydrocarbon receptor activity in mice and humans. *Microbiome*. 11, 47.
4. **Pokorzynski ND**, Alla MR, Carabeo RA (2022) Host cell amplification of nutritional stress contributes to persistence in *Chlamydia trachomatis*. *mBio*. doi: <https://doi.org/10.1128/mbio.02719-22>
3. **Pokorzynski ND**, Hatch ND, Ouellette SP, Carabeo RA (2020) The iron-dependent repressor YtgR is a tryptophan-dependent attenuator of the *trpRBA* operon in *Chlamydia trachomatis*. *Nat Commun*. 11, 6430.
2. **Pokorzynski ND**, Brinkworth AJ, Carabeo RA (2019) A bipartite iron-dependent transcriptional regulation of the tryptophan salvage pathway in *Chlamydia trachomatis*. *eLife*. 8:e42295.
1. **Pokorzynski ND**, Thompson CC, Carabeo RA (2017) Ironing Out the Unconventional Mechanisms of Iron Acquisition and Gene Regulation in *Chlamydia*. *Front Infect Cell Microbiol*. 7, 1-19.

MEDIA

Pokorzynski ND (2021) The iron-dependent repressor YtgR is a tryptophan-dependent attenuator of the *trpRBA* operon in *Chlamydia trachomatis*. Recorded seminar. JRNLCub. <https://jrnclub.org/research-films/ytgr-tryptophan-chlamydia>

Pokorzynski ND, Carabeo RA (2020) Behind the Paper: *Atypical Attenuation*. Nature Portfolio Microbiology Community. <https://naturemicrobiologycommunity.nature.com/posts/atypical-attenuation>

Chlamydia under siege (2019) eLife Digest. <https://elifesciences.org/digests/42295/chlamydia-under-siege>

HONORS AND AWARDS

2021	ASM Postdoctoral Travel Award World Microbe Forum
2021	First Place Oral Presentation Postdoctoral Category Missouri/Missouri Valley ASM Branch Meeting
2018	Trainee Travel Award Wind River Conference on Prokaryotic Biology
2018	Dr. Bruce Gibbins Travel Award Fellowship School of Molecular Biosciences Washington State University
2018	Sponsorship to attend AAAS CASE Workshop Washington, D.C. Washington State University
2017	Maloney Entrepreneur's Workshop Award Washington State University
2017	Second Place Oral Presentation Departmental Three-minute Thesis Competition Washington State University

AD-HOC PEER REVIEW

2023	Frontiers in Cellular and Infection Microbiology: Microbiology and Pathogenesis of <i>Chlamydia</i> , <i>Coxiella</i> , and <i>Rickettsia</i>
2022	Frontiers in Cellular and Infection Microbiology
2021	Frontiers in Immunology

ORGANIZATIONS

2022 - 2023	eLife Community Ambassador Chaired sessions: ECR Wednesday Webinar: "Science policy in action" Webinar report: https://bit.ly/3SRybJn ECR Wednesday Webinar: "Getting involved in global science policy" Webinar report: https://bit.ly/3Vh9ub4
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2019 – 2021	Member American Society for Microbiology
2018 – 2020	Co-founder Graduate and Professional Student Science Policy Initiative Positions held: Vice President, Treasurer Washington State University, Pullman WA
2018	Co-founder Washington Science Policy Network
2016 – 2020	Member American Association for the Advancement of Science

SERVICE

2018 – 2019	Vice President NIH Protein Biotechnology Training Program Washington State University, Pullman WA
2017 – 2018	Forum Secretary NIH Protein Biotechnology Training Program Washington State University, Pullman WA

MENTORSHIP

Nick Montimurro (Postgraduate Trainee)

Current position: Anatomy & Physiology/Integrated Physical Science Teacher, Trumbull High School, Trumbull, CT

Tyler Zimmerman (Postgraduate Trainee)

Current position: PhD student in the laboratory of Dr. Rey Carabeo, University of Nebraska Medical Center, Omaha, NE

Monisha Alla (Rotating Graduate Student)

Current position: PhD student in the Department of Pathology and Microbiology, University of Nebraska Medical Center, Omaha, NE

Amanda Stastny (Rotating Graduate Student)

Current position: PhD student in the laboratory of Dr. Rey Carabeo, University of Nebraska Medical Center, Omaha, NE

Joanna Hurtado (Rotating Graduate Student)

Last known position: Master's recipient from the laboratory of Dr. Dana Shaw, Washington State University, Pullman, WA

Ekaterina Berulava (Undergraduate Student)

Last known position: Pursuing doctorate of osteopathic medicine at Pacific Northwest University of Health Sciences, Yakima, WA

Kathryn Sutherland (Undergraduate Student)

Last known position: DVM student, College of Veterinary Medicine, Washington State University, Pullman, WA

INVITED SEMINARS

- 2021 Interview seminar for postdoctoral appointment. Adaptive attenuation: Implications of a bifunctional transcriptional regulator in *Chlamydia trachomatis*. Dr. Matthew D. Welch – University of California - Berkeley.
- 2021 Interview seminar for postdoctoral appointment. Adaptive attenuation: Implications of a bifunctional transcriptional regulator in *Chlamydia trachomatis*. Dr. Eduardo Groisman – Yale University.
- 2021 Interview seminar for postdoctoral appointment. Adaptive attenuation: Implications of a bifunctional transcriptional regulator in *Chlamydia trachomatis*. Dr. Man-Wah Tan – Genentech.
- 2020 Interview seminar for postdoctoral appointment. Adaptive attenuation: Implications of a bifunctional transcriptional regulator in *Chlamydia trachomatis*. Dr. Joseph Bondy-Denomy – University of California – San Francisco.
- 2019 Interview seminar for postdoctoral appointment. Adaptive attenuation: Implications of a bifunctional transcriptional regulator in *Chlamydia trachomatis*. Dr. Michael Emerman – Fred Hutchinson Cancer Research Center.
- 2019 Interview seminar for postdoctoral appointment. Adaptive attenuation: Implications of a bifunctional transcriptional regulator in *Chlamydia trachomatis*. Dr. Alexander Johnson – University of California – San Francisco.

CONFERENCE PRESENTATIONS

- 2022 **Pokorzynski ND**, Groisman EA. How magnesium homeostasis dictates carbon source utilization. Annual Department of Microbial Pathogenesis Retreat. Yale West Campus, Orange, CT. Oral Presentation.
- 2021 **Pokorzynski ND**, Hatch ND, Ouellette SP, Carabeo RA. The iron-dependent repressor YtgR is a tryptophan-dependent attenuator of the *trpRBA* operon in *Chlamydia trachomatis*. World Microbe Forum. Virtual Conference. iPoster Presentation.
- 2021 **Pokorzynski ND**, Hatch ND, Ouellette SP, Carabeo RA. The iron-dependent repressor YtgR is a tryptophan-dependent attenuator of the *trpRBA* operon in *Chlamydia trachomatis*. Missouri/Missouri Valley American Society of Microbiology Branch Meeting. Virtual Conference. Oral Presentation.
- 2020 **Pokorzynski ND**, Hatch ND, Ouellette SP, Carabeo RA. Regulation of an iron-dependent repressor by tryptophan availability attenuates transcription of the tryptophan salvage genes in *Chlamydia trachomatis*. NIAID Fellowship Workshop. Webinar. Online Poster Presentation. *In-person workshop cancelled due to COVID-19.*

- 2020 **Pokorzynski ND**, Hatch ND, Ouellette SP, Carabeo RA. Regulation of an iron-dependent repressor by tryptophan availability attenuates transcription of the tryptophan salvage genes in *Chlamydia trachomatis*. American Society of Microbiology Microbe 2020. Chicago, IL. Poster Presentation and Rapid Fire Oral Presentation. *Cancelled due to COVID-19*.
- 2020 **Pokorzynski ND**, Hatch ND, Ouellette SP, Carabeo RA. Regulation of an iron-dependent repressor by tryptophan availability attenuates transcription of the tryptophan salvage genes in *Chlamydia trachomatis*. Missouri/Missouri Valley American Society of Microbiology Branch Meeting. Independence, MO. Oral Presentation. *Cancelled due to COVID-19*. Program: www.asmbanches.org/brmo/documents/2020_MBMVB_ASM_program.pdf
- 2019 **Pokorzynski ND** & Carabeo RA. A bipartite iron-dependent transcriptional regulation of the tryptophan salvage pathway in *Chlamydia trachomatis*. Chlamydia Basic Research Society. Seattle, WA. Oral and Poster Presentation.
- 2018 **Pokorzynski ND** & Carabeo RA. The tryptophan salvage pathway is dynamically regulated by the iron-dependent repressor YtgR in *Chlamydia trachomatis*. Wind River Conference on Prokaryotic Biology. Estes Park, CO. Poster Presentation.
- 2018 **Pokorzynski ND** & Carabeo RA. The tryptophan salvage pathway is dynamically regulated by the iron-dependent repressor YtgR in *Chlamydia trachomatis*. ASM Microbe 2018. Atlanta, GA. Poster Presentation.
- 2017 **Pokorzynski ND**, Brinkworth AJ, Wildung M, Thompson CC, Carabeo RA. The iron-dependent transcriptional repressor YtgR coordinately regulates iron homeostasis and tryptophan biosynthesis in *Chlamydia trachomatis*. Chlamydia Basic Research Society. Charlotte, NC. Oral and Poster Presentation. *Received Honorable Mention during Jane E. Raulston Poster Award Ceremony*.
- 2016 Brinkworth AJ, **Pokorzynski ND**, Wildung M, Thompson CC, Carabeo RA. RNA-Sequencing reveals an unexpected link between iron starvation and the tryptophan salvage pathway. European Society of Chlamydia Research. Oxford Town Hall, Oxford, UK. Oral Presentation.
- 2012 **Pokorzynski ND**, Liu B, Benning C. Complementation of *Chlamydomonas* Lipid Mutants. Summer Undergraduate Research Forum. Michigan State University, East Lansing, MI. Poster Presentation.