

Date of Preparation 6/3/2020



Signature

Jeffrey H. Withey, Ph.D. Curriculum Vitae

OFFICE ADDRESS

Wayne State University School of Medicine
Department of Biochemistry, Microbiology, and Immunology
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EDUCATION

University of Michigan, Ann Arbor, MI. **Ph.D.** in Cellular and Molecular Biology 2000
Thesis advisor: Dr. David Friedman.
Dissertation title: An Analysis of the Requirements for tmRNA Function.

Johns Hopkins University, Baltimore, MD. **B.A.** in Biology 1991

SCIENTIFIC WORK EXPERIENCE

Johns Hopkins University, Baltimore, MD. Senior Laboratory Technician II 1990-1994
Biology Department, (Supervisor: Dr. Robert Schleif).

POST-GRADUATE TRAINING

Postdoctoral Research:

Unit for Lab Animal Medicine, University of Michigan Medical School 2001-2006
Ann Arbor, MI, (Research advisor: Dr. Victor DiRita).

Department of Microbiology and Immunology, University of Michigan 2000-2001
Medical School, Ann Arbor, MI, (Research advisor: Dr. David Friedman).

FACULTY APPOINTMENTS

Professor 8/19/2019-present
Dept. of Biochemistry, Microbiology, and Immunology
Wayne State University School of Medicine, Detroit, MI.

Associate Professor 1/9/2017-8/19/2019
Dept. of Biochemistry, Microbiology, and Immunology
Wayne State University School of Medicine, Detroit, MI.

Associate Professor 8/19/2013-1/9/2017
Department of Immunology and Microbiology
Wayne State University School of Medicine, Detroit, MI

Assistant Professor 10/16/2006-8/19/2013
Department of Immunology and Microbiology
Wayne State University School of Medicine, Detroit, MI

ADMINISTRATIVE APPOINTMENTS

Associate Chair for Research 2017-present
Department of Biochemistry, Microbiology, and Immunology
Wayne State University School of Medicine, Detroit, MI.

Chair, WSU Radiation Safety Committee 2016-present

Associate Chair for Research 2015-2017
Department of Immunology and Microbiology
Wayne State University School of Medicine, Detroit, MI.

MAJOR PROFESSIONAL SOCIETIES

American Society for Microbiology 1996-present
American Association for the Advancement of Science 2003-present
EuFishBioMed Society 2020-present

HONORS/AWARDS

Fulbright Scholar Alumni Ambassador 2020-2022
(I was selected to be one of 13 ambassadors for the 2020-2022 period. My role is to serve as an advocate and spread the word all over the United States about the numerous Fulbright programs available.)

Infection and Immunity Editors' Spotlight for our paper on inhibition of 2018

V. cholerae colonization by glucose and *E. coli* (Nag et al.)

Wayne State University School of Medicine Research Excellence Award 2018

Wayne State University School of Medicine College Teaching Award 2018

Applied and Environmental Microbiology Editors' Spotlight for our paper on quantitating zebrafish diarrhea (Mitchell et al.) 2017

Fulbright Senior Scholar **2014-2015**

(5 months research in Kolkata, India- Project was entitled "Establishing the zebrafish model for cholera in India." I worked with collaborators at the National Institute of Cholera and Enteric Disease and trained them how to use our zebrafish model. This collaboration has led to numerous subsequent publications.)

Journal of Bacteriology cover illustration from Park *et al.* publication 2015

Wayne State University School of Medicine College Teaching Award 2013

Wayne State University School of Medicine College Teaching Award 2010

Infection and Immunity Editors' Spotlight for our paper on enhancement of ToxT activity by bicarbonate (Abuaita and Withey) 2009

1st Training Mission in Cholera: Collaborative Research and Case Management, 2008
Kolkata, India. *(An NIH-sponsored and funded trip to India to foster collaboration and gain clinical experience with enteric diseases)*

ASM Student Travel Grant Award 1999

Winner, best poster presentation,
17th annual CMB Symposium, University of Michigan 1997

Gilbert Commonwealth Scholarship 1986-1990

National Merit Scholar 1986

SERVICE

Wayne State University

Departmental

Chair, Graduate Committee 2019-present
Dept. of Biochemistry, Microbiology, and Immunology

Graduate Program Officer Dept. of Biochemistry, Microbiology, and Immunology	2019-present
Finance and Development Committee (Elected position) Dept. of Biochemistry, Microbiology, and Immunology	2017-present
Curriculum Committee Immunology and Microbiology Graduate Programs	2006-present
Preliminary Oral Examination Committee, Bacteriology Bylaws Committee Dept. of Biochemistry, Microbiology, and Immunology	2008-2011, 2013-present 2017
New Biochemistry faculty search committee	2018-2019
Transition Committee for Departmental Merger Dept. of Biochemistry, Microbiology, and Immunology	2017
Promotion and Tenure Committee Department of Immunology and Microbiology (Elected position)	2013-2017
Graduate Studies Committee Immunology and Microbiology Graduate Programs	2015-2019
Salary Committee (Elected Position) Department of Biochemistry, Microbiology, and Immunology	2008-2022
Salary Committee (Elected Position) Department of Immunology and Microbiology	2008-2016
Seminar Committee Department of Immunology and Microbiology	2013-2015
Department of Immunology and Microbiology Self Study Committee	2013-2014

School of Medicine

Interviewer, MD/PhD Program	2019
Reviewer, Kamran S. Moghissi, MD Endowed Faculty Award for Excellence in Basic Science Teaching (3 nominations per year)	2015-2017
WSU Translational Science Work Group	2013-2014
Reviewer, Jack Ryan Research Award (16 applications)	2013
WSU Strategic Planning Committee Core Facilities Workgroup	2011-2012

University

Chair, WSU Radiation Safety Committee	2016-present
Wayne State University Academic Senate. (Elected position)	2009-2022
Associate Chair, WSU Radiation Safety Committee	2015-2016
WSU Radiation Safety Committee	2012-2015
Auditor, WSU Radiation Safety Program	2013
WSU Facilities, Support Services, Information Technology Committee	2010-present
Judge, WSU Graduate and Postdoctoral Research Symposium posters	2020
Judge, WSU Graduate Exhibition Poster Competition	2012-2013
Judge, student presentations, WSU Graduate Student Research Day	2009-2019
Reviewer, WSU Graduate Professional Scholarships	2010
WSU Research Committee	2009-2010

University of Michigan Service

Graduate Program in Cellular and Molecular Biology, Program Committee (Elected position)	1997-1999
<i>I was one of two students on this committee, which oversees the NIH-funded CMB Program.</i>	
Graduate Program in Cellular and Molecular Biology, Admissions Committee (Elected Position)	1997-1999

SCHOLARLY SERVICE

Grant Review Committees- National/International

NIH Special Emphasis Panel: Bacterial Pathogenesis and Host Response	2020
NIH Bacterial Pathogenesis (BACP) study section (Ad Hoc)	2020
Fulbright Egyptian Scholar Program	2019
NIH Prokaryotic Cell and Molecular Biology (PCMB) study section (Ad Hoc)	2019
Fulbright-Nehru International Postdoctoral Fellowships	2019
NIH Special Emphasis Panel, Bacterial Pathogenesis (ZRG1 IDM-B (02)) (Ad Hoc)	2019
NIH Special Emphasis Panel, Microbial Drug Resistance (ZRG1 IDM-R) (Ad Hoc)	2018
NIH Special Emphasis Panel, Topics in Drug Resistance, Drug Discovery and Clinical and Field Research (ZRG1 IDM-N) (Ad Hoc)	2018
NIH review of R15 grants (invitation declined due to time conflict)	2018
NIH Special Emphasis Panel, Host-Pathogen Interactions (ZRG1 IDM-R) (Ad Hoc)	2018
NIH Bacterial Pathogenesis (BACP) study section (Ad Hoc)	2017
Netherlands Organisation for Scientific Research (NOW-CW) (Ad Hoc)	2016
Austrian Science Fund (Ad Hoc)	2016
US-Israel Binational Science Foundation (Ad Hoc)	2016
Austrian Science Fund (Ad Hoc)	2015
The Sigma Delta Epsilon/Graduate Women in Science (SDE/GWIS) National Fellowships Program (Ad Hoc)	2015
Postdoctoral Researchers International Mobility Experience, German Academic Exchange Service (DAAD) (Ad Hoc)	2014
University of Wisconsin at Milwaukee, Research Growth Initiative Grant Program (Ad Hoc)	2013

External Reviewer for Promotion and Tenure

Kalamazoo College, Dr. Michael Wollenberg	2018
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Service for Peer-Reviewed Journals

Editor

Guest Editor, <i>PLoS Neglected Tropical Diseases</i>	2020
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Editorial Board Membership

Editorial Board, <i>Infection and Immunity</i>	2015-present
Editorial Board, <i>Journal of Bacteriology</i>	2010-present
Editorial Board, <i>Journal of Microbiological Methods</i>	2010-present
Editorial Board, <i>Current Clinical Microbiology Reports</i>	2014-present

Ad Hoc Review of Manuscripts

ACS Infectious Diseases, American Journal of Tropical Medicine and Hygiene, Applied and Environmental Microbiology, Archives of Microbiology, Asian Pacific Journal of Tropical Medicine, Biochimica et Biophysica acta, Bioinformation, BMC Microbiology, Communications Biology, Current Microbiology, Diseases of Aquatic Organisms, Drug Design, Development, and Therapy, Expert Review of Vaccines, FEBS Journal, FEMS Microbiology Ecology, FEMS Microbiology Letters, Frontiers in Cellular and Infection Microbiology, Frontiers in Microbiology, Gene, Gut Microbes, Heliyon, Infection, Genetics, and Evolution, Infection and Immunity, International Journal of Biological Macromolecules, International Journal of Medical Microbiology, Japanese Journal of Infectious Diseases, Journal of Applied Microbiology, Journal of Bacteriology, Journal of Biological Chemistry, Journal of Clinical Microbiology, Journal of Infectious Diseases, Journal of Pediatric Infectious Diseases, Journal of Pharmacy and Pharmacology, Journal of Visualized Experiments, Microbial Pathogenesis, Microbial Ecology, Microbiology, MSystems, Molecular Ecology, Molecular Microbiology, Nature Communications, Nature Structural and Molecular Biology, Pathogens and Disease, PLoS Neglected Tropical Diseases, PLoS One, PLoS Pathogens, Scientific Reports, Toxins, Trials in Vaccinology, Tropical Medicine and International Health, Vaccine, Virulence

Manuscripts reviewed since 2013:

2020: 17
2019: 31
2018: 16
2017: 21
2016: 33
2015: 23
2014: 25
2013: 20

Community

Vice President, Detroit Immunological Society	2015-2018
Article in WSU Alumni Magazine about fish research,	fall 2017
Radio interview about Haiti cholera outbreak, Evening Edition, Jamaican Public Radio program, 13 minutes live airtime,	Nov. 4, 2010
Interview about Haiti cholera outbreak, USA Today,	quoted on Nov. 16, 2010
Interview about Haiti cholera outbreak and Withey laboratory research, The South End (WSU student newspaper),	In print Nov. 15, 2010

TEACHING AT WAYNE STATE UNIVERSITY

Graduate Students:

Course Director

IM7850 (Graduate Student Seminar Course) 2010-present
Orally review most student presentations, organize course schedule.

IM7020-7520 (Molecular Mechanisms of Bacterial Pathogenesis) 2018-present
(co-director with Dr. Matt Jackson)

Graduate Lectures

Lecturer, IM7020/7520 (8 contact hours, 22 graduate students)	2020
Lecturer, IM7040 (2 contact hours, 3 graduate students)	2019
Lecturer, IM7020/7520 (8 contact hours, 14 graduate students)	2019
Lecturer, IM7040 (2 contact hours, 1 graduate student)	2018
Lecturer, IM7020/7520 (8 contact hours, 24 graduate students)	2018
Lecturer, IM7040 (2 contact hours, 6 graduate students)	2017
Lecturer, IM7020/7520 (8 contact hours, 24 graduate students)	2017
Lecturer, IM7040 (2 contact hours, 4 graduate students)	2016
Lecturer, IM7020/7520 (8 contact hours, 24 graduate students)	2016
Lecturer, IM7040 (2 contact hours, 4 graduate students)	2015
Lecturer, IM7020/7520 (4 contact hours, 8 graduate students)	2015
Lecturer, IM7040 (2 contact hours, 3 graduate students)	2014
Lecturer, IM7020/7520 (14 contact hours, 20 graduate students)	2014
Lecturer, IBS7010 (2 contacts hours, 25 graduate students)	2013
Lecturer, IM7040 (2 contact hours, 1 graduate student)	2013
Lecturer, IM7520 (6 contact hours, 2 graduate students)	2013
Lecturer, IBS7010 (2 contacts hours, 25 graduate students)	2012
Lecturer, IM7520 (6 contact hours, 1 graduate student)	2012
Lecturer, IM7520 (6 contact hours, 2 graduate students)	2011
Lecturer, IM7040 (2 contact hours, 1 graduate student)	2011
Lecturer, IBS7010 (2 contacts hours, 25 graduate students)	2011
Lecturer, IM7520 (6 contact hours, 5 graduate students)	2010
Lecturer, IM7520 (4 contact hours, 2 graduate students)	2009
Lecturer, IM7520 (4 contact hours, 7 graduate students)	2008
Lecturer, IM7520 (2 contact hours, 5 graduate students)	2007

Graduate Small Group Discussion courses

IM7450 (2 contact hours, 6 students) 2017

Medical Students:

Small Group Laboratory Instruction, M2 Students

Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (25 contact hours, 26 students)	2019
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (25 contact hours, 24 students)	2018
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (25 contact hours, 23 students)	2017
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (25 contact hours, 24 students)	2016
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (25 contact hours, 24 students)	2015
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (25 contact hours, 24 students)	2014
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (31 contact hours, 25 students)	2013
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (31 contact hours, 27 students)	2012
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (31 contact hours, 26 students)	2011
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (31 contact hours, 25 students)	2010
Lead Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (31 contact hours, 25 students)	2009
Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (31 contact hours, 25 students)	2008
Instructor, Immunology, Microbiology, and Virology Laboratory for 2 nd year medical students (31 contact hours, 24 students).	2007

Medical Lectures, M2 Students

Lecturer, Medical Microbiology course, 5 contact hours, 290 students.	2020
Lecturer, Medical Microbiology course, 5 contact hours, 290 students.	2019

Lecturer, Medical Microbiology course, 5 contact hours, 290 students.	2018
Lecturer, Medical Microbiology course, 5 contact hours, 290 students.	2017
Lecturer, Medical Microbiology course, 5 contact hours, 290 students.	2016
Lecturer, Medical Microbiology course, 3 contact hours, 300 students.	2015
Lecturer, Medical Microbiology course, 3 contact hours, 300 students.	2014
Lecturer, Medical Microbiology course, 3 contact hours, 300 students.	2013
Lecturer, Medical Microbiology course, 2 contact hours, 300 students.	2012
Lecturer, Medical Microbiology course, 2 contact hours, 300 students.	2011
Lecturer, Medical Microbiology course, 2 contact hours, 300 students.	2010
Lecturer, Medical Microbiology course, 2 contact hours, 300 students.	2009
Lecturer, Medical Microbiology course, 1.5 contact hours, 300 students.	2008

Residents/Fellows

Research presentation to 1 st year infectious disease fellows	2017
Research presentation to 1 st year infectious disease fellows	2016
Lecturer for Journal Club, Perinatology Research Branch of NIH, 4 sessions, 4 contact hours	2008-2009

Mentorship

Essays/Theses/Dissertations directed:

- 1) Isabella Cubillejo, Immunology and Microbiology Ph.D. student 2020-present
- 2) Bhavita Bhaya, Biochemistry and Molecular Biology Master's student 2019- present
- 3) Dustin Farr, Immunology and Microbiology Ph.D. student 2018-present
- 4) Kayla Beever, **M.S.** in Basic Medical Sciences (**2019**)
- 5) Madison Walton, Immunology and Microbiology Ph.D. student 2018-present
- 6) Paul Breen, Immunology and Microbiology Ph.D. candidate 2016-present
- 7) Kristie Mitchell, Immunology and Microbiology Ph.D. candidate 2012-present
- 8) Louay K. Meroueh, **M.S.** in Basic Medical Sciences (**2017**)
- 9) Alexander Klott, **M.S.** in Basic Medical Sciences (**2016**)
- 10) Paula Dietz, **M.S.** in Immunology and Microbiology (**2015**)
- 11) Sarah Plecha, **Ph.D. (2014)** Dissertation Title "The Mechanism for Inhibition of *Vibrio cholerae* Virulence Gene Expression By Bile and its Fatty Acid Components"
Dr. Plecha is currently a post-doctoral research fellow at the University of Detroit Mercy Dental School
- 12) Joshua Thomson, **Ph.D. (2014)** Dissertation Title: "Mechanisms for Bicarbonate-Mediated Virulence in *Vibrio cholerae*"
Dr. Thomson is currently an Assistant Professor at University of Detroit Mercy Dental School
- 13) Sarah Bajer, **M.S.** in Biomedical Sciences (**2013**)
Sarah is Program Director of Histotechnology at Beaumont Hospital
- 14) Jennifer Stone, **Ph.D. (2013)** Dissertation title: "Functional Characterization of the Cholera Toxin Promoter of *Vibrio cholerae*."
Dr. Dittmer is currently a grants administrator at University of Texas

- 15) Basel Abuaita, **Ph.D. (2010)** Dissertation title: “Post-Transcriptional Regulation of *Vibrio cholerae* Virulence Activator ToxT.”
Dr. Abuaita is currently a research scientist at the University of Michigan

As member of Ph.D. dissertation committee

- 1) Shelby Kasto, Biological Sciences Ph.D. student
- 2) Cameron Roberts, Biochemistry and Molecular Biology Ph.D. student
- 3) Jonathan Greenberg, Immunology and Microbiology Ph.D. student
- 4) Ankita Singh, Indian Institute of Science Education and Research Kolkata, Ph.D. student
- 5) Patrick McLaughlin, Biological Sciences **Ph.D.** (Biological Sciences, 2019)
- 6) Ashley Anderson, Immunology and Microbiology Ph.D. student
- 7) William Close, Immunology and Microbiology **Ph.D.** (Immunology and Microbiology, 2017)
- 8) Juniad Khan, Indian Institute of Science Education and Research, Mohali, Punjab, India **Ph.D.** 2016
- 9) Hannah Rowe, **Ph.D.** (Immunology and Microbiology, 2014)
- 10) Sanofar Abdeen, **Ph.D.** (Chemistry, 2012)
- 11) Phanramphoei Namprachan, **Ph.D.** (Immunology and Microbiology, 2011)
- 12) Jonathan Allen, **Ph.D.** (Immunology and Microbiology, 2011)
- 13) Brett Hanson, **Ph.D.** (Immunology and Microbiology, 2011)

As member of Master’s Degree thesis committee

- 1) Humna Tak, Basic Medical Sciences M.S. student, 2020-present
- 2) Daniel Lenchner, Basic Medical Sciences, **M.S.** in Basic Medical Sciences **(2020)**
- 3) Pearl James, Basic Medical Sciences M.S. student, 2020-present
- 4) Dipanwita Dutta Chowdhury, Biochemistry and Molecular Biology M.S. student, 2019-present
- 5) Jillian Green, Biochemistry and Molecular Biology M.S. student, 2019-present
- 6) Madison Ahmad, Immunology and Microbiology M.S. student, 2018-present
- 7) Essence Turner, Biochemistry and Molecular Biology M.S. student, 2017-present
- 8) Michael Pawlitz, **M.S.** in Immunology and Microbiology **(2019)**
- 9) Bradford Nelson, **M.S.** in Basic Medical Sciences **(2018)**
- 10) Kelly Hopper, **M.S.** in Basic Medical Sciences **(2008)**
- 11) Andrew Faila, **M.S.** in BMS **(2014)**
- 12) Justin Khoriaty, **M.S.** in BMS **(2011)**
- 13) Mary Meram, **M.S.** in BMS **(2011)**
- 14) Sarmad Alyas, **M.S.** in BMS **(2010)**
- 15) Kevin Belen, **M.S.** in BMS **(2009)**
- 16) Veronica Kokavec, **M.S.** in BMS **(2008)**
- 17) Kent VandeVrede, **M.S.** in BMS **(2008)**

Residents/Fellows

Dhrubajyoti Nag, postdoctoral fellow in Withey lab 2017-present

Faculty mentoring

Kevin Theis, Assistant Professor in BMI	2015-present
Eric Sebzda, Associate Professor in BMI	2020-present

Other Mentorship

Mentor, 30+ Immunology and Microbiology graduate student rotations	2007-present
Mentor, 10 WSU undergraduate student research projects	2007-present
Mentor, two area high school students, summer projects	2014
Mentor, Henry Ford Community College Biotechnology intern (Maureen Taylor)	2013
Mentor, 2 nd year Medical Student summer research project (Kevin Ginsburg)	2011
Mentor, area high school students, summer projects	2010, 2011

GRANTS, CONTRACTS, AND OTHER FUNDING

Active National/International Grants and Contracts

- 1) NIH R01 AI127390-01A1, 5/5/2017-4/30/2022
“Mechanisms for *Vibrio cholerae* colonization and pathogenesis in zebrafish”
PI: **JH Withey**, 30% effort. \$1,250,000 direct costs

The three major goals of this study are to 1) Identify and characterize V. cholerae colonization factors in zebrafish, 2) Determine how V. cholerae successfully competed with the zebrafish intestinal microbiota to establish a colonization niche, and 3) Determine how global V. cholerae gene expression changes during infection and prior to escape from the host.

Pending National/International Grants and Contracts

- 1) NIH R21 AI149073, 2019-2021
“Mechanisms for control of *Vibrio cholerae* pathogenesis by intestinal effectors”
PI: **JH Withey**, 10% effort, \$275,000 direct costs

Previously Funded Grants and Contracts

- 1) Wayne State University Faculty Competition for Postdoctoral Fellows, 2018-2020
PI: **JH Withey**, \$60,000
This was a competitive award from the WSU Vice President for Research that offers \$30,000 per year for 2 years to support a new postdoctoral fellow.
- 2) Wayne State University Competitive Bridge Funding Program, 2015-2017
PI: **JH Withey**, \$35,000.
- 3) Fulbright-Nehru Senior Scholarship, 10/30/2014-3/30/2015
“Establishing the zebrafish model for cholera in India”
PI: **JH Withey**, \$30,000

- 4) NIH R21 AI095520-01, 6/7/2011-11/30/2014
 “Zebrafish as a Natural Host Model for *Vibrio cholerae*.”
 PI: **JH Withey**, 25% effort. \$275,000 direct costs.
- 5) Bill and Melinda Gates Foundation OPP1068124, 2012-2014
 Grand Challenges Explorations, Round 9:
 “Linoleic acid as a therapeutic/preventative agent for cholera”
 PI: **JH Withey**, 10% effort, \$100,000 direct costs.
- 6) NIH R56 AI093622-01, 9/1/2011-8/31/2013
 “Mechanisms for control of *Vibrio cholerae* virulence.”
 PI: **JH Withey**, 30% effort. \$250,000 direct costs.
- 7) Wayne State University Competitive Bridge Funding Program, 2011
 PI: **JH Withey**, \$35,000.
- 8) NIH K22 AI071011-01, 2/1/2007-1/31/2010
 “Function of *Vibrio cholerae* ToxT.”
 PI: **JH Withey**, 75% effort. \$250,000 direct costs.
- 9) NIH F32 AI51074, 7/1/2002-6/30/2005
 “Structure and Function of *Vibrio cholerae* ToxT.”
 PI: **JH Withey**, 100% effort. \$142,908 direct costs.

PUBLICATIONS

H INDEX = 18, TOTAL CITATIONS = 1460 (As of 6/26/2020, Source: Google Scholar)

Peer Reviewed Publications

Reports of Original Work

Underline denotes author is/was a WSU student or postdoc in my laboratory

*corresponding author

- 1) Bhattacharya, D., Sinha, R., Mukherjee, P., Howlader, D.R., Nag, D., Sarkar, S., Koley, H., **Withey, J.H.**, and Gachhui, R. “Anti-virulence activity of polyphenolic fraction isolated from Kombucha against *Vibrio cholerae*” *Microbial Pathogenesis* DOI: 10.1016/j.micpath.2019.103927 (2020)
- 2) Howlader D.R., Bhaumik, U., Satpathy, A., Sarkar, S., Ghoshal, M., Maito, S., **Withey, J.H.**, Mitobe, H., Dutta, S., and Koley, H. “An experimental zebrafish model for *Shigella* pathogenesis, transmission, vaccine efficacy and therapeutic studies” *PLoS One*, submitted (2020)

- 3) DeAngelis, C.M., Nag, D., **Withey, J.H.**, and Matson, J.S. "Characterization of the *Vibrio cholerae* phage shock protein response" *Journal of Bacteriology*, DOI: 10.1128/JB.00761-18 (2019) Citations: 3
- 4) *Hounmanou, Y.M.G., Mdegela, R.H., Dougnon, T.V., Madsen, H., **Withey, J.H.**, Olsen, J.E., and Dalsgaard, A. "Tilapia (*Oreochromis niloticus*) as a reservoir host for survival and transmission of *Vibrio cholerae* O1 biotype El Tor in the aquatic environment" *Frontiers in Microbiology* DOI: 10.3389/fmicb.2019.01215 (2019) Citations: 1
- 5) Breen, P., Winters, A.D., Nag, D., Ahmad, M.A., Theis, K.R., and ***Withey, J.H.** "Internal versus external pressures: Effect of housing systems on zebrafish and tank water microbiomes." *Zebrafish*, DOI:10.1089/zeb.2018.1711 (2019)
- 6) Nag, D., Breen, P., Raychoudhuri, S., and ***Withey, J.H.** "Glucose metabolism by *E. coli* inhibits *Vibrio cholerae* intestinal colonization of zebrafish." *Infection and Immunity*, DOI: 10.1128/IAI.00486-18 (2018), Citations: 8

This paper was selected by the editors as a spotlight article of significant interest
- 7) Nag, D., Mitchell, K.C., Breen, P., and ***Withey, J.H.** "Quantifying *V. cholerae* colonization and pathogenesis in the adult zebrafish model." *Journal of Visualized Experiments*, **137**: doi: 10.3791/57767 (2018), Citations: 4
- 8) Mitchell, K.C., Breen, P., Britton, S., Neely, M.N., and ***Withey, J.H.** "Quantifying *Vibrio cholerae* Enterotoxicity in a Zebrafish Infection Model." *Applied and Environmental Microbiology*, **83**(16):e00783-17. (2017), Citations: 16

This paper was selected by the editors as a spotlight article of significant interest
- 9) Howlader, D.R., Sinha, R., Nag, D., Majumder, N., Mukherjee, P., Bhaumik, U., **Withey, J.H.**, and *Koley, H. "Zebrafish as a novel model for Non-Typhoidal Salmonella pathogenesis, transmission and vaccine efficacy." *Vaccine*, **34**:5099-5106 (2016), Citations: 14
- 10) Nag, D., Sinha, R., Mukherjee, P., **Withey, J.H.**, and *Koley, H. "Immunization of mice with a live transconjugant Shigella hybrid strain induced Th1 and Th17 cell mediated immune responses and confirmed passive protection against heterologous shigellae." *Scandinavian Journal of Immunology*, **83**(2):92-101 (2016) Impact Factor: 2.26, Citations: 2
- 11) Plecha, S.C. and ***Withey, J.H.** "[¹⁴C] linoleic Acid Uptake and Fractionation Assay in *Vibrio cholerae*." *Bio-protocol* **5**(24): e1682 (2015) Does not participate in Impact Factor

- 12) ***Withey, J.H.**, Nag, D., Plecha, S.C., Sinha, R., and Koley, H. "Conjugated linoleic acid reduces cholera toxin production in vitro and in vivo by inhibiting *Vibrio cholerae* ToxT activity," *Antimicrobial Agents And Chemotherapy*, **59**(12):7471-7576 (2015) Impact Factor: 4.42, Citations: 13
- 13) Plecha, S.C., and ***Withey, J.H.** "Mechanism for inhibition of *Vibrio cholerae* ToxT activity by the unsaturated fatty acid components of bile." *Journal of Bacteriology*, **197**(10):1716-1725 (2015) Impact Factor: 3.20, Citations: 49
- 14) Thomson, J.J., Plecha, S.C., and ***Withey, J.H.** "A small unstructured region in *Vibrio cholerae* ToxT mediates the response to positive and negative effectors and ToxT proteolysis." *Journal of Bacteriology* **197**(3):654-668 (2015) Impact Factor: 3.20, Citations: 11
- 15) Park, B., Zielke, R., Wierzbicki, I., Mitchell, K.C., **Withey, J.H.**, and *Sikora, A. "A new metalloprotease secreted by the Type II Secretion System links *Vibrio cholerae* with collagen." *Journal of Bacteriology*, **197**:1051-1064 (2015) Impact Factor: 3.20, Citations: 23

This publication also produced the cover photo for this issue of *Journal of Bacteriology*
- 16) Rowe, H.M. **Withey, J.H.**, and *Neely, M.N. "Zebrafish as a model for zoonotic aquatic pathogens." *Developmental and Comparative Immunology*, **46**(1):96-107(2014) Impact Factor: 3.71, Citations: 37
- 17) Thomson, J.J., and ***Withey, J.H.** "Bicarbonate increases binding affinity of *Vibrio cholerae* ToxT to virulence gene promoters." *Journal of Bacteriology*, **196**(22):3872-3880 (2014) Impact Factor: 2.69, Citations: 23
- 18) Runft, D., Mitchell, K.C., Abuaita, B.H., Allen, J., Bajer, S., Ginsberg, K., Neely, M.N., and ***Withey, J.H.** "Zebrafish as a Natural Host Model for *Vibrio cholerae* Colonization and Transmission." *Applied and Environmental Microbiology*, **80**(5):1710-1717. (2014) Impact Factor: 3.95, Citations: 65
- 19) Dittmer, J.B., and ***Withey, J.H.** "Identification and Characterization of the Functional Toxboxes in the *Vibrio cholerae* Cholera Toxin Promoter." *Journal of Bacteriology*, **194**(19):5255-5263. (2012) Impact Factor: 3.81, Citations: 18
- 20) Abuaita, B.A., and ***Withey, J.H.** "Termination of *Vibrio cholerae* Virulence Gene Expression is Mediated By Proteolysis of the Major Virulence Activator, ToxT." *Molecular Microbiology*, **81**(6):1640-1653. (2011) Impact Factor: 5.01, Citations: 22
- 21) Abuaita, B.A., and ***Withey, J.H.** "Genetic screening for bacterial mutants in liquid growth media by fluorescence-activated cell sorting." *Journal of Microbiological Methods*, **84**:109-113. (2011) Impact Factor: 2.09, Citations: 4

- 22) Richard, A.[‡], **Withey, J.H.** [‡], Beyhan, S., Yildiz, F., and *DiRita, V.J. “The *Vibrio cholerae* virulence regulatory cascade controls glucose uptake through activation of TarA, a small regulatory RNA.” *Molecular Microbiology*, **78**(5):1171-1181. (2010) Impact Factor: 4.82, Citations: 50
[‡]Equal contributors.
- 23) Abuaita, B.H., and ***Withey, J.H.** “Bicarbonate induces *Vibrio cholerae* virulence gene expression by enhancing ToxT activity.” *Infection and Immunity*, **77**:4111-4020. (2009) Impact Factor: 4.21, Citations: 152
This paper was selected by the editors as a spotlight article of significant interest
- 24) Bellair, M., and ***Withey, J.H.** “Flexibility of *Vibrio cholerae* ToxT in Transcription Activation of Genes Having Altered Promoter Spacing.” *Journal of Bacteriology* **190**:7925-7931. (2008) Impact Factor: 3.64, Citations: 20
- 25) **Withey, J.H.**, and *DiRita, V.J. “The toxbox: Specific DNA sequence requirements for activation of *Vibrio cholerae* *tcpA* transcription by ToxT.” *Molecular Microbiology* **59**:1779-1789. (2006) Impact Factor: 5.63, Citations: 78
- 26) **Withey, J.H.**, and *DiRita, V.J. “Activation of both *acfA* and *acfD* transcription by *Vibrio cholerae* ToxT requires binding to two centrally located DNA sites in an inverted repeat conformation.” *Molecular Microbiology* **56**: 1062-1077. (2005) Impact Factor: 6.20, Citations: 46
- 27) **Withey, J.H.**, and *DiRita, V.J. “*Vibrio cholerae* ToxT independently activates transcription of the divergent *aldA* and *tagA* genes.” *Journal of Bacteriology* **187**: 7890-7900. (2005) Impact Factor: 4.17, Citations: 46
I performed 100% of the experiments and wrote the paper.
- 28) Huang, C., Wolfgang, M.C., **Withey, J.**, Koomey, J.M., and *Friedman, D.I. “Charged tmRNA but not tmRNA-mediated proteolysis is essential for *Neisseria gonorrhoeae* viability.” *EMBO Journal* **19**: 1098-1107. (2000) Impact Factor: 14.00, Citations: 149
- 29) **Withey, J.**, and *Friedman, D.I. “Analysis of the Role of *trans*-Translation in the Requirement of tmRNA for λ *immP22* Growth in *Escherichia coli*.” *Journal of Bacteriology* **181**: 2148-2157. (1999) Impact Factor: 3.71, Citations: 90

Review Articles

- 1) Nag, D., Farr, D., Walton, M.G., and **Withey, J.H.** “Zebrafish models for pathogenic *Vibrios*.” *Journal of Bacteriology* under review. (2020)

- 2) Matson, J.S., **Withey, J.H.**, and *DiRita, V.J. "Regulatory networks Controlling *Vibrio cholerae* Virulence Gene Expression." *Infection and Immunity* **75**: 5542-5549. (2007) Impact Factor: 4.00, Citations: 259
- 3) **Withey, J.H.**, and *Friedman, D.I. "A Salvage Pathway for Protein Synthesis: tmRNA and *Trans*-Translation." *Annual Review of Microbiology* **57**: 101-123. (2003) Impact Factor: 12.11, Citations: 176
- 4) **Withey, J.H.**, and *Friedman, D.I. "The biological roles of *trans*-translation." *Current Opinion in Microbiology* **5**: 154-159. (2002) Impact Factor: 6.43, Citations: 79

Book Chapters:

- 1) Mitchell, K.C., and **Withey, J.H.** "*Danio rerio* as a native host model for understanding pathophysiology of *Vibrio cholerae*." In *Methods in Molecular Biology: Vibrio cholerae Methods and Protocols*, pp 97-102 (Springer). (2018)
- 2) **J.H. Withey**, "Control of *Vibrio cholerae* virulence gene expression by ToxT." In *Research Advances in Bacteriology*. (2009)

Published Abstracts:

*Denotes a WSU student in my laboratory

- 1) *Dixon, R.D., Mitchell, K., and **Withey, J.H.** "Effects on quorum sensing due to *hapR* gene frame shift mutation and deletion in *Vibrio cholerae*." Abstract of papers of the American Chemical Society, Volume 247. (2014)
- 2) *Mitchell, K.C., Runft, D., Neely, M.N., and **Withey, J.H.** "Zebrafish as a Natural Host Model for *Vibrio cholerae*." ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2014)
- 3) *Mitchell, K.C., Runft, D., *Abuaita, B.H., Allen, J., *Ginsberg, K, Neely, M.N., and **Withey, J.H.** "Zebrafish as a Natural Host Model for *Vibrio cholerae*." ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2013)
- 4) *Plecha, S. and **Withey, J.H.** "The Mechanism of Bile and Unsaturated Fatty Acid Inhibition of *Vibrio cholerae* Virulence Gene Expression." ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2013)
- 5) *Thomson, J. and **Withey, J.H.** "Mechanisms for Induction of *Vibrio cholerae* Virulence by Bicarbonate." ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2012)

- 6) *Dittmer, J. and **Withey, J.H.** “Characterizing the Interplay Between ToxT and H-NS in Controlling Cholera Toxin Expression in *Vibrio cholerae*.” ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2012)
- 7) *Plecha, S. and **Withey, J.H.** “Determining the Inhibition Mechanism of Bile and Unsaturated Fatty Acids on *Vibrio cholerae* Virulence Gene Expression.” ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2012)
- 8) *Thomson, J. and **Withey, J.H.** “Mechanisms for induction of *Vibrio cholerae* virulence by bicarbonate.” Microbial Pathogenesis and Host Response, Cold Spring Harbor Press, Cold Spring Harbor, NY. (2011)
- 9) *Dittmer, J. and **Withey, J.H.** “Identifying and Characterizing the ToxT and H-NS Binding Sites in the Cholera Toxin Promoter of *Vibrio cholerae*.” Microbial Pathogenesis and Host Response, Cold Spring Harbor Press, Cold Spring Harbor, NY. (2011)
- 10) *Plecha, S. and **Withey, J.H.** “Control of *Vibrio cholerae* virulence gene expression by bile and unsaturated fatty acids.” Microbial Pathogenesis and Host Response, Cold Spring Harbor Press, Cold Spring Harbor, NY. (2011)
- 11) *Dittmer, J. and **Withey, J.H.** “Identifying and Characterizing the ToxT and H-NS Binding Sites in the Cholera Toxin Promoter of *Vibrio cholerae*.” Molecular Genetics of Bacteria and Phages, Cold Spring Harbor Press, Cold Spring Harbor, NY. (2010)
- 12) *Abuaita, B. and **Withey, J.H.** “Regulation of *Vibrio cholerae* Virulence Regulator ToxT by Degradation.” ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2010)
- 13) *Dittmer, J. and **Withey, J.H.** “Identifying and Characterizing the ToxT and H-NS Binding Sites in the Cholera Toxin Promoter of *Vibrio cholerae*.” Microbial Pathogenesis and Host Response, Cold Spring Harbor Laboratory, Cold Spring Harbor Press, Cold Spring Harbor, NY, pg. 21. (2009)
- 14) *Abuaita, B. and **Withey, J.H.** “Regulation of *Vibrio cholerae* Virulence Regulator ToxT by Degradation.” Microbial Pathogenesis and Host Response, Cold Spring Harbor Laboratory, Cold Spring Harbor Press, Cold Spring Harbor, NY, p. 21. (2009)
- 15) *Abuaita, B. and **Withey, J.H.** “Post-transcriptional Regulation of *Vibrio cholerae* Virulence Activator ToxT.” ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2009)

- 16) Bellair, M. and **Withey, J.H.** "The Effects of Bile and Temperature On Virulence Factor Expression in *Vibrio cholerae*." ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2008)
- 17) *Abuaita, B. and **Withey, J.H.** "Monitoring Expression of *Vibrio cholerae* Virulence Regulator ToxT." ASM General Meeting Abstracts, American Society for Microbiology, Washington, D.C. (2008)
- 18) Bellair, M. and **Withey, J.H.** "Promoter Spacing Requirements for Activation of *Vibrio cholerae* Virulence Genes by ToxT." *Vibrio 2007*, Institut Pasteur, Paris, France, p. 98. (2007)
- 19) Bellair, M. and **Withey, J.H.** "Promoter Spacing Requirements for Activation of *Vibrio cholerae* Virulence Genes by ToxT." *Microbial Pathogenesis and Host Response*, Cold Spring Harbor Laboratory, Cold Spring Harbor Press, Cold Spring Harbor, NY, p. 21. (2007)
- 20) **Withey, J.H.** and DiRita, V.J. "Identification of Specific Base-Pairs Required for Activation of *Vibrio cholerae tcpA* Transcription by ToxT." ASM General Meeting, American Society for Microbiology, Washington, D.C. (2005)
- 21) **Withey, J.H.** and DiRita, V.J. "Transcriptional Activation of the Divergent *Vibrio cholerae acfA* and *acfD* genes by ToxT." *Molecular Genetics of Bacteria and Phages*, Cold Spring Harbor Press, Cold Spring Harbor, NY. (2004)
- 22) **Withey, J.H.** and DiRita, V.J. "Transcriptional Activation of *Vibrio cholerae acfA* and *acfD* by ToxT Requires Binding of Two ToxT Monomers to an Inverted Repeat Sequence." ASM General Meeting, American Society for Microbiology, Washington, D.C. (2004)
- 23) **Withey, J.H.** and DiRita, V.J. "*Vibrio cholerae* ToxT Activates Transcription by Binding to DNA Sequences Containing Inverted Repeat, Direct Repeat, and Single Binding Sites." *Microbial Pathogenesis and Host Response*, Cold Spring Harbor Press, Cold Spring Harbor, NY. (2003)
- 24) **Withey, J.H.** and DiRita, V.J. "Identification of ToxT Binding Sites Upstream of the *Vibrio cholerae* Virulence Genes *acfA*, *acfD*, *aldA*, *tagA*, and *tcpI*." ASM General Meeting, American Society for Microbiology, Washington, D.C. (2003)
- 25) **Withey, J.H.** and DiRita, V.J. "Identification of a consensus DNA binding sequence for the *V. cholerae* virulence regulator, ToxT." *Molecular Genetics of Bacteria and Phages*, Cold Spring Harbor Press, Cold Spring Harbor, NY. (2002)

PRESENTATIONS

National and International Meetings

Podium Presentations (refereed)

- 1) International Conference on Microbial Pathogenesis and New Frontiers 2019
CSIR-IMTECH, Chandigarh, India
“Probiotic *E. coli* inhibits *V. cholerae* colonization of a natural host.”
- 2) 106th Indian Science Congress, Jalandhar, India 2019
“Glucose metabolism by *E. coli* inhibits *Vibrio cholerae* intestinal colonization of zebrafish.”
- 3) Simposio Internacional VIBRIO Chile 2018
Universidad Autónoma de Chile, Santiago, Chile
“Control of cholera toxin production by ToxT and H-NS”
- 4) US-Japan Conference on Cholera and Other Bacterial Enteric Infections 2018
Hat Yai, Thailand
“Characterization of H-NS-mediated repression of cholera toxin gene transcription”
- 5) International Conference on 3S: Safety, Security and Sustainability: 2015
Innovations in Food and Bioprocess Industries
Jadavpur University, Kolkata, India
“Inhibition of cholera toxin production by linoleic acid, an essential fatty acid”
- 6) U.S.-Japan Cholera Meeting, ICDDR,B Dhaka, Bangladesh 2014
“Modeling *Vibrio cholerae* Transmission in Zebrafish, A Natural Host.”
- 7) 6th Aquatic Animal Models for Human Disease and 2013
Midwestern Zebrafish Conference, Milwaukee, WI
“Zebrafish as a Natural Host Model for *Vibrio cholerae* Colonization and Pathogenesis.”
- 8) U.S.-Japan Cholera Meeting, Chiba, Japan. 2012
“Zebrafish as a Natural Host Model for *Vibrio cholerae* Colonization and Pathogenesis.”
- 9) NIH Conference on Small Animal Models for Enteric Diseases 2012
Bethesda, MD
“Zebrafish as a Natural Host Model for *Vibrio cholerae*.”
- 10) U.S.-Japan Cholera Meeting, Kolkata, India. 2011
“Modulation of *Vibrio cholerae* Virulence Gene Expression By ToxT Effectors Bicarbonate and Bile.”

- 11) 20 Year Celebration of the DiRita Laboratory, University of Michigan Medical School, Department of Microbiology and Immunology, Ann Arbor, MI. "What's up with ToxT?" 2011
- 12) Midwest Microbial Pathogenesis Conference, St. Louis, MO. "Regulating the Regulators: Post-Transcriptional Control of *Vibrio cholerae* Virulence." 2010
- 13) Closing the Loop: A Celebration of the Scientific Life of Robert F. Schleif, Johns Hopkins University, Baltimore, MD. "The Regulation of *Vibrio cholerae* Virulence Gene Expression by ToxT." 2009
- 14) Molecular Genetics of Bacteria and Phages, Cold Spring Harbor, NY. "Transcriptional Activation of the Divergent *Vibrio cholerae* *acfA* and *acfD* Genes by ToxT." 2004
- 15) Molecular Genetics of Bacteria and Phages, Madison, WI. "*Vibrio cholerae* ToxT Activates Transcription by Binding to DNA Sequences Containing Inverted Repeat, Direct Repeat, and Single Binding Sites." 2003
- 16) Molecular Genetics of Bacteria and Phages, Cold Spring Harbor, NY. "Identification of a consensus DNA binding sequence for the *V. cholerae* virulence regulator, ToxT." 2002
- 17) Molecular Genetics of Bacteria and Phages, Cold Spring Harbor, NY. "An Examination of Species Specificity for tmRNA and SmpB Protein in *E. coli* and *N. gonorrhoeae*." 2000
- 18) Molecular Genetics of Bacteria and Phages, Madison, WI. "A Ribosomal Suppressor of the Effect of *ssrA* Mutation upon λ *immP22* Growth in *E. coli*." 1999
- 19) Molecular Genetics of Bacteria and Phages, Cold Spring Harbor, NY. "Can *trans*-Translation Occur in Ribosomes Stalled Upstream of the 3' End of mRNA?" 1998

Sessions chaired

- 1) 106th Indian Science Congress, Jalandhar, India 2019

Oral presentations by trainees

Underline denotes the presenter of the work

- 1) Nag, D., Breen, P, and **Withey, J.H.** 2019
54th US-Japan Joint Panel Conference on Cholera and Other Bacterial Enteric Infections, Osaka, Japan
“Gene regulation of *Vibrio cholerae* During Transmission in Zebrafish”
- 2) Farr, D., Peterson, M., and **Withey, J.H.** 2019
ASM Microbe, San Francisco, CA
“Characterization of the Zebrafish Immune Response to *Vibrio cholerae* Infection”
- 3) Nag, D., Raychaudhuri, S., and **Withey, J.H.** 2018
Midwest Vibrio Summit, Bloomington, IN
“Effect of glucose metabolism byproducts of *Escherichia coli* on *Vibrio cholerae* colonization in zebrafish”

Poster Presentations (refereed)

*Denotes a WSU Ph.D. student in my laboratory

Underline denotes the presenter of the work

- 1) *Farr, D., Nag, D., *Peterson, M., and **Withey, J.H.** 2020
Mucosal Immunology Symposium, Ann Arbor, MI
“Neutrophil responses to *Vibrio cholerae* infection in the zebrafish model”
- 2) *Breen, P., Winters, A.D., Theis, K.R., and Withey, J.H. 2019
54th US-Japan Joint Panel Conference on Cholera and Other Bacterial Enteric Infections, Osaka, Japan
“*Vibrio cholerae* Infection Induces Significant Changes in the Zebrafish Intestinal Microbiome”
- 3) *Farr, D., Nag, D., *Peterson, M., and **Withey, J.H.** 2019
Vibrio 2019, Montreal, Canada
“Characterization of the Zebrafish Immune Response to *Vibrio cholerae*”
- 4) *Peterson, M., Severin, G.B., Rhoades, C.R., Waters, C.M., and **Withey, J.H.** 2019
Vibrio 2019, Montreal, Canada
“Identification of factors that enable enhanced environmental persistence of *Vibrio cholerae* O1 El Tor in the zebrafish natural host model”
- 5) *Breen, P., Winters, A.D., Theis, K.R., and **Withey, J.H.** 2019
Vibrio 2019, Montreal, Canada
“*Vibrio cholerae* Infection Induces Significant Changes in the Zebrafish Intestinal Microbiome”

- 6) *Peterson, M.G., and **Withey, J.H.** 2019
Midwest Microbial Pathogenesis Conference, Toledo, OH
“Identification of Factors that Enable Long-Term *Vibrio cholerae* Colonization of Zebrafish”
- 7) *Breen, P., Winters, A.D., Theis, K.R. and **Withey, J.H.** 2019
Midwest Microbial Pathogenesis Conference, Toledo, OH
“*Vibrio cholerae* Infection Induces Significant Changes in the Zebrafish Intestinal Microbiome”
- 8) *Farr, D., *Peterson, M., and **Withey, J.H.** 2019
Midwest Microbial Pathogenesis Conference, Toledo, OH
“Characterization of the Zebrafish Immune Response to *Vibrio cholerae* Infection”
- 9) *Peterson, M.G., and **Withey, J.H.** 2019
ASM Microbe, San Francisco, CA
“Identification of Factors that Enable Long-Term *Vibrio cholerae* Colonization of Zebrafish”
- 10) Nag, D., *Breen, P., and **Withey, J.H.** 2019
ASM Microbe, San Francisco, CA
“*Vibrio cholerae* Shows Hyper-Infectivity during Transmission in Zebrafish”
- 11) *Breen, P., Winters, A.D., Theis, K.R. and **Withey, J.H.** 2019
ASM Microbe, San Francisco, CA
“*Vibrio cholerae* Infection Induces Significant Changes in the Zebrafish Intestinal Microbiome”
- 12) Hounmanou, Y.M.G., Leekitcharoenphon, P., Hendriksen, R.S., Dougnon, T.V., Mdegela, R.H., **Withey, J.H.**, Olsen, J.E., and Dalsgaard, A. 2019
ASM Microbe, San Francisco, CA
“Survival, Transmission, and Genomics of Pathogenic *Vibrio cholerae* in Edible Fish”
- 13) *Farr, D., *Peterson, M., and **Withey, J.H.** 2019
ASM Microbe, San Francisco, CA
“Characterization of the Zebrafish Immune Response to *Vibrio cholerae* Infection”
- 14) Nag, D., Raychowdhury, S. and **Withey, J.H.** 2019
US-Japan Conference on Cholera and Other Bacterial Enteric Infections
Hanoi, Vietnam
“Probiotic *E. coli* inhibits *V. cholerae* colonization of a natural host.”

- 15) Nag, D., Raychaudhuri, S., and **Withey, J.H.** 2018
 US-Japan Conference on Emerging Infectious Diseases, Hanoi, Vietnam
 “Effect of glucose metabolism byproducts of *Escherichia coli* on *Vibrio cholerae* colonization in zebrafish”
- 16)***Breen, P.**, Winters, A., Theis, K., and **Withey, J.H.** 2018
 Midwest Microbial Pathogenesis Conference, Iowa City, Iowa
 “Internal vs. External Pressures: the Effect of Housing Systems on the Zebrafish and Tank Water Microbiomes”
- 17) Nag, D., Raychaudhuri, S., and **Withey, J.H.** 2018
 Gordon Research Conference on Microbial Toxins and Pathogenicity, Waterville Valley, NH. “Effect of glucose metabolism byproducts of *Escherichia coli* on *Vibrio cholerae* colonization in zebrafish”
- 18)***Breen, P.**, Winters, A., Theis, K., and **Withey, J.H.** 2018
 Midwest Vibrio Summit, Bloomington, IN
 “Internal vs. External Pressures: the Effect of Housing Systems on the Zebrafish and Tank Water Microbiomes”
- 19)**DeAngelis, C.M.**, Nag, D., **Withey, J.H.**, and Matson, J.S. 2018
 Midwest Vibrio Summit, Bloomington, IN
 “Characterization of the Phage Shock Protein Response in *Vibrio cholerae*”
- 20)***Mitchell, K.C.**, Neely, M.N., and **Withey, J.H.** 2016
 Gordon Research Conference on Microbial Toxins and Pathogenicity, Waterville Valley, NH. “Quantitation of toxin-induced diarrhea in zebrafish infected with *Vibrio cholerae*”
- 21)***Mitchell, K.C.**, Neely, M.N., and **Withey, J.H.** 2015
 Midwest Microbial Pathogenesis Meeting, Indianapolis, IN
 “Zebrafish as a model for *Vibrio cholerae* transmission and pathogenesis”
- 22)***Mitchell, K.C.**, Neely, M.N., and **Withey, J.H.** 2014
 Gordon Research Conference on Microbial Toxins and Pathogenicity, Waterville Valley, NH. “Zebrafish as a model for *Vibrio cholerae* transmission and pathogenesis”
- 23)***Mitchell, K.C.**, Runft, D., M.N., and **Withey, J.H.** 2014
 ASM General Meeting, Boston, MA
 “Zebrafish as a Natural Host Model for *Vibrio cholerae*.”
- 24)***Thomson, J.J.**, Plecha, S.C., and **Withey, J.H.** 2014
 Vibrio 2014, Edinburgh, Scotland
 “A small unstructured region in *Vibrio cholerae* ToxT mediates the response to positive and negative effectors and proteolysis.”

- 25)*Mitchell, K.C., Runft, D., Neely, M.N., and **Withey, J.H.** 2014
 Vibrio 2014, Edinburgh, Scotland
 “Zebrafish as a Natural Host Model for *Vibrio cholerae*.”
- 26)*Plecha, S. and **Withey, J.H.** 2014
 Vibrio 2014, Edinburgh, Scotland
 “The Mechanism of Bile and Unsaturated Fatty Acid Inhibition of *Vibrio cholerae* Virulence Gene Expression.”
- 27)*Mitchell, K.C., Runft, D., Abuaita, B.H., Allen, J., Ginsberg, K, Neely, M.N., and **Withey, J.H.** 2013
 ASM General Meeting, Denver, CO
 “Zebrafish as a Natural Host Model for *Vibrio cholerae*.”
- 28)*Plecha, S. and **Withey, J.H.** 2013
 ASM General Meeting, Denver, CO
 “The Mechanism of Bile and Unsaturated Fatty Acid Inhibition of *Vibrio cholerae* Virulence Gene Expression.”
- 29)*Thomson, J., *Plecha, S., and **Withey, J.H.** 2012
 Gordon Research Conference on Microbial Toxins and Pathogenicity, Waterville Valley, NH. “Control of *Vibrio cholerae* virulence by ToxT effectors.
- 30)*Thomson, J. and **Withey, J.H.** 2012
 ASM General Meeting, San Francisco, CA
 “Mechanisms for Induction of *Vibrio cholerae* Virulence by Bicarbonate.”
- 31)*Dittmer, J. and **Withey, J.H.** 2012
 ASM General Meeting, San Francisco, CA
 “Characterizing the Interplay Between ToxT and H-NS in Controlling Cholera Toxin Expression in *Vibrio cholerae*.”
- 32)*Plecha, S. and **Withey, J.H.** 2012
 ASM General Meeting, San Francisco, CA
 “Determining the Inhibition Mechanism of Bile and Unsaturated Fatty Acids on *Vibrio cholerae* Virulence Gene Expression.”
- 33)*Dittmer, J. and **Withey, J.H.** 2011
 Vibrio 2011, Santiago de Compostela, Spain.
 “Control of Cholera Toxin Expression By ToxT and H-NS.”
- 34)*Thomson, J. and **Withey, J.H.** 2011
 Microbial Pathogenesis and Host Response, Cold Spring Harbor, NY.
 “Mechanisms for induction of *Vibrio cholerae* virulence by bicarbonate.”

- 35)*Plecha, S. and **Withey, J.H.** 2011
 Microbial Pathogenesis and Host Response, Cold Spring Harbor, NY.
 “Control of *Vibrio cholerae* virulence gene expression by bile and unsaturated fatty acids.”
- 36)*Dittmer, J. and **Withey, J.H.** 2010
 Molecular Genetics of Bacteria and Phages, Cold Spring Harbor, NY.
 “Identifying and Characterizing the ToxT and H-NS Binding Sites in the Cholera Toxin Promoter of *Vibrio cholerae*.”
- 37)*Abuaita, B.H., and **Withey, J.H.** 2010
 Gordon Research Conference on Microbial Toxins and Pathogenicity, Waterville Valley, NH. “A FACS –Based Genetic Screening Method For Bacteria in Liquid Growth Media.”
- 38)*Abuaita, B. and **Withey, J.H.** 2010
 ASM General Meeting, San Diego, CA
 “Regulation of *Vibrio cholerae* Virulence Regulator ToxT by Degradation.”
- 39)*Dittmer, J. and **Withey, J.H.** 2009
 Microbial Pathogenesis and Host Response, Cold Spring Harbor, NY
 “Identifying and Characterizing the ToxT and H-NS Binding Sites in the Cholera Toxin Promoter of *Vibrio cholerae*.”
- 40)*Abuaita, B. and **Withey, J.H.** 2009
 Microbial Pathogenesis and Host Response, Cold Spring Harbor, NY
 “Regulation of *Vibrio cholerae* Virulence Regulator ToxT by Degradation.”
- 41)*Abuaita, B. and **Withey, J.H.** 2009
 ASM General Meeting, Philadelphia, PA
 “Post-transcriptional Regulation of *Vibrio cholerae* Virulence Activator ToxT.”
- 42)Bellair, M. and **Withey, J.H.** 2008
 ASM General Meeting, Boston, MA
 “The Effects of Bile and Temperature On Virulence Factor Expression in *Vibrio cholerae*.”
- 43)*Abuaita, B. and **Withey, J.H.** 2008
 ASM General Meeting, Boston, MA
 “Monitoring Expression of *Vibrio cholerae* Virulence Regulator ToxT.”
- 44)Bellair, M.B., and **Withey, J.H.** 2008
 Gordon Research Conference on Microbial Toxins and Pathogenicity, Andover, NH.
 “Modulation of *Vibrio cholerae* ToxT Activity By Environmental Conditions.”

- 45)*Abuaita, B.H. and **Withey, J.H.** 2008
1st Training Mission in Cholera Collaborative Research and Case Management,
Kolkata, India. "Regulation of *Vibrio cholerae* Virulence Gene Expression By ToxT."
- 46)Bellair, M.B., and **Withey, J.H.** 2007
Microbial Pathogenesis and Host Response, Cold Spring Harbor Laboratory,
Cold Spring Harbor, NY. "Promoter Spacing Requirements for Activation of *Vibrio cholerae* Virulence Genes by ToxT."
- 47)Bellair, M.B. and **Withey, J.H.** 2007
Vibrio 2007, Institut Pasteur, Paris, France.
"Promoter Spacing Requirements for Activation of *Vibrio cholerae* Virulence Genes by ToxT."
- 48)**Withey, J.H.** and DiRita, V.J. 2005
ASM General Meeting, Atlanta, GA.
"Identification of Specific Base-Pairs Required for Activation of *Vibrio cholerae tcpA* Transcription by ToxT."
- 49)**Withey, J.H.** and DiRita, V.J. 2004
ASM General Meeting, New Orleans, LA.
"Transcriptional Activation of *Vibrio cholerae acfA* and *acfD* by ToxT Requires Binding of Two ToxT Monomers to an Inverted Repeat Sequence."
- 50)**Withey, J.H.** and DiRita, V.J. 2003
Microbial Pathogenesis and Host Response, Cold Spring Harbor, NY.
"*Vibrio cholerae* ToxT Activates Transcription by Binding to DNA Sequences Containing Inverted Repeat, Direct Repeat, and Single Binding Sites."
- 51)**Withey, J.H.** and DiRita, V.J. 2003
ASM General Meeting, Washington, D.C.
"Identification of ToxT Binding Sites Upstream of the *Vibrio cholerae* Virulence Genes *acfA*, *acfD*, *aldA*, *tagA*, and *tcpI*."
- 52)**Withey, J.H.** and DiRita, V.J. 2002
ASM General Meeting, Salt Lake City, UT.
"Identification of a Consensus Binding Sequence for *Vibrio cholerae* ToxT."
- 53)**Withey, J.H.** and Friedman, D.I. 1999
ASM General Meeting, Chicago, IL.
"A Suppressor of *ssrA* Mutation Maps to a Genomic Region Consisting of Ribosomal Protein Genes."

- 54) **Withey, J.H.** and Friedman, D.I. 1997
Molecular Genetics of Bacteria and Phages, Madison, WI.
“Examination of the Effects of Tagging and Tagging for Degradation Mutants on λ immP22 Growth in *Escherichia coli*.”
- 55) **Withey, J.H.** and Friedman, D.I. 1996
Molecular Genetics of Bacteria and Phages, Cold Spring Harbor, NY.
“Tagging for Degradation Function of 10Sa RNA is Not Required for Support of λ immP22 Growth in *Escherichia coli*.”
- 56) **Withey, J.H.** and Friedman, D.I. 1996
ASM General Meeting, New Orleans, LA.
“Binding of *Escherichia coli* 10Sa RNA to Proteins Containing a Helix-Turn-Helix Motif.”
- 57) **Withey, J.H.** and Friedman, D.I. 1995
Molecular Genetics of Bacteria and Phages, Cold Spring Harbor, NY.
“Interaction of *E. coli* 10Sa RNA with DNA Binding Proteins.”

Invited Lectures/Presentations

International/National

- 1) University of Michigan- Dearborn 2019
Department of Natural Sciences
“Fishy stories of cholera- *Vibrio cholerae* infections of natural hosts”
- 2) Tulane University School of Medicine 2019
Department of Microbiology and Immunology
“*Vibrio cholerae* pathogenesis in natural hosts: a fishy story of cholera”
- 3) Loyola University Chicago, Health Sciences Division 2018
Department of Microbiology and Immunology
“Don’t drink the water: *Vibrio cholerae* pathogenesis in humans and fish”
- 4) University of Warwick, Coventry, England 2018
School of Life Sciences
“Don’t drink the water: *Vibrio cholerae* pathogenesis in humans and fish”
- 5) University of Illinois Urbana/Champaign 2018
Department of Pathobiology
“*Vibrio cholerae* pathogenesis in humans and fish”
- 6) National Institute for Cholera and Enteric Diseases (NICED), Kolkata, India 2015
“Zebrafish as a model for *Vibrio cholerae* and other enteric pathogens”

- 7) Heritage Institute of Technology, Kolkata, India 2015
Department of Biotechnology
“*Vibrio cholerae* pathogenesis in humans and zebrafish”
- 8) National Institute for Cholera and Enteric Diseases (NICED), Kolkata, India 2014
“Control of *Vibrio cholerae* virulence by in vivo ToxT effectors”
- 9) University of Toledo Health Science Center 2014
Department of Medical Microbiology and Immunology;
“*Vibrio cholerae* pathogenesis in humans and zebrafish”
- 10) Northwestern University Feinberg School of Medicine 2013
Department of Microbiology-Immunology
“Zebrafish as a natural host model for *Vibrio cholerae* colonization and transmission”
- 11) Michigan State University 2012
Department of Microbiology and Molecular Genetics
“In vivo Control of *Vibrio cholerae* Virulence”
- 12) Medical College of Ohio 2005
Department of Medical Microbiology and Immunology
“Activation of *Vibrio cholerae* Virulence Genes by ToxT: Variety is the Spice of DNA Binding.”
- 13) University of Michigan Medical School, 2004
Department of Microbiology and Immunology.
“Activation of *Vibrio cholerae* Virulence Genes by ToxT: Variety is the Spice of DNA Binding.”

Local

- 1) Detroit Medical Center, Department of Infectious Diseases 2017
“The Current Status of Cholera”
- 2) Wayne State University, Department of Biological Sciences 2015
“*Vibrio cholerae* pathogenesis in humans and fish”
- 3) Wayne State University, MedStart Program 2014
“Cholera”
- 4) Detroit Medical Center, Department of Infectious Diseases 2014
“Cholera”
- 5) Detroit R&D, Good Morning Detroit seminar series 2013
“Zebrafish as a natural host model for *Vibrio cholerae* colonization and transmission”

- 6) Wayne State University, Department of Chemistry 2013
 “*Vibrio cholerae* Pathogenesis in Humans and Fish”
- 7) Wayne State University School of Medicine, Department of Physiology. 2012
 “Control of *Vibrio cholerae* Virulence by Human Intestinal Signals
- 8) Wayne State University School of Medicine, 2008
 Department of Anatomy and Cell Biology.
 “The Ups and Downs of *Vibrio cholerae* Virulence Gene Regulation.”
- 9) Wayne State University School of Medicine, 2008
 Department of Biochemistry and Molecular Biology.
 “The Regulation of *Vibrio cholerae* Virulence Gene Expression by ToxT.”
- 10) Wayne State University School of Medicine, 2006
 Department of Immunology and Microbiology.
 “Regulation of *Vibrio cholerae* Virulence Genes: It’s All About the Toxboxes.”
- 11) Wayne State University School of Medicine, 2004
 Department of Immunology and Microbiology
 “Activation of *Vibrio cholerae* Virulence Genes by ToxT: Variety is the Spice of DNA Binding.”