

Andrea R. Castillo, PhD, Curriculum Vitae

CURRENT POSITION: Associate Professor of Microbiology, Eastern Washington University
258 Science Building
Cheney, WA 99004-2440
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EDUCATION:

- Postdoctoral fellow, University of California, Santa Cruz, CA
- Postdoctoral fellow, Fred Hutchinson Cancer Research Center, Seattle, WA
- Ph.D. in Molecular, Cellular and Developmental Biology, University of Colorado, Boulder, CO
- B.S. in Biology, College of Idaho, Caldwell, ID

CURRENT RESEARCH PROJECTS:

- Identifying intracellular acting *Helicobacter pylori* virulence factors using a yeast model system.
- Role of putative small regulatory RNA (sRNA) in regulating expression in *Helicobacter pylori*.
- Exploring Manuka honey antibacterial mechanisms (Laurisa Ankley)
- Monitoring fecal coliform in Cannon Hill Park Pond, Spokane WA (Veronica Albrecht)
- Engineering *Lactococcus lactis* to express the inhibitory neurotransmitter, GABA (Killian Campbell)
- Determining the antibiotic susceptibility profile for the human intestinal bacteria, *Christensenella minuta* (Juanita Ferguson)

UNDERGRADUATE AND GRADUATE STUDENTS MENTORED IN RESEARCH:

Killian Campbell, Juanita Ferguson, Katherine Camp, Laurisa Ankley, Veronica Albrecht, Hannah Rumbah, Bryce Burnett, Savanna Garcia, Chris Baber, Allysa Barton, Amelia Bothwell, David Malinak, Cody Thomas, Natacha Chimenti, Rebecca Watson, Xue Xi, Cassie Miller, James Schaefer, Abigail Winschell, Olga Shiva, Nathan Phillips, Chris Hansen, Ben Knox, Michael Haugen, Dorine Lantimo, Thanh Vo, Derek Wallace, Son Do, Merri Leqoc, Michelle Gunsior

MCNAIR UNDERGRADUATE MENTEES INCLUDE: Laurisa Ankley, Veronica Albrecht, Allysa Barton, Olga Shiva

FUNDING WHILE AT EWU:

EWU-Start Something Big Foundation Grant	2014
EWU-Start Something Big Foundation Gant	2011
NSF ADVANCE Grant (Co-PI)	2010-2012
EWU-Start Something Big Foundation Grant	2010
Faculty Research and Creative Works Grant	2010-2011
Faculty Research and Creative Works Grant	2009-2010
Eastern Washington University Start-up funds	2008

SUBMITTED GRANTS, PENDING:

Multiple Sclerosis Foundation Grant, Co-PI	submitted August 2, 2017
NIH R15 Grant, Co-PI	to be submitted October 25, 2017
EWU-Start Something Big Foundation Grant	to be submitted October 18, 2017

COURSES TAUGHT (36 CONTACT HOURS PER YEAR):

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| • Elementary Medical Microbiology (hybrid classroom), EWU | current |
| • Genetics (flipped classroom), EWU | current |
| • Medical Microbiology (hybrid classroom), EWU | current |
| • Microbiology, EWU | current |
| • Medical Bacteriology, EWU | current |
| • Medical Bacteriology, EWU (online) | |
| • Microbial Physiology, EWU | current |
| • Current Topics in Molecular Biology, new topics each year, EWU | current |
| • Guest lecturer, microbiology WWAMI program | '09, '10, '15 |

FELLOWSHIPS AND AWARDS:

EWU Merit Award in Teaching	2013
American Cancer Society (co-written with K. Ottemann, awarded to KO)	2005-2008
Postdoctoral NRSA (NIH) Fellowship	2002-2003
Predocctoral NRSA (NIH)	1998-2000
Bachelor of Science, <i>summa cum laude</i> , Albertson College of Idaho	1994
Cold Spring Harbor Undergraduate Fellowship	1993

OUTREACH:

Wilson Elementary (Spokane) Microbe Presentation	Oct. 2017
Satori Camp Instructor	2015, 2016
Science Olympiad, Microbe Mission	2012
Upward Bound Instructor, Yakima High School Students	2012
MESA, High School student activity	2013

SELECTED PUBLICATIONS:

Albrecht, V and **AR Castillo**. 2017. Fecal Coliforms Increase in a Storm Drain Fed Pond After Rain Events. Northwest Science, *in preparation*

Sause, WE, **AR Castillo**, KM Ottemann. 2012. The *Helicobacter pylori* Autotransporter ImaA (HP0289) Modulates the Immune Response and Contributes to Host Colonization. Infect Immun. 80(7): 2286-96.

Ta LH, LM Hansen, WE Sause, O Shiva, A Millstein, KM Ottemann, **AR Castillo** and JV Solnick. 2012. Conserved transcriptional unit organization of the cag pathogenicity island among *Helicobacter pylori* strains. Front. Cell. Inf. Microbio. 2:46

Castillo, A. 2011. How bacteria use quorum sensing to communicate. Frontiers in Research Articles Series, Nature Education/Bedford Freeman Worth

- Castillo, AR**, A Woodruff, E Cabral, L Connolly, W Sause, KM.Ottemann. 2008. Recombination-based *in vivo* expression technology identifies *Helicobacter pylori* genes required for host colonization. *Infect. Immun.* 76 (12): 5632-42.
- Castillo, AR**, SA Arevalo, A Woodruff, KM Ottemann. 2008. Experimental analysis of *Helicobacter pylori* transcriptional terminators suggests this microbe uses both intrinsic and factor-dependent termination. *Mol. Micro.* 67(1):155-170
- Collins, KA, **AR Castillo**, SY Tatsutani, S Biggins. 2005. *De novo* kinetochore assembly requires the centromeric histone H3 variant. *Mol. Biol. Cell*, 16(12): 5649-60.
- Castillo, AR**, JB Meehl, G Morgan, AR Schutz, M Winey. 2002. The Yeast Protein Kinase Mps1p is Required for Assembly of the Integral Spindle Pole Body Component Spc42p. *J. Cell Biol.*, 156(3): 453-65.
- Mach, JM, **AR Castillo**, R Hoogstraten, JT Greenberg. 2001. The *Arabidopsis*-accelerated cell death gene *ACD2* encodes red chlorophyll catabolite reductase and suppresses the spread of disease symptoms. *Proc. Natl. Acad. Sci. USA*, 98(2): 771-776.
- Jones, MH, JB Bachant, **AR Castillo**, TH Giddings, Jr., M. Winey. 1999. Yeast Dam1p is required to maintain spindle integrity during mitosis and interacts with the Mps1p kinase. *Mol. Bio. Cell*, 10: 2377-2391.

POSTER AND ORAL PRESENTATION:

- Castillo, A.R.**, 2017. Characterization of *Helicobacter pylori* Cytotoxin Associated Gene Pathogenicity Island Putative Small Regulatory RNA Transcripts. Regional American Society for Microbiology Meeting, Pullman, WA. **Poster**
- Albrecht, V., **A.R. Castillo**. 2017. Fecal Coliforms Increase in a Storm Drain Fed Pond After Rain Events, PNCWA, Spokane, WA. **Poster**
- Castillo, A.R.** 2014. A Yeast System to Identify *Helicobacter pylori* T4SS Effectors. **Invited Speaker.** Regional American Society for Microbiology Meeting, Seattle, WA
- Castillo, A.R.** 2013. Female Researcher's Status and Training in Universities in the USA. **Invited Speaker.** Mukogawa Symposium, Mukogawa Women's University.
- Castillo, A.R.** and Abigail Winschell. 2013. Molecular Genetics of Bacteriophage and Bacteria, **poster**
- Bothwell, A. and **A.R. Castillo**. 2013. Molecular Genetics of Bacteriophage and Bacteria, **poster**
- Islam-Zwart, K. and **A.R. Castillo**, Christina Patterson. 2011. The First Step: Faculty Work-Life Survey. **Poster**, NSF Advance Grant Meeting, Alexandria, VA.
- Castillo, A.R.**, S.A. Arevalo, A. Woodruff, K.M. Ottemann. 2007. Experimental analysis of *Helicobacter pylori* transcriptional terminators suggests this microbe uses both intrinsic and factor dependent termination. **Speaker** at the West Coast Bacterial Physiology Meeting, Pacific Grove, CA.
- Castillo, A.R.**, A. Woodruff, E. Cabral, L. Connolly, K.M. Ottemann. 2007. Use of RIVET in *Helicobacter pylori* identifies novel putative virulence factors. **Poster** at the Microbial Pathogenesis and Host Response Meeting, Cold Spring Harbor, NY.
- Castillo, A.R.**, A. Woodruff, E. Cabral, L. Connolly, K.M. Ottemann. 2006. Using RIVET to identify *Helicobacter pylori* virulence factors. **Speaker** at the Bay Area Pathogenesis Meeting, San Francisco, CA.
- Castillo, A.R.**, A. Woodruff, E. Cabral, L. Connolly, K.M. Ottemann. 2005. Using RIVET to identify *Helicobacter pylori* virulence factors. **Speaker** at the West Coast Bacterial Physiology Meeting, Pacific Grove, CA.
- Castillo, A.R.**, A. Woodruff, E. Cabral, L. Connolly, K.M. Ottemann. 2005. Using RIVET to identify *Helicobacter pylori* virulence factors. **Poster** at the Microbial Pathogenesis and Host Response Meeting, Cold Spring Harbor, NY.

CONSULTANT:

Nature Scitable, Ask and Expert
BioMed Bridge