

EDUCATION

Ph.D.

Marine Biology, Texas A&M University at Corpus Christi, Texas, 2015 -
Dissertation: Assessing the fate of plastic debris in the marine environment

M.Sc.

Microbial Ecology, University of Waterloo, Waterloo, Ontario, 2009 - 2011
Thesis: Targeted enrichment of cellulase genes using stable-isotope probing and metagenomics.

B.Sc.

Biology, University of Waterloo, Waterloo, Ontario, 2005 - 2009
Senior Thesis Project: Characterizing seasonal variability of total nitrogen concentration in Lake Bosumtwé, Ghana

PROFESSIONAL EXPERIENCE

Ph.D., Marine Biology, Texas A&M University – Corpus Christi, Texas, June 2015 – present

- Performing an independent research project focusing on the impacts of plastic debris in the marine environment at the microbial level
- Continuing to learn new techniques (flow cytometry, cell sorting, bioinformatics)

Research Technologist II, SickKids Hospital, Toronto, Ontario, November 2013 – November 2014

- Continued to perform independent and collaborative research studying host-microbe interactions in the gut using molecular techniques and learned new methods (FISH, ddPCR)

Research Technologist I, SickKids Hospital, Toronto, Ontario, October 2012 – October 2013

- Performed independent research focusing on the microbiota and host-microbe interactions of the gastrointestinal tract, associated diseases, and the effects of probiotics/prebiotics using molecular, culture-based, and cell-based techniques

M.Sc., Microbial Ecology, University of Waterloo, Waterloo, Ontario, September 2009 – December 2011

- Performed molecular and microbiological techniques on a daily basis, including DNA isolation, PCR, DGGE, PFGE, SCODA, next-generation sequencing and analysis, cloning, gel analysis, transformation, restriction digests, culture-based selection

Field & Lab Technician, Aquatic Ecology, University of Waterloo, Waterloo, Ontario, May 2009 – September 2009

- Led a field research team of four conducting limnological research on Lake Ontario focused on determining the effect of *Dreissenid* mussels on lake eutrophication
- Implemented and analyzed field-based experiments aimed at determining the effect of UV radiation on phytoplankton in freshwater Ontario lakes

Field & Lab Technician, Benthic Limnology, University of Waterloo, Waterloo, Ontario, May 2008 – September 2008

- Implemented and analyzed *in situ* experiments attempting to determine the effect of *Dreissenid* mussels on Lake Simcoe benthic invertebrate communities

Lab Technician, Paleolimnology, University of Waterloo, Waterloo, Ontario January 2008 – April 2008

- Analyzed zooplankton communities for a M.Sc. research study evaluating the effect of flooding on the Peace-Athabasca River delta

PUBLICATIONS

Vong, L. Yeung, CW., **Pinnell, LJ.**, Sherman, PM. 2016. Adherent-invasive *Escherichia coli* exacerbates antibiotic-associated intestinal dysbiosis and neutrophil extracellular trap activation. *Inflammatory Bowel Diseases* 22: 42-54

Vong, L., **Pinnell, LJ.**, Määttänen, P., Yeung, CW., Lurz, E., Sherman, PM. 2015. Selective enrichment of commensal gut bacteria protects against *Citrobacter rodentium*-induced colitis. *American Journal of Physiology-Gastrointestinal and Liver Physiology* 309: G181-G192

Yusta, B., Baggio, LL., Koehler, J., Holland, D., Cao, X., **Pinnell, LJ.**, Johnson-Henry, KC., Yeung, W., Surrete, MG., Bang, KW., Sherman, PM., Drucker, DJ. 2015. GLP-1 receptor (GLP-1R) agonists modulate enteric immune responses through the intestinal intraepithelial lymphocyte GLP-1R. *Diabetes* 64: 2537-2549

Howe, KL., Lorentz, R., Assa, A., **Pinnell, LJ.**, Johnson-Henry, K., Sherman, PM. 2015. Transforming growth factor beta-1 protects against intestinal epithelial barrier dysfunction caused by hypoxia-reoxygenation. *Shock* 41: 483-489

Assa, A., Vong, L., **Pinnell, LJ.**, Rautava J., Avitzur, N., Johnson-Henry, KC, Sherman, PM. 2014. Vitamin D deficiency predisposes to adherent-invasive *Escherichia coli*-induced epithelial barrier dysfunction and experimental colitis. *Inflammatory Bowel Diseases* 21: 297-306

Rautava, J., **Pinnell, LJ.**, Vong, L., Askeer, N., Assa, A., Sherman, PM. 2014. Oral microbiome compositions changes in mouse models of colitis. *Journal of Gastroenterology and Hepatology* 30: 521-527

Johnson-Henry, KC., **Pinnell LJ.**, Waskow, AM., Irrazabal, T., Martin, A., Hausner, M., Sherman, PM. 2014. Short-chain fructo-oligosaccharide and inulin modulate inflammatory responses and microbial communities in Caco2-bbe cells and in a mouse model of intestinal injury. *Journal of Nutrition* 144: 1725-1733

Pinnell LJ., Dunford, E., Ronan, P., Hausner, M., Neufeld, JD. 2014. Recovering glycoside hydrolase genes from active cellulolytic bacteria. *Canadian Journal of Microbiology* 60: 469-476

Assa, A., Vong L., **Pinnell, LJ.**, Avitzur, N., Johnson-Henry, KC., Sherman, PM. 2014. Vitamin D deficiency promotes epithelial barrier dysfunction and intestinal inflammation. *Journal of Infectious Diseases* 210: 1296-1305.

Cheng, J., **Pinnell, LJ.**, Engel, K., Neufeld, JD., Charles, TC. 2014. Versatile broad-host-range cosmids for construction of high quality metagenomic libraries. *Journal of Microbiological Methods*. 99: 27-34

Engel, K. **Pinnell, LJ.**, Cheng J., Charles, TC., Neufeld JD. 2012. Nonlinear electrophoresis for purification of soil DNA for metagenomics. *Journal of Microbiological Methods*. 88: 35-40

Pinnell, LJ., Charles, TC., Neufeld, JD. 2011. Stable-isotope probing and metagenomics. *Stable Isotope Probing and Related Technologies*. Whiteley A, Murrel JC (Eds). ASM Press.

PRESENTATIONS

Pinnell, LJ. (presenter), Tallman, J. (presenter), Paranjpye, R., Turner, JW. Genomic analysis of attenuation in pandemic *Vibrio parahaemolyticus*. American Society for Limnology and Oceanography Ocean Science Meeting, February 2016

Moreno, E. (presenter), Parks, M., **Pinnell, LJ.**, Paranjpye, Turner, JW. Genomic analysis of two emergent *Vibrio parahaemolyticus* ecotypes. American Society for Limnology and Oceanography Ocean Science Meeting, February 2016

Parks, M. (presenter), Moreno, E., **Pinnell, LJ.**, Tallman, J., Paranjpye, R., Turner, JW. Genome sequencing and analysis of a highly virulent *Vibrio parahaemolyticus* strain isolated from the marine environment. American Society for Limnology and Oceanography Ocean Science Meeting, February 2016

Vong, L. (presenter), Yeung, W., **Pinnell, LJ.**, Sherman, PM. Intestinal dysbiosis enhances gut microflora-induced neutrophil extracellular traps. Experimental Biology, San Diego, California, April 2014

Lin, A. (presenter), **Pinnell, LJ.**, Sherman, PM., Inman, RD. HLA-B27 Influence on The Gut Microbiome. American College of Rheumatology Annual Meeting, San Diego, California, October 2013

Assa, A. (presenter), Vong, L., **Pinnell, LJ.**, Avitzur, N., Johnson-Henry, KC., Sherman, PM. Vitamin D protects against intestinal inflammation and epithelial barrier dysfunction. SickKids Cell Biology Program Research Retreat, Toronto, Ontario, May 2013

Rautava, J. (presenter), **Pinnell, LJ.**, Vong, L., Askeer, N., Assa, A., Sherman, PM. Mouse oral microbiome changes with colon inflammation. Toronto-McMaster-SickKids Research Day, Toronto, Ontario, February 2013

Pinnell, LJ. (presenter), Dunford, E., Charles, TC., Neufeld, JD. Discovering novel cellulases with DNA-stable isotope probing coupled with functional metagenomics. American Society for Microbiology Annual General Meeting, New Orleans, Louisiana, May 2011

Pinnell, LJ. (presenter), Neufeld, JD. Combining DNA-SIP and functional metagenomics to discover truly novel cellulases. University of Waterloo Graduate Research Conference, Waterloo, Ontario, April 2011

Pinnell, LJ. (presenter), Dunford E., Charles, TC., Neufeld, JD. Characterizing the active consortia of cellulolytic organisms in arctic tundra soil. Canadian Society for Microbiology Annual Meeting, Hamilton, Ontario, June 2010

AWARDS & SCHOLARSHIPS

Study Abroad Graduate Scholarship

Texas A&M University – Corpus Christi, 2016

Graduate Summer Scholarship

Texas A&M University – Corpus Christi, 2016

Graduate Research Assistantship

Texas A&M University – Corpus Christi, 2016

Student Success Scholarship

Texas A&M University – Corpus Christi, 2015

Graduate Summer Scholarship

Texas A&M University – Corpus Christi, 2015

University of Waterloo Graduate Scholarship

University of Waterloo, 2011

University of Waterloo Graduate Scholarship

University of Waterloo, 2010

University of Waterloo Graduate Entrance Scholarship

University of Waterloo, 2009