



SHANNON MCQUAIG ULRICH

CANDIDATE STATEMENT

It is my honor to be considered for this position. I am currently a full professor at St. Petersburg College in Clearwater, FL. My research interests focus in environmental microbiology and astrobiology. I believe my position at a community college as a 'teaching' faculty member who has found time and resources to pursue research may lend a helpful perspective. Community colleges are educational sites for many First-Generation students as well as minorities and/or low-income students. I would like to advocate for increased accessibility to research projects at these schools. Moreover, we are in a changing landscape of education with undergraduate institutions increasing online course offerings. I believe ASM should lead discussions on the challenges of online education as it relates to students developing tactile laboratory skills and provide guidance and recommendations for online education. Inclusion of these topics in future planning discussions would be my priority as a COMS member.

ASM-RELATED ACTIVITIES

- Council on Microbial Sciences (COMS), At-large Member, 2020-2023
- ASM Florida Branch, Board Member, 2019 - present
- ASM Florida Branch, President, 2017-2019
- ASM Florida Branch, Vice President, 2015-2017
- ASM Florida Branch, Secretary, 2013-2015

SHANNON MARIE ULRICH

MAIDEN NAME: MCQUAIG
CURRICULUM VITAE: 2022

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EDUCATION

2009 **Ph.D.** Biology. University of South Florida, Tampa, FL
2005 **M.S.** Microbiology and Cell Science. University of Florida, Gainesville, FL
2003 **B.S.** Microbiology and Cell Science. University of Florida, Gainesville, FL

PROFESSIONAL EXPERIENCE

2014-2020 **Consultant**
PureMolecular, LLC., St. Petersburg, FL

2014-2018 **Host – QUEST**
WEDU, Tampa, FL

2010-current **Professor**
Department of Natural Sciences
St. Petersburg College, Clearwater, FL

2011- current **Adjunct Faculty**
Biology Baccalaureate Program
St. Petersburg College, Clearwater, FL

2009-2010 **Visiting Instructor**
Department of Cell Biology, Molecular Biology and Microbiology
University of South Florida, Tampa, FL

PROFESSIONAL ORGANIZATIONS

2015-current Member, Florida Academy of Sciences
2013-current Member, Florida Branch of American Society for Microbiology
2000-current Member, American Society for Microbiology

SCIENTIFIC SERVICE & ORGANIZATIONS

2019-current Board Member, Florida Branch of American Society for Microbiology
2017-2019 President, Florida Branch of American Society for Microbiology
2015-2017 President-elect, Florida Branch of American Society for Microbiology
2014-2015 Member, 1st Annual Student-Led Life Sciences Colloquium Organization Committee
2013-2015 Secretary, Florida Branch of American Society for Microbiology
2013-2015 Co-founder, Tampa Bay's Tiniest Biology Seminar Series

FUNDING AS PRINCIPLE INVESTIGATOR

2021-2022. *First to Finished: First Generation Student Success Initiative*. St. Petersburg College Foundation Innovations Grant. **\$3,500.00**

2017-2018. *From Making Media to Martian Microbes*. St. Petersburg College Foundation Innovations Grant. **\$3,453.36**

2014-2015. *Bacteria Bathing at the Beach?!?* St. Petersburg College Foundation Innovations Grant. **\$3,459.38**

2013-2014. *From Bacteria to Brush: Extracting Bacterial Pigments* St. Petersburg College Foundation Innovations Grant. **\$3,477.84**

2013-2014. *Examining Triclosan Resistance in Enterococci Isolates* Faculty Governance Organization Creativity Award. **\$5,000.00**

2012-2013. *Filthy Fomites Fostering Infections?* St. Petersburg College Foundation Innovations Grant. **\$3,489.94**

2011-2012. *Cash or Credit? Spreading the Wealth of Virulence Genes.* St. Petersburg College Foundation Innovations Grant. **\$3,434.00**

PUBLICATIONS

- 2022 Robinson, A., and **S.M. McQuaig-Ulrich**. *Haloferax volcanii* remains viable and shows morphological changes under anoxic (CO₂ enriched) and hypobaric (2.4 kPa) atmospheric conditions. *Astrobiology* 22 (7): 829-837
- 2017 Symonds, E.M., S. Young, M.E. Verbyla, **S.M. McQuaig-Ulrich**, E. Ross, J.A. Jimenez, V.J. Harwood, M. Breitbart. Microbial source tracking in shellfish harvesting waters in the Gulf of Nicoya, Costa Rica. *Water Research* 111 (15 March 2017): 177–184
- 2016 Symonds, E.M., C. Singigalliano, M. Gidley, W. Ahmed, **S.M. McQuaig-Ulrich**, and M. Breitbart. Fecal pollution along the southeastern coast of Florida and insight into the use of pepper mild mottle virus as an indicator. *J Appl Microbiol.* 2016, Nov; 121(5):1469-81.
- 2015 Symonds, E.M., M.M. Cook, **S.M. McQuaig**, R.M. Ulrich, R.O. Schenck, J.O. Lukasik, E.S. Van Vleet, M. Breitbart. Reduction of nutrients, microbes, and personal care products in domestic wastewater by a benchtop electrocoagulation unit. *Scientific Reports*. 23 Mar 2015 5: 9380.
- 2012 **S. M. McQuaig**, J. Griffith and V. Harwood. Association of fecal indicator bacteria with human viruses and microbial source tracking markers at coastal beaches impacted by nonpoint source pollution. *Appl Environ Microbiol.* 78: 6423-6432
- 2011 Abdelzaher, A., M. Wright, C. Ortega, A. Hasan, T. Shibata, H. Solo-Gabriele, J. Kish, K. Withum, G. He, S. Elmir, J. Bonilla, T. Bonilla, C. Palmer, T. Scott, J. Lukasik, V. Harwood, **S. M. McQuaig**, C. Sinigalliano, M. Gidley, D. Wanless, L. Plano, A. Garza, X. Zhu, J. Stewart, J. Dickerson, H. Yampara-Iquise, C. Carson, J. Fleisher, and L. Fleming. Daily measures of microbes and human health at a non-point source marine beach. *J Water Health*. Sept; 9(3):443-57
- 2011 Shah, A., A. Abdelzaher, H. Solo-Gabriele, M. Phillips, R. Hernandez, J. Kish, G. Scorzetti, J. Fell, T. Scott, J. Lukasik, V. J. Harwood, **S. M. McQuaig**, C. Sinigalliano, M. Gidley, D. Wanless, A. Agar, J. Liu, J. Stewart, L. Plano and L. Fleming. Indicator microbes correlate with pathogenic bacteria, yeasts and helminthes in sand at a subtropic recreational beach site. *J Appl Microbiol.* Jun; 110(6):1571-83
- 2010 Abdelzaher, A., M. Wright, C. Ortega, H. Solo-Gabriele, G. Miller, S. Elmir, X. Newman, P. Shih, J. Bonilla, T. Bonilla, C. Palmer, T. Scott, J. Lukasik, V. Harwood, **S. M. McQuaig**, C. Sinigalliano, M. Gidley, L. Plano, X. Zhu, J. Wang, L. Fleming. Presence of Pathogens and

Indicator Microbes at a Non-point Source Subtropical Recreational Marine Beach *Appl Environ Micro* Feb; 76(3):724-32.

- 2009 **McQuaig, S. M.**, T. M. Scott, J. O. Lukasik, J. H. Paul, and V. J. Harwood. Quantification of Human Polyomaviruses JCV and BKV by Taqman® Quantitative PCR and Comparison to other Water Quality Indicators in Water and Fecal Samples. *Appl Environ Micro* 75(11): 3379–3388.
- 2007 Brownell, M. J., V. J. Harwood, R. C. Kurz, **S. M. McQuaig**, J. Lukasik, and T. M. Scott. Confirmation of putative stormwater impact on water quality at a Florida beach by microbial source tracking methods and structure of indicator organism populations. *Water Res.* 2007 Aug;41(16):3747-57.
- 2006 **McQuaig, S. M.**, T. M. Scott, V. J. Harwood, S. R. Farrah and J. O. Lukasik. Detection of human derived fecal pollution in environmental waters using a PCR based human polyomavirus assay. *Appl Environ Micro* Dec 72 (12): 7567-74

BOOK CHAPTERS

- 2010 **S. M. McQuaig** and R. Noble. Viruses as tracers of fecal contamination. *In*: C. Hagedon, A.R. Blanch, and V. J. Harwood. *Microbial Source Tracking: Methods, Applications, and Case Studies*. (pp. 113-135) New York: Springer

ABSTRACTS & RESEARCH PRESENTATIONS

2016. Symonds, E.M., C. Sinigalliano, M. Gidley, W. Ahmed, S. M. McQuaig-Ulrich, M. Breitbart. Performance of A Pepper Mild Mottle Virus RT-qPCR Method In Coastal Waters Exposed To Untreated Wastewater Pollution And Its Simulated Risk Of Gastrointestinal Illness. POSTER. General Meeting of the American Society of Microbiology, July, Boston, MA.

STUDENT ABSTRACTS & RESEARCH PRESENTATIONS

(Students supervised by Ulrich are bolded and italicized)

2022. ***Adam Robinson*** and S. McQuaig Ulrich. *Haloferax volcanii* remains viable and shows morphological changes under anoxic (CO₂ enriched) and hypobaric (2.4 kPa) atmospheric conditions. AbSciCon. May, 15-20, Atlanta, GA.

2022. ***Tyler Dondero***, ***Adam Robinson***, and S. McQuaig Ulrich. Survival of Halophilic Microorganisms in Subsurface Mars-like Conditions. Florida Academy of Sciences. March 11, ONLINE. [AWARDED: **Second Place Outstanding Undergraduate Poster**]

2019. ***Erika Ostos*** and S. McQuaig Ulrich. Investigation of the antibiotic resistance profiles of bacteria found in wild-caught versus farm-raised shrimp. Florida Branch American Society for Microbiology, October 11-13, Clearwater, FL.

2019. ***Adam Robinson*** and S. McQuaig-Ulrich. High Salt Concentrations Enable *Haloferax volcanii* to Grow Anaerobically on Perchlorate. Florida Branch American Society for Microbiology, October 11-13, Clearwater, FL.

2018. **Amber Sylvester** and S. McQuaig Ulrich. Assessing environmental samples for the presence of bacteriophage that specifically infect vancomycin-resistant enterococci. STEM By the Bay, January 12-13, Bay Pines, FL.
2017. **Timilehin Opapeju**, S. McQuaig-Ulrich, and M. Osovitz. Blue Light Irradiation on Methicillin Resistance and Hemolytic Activity of Methicillin Resistant *S. aureus* Florida Branch American Society for Microbiology, October 14-15, Clearwater Beach, FL.
2017. **Lauren Bentzel** and S. McQuaig-Ulrich. Are Antibiotics Killing Us? ORAL PRESENTATION. SPC Honors College 10th Annual Collegiate Research Conference, January 27, Seminole, FL.
2016. **Adam Robinson** and S. McQuaig-Ulrich. Survivability of *Haloferax volcanii* under Simulated Martian Atmospheric Conditions in the presence of Perchlorate. ORAL PRESENTATION. Florida Branch American Society for Microbiology, October 15-16, Miami, FL. [AWARDED: Second Place Undergraduate Talk]
2016. **Katherine Waters** and S. McQuaig-Ulrich. The Isolation and Identification of *Staphylococcus* spp. on Public Restroom Surfaces. POSTER PRESENTATION. Florida Branch American Society for Microbiology, October 15-16, Miami, FL.
2016. **Joseph Perez** and S. McQuaig-Ulrich. *Vibrio* or *Enterococcus*?: The bigger health concern. POSTER PRESENTATION. Florida Branch American Society for Microbiology, October 15-16, Miami, FL.
2016. **Erin Hoyle** and S. McQuaig-Ulrich. A Potential New Source of Biosynthesized Sun Protection. POSTER PRESENTATION. Florida Branch American Society for Microbiology, October 15-16, Miami, FL.
2016. **Erin Hoyle, Roberta Spathari**, and S. McQuaig-Ulrich. A Potential New Source of Biosynthesized Sun Protection. ORAL PRESENTATION. Southern Regional Honors Council Conference, March 31-April 2, Orlando, FL.
2016. **Erin Hoyle, Roberta Spathari**, and S. McQuaig-Ulrich. A Potential New Source of Biosynthesized Sun Protection. ORAL PRESENTATION. Florida Collegiate Honors Council Conference, February 19-21, Gainesville, FL.
2016. **Erin Hoyle, Roberta Spathari**, and S. McQuaig-Ulrich. A Potential New Source of Biosynthesized Sun Protection. ORAL PRESENTATION. SPC Honors College 9th Annual Collegiate Research Conference, January 28, Largo, FL.
2015. **Ashleigh Collis** and S. McQuaig-Ulrich. Survey of Anaerobic Bacteria in the Oral Cavity. POSTER. Florida Branch American Society for Microbiology, October 9-11, Cocoa Beach, FL
2015. **Charles Tagoe, Nanjoo Shin** and S. McQuaig-Ulrich. Evaluating Triclosan Resistance and the Presence of Virulence Factors in *Enterococcus* spp. Isolated From Sewage and Environmental Samples. ORAL PRESENTATION. Florida Branch American Society for Microbiology, October 9-11, Cocoa Beach, FL
2015. **Erin Hoyle, Roberta Spathari**, and S. McQuaig-Ulrich. Slime Mold's Resistance to Ultraviolet Radiation Paralleled with *Micrococcus luteus*. POSTER. Florida Branch American Society for Microbiology, October 9-11, Cocoa Beach, FL
2015. **Joseph Perez** and S. McQuaig-Ulrich. Determining Virulence of a Strain of *Vibrio vulnificus* Isolated from a Touch Tank. POSTER. Florida Branch American Society for Microbiology, October 9-11, Cocoa Beach, FL [AWARDED: Second Place Undergraduate Poster]

2015. **Katherine Waters** and S. McQuaig-Ulrich. The Identification of *Staphylococcus* on Door Handles at a Local Hospital. POSTER. Florida Branch American Society for Microbiology, October 9-11, Cocoa Beach, FL

2015. **Theresa Ketcham** and S. McQuaig-Ulrich. Surf's up...but is it safe? Examining the effects of rainfall on beach pollution and the potential health risks to Florida Gulf Coast surfers. POSTER. Florida Branch American Society for Microbiology, October 9-11, Cocoa Beach, FL

2015. **Jessica Small** and S. McQuaig-Ulrich. Fountain of Filth: Analysis of Bacteria in Local Water Fountains. 1st Annual Student-Led Life Sciences Colloquium, April 10, Clearwater, FL. [AWARDED: Best Overall Poster]

2015. **Salwa Shamsi, Ana Fokina** and S. McQuaig-Ulrich. 1-800 MRSA. POSTER. University of South Florida's Undergraduate Research and Arts Colloquium, April 9, Tampa, FL.

2015. **Kyle Pepler** and S. McQuaig. Characterizing an antibiotic producing bacterium. POSTER. SPC Honors College 8th Annual Collegiate Research Conference, January 22, Largo, FL.

2014. **Salwa Shamsi, Maria Hernandez** and S. M. McQuaig. 1-800 MRSA. POSTER. Southern Region Honors Council, March 27-29, Savannah, GA.

2014. **Salwa Shamsi, Maria Hernandez** and S. M. McQuaig. MRSA is coming, watch out! ORAL PRESENTATION. SPC Honors College 7th Annual Collegiate Research Conference, January 29, Largo, FL.

2014. **Romina Buna, Lorela Piqoni** and S. M. McQuaig. Bacteria in the Weeds: Assessing the Prevalence of *Enterococcus* spp. on Marine Vegetation. POSTER. SPC Honors College 7th Annual Collegiate Research Conference, January 29, Largo, FL.

2014. **Theresa Ketcham** and S. M. McQuaig. Surf's up...but is it safe? Examining the effects of rainfall on beach pollution and the potential health risks to Florida Gulf Coast surfers. POSTER. SPC Honors College 7th Annual Collegiate Research Conference, January 29, Largo, FL.

2014. **Brandon Klee** and S. M. McQuaig. Antimicrobial Effects of *Callicarpa americana* on Gram positive bacteria. POSTER. SPC Honors College 7th Annual Collegiate Research Conference, January 29, Largo, FL.

2014. **Chelsea Knapp** and S. M. McQuaig. Pigmented Bacteria in the Environment. POSTER. SPC Honors College 7th Annual Collegiate Research Conference, January 29, Largo, FL.

2014. **Betsaida Miranda** and S. M. McQuaig. Dirty Door Handles: Examining Presence of Antibiotic Resistant Bacteria on Bathroom Door Handles. POSTER. SPC Honors College 7th Annual Collegiate Research Conference, January 29, Largo, FL.

2014. **Richard Nichols** and S. M. McQuaig. Continuing the Characterizing the Normal Oral Microbiota of the *Python regius*. POSTER. SPC Honors College 7th Annual Collegiate Research Conference, January 29, Largo, FL.

2013. **Adela Ago, Romina Buna**, and S. M. McQuaig. Examining the Prevalence of ESBL-positive Bacteria in the Hospital and Community. POSTER. Florida Branch American Society for Microbiology, April 12-14, Islamorada, FL

2013. **Courtney Cain** and S. McQuaig. Gambling on Hygiene. POSTER. Florida Branch American Society for Microbiology, April 12-14, Islamorada, FL

2013. **Mate Fabian, R. Nichols, B. Klee, C. Brennan, L. Cifuentes**, and S. M. McQuaig. Methicillin-Resistant *Staphylococcus aureus* (MRSA) on Money. POSTER. Florida Branch American Society for Microbiology, April 12-14, Islamorada, FL
2013. **Theresa Ketcham, T. F. Rafalski**, and S. M. McQuaig. Cash or Credit? Examining the Prevalence of Vancomycin-Resistant Enterococci on Currency. POSTER. Florida Branch American Society for Microbiology, April 12-14, Islamorada, FL
2013. **Brandon Klee** and **S. M. McQuaig**. Antimicrobial Effects of *Callicarpa americana*. POSTER. Florida Branch American Society for Microbiology, April 12-14, Islamorada, FL
2013. **Richard Nichols** and S. M. McQuaig. Characterizing the Normal Oral Microbiota of the *Python regius*. POSTER. Florida Branch American Society for Microbiology, April 12-14, Islamorada, FL
2013. **Timothy F. Rafalski** and S. M. McQuaig. Investigations into the Differences in Protein Expression of *Proteus mirabilis* Grown in Select Carbohydrate Sources. POSTER. Florida Branch American Society for Microbiology, April 12-14, Islamorada, FL
2013. **Adela Ago, Romina Buna**, and S. M. McQuaig. Examining the prevalence of ESBL-positive bacteria in community and hospital setting. POSTER. Florida Undergraduate Research Conference, February 22-23. Gainesville, FL.
2013. **Brandon Klee** and S. M. McQuaig. Antimicrobial Effects of *Callicarpa americana*. POSTER. Florida Undergraduate Research Conference, February 22-23. Gainesville, FL.
2013. **Timothy F. Rafalski** and S. M. McQuaig. Investigations into the differences in protein expression of *Proteus mirabilis* in select carbohydrate sources. POSTER. Florida Undergraduate Research Conference, February 22-23. Gainesville, FL.
2013. **Richard Nichols** and S. M. McQuaig. Richard Nichols Characterizing the normal oral microbiota of the *Python regius*. POSTER. Florida Undergraduate Research Conference, February 22-23. Gainesville, FL.
2013. **Mate Fabian, B. Klee, R. Nichols** and S. M. McQuaig. Determining the presence of methicillin-resistant *Staphylococcus aureus* (MRSA) on dollar bills and credit cards. POSTER. Florida Undergraduate Research Conference, February 22-23. Gainesville, FL.
2013. **M. Fabian, C. Haggert, T. Ketcham, B. Klee, A. Orbea, R. Nichols, T. F. Rafaski**, and S. M. McQuaig. *Cash or Credit: Spreading the Wealth of Virulence Genes?!?* PANEL DISCUSSION. SPC Honors College 6th Annual Collegiate Research Conference, January 30, Largo, FL.
2013. **Adela Ago, Romina Buna**, and S. M. McQuaig. Examining the prevalence of ESBL-positive bacteria in community and hospital setting. SHORT PANEL DISCUSSION. SPC Honors College 6th Annual Collegiate Research Conference, January 30, Largo, FL.
2013. **Brandon Klee** and S. M. McQuaig. Antimicrobial Effects of *Callicarpa americana*. POSTER. SPC Honors College 6th Annual Collegiate Research Conference, January 30, Largo, FL.
2013. **Mate Fabian, B. Klee, R. Nichols** and S. M. McQuaig. Determining the presence of methicillin-resistant *Staphylococcus aureus* (MRSA) on dollar bills and credit cards. POSTER SPC Honors College 6th Annual Collegiate Research Conference, January 30, Largo, FL.

2013. **Richard Nichols** and S. M. McQuaig. Characterizing the normal oral microbiota of the *Python regius*. POSTER. SPC Honors College 6th Annual Collegiate Research Conference, January 30, Largo, FL.

2013. **Theresa Ketcham, T. F. Rafalski** and S. M. McQuaig. Cash or Credit? – Examining the Presence of Vancomycin-Resistant Enterococcus (VRE) on Currency. POSTER. SPC Honors College 6th Annual Collegiate Research Conference, January 30, Largo, FL.

2013. **Timothy F. Rafalski** and S. M. McQuaig. Investigations into the differences in protein expression of *Proteus mirabilis* in select carbohydrate sources. POSTER. SPC Honors College 6th Annual Collegiate Research Conference, January 30, Largo, FL.