STEVEN WRAY WILHELM – curriculum vitae synopsis (2015-forward)

Research

Professor Wilhelm's group has remained active in the period since 2015. Notable achievements include the following:

- 78 peer-reviewed journal papers during the review period. > 200 during career (since 1994).
- 24 externally funded research projects (current active funds ~$4.6M plus 4 active JGI awards (2 as lead) and one active UNOLS Ship-time award)
- 8 doctoral students graduated (7 presently training)
- A spectrum of invited and contributed seminars, lectures and conference presentations
- H = 47 since 2016; overall H = 65
- Research outputs may be validated at orcid.org/0000-0001-6283-8077 or scholar.google.com/citations?user=XV0DED0AAAAJ

Teaching and training

- Undergraduate research assistants (14 from UTK, 6 from other institutions)
- Served on 21 graduate student advisory committees outside the Wilhelm lab
- Active in departmental teaching (1-3 courses per semester: *e.g.,* fall 2021 Microbiology 596 (Grant Writing, 19 students), Microbiology (Journal Club, 8 students), Micro/EPS 459/559 (Introduction to Oceanography, 35 students). Teaching scores consistently > 4.0 / 5.0.
- International guest lectures / classes in the Netherlands and Uruguay.
- National Science Foundation funded program for training undergraduates (REU Site Award, active since 2012). Renewed in 2021 for three more years.

DEI

- Established Departmental REU site (active since 2012) to improve departmental diversity. The REU site not only influenced our undergraduate research community but has improved diversity in our graduate student population.
- Established exercises in Microbiology 495 (Senior seminar – Professionalism class) to identify and develop materials for other courses on the diverse history of microbiology as a science.

Service and Awards

- Served as Associated Head of Department (2007-2020) and Director of Graduate Students (2009-2020)
- Search committees (2), Departmental Advancement Committee (since 2020, chair), Departmental Social Media team (since 2019)
- Associate Editor *Limnology & Oceanography: Methods*. Editorial board member of *Applied & Environmental Microbiology*, *The ISME Journal*, *Harmful Algae* (stepped down in 2021)
- Review of grants (~ 5 per year), papers for journals (~ 18 per year), tenure/promotion packages (~2 per year)

- Presently serving as *Kenneth & Blaire Mossman Professor* (since 2014)
- Served as a *James R Cox Professor* (2018-2021)
- Since 2015 internally awarded *College of Arts & Science Distinguished Research Career Award* (2019), *Chancellor's Research and Creative Achievement Award* (2018), *College of Arts & Science Senior Teaching Award* (2018)
- Elected fellow, *American Academy of Microbiology* (AAM, the honorific branch of ASM) (2016)
- Elected sustaining fellow, *Association for the Sciences of Limnology & Oceanography* (ASLO) (2016)
- Elected fellow, *American Association for the Advancement of Science* (AAAS) (notified in 2021, official entrance in 2022, *this information under embargo from external communication through to Feb 2022*)
- Received **John H Martin Award** (with CA Suttle) from *ASLO* for high impact paper from last 30 years (2021)

STEVEN WRAY WILHELM – curriculum vitae

Kenneth & Blaire Mossman Professor, Associate Head, Department of Microbiology
The University of Tennessee, Knoxville, TN 37996

Date of Birth: July 22, 1966. Place of Birth: Shakespeare, Ontario, Canada
Citizenship: Canadian (US Permanent Resident)

Educational History

Institution	*Program or Degree*	*Dates in Program*	*Degree*
University of Western Ontario	Ph.D. Plant Sciences	1990 - 1994	Ph.D.
University of Western Ontario	B.Sc. Genetics	1985 - 1989	B.Sc. (Honours)

Employment History

Rank	*Effective Date*
Assistant (1998), Associate (2004), Full (2008) Professor, *University of Tennessee*	August 1, 1998
NSERC Visiting Fellow, *Environment Canada,* AECB, Burlington, ON	August 1, 1997
Postdoctoral Fellow, Department of Earth and Ocean Sciences, *The University of British Columbia*	June 1, 1996
Postdoctoral Fellow, Marine Sciences, *The University of Texas (Austin) Marine Science Institute*	March 1, 1995

Employment History – Courtesy Appointments and Positions

Rank	*Institution*	*Department*	*Effective Date*
Mossman Professorship	*Tennessee*	Microbiology	Since Oct 2014
Associate Head	*Tennessee*	Microbiology	2007 - 2020
Graduate Director	*Tennessee*	Microbiology	2009 - 2020
Advisory Board	*Bigelow Lab for Ocean Sciences*	Provasoli-Guillard Collection of Marine Phytoplankton	2009 - 2013
Visiting Faculty	*Wisconsin - Milwaukee*	Biology	2007 – 2010
Graduate faculty	*University of Maine*	School of Marine Sciences	2012 – 2017
Adjunct Faculty	*University of Kuopio*	Biotechnology	2000 – 2001
Adjunct Faculty	*University of Windsor*	Great Lakes Institute for Environmental Research	Since 2019
Adjunct Faculty	*Tennessee*	Ecology & Evolutionary Biology	Since 1998
Adjunct Faculty	*Tennessee*	Genome Science & Technology	Since 1998
Adjunct Faculty	*Tennessee*	Center for Environmental Biotechnology	Since 1998
Adjunct Faculty	*Tennessee*	Earth & Planetary Sciences	Since 2013
Associate Faculty	*Tennessee*	National Institute for Mathematics & Biological Synthesis	Since 2016
Lecturer	*Western Ontario*	Plant Sciences	Jan – Apr 1994
Associate Editor:	*Limnology & Oceanography: Methods*		Since 2002
Editorial Board:	*Applied & Environmental Microbiology*		Since 2007
	Harmful Algae		2011- 2021
	The ISME Journal		Since 2013

Awards and Commendations

2021	*Association for the Sciences of Limnology & Oceanography* (ASLO) ***John H Martin award*** for a paper in aquatic sciences judged to have had a high impact on subsequent research in the last 30 years. For Wilhelm SW and CA Suttle. 1999. *Viruses and nutrient cycles in the sea*. BioScience 49:781-788.
2019	University of Tennessee, College of Arts & Sciences *Distinguished Research Career Award*
2018	University of Tennessee, *Chancellor's Research and Creative Achievement award*
2018	University of Tennessee, *James R. Cox Professorship* (2018 – 2021)
2017	University of Tennessee, *College of Arts & Sciences Senior Teaching Award*
2016	**Elected Fellow**, *American Academy of Microbiology*
2016	**Elected Sustaining Fellow**, *Association for the Sciences of Limnology and Oceanography*.
2014	Named *Kenneth & Blaire Mossman Professor of Biomedicine*
2010	University of Tennessee, *Quest Scholar of the Week* (August 15 – 22)
2009	University of Tennessee, *Chancellor's Award for Research & Creative Achievement*
2000	University of Tennessee, *Science Alliance Faculty Award for Research*
1999	Oak Ridge Associated Universities *Ralph E. Powe Junior Faculty Enhancement Award*
1997	Natural Science & Engineering Research Council (Canada) Visiting Scientist Fellowship
1994	*Dissertation Initiative for the Advancement of Limnology and Oceanography,* ASLO
1993	Graduate Research Fellowship, The University of Western Ontario
1992	Phycological Society of America, Grant-In Aid of Research
1991,92,93	Development Bursary, Northeast Algal Society
1992,93	Special University Scholarship, The University of Western Ontario
1992	North East Algal Society, Robert T. Wilce Award for best paper

Students Supervised

PhD Students	**Thesis**	**Employment After**
Naomi Gilbert	Marine virus infection networks	***Current student***
Brittany Zepernick	Freshwater diatoms and competition with *Microcystis*	***Current student***
Liz Denison	The virome of *Sphagnum* bogs	***Current student***
Gwen Stark	Strain heterogeneity in Microcystis isolates	***Current student***
Alex Truchon	Genetics of giant viruses	***Current student***
Barb Klein	HGT between viruses and cyanobacteria	***Current student***
Katelyn Houghton	Single cell transcriptomics and virus infection in marine surface waters	***Current student***
Helena Pound, Aug 2021	Microbial community dynamics in a *Microcystis* bloom	US Department of Energy
Eric Gann, Jan 2020	The physiological ecology of giant viruses infecting *Aureococcus anophagefferns*	The Henry Jackson Foundation Bethesda MD
Samantha Rose, June 2019	Tool development for model studies on interactions between a eukaryotic algae and giant virus	Postdoctoral Fellow, Rice University
Lauren Krausfeldt, June 2018	Molecular characterization of factors constraining the success and toxicity of *Microcystis* blooms	Postdoctoral Fellow, Nova Southeastern
Robbie Martin, June 2018	Ecological constraints of toxic cyanobacterial blooms	Postdoctoral Fellow, UTK
P. Jackson Gainer, April 2018	Microbial interactions in the North Pacific Ocean	Assistant Professor, Tennessee Wesleyan
Joshua Stough, Nov 2017	Bioinformatics for complex microbial communities	Postdoctoral Fellow, Michigan
Mohammed Moniruzzaman, Sept 2016	Molecular and ecological aspects of *Aureococcus anophagefferens* and its giant virus	Postdoctoral Fellow, MBARI
Morgan Steffen, June 2014	*Microcystis* community analyses by metagenomics	Assistant Professor, James Madison, VA
Audrey Matteson, Nov 2010	Cyanophage production and ecology	Research Associate, UNC Wilmington

Matthew A Saxton, Nov 2010	Constraints on primary production in Lake Erie	Managing Director, ECOGIG consortium, UGA
Janet M Rowe, Dec 2008	Virus production and diversity in the North Atlantic	Postdoctoral Fellow, UC Irvine
Johanna Rinta-Kanto, Nov 2006	Toxic *Microcystis* diversity and proliferation in a Laurentian Great Lake	Research Associate, The University of Helsinki
Leo Poorvin, Nov 2005	The role of viruses in the cycling of Fe	ARCH chemicals
Cécile Mioni, Oct 2004	Using a bioluminescent bacterial bioreporter to assess iron bioavailability in oceans	Research Associate, UC Santa Cruz
Melanie Eldridge, Apr 2004	Effects of Fe on plankton in HNLC oceans	Assistant Professor, U New Haven, CT

Masters Students

Shafer Belisle, June 2014	Urea as a driver of cyanobacterial blooms	Research Assistant, ORNL
Tiana Pimentel, Nov 2013	Cyanophage distribution in the Northern Pacific	DOCS, NC
Claire Campbell, Nov 2011	Microbial diversity in co-culture	Novozyme, VA
Star Loar, May 2009	Novel picoplankton in a Laurentian Great Lake	Algenol, FL
Julie Higgins, Mar 2005	Virus dynamics in HNLC marine waters	AMETEK, TN
Amanda Dean, Oct 2004	The dynamics & activity of viruses in Lake Erie	Genova Diagnostics, NC
Shannon Pedigo, Apr 2004	The effects of iron on the growth and physiology of the cyanobacterium *Microcystis aeruginosa*	NA
Johanna Rinta-Kanto, Nov 2001 (University of Kuopio, Finland)	The effects of viral size class enrichments on microbial communities in marine systems	Research Associate, The University of Helsinki

Postdoctoral /Research Associates

Dr. Anthony Ouellette	Feb 2002 – Jul 2003	Associate Professor & Department Co-Chair, Jacksonville University, Jacksonville FL.
Dr. Renhui Li	Dec 2003 – Jun 2005	Professor, Chinese Academy of Sciences, Wuhan China
Dr. Leo Poorvin	Jan 2006 – Jun 2007	Senior Microbiologist, ARCH chemicals (Georgia)
Dr. Gary LeCleir	Jan 2006 – present	Research Assistant Professor, UTK
Dr Sahar Hasim	Nov 2015-Nov 2016	Oak Ridge National Laboratory
Dr Lauren Krausfeldt	Jun 2018-July 2019	Nova Southeastern University
Dr Eric Gann	Mar 2020 – Mar 2021	The Henry Jackson Foundation
Dr Robbie Martin	Aug 2018 - present	
Dr Kristen Yoshimura	Aug 2020 - present	

Visiting Scientists		**Home Institution**
Dr Peter Pascucci	Jun – Aug 2005 and Jan 2006	Denver Community College,
Dr George Bullerjahn	Nov 2005 and June 2013	Bowling Green State University
Dr R Michael McKay	Nov 2006	Bowling Green State University
Dr Andrew Lang	Mar – May 2013 (cohosted with A Buchan)	Memorial University
Dr Xiangming Tang	Mar 2015 – Mar 2016	NIGLAS, CAS
Dr Guijun Yang	Apr 2015 – Apr 2016	University of Wuxi (China)

Visiting graduate students (includes UT students who completed significant amounts of work in my lab)

Andy Kenst	Jan 2004 – Oct 2005	UTK Earth and Planetary Science (E Perfect, advisor)
Cynthia May	May 2007	University of Vermont (M. Watzin, advisor)
Alicia Hanson	Mar 2008	University of Wisconsin–Milwaukee (E Young, advisor)
Marie-François Fabre	Jun – Sept 2008	École National Agronomique, Rennes France
Emily Rogers	2006 - 2010	UTK FWS (T Henry, Advisor)
Jacque Young	2009-2010	UTK GST (B Hettich, advisor)
Marie-Agnes Perdu	Aug 2011 – Jan 2012	AgroParis Tech, Paris France
Mallory Morrow	May – Dec 2011	UTK Graduate Education program

Alise Ponsero	Jan – Jun 2012	Université de Rennes 1, France
Lang Ho Lee	Sept 2012 –Sept 2013	ORNL GST (N VerBerkmoes (NEB), advisor)
Chloe Ridings /Kristin Irwin	April – May 2014	UTK EPS (Mike McKinney, Advisor)
Guotao (Sunny) Peng	September 2015 - 2016	Fudan University (Shanghai), China
Sebastien Guilmot	Jan 2016 – July 2016	University of Pau (UPPA), France
Taylor Tuttle	Feb 2016	Bowling Green State University
Emily Davenport	Feb 2016	Bowling Green State University
Justyna Hampel	May 2017	Wright State
Dominique Derminio	Sept 2019	SUNY ESF
Chris Cook	2018 - 2020	UTK (A Steen, Advisor)

UTK Undergraduate Research Assistants: Johanna Rinta-Kanto (1999), Arianne Balsom (2000), Amanda Howard (2000), Kari Voellinger (2000 - 01), Alison Rozmus (2001), Acacia Baker (RT McNair Fellow - 2001), Courtney Mack (2001) Sara Handy (2002), Lynn Neal (2003 – 04), Janet Rowe (2003 – 04), Justine Leigh-Bell (2002 – 04), Casey Rentz (2002 – 04), Matthew Carberry (2002 -05), Matthew Smith (2002 – 05), Matthew Steadmon (2004 – 05), Ashley Frazier (2005 – 2006), Kim Dunagan (2005 – 2006), Ainslie Fennell (2006 – 2006), Rhett Ketschke (2005 – 2006), Jeremy Chandler (2006), Dinielle Truitt (2006 – 2008), Sallye Hartman (2007), Lindsay Kuhnhein (2007-2008), Randon Davis (2007-2008), Rob Arnold (2007 – 2009), Ann Wells (2008 – 2009), Tanaysha Mapp (2008 – 2010), Kellina Morris (2008 –2010**)**, Tommie-Jo Kinney (2009 – 2011), Juhee Shah (2009), Sarah Farnsley (2009 – 2011), Cara Turski (2009-2012), Liz Morrow (2010), Loren Lowry (2010), Helena Pound (2010 – 2014), Mallory Morrow (2011), Jenna Zalewski (2011 - 2012), B. Schafer Belisle (2011 – 2012), Chad Effler (2011 – 2013), Brooke Watson (2012), Kacey Russell (2012), Austen Webber (2012 – 2014), Jasmine Vazin (2012 – 2013), A. Kaitlyn Victor (2013 - 2014), Kristen Larsen (2013 - 2015), Alex Daniel (2014), Mark MacDonald (2014 – 2016), Alyssa Scott (2015 – 2017), Miranda French (2016 – 2017), Steven Ho (2017), Ashley Humphrey (2016 – 2019), Tommiejean Christesen (2017-2018), Shelby Whitehead (2017-2021), Abigail Jarrat (2018), Vinila Baljepally (2018), Brennan Hughes (2018-2020), Jenny Patel (2020), Kelly Fox (2020-2021), Justin Dracup (2020-2021), David Nikenjad (2020-present)

Visiting Undergraduate Assistants: Whitney Black (Maryville College, 1999 – 00), Starla Stephens (NIH-RISE fellow; New Mexico State University, 2000), Sarah Wied (University of Minnesota, 2002), Rachel Service (Maryville College 2003 – 04), Margaret Henke (University of Wisconsin-LaCrosse, 2005), Brittany Morcom (University of Delaware, 2006), Sarah Kortebein (Tufts University, 2008; DePauw University, 2011), Mariya Campbell (Georgia State, 2013), Eric Gann (U Mass Amherst, 2014 - 2015), Emlyn Hammer (St Mary's College of Maryland, 2015), Olivia Sayer (Colorado Mesa, 2015), Markus Pryor (Rochester Inst Tech, 2017), Ryan Johnson (Augustana College, 2018), Barbara Klein (U West Florida 2019), Kyle Rauba (Columbia College, 2021)

Pre-collegiate scholars (High School students): Brandon Falls (Farragut, 2007), Cara Turski (Farragut, 2008 and 2009), Christina Kihm (Farragut, 2009), Phillip Hensley (Gibbs, 2011), Rebecca Weir (Farragut, 2011), Margaux Armfield (West Secondary, 2014- 2016)

Science-journalism interns: Joel Smithson (2008), Sarah Farnsley (2009), Miriam Kramer (2009 – 2011), Katie Freeman (2010), Eric Gedenk (2012), Lewis Walker (2013 – 2014), Jesse Weber (2013 – 2014), Shelby Whitehead (2017-present)

Teaching Experience - *The University of Tennessee* (with evaluations as available)

1999 Microbial Ecology (Micro 470) (4.20 / 5.00), General Seminar (Micro 595, 2 semesters)

2000 Microbial Ecology (Micro 470) (4.51 / 5.00), Microbial Physiology (Micro 601 – *Archaea*), Intro to Oceanography (EEB 446) (4.03 / 5.00), General Seminar (Micro 595, 2 semesters)

2001 Microbial Ecology (Micro 470) (3.85 / 5.00), Ocean Biogeochemistry Readings and Discussion (EEB 554), General Seminar (Micro 595, 2 semesters), Microbial Physiology (Micro 601 – *The physiology of photosynthetic microbes*), Advanced Microbial Physiology (Micro 610 – *Classic concepts in microbial physiological ecology*)

2002 Intro to Oceanography (EEB 446) (4.38 / 5.00), Microbial Ecology (Micro 470) (4.55 / 5.00) , Senior Semina (Micro 495), General Seminar (Micro 595), Microbial Physiology (Micro 601 – *The physiology & genetics o microbial toxin production*)

2003 Microbial Ecology (Micro 470) (4.57 / 5.00), Senior Seminar (Micro 495), General Seminar (Micro 595),

2004 Microbial Ecology (Micro 470) (3.5/5.0), Senior Seminar (Micro 495)

2005 Microbial Ecology (Micro 470) (3.6/5.0), Senior Seminar (Micro 495), General Seminar (Micro 595), Advanced topics in Microbial Genetics & Molecular Biology (Micro 650 – *Molecular tools & complex communities*) (3.6/5.0)

2007 Senior Seminar (Micro 495), General Seminar (Micro 595), Advanced topics in Microbial Genetics and Molecular Biology (Micro 650 – *Molecular tools and complex communities*) (4.25/5.00)
2008 Foundations in Microbiology (Micro 680). Guest lecture to the school of journalism – *Scientists and society, two peoples separate by a not so common language*. Guest lecture to Microbial Ecology (Micro 470).
2009 Senior seminar (Micro 495, 22 students) (4.3/5.0). Guest lecture to Microbial Ecology (Micro 470).
2010 Microbiology 650 (10 students), Micro 595 (34 students), Microbiology 495 (22 students (4.43/5.0)). Micro 596 (6), Guest lectures to Microbiology 470 (Microbial Ecology), Journalism and Electronic Media 451 (Environmental Journalism), Micro 596 (6 students)
2011 Microbiology 495 (16 students, 4.3/5.0), Geol 459/559 (26 students), Micro 596 (11 students)
2012 Micro 310 (184 students, team taught 3.8/5.0), Micro 596 (5 students, spring 2012; 8 students, fall 2012), Micro 650 (9 students), Micro 495 (8 students, 4.4 /5.0)); Micro 595 (38 students). Guest lectures to Microbiology 470 (Microbial Ecology), Journalism &d Electronic Media 451 (Environmental Journalism)
2013 Micro 596 (2 students), Micro 495 (5 students), Micro459/EPS459 (28 students 4.2 / 5.0), Micro 559/EPS559 (9 students, 4.1 / 5.0), Micro 596 (10 students), Guest lecture JEM 451 (Environmental Journalism)
2014 Micro 595 (36 students), Guest lecture JEM 451 (Environmental Journalism), Micro 596 (7 students),
2015 Micro 596 (1 student spring, 9 students fall), Micro459/EPS459 (35 students), EPS 559 (5 students), Micro 650 (12 students)
2016 Micro 604 (Virology JC, 17 students), Micro 594 (Grant Writing, 15 students), Micro 596 (8 students). Guest lectures to JEM 451 (Environmental Journalism, 15 students) and Microbiology 321 (45 students)
2017 Micro 321 (Advance Microbiology, 37 students), Micro 604 (Graduate journal club in genomics, 27 students). EPS/Micro 459, 559 (Introduction to Oceanography, 38 students), Micro 595 (General Seminar, 49 students), Micro 596 (graduate rotations, 10 students)
2018 Micro 615 (Colloquium, 41 students), Micro 596 (10 students), Micro 321 (47 students), Guest lectures to JEM 451 (Environmental Journalism, 15 students)
2019 Micro 594 (Grant Writing, 11 students), EPS/Micro 459, 559 (Introduction to Oceanography, 36 students), Micro 596 - graduate rotations (10 students). Guest lectures to JEM 451 (Environmental Journalism, 15 students),
2020 Micro 506 (2 students), Micro 401 (1 student), Micro 600 (4 students), Micro 495 (14 students, 4.8 / 5.0). Guest lectures to JEM 451 (Environmental Journalism, 15 students),
2021 Micro 401 (2 students), Micro 600 (5 students), Micro 495 (16 students, 4.9/5.0), EPS/Micro 459, 559 (Introduction to Oceanography, 35 students (4.5/5 and 4/5), Micro 596 (Grant Writing, 19 students, 3.88/5), Micro 610 (Journal club – the art of the review – 8 students). Guest lectures to JEM 451 (Environmental Journalism, 12 students)

Teaching Experience - Other Institutions

University of Amsterdam Understanding *Microcystis* - A Masterclass, March 2021.

Universidad de la República de Uruguay, *Programa Curso-Taller Interdisciplinario de Posgrado: "Cianotoxinas en sistemas acuáticos. Metodologías de monitoreo y análisis*. Montevideo, UY (Dec 2017)

Marine Biological Association of the UK, Plymouth, UK. Instructor – Practical workshop on virus ecology (July 2006)

Environmental Protection Agency / Clarkson Center for the Environment. Instructor - Lake Ontario Limnology Practicum (September 2003) (Clarkson Univ BY501). Field training course on the RV Lake Guardian.

Earth and Ocean Sciences, The University of British Columbia. Spring 1997. Guest Lecturer as replacement instructor delivered to Oceanography 412 (Marine Microbiology) and Oceanography 415 (Algal Ecology).

Faculty of Science, The University of Western Ontario. 1993-1994. Instructor - Biology 213b, Productivity and Pollution in Aquatic Ecosystems - Limnology. (Teaching Rating: 4.6 / 5.0)

RESEARCH GRANTS AND SUPPORT

Nationally Competitive Grants and Awards from Federal Sources (*active, †student training grant)

*2021 - 2022	NSF (OCE). Collaborative Research: inferring cellular lysis and regeneration of organic matter by marine viruses. ($59,450 plus 3 days ship time to UTK). PI – SW Wilhelm. Supplemental funds to continue research on virus activity in the Sargasso Sea.
†*2021-2024	NSF DBI - NSF REU Site Award. ($402,340 to UTK). PI –SW Wilhelm. coPI GR LeCleir. *Microbial community interactions and functions.*
*2019 - 2022	DOE OBER. ($3,169,336 total; $715,854 to SWW). PI JP Gibert (Duke). coPIs J Shaw (Duke), D Pelletier and D Weston (ORNL) and SW Wilhelm. *From viruses to protists: temperature response of the neglected components of microbial controls on peatland nutrient cycling.*
*2019 - 2022	NSF EDGE. ($1,009,308 to UTK; $812,116 to SWW) PI SW Wilhelm. coPIs TB Reynolds and TE Sparer. *EDGE CT: Genetic tools to study giant viruses.*
*2018 - 2023	NIH / NSF. Oceans and Human Health Center Award. ($5.2M to BGSU, $501,682 to UTK) PI – GS Bullerjahn (BGSU). coPIs SW Wilhelm and 12 others. *Lake Erie Center for Great Lakes and Human Health*
*2018 - 2022	NSF (OCE). Collaborative Research: inferring cellular lysis and regeneration of organic matter by marine viruses. ($1,773,520 total, $598,368 to UTK. Proposal also includes 14 days ship time with Wilhelm as lead, ~$ 700,000 in-kind). PI JS Weitz (G Tech). CoPIs SW Wilhelm and MB Sullivan (Ohio State).
*2018 - 2022	NOAA (NCCOS – ECOHAB). ($654,968 total, $359,443 to UTK). PI – Ameet Pinto (Northeastern). coPIs SW Wilhelm (UTK) and F. Hellweger (TUB). *Towards a predictive understanding of our ecosystems: Microcystis blooms and toxin production*
†2017 - 2020	NSF DBI - NSF REU Site Award. ($340,410 to UTK). PI –SW Wilhelm. coPI GR LeCleir. *Microbial community interactions and functions.* With $1,698 supplement added May 2017.
†2016	NSF DBI - NSF REU Site Award. ($17,989 to UTK). PI –SW Wilhelm. coPI ER Zinser. *Microbial community interactions and functions.*
2015 - 2020	NSF (IOS) ($1,049,718 total, $467,638 to SWW, IOS-1451528) PI SW Wilhelm with 4 coPIs. *Collaborative Research: an integrated approach to understanding the function of the potent hepatotoxin microcystin in the growth & ecology of Microcystis.*
2015-2018	NSF (MRI) ($412,443 for equipment acquisition). *MRI: Acquisition of a Liquid Chromatograph-Tandem Quadrupole-Orbitrap Fourier Transform Mass Spectrometer for High-Throughput Biological Analyses*
2014-2017	NIH (Pathogenic eukaryotes panel) – R21AI113386-01. ($403, 000 total; $275,000 direct). N Schmidt, PI. SW Wilhelm and SR Campagna, co-PIs. *Effect of the gut microbiome on malaria*.
2012 – 2017	NSF Dimensions in BioDiversity program. (~$2,000,000 total - $575,644 to SWW. DEB 1240870). PI –HW Paerl. coPIs SW Wilhelm, W Gardner and F Hellweger. *Collaborative Research: Anthropogenic nutrient input drives genetic, functional and taxonomic biodiversity in hypereutrophic Lake Taihu, China*
2012-2016	NSF Cross divisional (CBET / DEB). PI HW Paerl. coPIS SW Wilhelm, JM DeBruyn. *INSPIR: An ecologically driven strategy for ensuring sustainability of anthropogenically and climactically impacted lakes*. ($475,000 total, $179,999 to UTK)
†2012 – 2016	NSF DBI - NSF REU Site Award. ($315,000 to UTK). PI –SW Wilhelm. coPI ER Zinser. Microbial community interactions and functions.
2011 - 2016	NOAA (ECOHAB-PCM, NA11NOS4780021) ($703,779 total to UTK, $351,890 to SWW). PI SW Wilhelm, coPI GL Boyer. *"Biological degradation of microcystins: a first step towards biofilters for high efficiency toxin removal"*
2011 - 2015	NSF OCE–1061352 ($874, 605 total to UTK - $295, 000 to SWW). PI A Buchan, coPIs SR Campagna and SW Wilhelm. *"Biogeochemical implications of marine phage: roseophage as a relevant model* ".
2010-2015	NSF OCE-1030518 ($1,400,043 total ($799,179 total to UTK - $372,424 to SWW). PI ER Zinser, coPIs Z Johnson and SW Wilhelm. *Collaborative Research: Seasonal and decadal changes in temperature drive Prochlorococcus ecotype distribution patterns.* This proposal is complemented by 64 days of major ship time (*ca* $1,6000,000 of in-kind support).
2009 - 2013	NSF EF – 0949120 ($613,954 total ($275,004 to UTK plus $6,700 REU supplement in May 2011). PI WH Wilson, coPIs SW Wilhelm and R Stepanauskas. *Decoding virus leviathans.*
2009 - 2014	NSF IOS – 0841918 ($458,704 to UTK, †plus $5,700 REU supplement in June 2010). PI SW Wilhelm, NC Verberkmoes. *What makes Microcystis bloom? Dissecting the physiological ecology of a toxic cyanobacterium with community level proteomics*
2009 - 2013	NSF OCE - 0851113 ($499,703 total, $299,800 to UTK) PI SW Wilhelm. Co-PIs NC Verberkmoes, JT Lennon. *Collaborative research: characterizing the constraints on virus infection of cyanobacteria*
2008 - 2012	NSF CBET – 0826838 ($300,000 total - $101,582 ($80,630 direct) to UT, †$9,950 REU supplement added in 2009) PI H Paerl. coPI SW Wilhelm C*ollaborative research: evaluating nutrient reductions to control cyanobacteria and ensure large lake sustainability: Lake Taihu (china) as a model for North American systems.*
2008 - 2011	NSF OCE – 0825405 ($610,163 total - $174,257 to UTK). PIs DA Hutchins, SW Wilhelm and BS Twining. *FeCycle II: Variability in plankton Fe quotas during an unamended Lagrangian experiment.*

2006 - 2010 NOAA (ECOHAB) ($436,967 to UTK). PIs SW Wilhelm, T Henry, GL Boyer, R Strange, M Twiner. *Chronic toxicity and bioaccumulation of microcystins in freshwater fish.*

2005 - 2010 DOE (JGI). *"Determination of the genomic sequence of Aureococcus anophagefferens*." PIs CJ Gobler, D Berry and SW Wilhelm. Sequencing and automated assembly of the *A. anophagefferens* genome.

2005 - 2009 NSF OCE - 0526159. ($466,095 to UTK). *"Development of bioluminescent bacterial bioreporters to quantify the bioavailability of Fe in seawater*"

2005 - 2009 OHHI (NOAA) – ($748, 921 total ($349,993 total - $294,142 direct to SWW). PIs GS Boyers and SW Wilhelm. "*OHH 2005: Identification, characterization and inventory of novel freshwater biotoxins*".

2005 - 2009 NSF OCE – 0452409 ($357, 369 - $246,361 direct). PI SW Wilhelm. "*Viral abundance, production and diversity during the North Atlantic Spring Bloom (NASB 2005)"*

2002 - 2008 MERHAB (NOAA). ($3,328,055 total, ($488,127 to UTK). PI- Greg Boyer, co-PIs S.W. Wilhelm, J. Makarewicz, M.C. Watzin, C.R. O'Neill, T.B. Mihuc, and P. Hopkins. *Tier-based monitoring for toxic cyanobacteria in the lower Great Lakes*

2002 - 2006 NSF DEB – 0129118. $300,147 total; $207,000 direct. *Viral influence on freshwater cyanobacteria and toxin dynamics*

2002 - 2003 NSF OPP – 0228895. $22,714 total; $18,000 + $6,000 in direct supplies and $5,000 indirect travel costs *Viral dynamics and the Southern Ocean Fe-cycle*

2002 - 2003 NSF – Direct funds for participation in NBP Haz Mat. Cruise (ca. $10,000 in direct supplies and travel costs, $15,000 in shiptime), PI – Wade Jeffrey, Univ. West Florida. *Solar stimulation of bacterial production in the southern hemisphere*

2000-2002 NSF OPP – 0003241. $72,115 to UTK. PI- J. Grebmeier, co-PI's S. Wilhelm and L. Cooper. *SGER: Voyage of the RCMP St. Roch II: A Journey of Scientific Re-Discovery*

2000-2001 NSF OCE – 0002968. $48,220 to UTK PI – S.W. Wilhelm, co – PI's B. Applegate, G. Sayler. *SGER: Development of a bioreporter regulated by the bioavailability of Fe in seawater*

2000-2001 NSF DEB – 0003069. $34,937 to UTK. *SGER: Viral impacts on fluvial and limnetic biogeochemistry*

2000 NSF – Direct funds for participation in NBP Haz Mat. Cruise (ca. $10,000 direct in supplies and travel costs, $20,000 in shiptime), PI – Wade Jeffrey, Univ. West Florida. *Microbial DNA damage across a latitudinal gradient in the southern hemisphere*

1999-2003 NSF OCE – 9977040, $243,063 to UTK direct plus 21 days shiptime, (*ca*. $144,000). *Bioavailability of carbon and iron from viral lysis products* Includes $5,400 REU supplement in 2000.

1999 - 2006 NSF CHE- 9974734. $ 2,036,093 total budget. John Turner, PI. Wilhelm listed as senior collaborator. *Integrating teaching and research for chemical and environmental analysis in Appalachia and the southeast*

1997-1998 NSERC – *Visiting Scientists Research Fellowship* – Environment Canada ($35,000)

Nationally /Internationally Competitive Grants and Awards from other Sources

*2020 - 2024 Simons Foundation. The continuum of virus-host interactions: environmental drivers of horizontal gene transfer and virus effects. $1,147,793 to SWW.

*2020-2021 NSERC (Canada). Evaluating the persistence of SARS-CoV-2 (COVID-19) in the urban water cycle. PI RML McKay (U Windsor). SWW listed as "contributor/partner" per NSERC rules on international scientists. ($50,000 – all funds staying in Canada).

*2019-2021 DOE-JGI. Collaborator on "Interactions through multi-omics high-resolution time series'. Sequencing of genomes and metatranscriptomes" Sequencing of genomes and metatranscriptomes (*est* $400,000 in sequencing and support).

*2018-2021 DOE-JGI. coPI on "Elucidating *Sphagnum* microbiome genetic interactions for improved growth at elevated temperature". Sequencing of genomes and metatranscriptomes (*est* $400,000 in sequencing and support)

*2018-2021 DOE-JGI. Lead PI on "Algal, bacterial and viral interactions as the backdrop to marine carbon and trace metal cycling". Sequencing of 135 metatranscriptomes (*est* $150,000 in sequencing and support)

*2018-2021 DOE-JGI. Lead PI on "Microbial interactions that drive carbon and nutrient cycling via the fate of an under-ice freshwater diatom bloom". Sequencing of 90 metatranscriptomes (*est* $100,000 in sequencing and support)

2016-2017 Oak Ridge National Laboratory. Support for viral research in northern peat fields ($25,330)

2016-2017 The Gordon & Betty Moore Foundation ($43,000). Service and advisory to *Protocols.IO*. SW Wilhelm PI.

2015 - 2018 The Gordon & Betty Moore Foundation ($329,000). Development of a tractable genetic system for *Aureococcus anophagefferens*. SW Wilhelm PI. coPIs ER Zinser, WH Wilson, T Sparer and T Reynolds.

2014 - 2020 Natural Sciences and Engineering Research Council (Canada). ($1,650,000 funds for training to Western University) *"NSERC CREATE for freshwater Harmful Algal Blooms (fHABs): Algal Bloom Assessment though Science, Technology and Education (ABATE)".* PIs I Creed, CG Trick. *SW Wilhelm listed as international contributor*.

2011 - 2014 National Institute for Mathematical and Biological Synthesis – funding to support working group to model virus activities (est. $100,000). PI J. Weitz (Georgia Tech), coPI SW Wilhelm.

2009 - 2010 The Gordon & Betty More Foundation – *Sequencing of 4 phage genomes* (*ca* $20,000). PI A Buchan, coPIs SW Wilhelm and WH Wilson

2009 - 2011 New York SeaGrant ($108,615 - $11,000 to UT). *Winter assessment of microbial biomass and metabolism: testing the importance of winter productivity to summer hypoxia in Lake Erie.* PIs MR Twiss, SW Wilhelm.

2007 - 2009 Ohio SeaGrant ($116,607 - $30,000 to UT) *Phylogenetic analysis and physiological characterization of photosynthetic picoplankton in Lake Erie.* PIs GS Bullerjahn, RML McKay, SW Wilhelm.

2005 - 2009 Scientific Committee on Oceanographic Research – ($45,000 direct funds). Funds to support a marine virus ecology working group. Chairs, M Weinbauer (Villefrenche-sur-mer, France), SW Wilhelm.

2006 - 2008 Ohio SeaGrant ($93,244 - $8,568 to UT). *Redfield revisited: addressing current perspectives on the phosphorus quotas of freshwater plankton.* PIs RML McKay, B Sterner, SW Wilhelm.

2002 –2005 American Water Work Association. $139,814 total; $96,423 direct. PI – S.W. Wilhelm *Development of molecular reporters for Microcystis toxicity and activity*

1999-2000 ORAU Faculty Enhancement Award ($5,000 direct funds + $9,300 UTK match).
Molecular diagnostics for the ferric uptake regulatory gene in marine prokaryotes

1998 – 2013 Ship time on the CCGS *Limnos* (with estimated value of in-kind support): 1998 - 5 days ($26,000) ; 1999 - 11 days ($57, 200); 2000 -11 days ($57,200); 2001 - 11 days ($62,000); 2002- 11days ($69,000), 2003 - 12 days ($84,000), 2004-15 days ($108,000); 2005 - 10 days ($75,000); 2006 – 10 days ($130,000); 2007 – 5 days ($65,000); 2008 – 6 days ($78,000); 2009 – 5 days ($65,000); 2010 – 5 days ($65,000); 2011 – 5 days ($65,000); 2012 – 5 days ($65,000); 2013 – 15 days ($225,000); 2015 – 5 days ($100,000). Time on CCGS *Griffon* 2007 – 3 days ($75,000); $2008 – 6 days ($150,000); 2009 – 10 days ($250,000); 2010-3 days ($75,000); 2011- 5 days ($125,000); 2012-5 days ($125,000); 2013-5 days($125,000); 2015-5 days($125,000)

Competitive Grants and Awards from The University of Tennessee (all direct funds)

2019-2020 Joint Direct Research and Development Program: Science Alliance ($48,583 – PI SW Wilhelm). Microeukaryotes and their viruses: uncovering their hidden role in one of the largest terrestrial carbon sinks II.

2018-2019 Office of Research Interdisciplinary Research Seed Program ($66,010 – PI A Steen, coPI SW Wilhelm). Novel pathways for microcystin degradation in aquatic environments.

2018-2019 Joint Direct Research and Development Program: Science Alliance ($49,531 – PI SW Wilhelm). Microeukaryotes and their viruses: uncovering their hidden role in one of the largest terrestrial carbon sinks.

2017 Haines- Morris Award – University of Tennessee ($3,872 - PIs: J Mikucki, SW Wilhelm) Grant to support distinguished lecturer series "*The Earth's Microbiome".*

2015 Center for Wildlife Health (UTIA) – ($10,000 – PI R. Trout-Fryxell, coPIs JM DeBruyn and SW Wilhelm). *Discovering the effects of life history on Lone star ticks microbiomes.*

2015 Haines- Morris Award – University of Tennessee ($3,000 - PIs: K Lloyd, SW Wilhelm) Grant to support distinguished lecturer series *It's a Microbial World After all.*

2012 SARIF – University of Tennessee ($93,110 from SARIF, College and cost shares). *Modernization of equipment in Microbiology.*

2012 Haines- Morris Award – University of Tennessee ($4,000 - PIs: K Lloyd, J Mikucki, SW Wilhelm) Grant to support distinguished lecturer series *Microorganisms, Guardians of the Earth's Biogeochemical Cycles.*

2012 UTK/ORNL JDRD ($43,500 - PI SW Wilhelm, coPI LJ Hauser). *High-throughput transcriptomics to secure ecosystem health in freshwater systems.*

2011-2012 Microbiology across Campuses Educational and Research Venture ($9,960 - PI JM DeBruyn, coPIs A Buchan, ER Zinser. MA Radosevich and SW Wilhelm. *Establishment of a baseline research program concerning the microbiology of the Tennessee River system.*

2010-2011 Microbiology across Campuses Educational and Research Venture ($20,000-PI A Buchan, coPI S Campagna). "*Biogeochemical Influences of Bacteriophage: Characterization of the Composition and Bioavailability of Nutrients Released by Phage-Mediated-Lysis of Roseobacters in Model Systems"*

2010 - 2011 Haines- Morris Award – University of Tennessee ($5,931 - PI: B O'Meara, multiple coPIs including SW Wilhelm). Grant to support distinguished lecturer series *Merging Phylogenies with Ecology*

2009-10 Haines- Morris Award – University of Tennessee ($6,000 - co-PIs S. Campagna). Funds to host seminar series - *The evolution of –omics and the interface of biology and chemistry.3*

2009-10 Microbiology across Campuses Educational and Research Venture ($24,995 - co-PIs M Radosevich and A Buchan). *Seasonal variation in lysogeny and its response to climate change.*

2009-10 Microbiology across Campuses Educational and Research Venture ($24,020 - PI M Radosevich, coPIs N Labbe, SW Wilhelm and A Buchan). *Revealing the lifestyles of novel soil bacteria through whole genome sequencing: Planococcus sp. and Gemmatimonadetes*

2008 Professional Development Award – University of Tennessee ($3,500). *The sequence of a giant virus: a proof of concept for a large-scale genome sequencing program.*

2007 Haines- Morris Award – University of Tennessee ($6,000 - co-PIs A. Buchan and E. Zinser). Funds to host seminar series - *The complexity of microbial ecology from proteins to planets.*

2006	Professional Development Award – University of Tennessee ($4,467 – split with Dr A Buchan). A shifting paradigm in the isolation and cultivation of microbes.
2004	SARIF Small grants fund - University of Tennessee ($5,000 each from Microbiology, Arts and Sciences and Office of Research) Impacts of ocean fertilization on viral infection
2002	Professional Development Award - University of Tennessee ($4,950) Research in Viral Proteomics
2000-2001	UT Environment and Natural Resources Council ($40,000 - co-PI G. Stacey)
	Environmental genomic approaches to Microcystis ecology, toxicology and biogeochemistry
2001	SARIF Equipment Grant - University of Tennessee ($ 8,000)
2001	Professional Development Award - University of Tennessee ($3,200) Viral distributions in the Arctic
2000	Professional Development Award - University of Tennessee ($4,500) *Lake Erie Viral Ecology*
2000	SARIF/Small Grant Funds – University of Tennessee ($10,000) *Iron limitation in the Peruvian Upwelling*
1999	SARIF Equipment Grant - University of Tennessee (with B Applegate, D Nivens, G Sayler) ($20,000)

Research and Teaching Expeditions

InVirT Cruise II, Sargasso, Mar 25 – Apr 1, 2022 RV Atlantic Explorer	Chief Scientist, Dr Steven Wilhelm
InVirT Cruise, Sargasso, Oct 12 - 17 2019 RV Atlantic Explorer	Chief Scientist, Dr Steven Wilhelm
The Taihu Project, Aug 14 – 19, 2018, Wuxi/Nanjing, China	Lead Scientist, Dr. Steven Wilhelm
The Taihu Project, Jun 20-27, 2016, Wuxi/Nanjing, China	Lead Scientist, Dr. Steven Wilhelm
Lake Erie survey, Aug 17-21, 2015. CCGS Limnos.	Lead Scientist, Dr Caren Binding
The Taihu Project, Oct 6-12, 2014, Wuxi/Nanjing, China	Lead Scientist, Dr. Steven Wilhelm
The Taihu Project, Aug 5-14, 2013, Wuxi/Nanjing, China	Lead Scientist, Dr. Steven Wilhelm
MELEE XVI, July 21-26, 2013, CCGS Limnos	Chief Scientist, Dr. Rick Bourbonniere
POWOW 2, Jan 10 – Feb 7, 2013, RV Kilo Moana	Chief Scientist, Dr Zack Johnson
MELEE XV, Aug 13-17, 2012, CCGS Limnos	Chief Scientist, Dr. Rick Bourbonniere
The Taihu Project, Jun 21 - 28, 2011, Wuxi, China	Lead Scientist, Dr. Steven Wilhelm
MELEE XIV, Aug 3-7, 2010 CCGS *Limnos*	Chief Scientist, Bourbonniere/Wilhelm
The Taihu Project, May 24 – 31, 2010, Wuxi, China	Lead Scientist, Dr. Steven Wilhelm
WamBam IV, Feb 16-19, 2010, CCGS *Griffon*	Chief Scientist, Dr. Steven Wilhelm
MELEE XIII, Aug17-22, 2009 CCGS *Limnos*	Chief Scientist, Dr. Rick Bourbonniere
The Taihu Project, May 22 – Jun 2, 2009, Wuxi, China	Lead Scientist, Dr. Hans Paerl
WAMBAM IIIb, Feb 16 – 20 2009 CCGS *Griffon*	Chief Scientist, Dr. Steven Wilhelm
WAMBAM IIIa, Jan 12-16 2009 CCGS *Griffon*	Chief Scientist, Dr. Steven Wilhelm
FeCycle II, September 14 – Oct 7 2008, R/V *Tangoroa*	Chief Scientist, Dr. Phil Boyd
WAMBAM II, Feb 12 – 17 2008 CCGS *Griffon*	Chief Scientist, Dr. Steven Wilhelm
MELEE XII (Lake Erie), Aug 20 - 24 2007 CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
WAMBAM, Feb 20 -22, 2007 CCGS *Griffon*	Chief Scientist, Dr. Steven Wilhelm
Hawaiian transects trial, Nov 6-8 2006 R/V *Kilo Moana*	Chief Scientist, Dr Zack Johnson
MELEE XI (Lake Erie), Aug 8 - 18 2006 CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
MELEE X (Lake Erie), Aug 22 - 26 2005 CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
MELEE IX (Lake Erie), July 11 - 15 2005 CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
NASB 2005- Leg 1 (Florida-Azores), May 22 – June 27 RV *Seward Johnson*	Chief Scientist, Dr. David Hutchins
Lake Erie Moorings Survey, Aug 9 – 13, 2004 CCGS *Limnos*	Chief Scientist, Murray Charlton
MELEE VIII (Lake Erie), July 12 - 16 2004 CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
Limnology Practicum. Sept 19–26, 2003 R/V *Lake Guardian*	Chief Scientist, Dr. Michael Twiss
Lake Erie Moorings Survey, Aug 11 – 15, 2003 CCGS *Limnos*	Chief Scientist, Murray Charlton
MELEE VII (Lake Erie), July 21 - 25 2003 CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
Lake Erie Moorings Survey, Jun 17 – 20, 2003 CCGS *Limnos*	Chief Scientist, Murray Charlton
FeCycle (Southern Ocean), Jan 26- Feb 15 2003 R/V *Tangoroa*	Chief Scientist, Dr. Phil Boyd
MELEE VI (Lake Erie), July 15-26, 2002, CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
MELEE V (Lake Erie), November 5-9, 2001, CCGS *Limnos*	Chief Scientist, Dr. Michael Twiss
MELEE IV (Lake Erie), July 9-20, 2001, CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
Peru-Galapagos Upwelling, Aug-Sept 2000 R/V *Melville*	Chief Scientist, Dr. Ken Bruland
MELEE III (Lake Erie), July 3-14 2000 CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
Delaware - Sargasso Sea, May 21- June 16 2000, R/V Cape *Henlopen*	Chief Scientist, Dr. Steven Wilhelm
MELEE II (Lake Erie), July 5-16, 1999, CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm

California Iron Upwelling Survey, June 3-14 1999, R/V *Pt Sur*	Chief Scientist, Dr. David Hutchins
Delaware – Sargasso Sea, Sept 28 – Oct 4, 1998, R/V *Cape Henlopen*	Chief Scientist, Dr. David Hutchins
MELEE I (Lake Erie), July 6-10 1998, CCGS *Limnos*	Chief Scientist, Dr. Steven Wilhelm
Strait of Georgia Survey III, July 16-21 1998, CCGS *Vector*	Chief Scientist, Dr. Curtis Suttle
Delaware - Sargasso Sea, May 3- 25 1998, R/V *Cape Henlopen*	Chief Scientist, Dr. David Hutchins
Lake Erie Survey, September 2-6 1997, CCGS *Limnos*	Chief Scientist, Dr. Robert Hecky
Strait of Georgia Survey II, June 23-28 1997, CCGS *Vector*	Chief Scientist, Dr. Curtis Suttle
Strait of Georgia Survey, August 19-24 1996, CCGS *Vector*	Chief Scientist, Dr. Curtis Suttle
VIRDEX III, Gulf of Mexico July 22-31 1996, R/V *Longhorn*	Chief Scientist, Dr. Curtis Suttle
VIRDEX II, Gulf of Mexico November 7-8 1995, R/V *Longhorn*	Chief Scientist, Dr. Steven Wilhelm
VIRDEX, Gulf of Mexico June 20-29 1995, R/V *Longhorn*	Chief Scientist, Dr. Curtis Suttle
LongSecs, April 22 1995, R/V *Longhorn*	Chief Scientist: Anthony F. Amos

Peer Reviewed Journal Publications *(*graduate student, **undergraduate, # postdoc in my group)*

Up to date details available at orcid.org/0000-0001-6283-8077; scholar.google.com/citations?user=XV0DED0AAAAJ

#Gann ER, *AR Truchon, SE Papoulis, ST Dyhrman, CJ Gobler and SW Wilhelm. 2021. *Aureococcus anophagefferens* (Pelagophyceae) genomes improve evaluation of nutrient acquisition strategies involved in brown tide dynamics. **Journal of Phycology** doi:10.1111/jpy.13221

*Pound HL, #ER Gann and SW Wilhelm. 2021. A comparative study of metatranscriptomic assessment methods to characterize *Microcystis* blooms. **Limnology & Oceanography: Methods** doi: 10.1002/lom3.10465

Corchis-Scott R, Q Geng, R Seth, R Ray, M Beg, N Biswas, L Charron, K Drouillard, R D'Souza, D Heath, C Houser, F Lawal, J McGinlay, S Menard, L Porter, D Rawlings, M Scholl, K Siu, Y Tong, C Weisener, SW Wilhelm, and RM McKay. 2021. Averting an outbreak of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) in a university residence hall through wastewater surveillance. **Microbiology Spectrum** 9: e00792-21 doi: 10.1128/Spectrum.00792-21.

Hoke AK, G Reynoso, MR Smith, MI Gardner, DJ Lockwood, *NE Gilbert, SW Wilhelm, IR Becker, GJ Brennan, LK Utz, KE Crider, SR Farnon, V Mendoza, ZP Zimmerman, AC Poole, LL Wurch and MM Steffen. 2021. Genomic signatures of Lake Erie bacteria suggest interaction in the *Microcystis* phycosphere. **PLoS ONE** 16(9): e0257017 doi:10.1371/journal.pone.0257017

*Pound HL, #RM Martin, CS Sheik, MM Steffen, SE Newell, GJ Dick, RML McKay, GS Bullerjahn and SW Wilhelm. 2021. Environmental studies of cyanobacterial harmful algal blooms should include interactions with the dynamic microbiome. **Environmental Science & Technology** 10.1021/acs.est.1c04207

Papoulis S, SW Wilhelm, D Talmy and ER Zinser. 2021. Nutrient loading and viral memory drive accumulation of restriction modification systems in bloom-forming cyanobacteria. **mBIO.** doi: 10.1128/mBio.00873-21

#Gann ER, Y. Kang, ST Dyhrman, CJ Gobler and SW Wilhelm. 2021. Metatranscriptome library preparation influences analyses of viral community activity during a brown tide bloom. **Frontiers in Microbiology** doi: 10.3389/fmicb.2021.664189

Kang Y, MJ Harke, DL Berry, JL Collier, SW Wilhelm, ST Dyhrman, CJ Gobler. 2021. Transcriptomic responses of four pelagophytes to nutrient and light limitation. **Frontiers in Marine Science** doi: 10.3389/fmars.2021.636699 (in press)

*Zepernick BN, #ER Gann, *HL Pound, #RM Martin, # LE Krausfeldt, JD Chaffin and SW Wilhelm. Elevated pH conditions associated with *Microcystis* spp. blooms decrease viability of the cultured diatom *Fragilaria crotonensis* and natural diatoms in Lake Erie**. Frontiers in Microbiology 12: 598736** doi: 10.3389/fmicb.2021.598736

Barnard MA, JD Chaffin, HE Plaas, GL Boyer, B Wei, SW Wilhelm, KL Rossignol, JS Braddy, GS Bullerjahn, TB Bridgeman, TW Davis, J Wei, M Bu and HW Paerl. 2021. Roles of nutrient limitation on Western Lake Erie CyanoHAB toxin production. **Toxins** 13: 47 doi: 10.3390/toxins13010047

#Martin RM, M Kausch, K Yap, J Wehr, GL Boyer and SW Wilhelm. 2021. Metagenome-assembled genome sequences of *Raphidiopsis raciborskii* and *Planktothrix agardhii* from a cyanobacterial bloom in Kissena Lake, New York, USA. **Microbiology Resource Announcements** 10: e10380-20 doi:10.1128/MRA.01380-20**.**

*Pound HL and SW Wilhelm. 2020. Tracing the active genetic diversity of *Microcystis* and *Microcystis* phage through a temporal survey of *Taihu*. **PLoS ONE** 15: e0244482 doi:10.1371/journal.pone.0244482

[#]Martin RM, M Moniruzzaman, *GF Stark, [#]ER Gann, DS Derminio, Bofan Wei, FL Hellweger, A Pinto, GL Boyer, and SW Wilhelm. 2020. Episodic decrease in temperature increases *mcy* gene transcription and cellular microcystin in continuous cultures of *Microcystis aeruginosa* PCC 7806. **Frontiers in Microbiology** 11:601864 doi:10.3389/fmicb.2020.601864

Yang G, X Tang, SW Wilhelm, W Pan, Z Rui, L Xu, C Zhong and X Hu. 2020. Intermittent disturbance benefits colony size, growth and dominance of *Microcystis* in Lake Taihu under field simulation conditions. **Harmful Algae** 99:101909. doi:10.1016/j.hal.2020.101909

*Gann ER, Y Xian, P Abraham, R Hettich, TB Reynolds, C Xiao and SW Wilhelm. 2020. Structural and proteomic studies of the Aureococcus anophagefferens Virus demonstrate a global distribution of virus-encoded carbohydrate processing. **Frontiers in Microbiology** doi: 10.3389/fmicb.2020.02047

Wilhelm SW, GS Bullerjahn and RML McKay. The complicated and confusing ecology of *Microcystis* blooms. 2020. mBio 1(3) e00529-20 doi: 10.1128/mBio.00529-20.

Jenny J-P., O Anneville, F Arnaud, Y Baulaz, D Bouffard, I Domaizon, SA Bocaniov, N Chèvre, M Dittrich, J-M Dorioz, ES Dunlap, G Dur, J Guillard, T Guinaldo, S Jacquet, A Jamoneau, Z Jawed, E Jeppesen, G Krantzberg, J Lenters, B Leoni, M Meybeck, V Nava, T Nõges, P Nõges, M Patelli, V Pebbles, M-E Perga, S Rasconi, CR Ruetz III, L Rudstam, N Salmaso, S Sapna, D Straile, O Tammeorg, MT Twiss, DG Uzarski, A-M Ventela, WF Vincent, SW Wilhelm, S-A Wänberg. GA Weyhenmeyer. 2020. Scientists warning to humanity: rapid degradation of the world's large lakes. **Journal of Great Lakes Research** (in press).

[#]Krausfeldt LE, AT Farmer, HF Castro, GL Boyer, SR Campagna and SW Wilhelm. 2020. Nitrogen flux into metabolites and microcystins changes in response to different nitrogen sources in *Microcystis aeruginosa* NIES-843". **Environmental Microbiology** 22(6) 2419-2431 doi: 10.1111/1462-2920.15032.

*Coy SR, *ER Gann, SE Papoulis, M Holder, N Ajami, J Petrosino, ER Zinser, JL Van Etten and SW Wilhelm. 2020. SMRT sequencing of Paramecium bursaria Chlorella Virus-1 reveals diverse methylation stability in adenines targeted by restriction modification systems. **Frontiers in Microbiology** 11:887 doi:10.3389/fmicb.2020.00887

Liang X, Y Zhang, KE Wommack, SW Wilhelm, JM DeBruyn, AC Sherfy, J Zhuang, M Radosevich. 2020. Lysogenic reproductive strategies of viral communities vary with soil depth and are correlated with bacterial diversity, **Soil Biology and Biochemistry**, 107767. doi: 10.1016/j.soilbio.2020.107767

*Gann ER, **BJ Hughes, TB Reynolds and SW Wilhelm. 2020. Internal nitrogen pools shape the infection of *Aureococcus anophagefferens* CCMP 1984 by a giant virus**. Frontiers in Microbiology.** doi: 10.3389/fmicb.2020.00492

*Zepernick BN, *LE Krausfeldt and SW Wilhelm. 2020. Flaming as part of aseptic technique increases $CO_{2\,(g)}$ and decreases pH in freshwater culture media. **Limnology & Oceanography: Methods.** doi: 10.1002/lom3.10355

*Pound HL, *ER Gann, X Tang, *LE Krausfeldt, M Huff, M Staton, D Talmy and SW Wilhelm. 2020. The "neglected viruses" of Taihu: abundant transcripts for viruses infecting eukaryotes and their potential role in phytoplankton succession. **Frontiers in Microbiology**. doi: 10.3389/fmicb.2020.00338

***Gann ER, *PG Gainer, TB Reynolds and SW Wilhelm. 2020. Influence of light on the infection of *Aureococcus anophagefferens* CCMP 1984 by a "giant virus". PLoS ONE 15:e0226758. doi:10.1371/journal.pone.0226758.**

***Krausfeldt LE, MM Steffen, RM McKay, GS Bullerjahn, GL Boyer and SW Wilhelm. 2019. Insight into the molecular mechanisms for microcystin biodegradation in Lake Erie and Lake Taihu. Frontiers in Microbiology. 10:2741 doi:**

Davenport EJ, MJ Neudeck, PG Matson, GS Bullerjahn, TW Davis, SW Wilhelm, *MK Denny, *LE Krausfeldt, *JM Stough, KA Meyer, GJ Dick, TH Johengen, E Lindquist, SG Tringe and RM McKay. 2019.

10.3389/fmicb.2019.02741

Metatranscriptomic analyses of diel metabolic functions during a *Microcystis* bloom in western Lake Erie (USA). Frontiers in Microbiology. 10: 2081 doi: 10.3389/fmicb.2019.02081.

Liang X, RE Wagner, J Zhuang, JM DeBruyn, SW Wilhelm, F Liu, L Yang, ME Staton, AC Sherfy, and M Radosevich. 2019. Viral abundance and diversity vary with depth in a southeastern United States agricultural ultisol. ***Soil Biology and Biochemistry***, 107546. doi:10.1016/j.soilbio.2019.107546

Jackson JW, TJ Hancock, E LaPrade, P Dogra, *ER Gann, TJ Masi, R Panchanathan, WE Miller, SW Wilhelm and TE Sparer. 2019. Human cytomegalovirus chemokine, vCXCL-1, modulates normal dissemination kinetics of murine cytomegalovirus *in vivo.* ***mBio*** 10(3): e01289-19 doi: 10.1128/mBio.01289-19.

Chen H, ZK Yang, D Yip, RH Morris, SJ Lebreux, MA Cregger, DM Klingeman, D Hui, RL Hettich, SW Wilhelm, G Wang, FE Löffler and CW Schadt. 2019. One-time nitrogen fertilization shifts switchgrass soil microbiomes within a context of larger spatial and temporal variation. **PLoS ONE** 14:e0211310**.** doi:10.1371/journal.pone.0211310

Zhong C, G Yang, B Qin, SW Wilhelm, L Yu, L Han, Z Rui, H Yang and Z Zhang. 2019. Effects of mixing intensity on colony size and growth of *Microcystis aeruginosa*. **Annales de Limnologie - International Journal of Limnology** 55:12 doi 10.1051/limn/2019011

*Krausfeldt LE, AT Farmer, HF Castro Gonzalez, BN Zepernick, SR Campagna and SW Wilhelm. 2019. Urea is both a carbon and nitrogen source for *Microcystis aeruginosa*: tracking ^{13}C incorporation at bloom pH conditions. **Frontiers in Microbiology** 10:1064 doi: 10.3389/fmicb.2019.01064.

*Stough JMA, N Yutin, YV Chaban, *M Moniruzzaman, *ER Gann, *HL Pound, *MM Steffen, JN Black, EV Koonin, SW Wilhelm and SM Short. 2019. Genome and environmental activity of a *Chrysochromulina parva* virus and its virophage. **Frontiers in Microbiology** 10:703 doi:10.3389/fmicb.2019.00703

*Coy SR, **AN Alsante, JL Van Etten, and SW Wilhelm. Cryopreservation of Paramecium bursaria Chlorella Virus-1 during an active infection cycle of its host. **PLoS ONE** 14(3): e0211755. doi:10.1371/journal.pone.0211755

Larsen ML, SW Wilhelm and JT Lennon. 2019. Nutrient stoichiometry shapes microbial evolution. **Ecological Letters** 22: 1009-1018 doi: 10.1111/ele.13252

Liang X, J Zhuang, FE Löffler, Y Zhang, JM DeBruyn, SW Wilhelm, SM Schaeffer and M Radosevich. Viral and bacterial community responses to stimulated Fe(III)-bioreduction during simulated subsurface bioremediation 2019. **Environmental Microbiology**. 21: 2043-2055, doi: 10.1111/1462-2920.14566

Smith ZJ, *RM Martin, B Wei, SW Wilhelm and GL Boyer. 2019. Spatial and temporal variation in paralytic shellfish toxin production by benthic *Microseira* (*Lyngbya*) *wollei* in a freshwater New York lake. **Toxins.** 11(1) doi: 10.3390/toxins11010044

*Martin RM, *M Moniruzzman, *NC Mucci, A Willis, JN Woodhouse, Y Xian, C Xiao, CPD Brussaard and SW Wilhelm. 2019. *Cylindrospermopsis raciborskii* Virus and host: genomic characterization and ecological relevance. **Environmental Microbiology**. 21: 1942-1956 doi: 10.1111/1462-2920.14425

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Other publications

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Invited Seminars at Institutions

The complicated ecology of *Microcystis.* MEB seminar series, the University of Southern California, Los Angeles, CA, Nov 2021 (virtual)

The complicated ecology of *Microcystis*. Institute for biodiversity and ecosystem dynamics, University of Amsterdam, March 2021. (Virtual seminar)

Standing on the shoulders of giants: the unusually large viruses of the world. New England BioLabs Corporate, Feb 18, 2021. (Virtual seminar)

What makes *Microcystis* bloom? Institute for biodiversity and ecosystem dynamics, University of Amsterdam. April 2020 (cancelled due to COVID19)

Using molecular tools to study viruses in the environment. University of Texas – El Paso, El Paso TX, April 2019

Resolving virus activity with molecular tools. Rice University, Houston TX, Nov 2018

Using molecular tools to study ecosystem health in the Laurentian Great Lakes. McMaster University, Hamilton, ON, Dec 2016.

Moving towards a quantitative understanding of marine viruses. University of Georgia (Microbiology), Athens, GA. Nov 2016.

How viruses make the ocean work. James Madison University, Harrisonburg, VA. April 2016.

Toxic *Microcystis* blooms: molecular resolution of why blooms occur. Johns Hopkins University, Baltimore MD. April 2016

Measuring moments in cyanobacterial ecology – using big data to deal with big blooms. Grand Valley State University – Annis Water Center. Allendale MI, Jan 2016.

Shakespeare said it best – all the world's a phage. University of North Carolina Marine Sciences, Morehead City, NC, October 2015.

What constrains marine viruses? Royal Netherlands Institute for Sea Research, Texel NL, September 2015.

Molecular approaches to understand the ecology of harmful algal blooms, Bowling Green State University, April 2014.

Ecogenomic approaches to understanding virus ecology across the world's oceans. University of Nebraska, Jan 2014.

Protecting our waters: a microbiologist's perspective. University of Tennessee Pre-football game showcase presentation, Nov 2012.

Nearly two decades of *Microcystis* blooms in the Laurentian Great Lakes – what have we learned? Department of Biological Sciences, University of Toronto, Mississauga, Oct 2012.

The molecular ecology of freshwater harmful algal blooms. Environmental Sciences, College of William and Mary, Williamsburg VA, February 2012.

Wilhelm SW. Our water resources and the microbiologist. ORICL Society, Roane State College, Oak Ridge TN, Feb 2012.

Can 'omics tell us why harmful algal blooms occur? Biological Sciences, Kent State University, Kent OH, September 2010.

Molecular tools: complex communities. The Chinese Academy of Science, Nanjing Institute of Geography and Limnology. Nanjing, China, June 2009.

Understanding Toxic Cyanobacteria in a Laurentian Great Lake. The University of Western Ontario, London, ON. Mar 2009.

Viruses, biogeochemistry and global carbon cycles, Bucknell University (inaugural *Phi Sigma* departmental lecture), Lewisburg PA, Nov 2008.

Climate change and our most valuable natural resource – our freshwater systems. The University of Tennessee Science Forum, Knoxville TN, Nov 2008

Quantitative molecular tools and toxic cyanobacteria in a Great Lake. University of Maryland, Baltimore, MD Mar 2008.

Viruses, cyanobacteria and a dead zone: using molecular biology in a Laurentian Great Lake. College of Natural Resources and the Environment, The University of Michigan, Ann Arbor, MI, Nov 2007.

Great Lakes microbial ecology: Viruses in the Great Lakes ecosystem. The University of Wisconsin-Milwaukee, Apr 2007.

The application of molecular tools to uncover the ecology and diversity of toxic cyanobacteria. Great Lakes Water Institute, The University of Wisconsin-Milwaukee, Apr 2007.

Virus driven geochemistry and virus ecology in freshwater environments, Kellogg Biological Station, Michigan State University, Mar 2007.

Quantitative tools and cyanobacterial communities in the Great Lakes. The University of North Carolina Marine Sciences, Morehead City, Oct 2006.

Quantitative molecular tools for toxic cyanobacterial blooms: insights on ecology. University of Delaware, Lewes DE, Jun 2006.

Viruses, toxic algae and a dead zone: my vacations on Lake Erie. Department of Biology, University of Quebec at Montreal, Mar 2006.

Viruses and toxic algae in Lake Erie. Department of Biology, SUNY Oswego, Oswego NY, Nov 2005.

Nutrient recycling in marine microbial communities: moving forward with our understanding of bioavailability. Department of Biology, The University of Denver, Denver, CO. Feb 2005.

Fe cycling in marine microbial communities: moving forward with our understanding of bioavailability. College of Marine Studies, the University of Delaware, Lewes DE. Sept 2004.

The Microbial Ecology of the Lake Erie Ecosystem: Insights on viral and cyanobacterial populations. Department of Biological Sciences, Wright State University, Dayton, OH, May 2004.

Virus in the sea: evidence for their critical role in the marine iron cycle. Department of Marine Sciences, Grice Marine Laboratory / College of Charleston, Charleston SC. Apr 2004.

The impact of viruses on marine geochemistry. Southampton College, Long Island University, Southampton NY Nov 2003.

How do microbes and viruses influence global carbon cycles? Department of Biology, Maryville College, Maryville, TN Apr 2003.

The effect of viruses on biogeochemical cycles in aquatic systems. Department of Biology, Kent State University, Akron, OH, Sept 2001.

Viruses and nutrient cycles in the sea. Department of Biology, New Mexico State University, Las Cruces, NM, Apr 2000.

The influence of viruses and cyanobacteria on marine Fe cycles. Department of Marine Sciences, University of Georgia, Athens, GA, May 1999.

The role of viruses and prokaryotes iron in marine systems. Skidaway Institute of Oceanography, Savannah, GA. Apr 1999.

Factors influencing the bioavailability of iron in marine systems. Department of Ecology and Evolutionary Biology, University of Tennessee, Knoxville, TN Mar 1999.

Viruses and iron as regulators of marine productivity. Netherlands Institute of Oceanography (NIOZ), Texel, NL. Oct 1998

The impact of sunlight and host repair mechanisms on marine viral communities. College of Marine Studies, The University of Delaware, Lewes DE, Nov 1997.

Viruses in aquatic environments: understanding ultraviolet radiation and "The Paradox of The Viruses". Canada Centre for Inland Waters, Burlington, ON, Nov 1997.

The role of sunlight in the maintenance of viruses in the sea. Department of Plant Sciences, The University of Western Ontario, London, Ontario, Apr 1997.

The physiological ecology of iron-limited cyanobacteria. Department of Microbiology, The University of British Columbia. Vancouver, British Columbia, Jan 1997.

The dynamics of viruses in marine systems. Department of Plant Sciences, The University of Western Ontario, London, Ontario, Oct 1996.

The ecology of cyanobacteria in iron-limited systems. Marine Science Institute, University of Texas at Austin, Port Aransas, Texas, June 1995.

Nutrient limitation in aquatic systems. Sir Wilfred Grenfell College, Memorial University. Cornerbrook, Newfoundland, May 1995.

Iron transport in cyanobacteria: a new concept for affinity. Biology Department, Brock University. St. Catherines, Ontario, May 1994.

Presentations at Scientific Meetings – Invited

Wilhelm SW. Profiling virus infections in mixed communities. Gordon Research Conference – Marine Microbes – Les Diablerets, Switzerland, May 24, 2020 (Cancelled due to COVID-19) (**Opening Keynote**).

Wilhelm SW. The proteome and structure of the AaV particle: a virus with a sweet tooth. *4th* International Symposium on Giant Virus Biology, Ringberg Castle, Tegernsee, Germany Nov 2019

Wilhelm SW. Metatranscriptomic insight into the effects of viruses on *Microcystis* blooms. ICTC11, Krakow, Poland May 3-10, 2019 (**Keynote Speaker**)

Wilhelm SW. Recent advances on the role of biological interactions, food web structure and biodiversity on lake function. ELLS-IAGLR 2018 Evian, France, Sept 23-28 (***Keynote Speaker***)

Wilhelm SW, LE Krausfeldt, X Tang, MM Steffen, M Denney, RM Martin, JMA Stough, AT Farmer, HF Castro-Gonzalez and SR Campagna. Using big data to save large lakes – understanding what the microbial community is trying to do provides a path forward. International Society of Limnology, Nanjing, China, August 2018.

Wilhelm SW. Resolving virus-host relationships from environmental metatranscriptomes. *Aquatic Virus Workshop 9, Lincoln, NE. June 2018 (**Opening Plenary**)*

Wilhelm SW, SR Coy, ER Gann, M Moniruzzaman, JMA Stough, and SM Short. Ecological interactions of giant viruses revealed by metatranscriptomics. 3rd International Symposium on Giant Virus Biology, Ringberg Castle, Tegernsee, Germany Nov 2017.

Wilhelm SW. Resolving hidden virus-host relationships in environmental metatranscriptomes. Gordon Research Conference - Marine Molecular Ecology. Hong Kong, July 2017.

Wilhelm SW. Making lakes great again: using molecular tools to study harmful algal blooms in lakes from China to the USA. International Nexus of Food, Energy, Water, and Soil. Yixing, China, October 2016 (***Keynote symposium presentation***)

Wilhelm SW. Of shunts and pumps – virus driven nutrient dynamics. Aquatic virus workshop 8, Plymouth, UK. July 2016 (***Plenary***).

Wilhelm, SW. A preliminary gauge for the diversity of giant viruses in marine coastal waters – tracking AaV. 2nd International Symposium on Giant Virus Biology, Ringberg Castle, Tegernsee, Germany Nov 2015.

Wilhelm SW. Developing a quantitative understanding of virus community activity in marine systems. American Society of Virology, July 2015 (***Keynote symposium presentation***)

Wilhelm SW and MM Steffen. Using metatranscriptomes to link cyanobacterial bloom communities with environmental drivers. American Society for Microbiology, New Orleans, June 2015.

Paerl HW, WS Gardner, MJ McCarthy, TG Otten, BL Peierls, KL Rossignol and SW Wilhelm. Mitigating global proliferation of toxic cyanobacterial blooms: the case for dual nutrient (N & P) input reduction strategies. International Association of Great Lakes Researchers, Burlington Vermont, June 2015.

Wilhelm SW. The biology of HAB species. NSF workshop to collect global expertise to address the problem of harmful algal blooms, Bowling Green, OH, April 2015. (***Opening Keynote***)

Wilhelm SW, MM Steffen, BS Belisle, SP Dearth, MM Campbell, GL Boyer, SB Watson, RA Bourbonniere, JM DeBruyn and SR Campagna. Changing tides for Lake Erie: the biogeochemical evolution of a Laurentian Great Lake and implications for biological communities of the future. American Geophysical Union, San Francisco CA, Dec 2013

Wilhelm SW. The genome of BtV – the large virus infecting *Aureococcus anophagefferens.* International Symposium on Giant Virus Biology, Ringberg Castle, Tegernsee, Germany Nov 2013.

Wilhelm SW, DL Sonderegger, CA Stock, JS Weitz, CA Suttle, L Bourouiba, A Buchan, M Middelboe, ML Coleman, MJ Follows, JA Fuhrman, JT Lennon, TF Thingstad, WH Wilson, KE Wommack. Mapping global distributions and activity of marine viruses. Aquatic Virus Workshop 7, St Petersburg, FL, Nov 2013. (***Opening Plenary***)

Weitz JS, CA Stock, Wilhelm SW, L Bourouiba, A Buchan, ML Coleman, MJ Follows, JA Fuhrman, JT Lennon, M Middelboe, DL Sonderegger, CA Suttle, TF Thingstad, WH Wilson, KE Wommack. A multi-trophic model to quantify what viruses do (in theory) to microbial ecosystems in the ocean euphotic zone. Aquatic Virus Workshop 7, St Petersburg, FL, Nov 2013. (***Plenary***)

Steffen MM and SW Wilhelm. Can nutrient availability drive genome plasticity in *Microcystis*? International Association for Cyanophytes Research Symposium, Cleveland, OH, Aug 2013.

Maas EW, JM DeBruyn, SW Wilhelm and PW Boyd. Iron and bacteria. University of Otago Symposium on the Role of the Ocean in Climate Change, Dunedin, NZ, Nov 2012.

Wilhelm SW. Viruses in the ocean: do they manage the best recycling program on the planet? University of Otago Symposium on the Role of the Ocean in Climate Change, Dunedin, NZ, Nov 2012.

Sander SG, PW Boyd, GR LeCleir, KA Hunter, E Ilbisanmi, EW Maas, I Velasquez and SW Wilhelm. Organic ligands – a key control on trace metal biogeochemistry in the ocean. University of Otago Symposium on the Role of the Ocean in Climate Change, Dunedin, NZ, Nov 2012.

DeBruyn JM, GR LeCleir, EW Maas, SW Wilhelm, PW Boyd. Bacterial production and diversity during a southern Pacific Ocean spring phytoplankton bloom. New Zealand Society for Microbiology, Dunedin NZ, Nov 2012.

Wilhelm SW, AR Matteson, SN Loar, S Pickmere, JM DeBruyn, MJ Ellwood, DA Hutchins and PW Boyd. The ecological implications of viruses in a Pacific spring bloom community. New Zealand Society for Microbiology, Dunedin NZ, Nov 2012.

Wilhelm SW. Developing an understanding of the synergies between human activity & climate for toxic cyanobacterial blooms. New Zealand Society for Microbiology, Dunedin NZ, Nov 2012 (***Plenary***).

Wilhelm SW, AR Matteson, SN Loar, S Pickmere, JM DeBruyn, MJ Ellwood, DA Hutchins and PW Boyd. The ecological implications of viruses in a Pacific spring bloom community. New Zealand Society for Microbiology, Dunedin NZ, Nov 2012

Wilhelm SW, AR Matteson, AJ Ponsero and TM Pimentel. Cyanophage – ubiquitous members of freshwater and marine systems. Phycological Society of America, Charleston, SW. June 2012 (***Plenary***).

Wilhelm SW. Global scale processes and constraints on viruses: implications for biogeochemistry. Aquatic Virus Workshop, Texel, Netherlands, October 2011. (***Keynote***)

Wilhelm SW. Advances in our understanding of *Microcystis* bloom events: implications from metagenomic and metaproteomic observations. Sino-US symposium on harmful cyanobacteria. Chinese Academy of Science Institute of Hydrology, Wuhan, China, June 2011. (***Keynote***)

Carrick HJ, RA Bourbonniere, B Beall, GS Bullerjahn, RML McKay, REH Smith, MR. Twiss, and SW Wilhelm. Abundance, distribution and taxonomic composition of winter plankton in ice covered Lake Erie. Regional Science Consortium, Erie, PA, Nov 2010.

Wilhelm SW. Viruses and global-scale processes. International Society for Microbial Ecology, Seattle, August 2010.

Wilhelm SW. Can `omics tell us why we get harmful algal blooms? Canadian Institute for Advance Research Integrated Microbial Biodiversity Program. Seattle, August 2010.

Wilhelm SW, RML McKay, MR Twiss, GS Bullerjahn, RA Bourbonniere, CH Marvin, HJ Carrick, REH Smith, N D'Souza, BF Beall, MA Saxton, DE Smith, and J Harrison. Biology on ice: life in a very cold Lake Erie. The Lake Erie at the Millennium Conference, Windsor, ON April 2010.

Wilhelm SW. Viruses and the marine carbon cycle: moving beyond models. SCOR working group on Microbial Carbon, Xiamen, China, October 2009.

Wilhelm SW. The implications of viruses on ecosystem level geochemical cycles. American Society of Microbiology, Philadelphia, PA May 2009.

Wilhelm SW. Around the world in eighty stations – a global perspective of aquatic viruses. ASLO, Nice, France, January 2009.

Wilhelm SW. "Cyanobacteria – their toxins and phage". Keynote address – Allegheny Branch - American Society for Microbiology, Lewisberg PA, Nov 2008

Wilhelm SW. The ecological role of viruses in marine and freshwater ecosystems. Ecological Society of American, Milwaukee, WI, August 2008.

Wilhelm SW. Imminent challenges in aquatic virus ecology. Aquatic Virus Workshop, Vancouver, BC July 2008.

Cattolico RA, J Chang, C Gobler, H Ong, E Sims, G Rocap, SW Wilhelm, Y Zhou and M Jacobs. The stramenopile chloroplast genome: new evolutionary and functional insights. Seventh International Chrysophyte Symposium, New London, CT June 2008.

Twiss MR, RA Bourbonniere, GS Bullerjahn, HJ Carrick, N D'Souza, PC Furey, RML McKay, NE Ostrom, M Saxton, REH Smith, and SW Wilhelm. Winter Assessment of Microbial Biomass and Metabolism: February 2007 & 2008. The Fifth Biennial Conference of the Lake Erie Millennium Network, University of Windsor, Windsor, ON April 2008

Wilhelm SW and GL Boyer. Toxic cyanobacteria in the Laurentian Great Lakes – an overview of the past and a looking glass to the future. US EPA Toxicology and risk assessment conference, Cincinnati OH April 2008.

Wilhelm SW. Climate change and food webs in the Great Lakes: implications for the changing seasons. Michigan State University conference on Climate Change in the Great Lakes Region, East Lansing, MI April 2008.

Wilhelm SW. Viruses in large lakes – the Lake Erie experience. IAGLR, State College, PA, May 2007.

Wilhelm SW. Viruses and biogeochemical cycles. EuroOceans Conference on Marine Viruses, Bergen, Norway. May 2007. (***Keynote***)

Wilhelm SW. The synergies between viruses, nutrient cycles and system geochemistry. SCOR WG126 – Marine Virus Ecology Meetings, Vancouver, BC. June 2006.

Wilhelm SW, GL Boyer, JM Rinta-Kanto, AJA Ouellette, R Li, and RA Bourbonniere. An overview of cyanobacterial blooms in Lake Erie, 2000 – 2005. ASLO, Victoria, BC. June 2006.

Rinta-Kanto JM, R Li, and SW Wilhelm. The use of conserved genes from the microcystin synthetase pathway to forecast toxin production potential of a cyanobacterial community in Lake Erie. ASLO, Victoria, BC. June 2006.

Wilhelm SW and JM Rinta-Kanto. Field methods in the study of toxic cyanobacterial blooms: results and insights from the Lake Erie experience. EPA – ISOCHAB, September 2005, Raleigh NC

Rinta-Kanto JM, R Li, GL Boyer, and SW Wilhelm. Analysis of toxic cyanobacterial community during 2003 and 2004 blooms on Lake Erie. IAGLR, May 2005, Ann Arbor, MI.

Carberry MJ, JM Rinta-Kanto and SW Wilhelm. Pervasive cyanophage in a Laurentian Great Lake: applications of molecular techniques to gain insight on their distribution and ecology. Eighth Cyanobacterial Molecular Biology Workshop, St Adele, PQ. August 2004.

Mioni CE, MR Twiss, WH Jeffrey, RD Frew, PW Boyd, and SW Wilhelm. Deployment of a heterotrophic bioluminescent bioreporter to estimate the bioavailability of iron in seawater. ASLO / TOS Ocean Sciences Meeting, Honolulu HI, Feb 2004.

Wilhelm SW. Molecular and ecological effects of ultraviolet radiation on marine virioplankton. American Society of Photobiology. Baltimore, MD, July 2003.

Wilhelm SW, CE Mioni, MR Twiss, RML McKay and CG Trick. Resolving iron availability in Lake Erie. IAGLR, Chicago, IL, June 2003

Trick CG, L Pickell and SW Wilhelm. Fundamental differences in the iron acquisition systems in phytoplankton. Iron Fertilization Experiment Panel. PICES Annual Meeting, October 2000, Tsukuba, Japan

Suttle CA and SW Wilhelm. Ten years after: revisiting the significance of viruses to mortality and carbon flow in aquatic ecosystems. ASLO, June 2000, Copenhagen, DN

Wilhelm SW. Physiological alterations that influence iron acquisition in marine cyanobacteria. Scientific Community on Oceanographic Research-WG109, Biogeochemistry of Iron in Seawater, Amsterdam, NL November 1998.

Wilhelm SW and CA Suttle. Viruses as regulators of nutrient cycles in aquatic environments. Eighth International Symposium of Microbial Ecology, Halifax, NS, August 1998

Wilhelm SW and CA Suttle. The role of viruses in organic carbon cycles in the sea. Ocean Sciences Meeting-American Geophysical Union, San Diego CA, February 1998.

Contributed conference presentations

McKay RML, GS Bullerjahn, HJ Carrick, MR Twiss and SW Wilhelm. The past, present and future of Lake Erie's winter ecosystem. Joint Aquatic Science Meeting, Grand Rapids, MI. May 2022.

Stark GF, RM Martin, LE Smith, B Wei, GL Boyer, and SW Wilhelm. Microcystin aids in photo-acclimation during prolonged cold stress treatment in *Microcystis aeruginosa* strain PCC7806. ICTC Toledo OH, May 2022

Sheik C, K Natwora, RM Martin, SW Wilhelm, TR Miller, K Svoboda. Hiding in plaint sight: characterizing a novel cyanobacterium that packs a potential punch. ICTC Toledo OH, May 2022

Martin RM, MK Denney, HL Pound, JD Chaffin, GS Bullerjahn, RM McKay, K Jones, HF Castro, SR Campagna and SW Wilhelm. Sulfolipid profiles of Microcystis aeruginosa and cyanobacterial blooms as an indicator of P availability. ICTC Toledo OH, May 2022

Barnard MA, HE Plaas, KL Rossignol, JS Braddy, AN Bartenfelder, JD Chaffin, RM Martin, DJ Niknejad, SW Wilhelm, HW Paerl. Evaluating FluoroProbe as a tool for rapid chlorophyll a and phytoplankton group differentiation during Western Lake Erie CyanoHAB bloom conditions. ICTC 12, Toledo OH, May 2022.

Sofen LE, O Antipova, MJ Ellwood, NE Gilbert, MC Lohan, C Mahaffey, EL Mann, DC Ohnemus, SW Wilhelm, and BS Twining. Metal contents of autotrophic flagellates from contrasting open-ocean ecosystems. OSM-ASLO, Honolulu HI, Feb 2022.

Papoulis S, SW Wilhelm, D Talmy and ER Zinser. Nutrient loading and viral memory drive accumulation of restriction modification systems in bloom-forming cyanobacteria. OSM-ASLO, Honolulu HI, Feb 2022.

Martin RM, MK Denney, HL Pound, JD Chaffin, GS Bullerjahn, RM McKay, K Jones, HF Castro, SR Campagna and SW Wilhelm. Sulfolipid profiles of *Microcystis aeruginosa* and cyanobacterial blooms are an indicator of P availability. Oceans and Human Health Annual Meeting, Bowling Green OH, Oct 2021.

Zepernick BN, ER Gann, RM Martin, HL Pound, LE Krausfeldt, JD Chaffin and SW Wilhelm. Elevated pH conditions associated with *Microcystis spp.* blooms decrease viability of the cultured diatom *Fragilara crotonensis* and natural diatoms in Lake Erie. Oceans and Human Health Annual Meeting, Bowling Green OH, Oct 2021.

Barnard MA, HE Plaas, K Rossignol, J Braddy, A Bartenfelder, JD Chaffin, RM Martin, DJ Niknejad, SW Wilhelm and HW Paerl. Evaluating FluoroProbes as tools for rapid chlorophyll a and phytoplankton group differentiation during bloom conditions. Oceans and Human Health Annual Meeting, Bowling Green OH, Oct 2021.

Pound HL, RM Martin, BN Zepernick, CJ Chrostopher, SM Howard, H Castro, SR Campagna, GL Boyer, GS Bullerjahn, JD Chaffin and SW Wilhelm. The influence of nutrients on *Microcystis* physiology and proliferation: are viruses' part of your "bottle effects?" Oceans and Human Health Annual Meeting, Bowling Green OH, Oct 2021.

Barnard MA, JD Chaffin, HE Plaas, GL Boyer, Bofan Wei, SW Wilhelm, KL Rossignol, JS Braddy, GS Bullerjahn, TB Bridgeman, TW Davis, J Wei, B Minsheng and HW Paerl. Nutrient limitation dynamics of Western Lake Erie CyanoHAB biomass, microcystin, and anatoxin production. IAGLR (virtual) May 2021.

Barnard MA, JD Chaffin, HE Plaas, GL Boyer, Bofan Wei, SW Wilhelm, KL Rossignol, JS Braddy, GS Bullerjahn, TB Bridgeman, TW Davis, J Wei, B Minsheng and HW Paerl. Nutrient limitation dynamics of the Western Lake Erie CyanoHAB biomass and toxin production. ACS Virtual Meeting, April 2021.

Barnard MA, HE Plaas, JD Chaffin, GL Boyer, Bofan Wei, SW Wilhelm, KL Rossignol, JS Braddy, GS Bullerjahn, TB Bridgeman, TW Davis, J Wei, B Minsheng and HW Paerl. Understanding the roles of nutrient limitation on the Western Lake Erie Cyanobacterial Harmful Algal Blooms. North Carolina State University ePoster session. Sept 2020.

Wilhelm SW, RM Martin, LE Krausfeldt, HL Pound, BN Zepernick, B Klein, GR LeCleir, SE Papoulis, X Tang, HF Castro, D Talmy, FL Hellweger, AJ Pinto, ER Zinser, SR Campagna and GL Boyer. The complicated, no good, multifaceted and confusing reasons for *Microcystis* blooms. Ocean Sciences / ASLO meeting. San Diego, Feb 2020.

Calfee BC, D Talmy, SW Wilhelm and ER Zinser. Determining the contributions of microorganisms to H_2O_2 degradation and its implications for the success of *Prochlorococcus* in the oligotrophic ocean. Ocean Sciences / ASLO meeting. San Diego, Feb 2020.

Gann ER, B Hughes, PJ Gainer, TB Reynolds and SW Wilhelm. Influence of light and nitrogen concentration on the infection of *Aureococcus anophagefferens* CCMP 1984 by a giant virus. *4th* International Symposium on Giant Virus Biology, Ringberg Castle, Tegernsee, Germany Nov 2019.

Barnard MA, HE Plaas, J Wei, JD Chaffin, GL Boyer, B Wei, SW Wilhelm and HW Paerl. Use of ^{15}N compound specific analysis to trace N assimilation into microcystins in toxic cyanobacterial harmful algal blooms (cyanoHABs). American Chemical Society Eastern North Carolina Regional Meeting, Nov 2019.

Zepernick BN, ER Gann, HL Pound, RM Martin, LE Krausfeldt, JD Chaffin and SW Wilhelm. *M. aeruginosa* bloom-induced pH effects on freshwater diatoms. 10th Symposium on Harmful Algae in the US, Orange Beach AL, Nov 2019.

Pound HL, D Talmy and SW Wilhelm. The “neglected viruses” of *Taihu*: abundant transcripts for viruses infecting eukaryotes and their potential role in phytoplankton succession. 10th Symposium on Harmful Algae in the US, Orange Beach AL, Nov 2019.

Martin RM, B Klein, DS Dermino, B Wei, FL Hellweger, AJ Pinto, GL Boyer and SW Wilhelm. Reduced light intensity counteracts the cool-temperature-induced increase in microcystin quota of *Microcystis aeruginosa.* 10th Symposium on Harmful Algae in the US, Orange Beach AL, Nov 2019.

Krausfeldt LE, AT Farmer, C Christopher, GL Boyer, HF Castro, BN Zepernick, SR Campagna and SW Wilhelm. Different physiological responses and toxicity related to N-speciation are revealed by tracing labeled N through the metabolome of *Microcystis aeruginosa.* 10th Symposium on Harmful Algae in the US, Orange Beach AL, Nov 2019.

Hellweger F, SW Wilhelm, RM Martin and A Pinto. Systems BioEcology modeling of *Microcystis* growth and toxin production. Microbial Ecology and Water Engineering Conferences (IWA), Hiroshima, JP. Nov 2019.

Hellweger F, SW Wilhelm, RM Martin and A Pinto. Dynamic, Molecular-level modeling of the intracellular functioning Microcystin in *Microcystis*. Society for Aquatic Microbial Ecology, Potsdam, DE, Sept 2019.

Papoulis S, SW Wilhelm, D Talmy and ER Zinser. Nutrients explain the distribution of restriction modification systems in prokaryotic genomes. Trait-based approaches to ocean life. Buckinghamshire, UK Aug 2019.

Xian Y, ER Gann, J Rodriguez, MC Chacon, SW Wilhelm and C Xiao. Structural studies of A. anophagefferens Virus (AaV) by Cryo-EM. Three-Dimensional Electron Microscopy Gordon Conference, Hong Kong June 2019.

Smith ZJ, RM Martin, B Wei, SW Wilhelm and GL Boyer. Spatial and temporal variation in Paralytic Shellfish Toxin production by benthic *Microseira* (*Lyngbya*) *wollei* in a freshwater New York Lake. International conference on toxic cyanobacteria, Krakow, Poland. May 2019.

Tang X, LE Krausfeldt, HW Paerl, G Gao, B Qin and SW Wilhelm. Seasonal gene expression and the ecophysiological implications of toxic *Microcystis aeruginosa* blooms in a large shallow eutrophic lake (Lake Taihu, China). The 18th International Conference on Harmful Algae, Nantes, France, October 2018.

Pound HL, X Tang, JMA Stough, LE Krausfeldt, G Gao and SW Wilhelm. Community level virus diversity during a massive *Microcystis* bloom in Lake Taihu. International Society of Limnology, Nanjing, China, August 2018.

Paerl HW, H Xu, G Zhu, JT Scott, MJ McCarthy, SE Newell, SW Wilhelm, WS Gardner, N Hall, B Peierls, K Rossignol, Y Li, M Zhu, B Qin. Combating large lake eutrophication and harmful algal blooms in the anthropocene: why dual nutrient (N &P) reductions are needed. International Society of Limnology, Nanjing, China, August 2018.

Black JN, JMA Stough, SW Wilhelm, CV Ton and SM Short. A complex community of viruses and virophage infects the alga C. parva. Canadian Society for Microbiology, Winnipeg, MN, June 2018.

Moniruzzaman M, ER Gann and SW Wilhelm. Giant virus infection induces widespread physiological reprogramming in Aureococcus anophagefferens CCMP 1984 – a harmful bloom algae. Aquatic Virus Workshop 9, Lincoln, NE. June 2018

Xiao C, J Rodrigues, Y Xian, ER Gann, MG Fischer and SW Wilhelm. Giant marine virus sample preparation and data collection for Cryo-EM. Aquatic Virus Workshop 9, Lincoln, NE. June 2018

Xian Y, ER Gann, J Rodriguez, MC Chacon, SW Wilhelm and C Xiao. Structural studies of *Aureococcus anophagefferens* Virus (AaV) by Cryo-EM. American Society of Virology, College Park, MD. July 2018.

Coy SR, ER Gann, ME Holder, NJ Ajami, JF Petrosino, JL Van Etten and SW Wilhelm. Epigenomics of the Chlorella virus PBCV-1. Aquatic Virus Workshop 9, Lincoln, NE. June 2018

Pound HL, X Tang, JMA Stough, LE Krausfeldt, G Gao and SW Wilhelm. Community level virus diversity during a massive *Microcystis* bloom in Lake Taihu. Aquatic Virus Workshop 9, Lincoln, NE. June 2018

Martin RM, M Moniruzzaman, LM Steenhauer, AJ Koster, A Willis, JN Woodhouse, CPD Brussaard and SW Wilhelm. *Cylindrospermopsis raceiborskii* virus and host: a new genomically characterized virus/host system for a bloom-forming cyanobacterium. Aquatic Virus Workshop 9, Lincoln, NE. June 2018

Gann ER and SW Wilhelm. Towards understand environmentally relevant constraints of the *Aureococcus anophagefferens* virus infection cycle. Aquatic Virus Workshop 9, Lincoln, NE. June 2018

Gann ER, BC Calfee, T Chen, ER Zinser, TE Sparer, TB Reynolds and SW Wilhelm. Towards developing a genetic system for the brown tide bloom forming pelagophyte *Aureococcus anophagefferens*. American Society of Microbiology, Atlanta, GA. June 2018

Stough JMA, M Kolton, JE Kostka, DJ Weston, DA Pelletier and SW Wilhelm. Novel viral diversity within microbiome of *Sphagnum* peat identified by high-throughput transcript sequencing data. ASM TN-KY Regional Branch Meeting, Nov 2017

Coy SR, AN Alsante, JL Van Etten and SW Wilhelm. Long-term cryopreservation of large, dsDNA algal-infecting viruses. ASM TN-KY Regional Branch Meeting, Nov 2017

Krausfeldt LE, GL Boyer and SW Wilhelm. Biodegradation of a potent cyanotoxin in freshwater environments. ASM TN-KY Regional Branch Meeting, Nov 2017.

Stough JMA, MM Steffen, YB Chaban, M Moniruzzaman, ER Gann, SW Wilhelm and SM Short. Genome and activity of *Chrysochromulina parva* virus and its constituent virophage. 3rd International Symposium on Giant Virus Biology, Ringberg Castle, Tegernsee, Germany Nov 2017.

Denney M, A Farmer, LE Krausfeldt, A Zastepa, CE Binding, SB Watson, HF Castro Gonzalez, SR Campagna and SW Wilhelm. Characterizing the lipidome of *Microcystis* blooms in Lake Erie (2015). ASM TN-KY Regional Branch Meeting, Nov 2017.

Martin RM, G Peng, SP Dearth, X Sun, GL Boyer, SR Campagna, S Lin and SW Wilhelm. Temperature and nitrogen chemistry modulate microcystin production in *Microcystis aeruginosa* NIES-843. ASM TN-KY Regional Branch Meeting, Nov 2017.

Gann ER and SW Wilhelm. Analyses of viral populations with large genomes in the Tennessee River. ASM TN-KY Regional Branch Meeting, Nov 2017.

Gainer PJ, HL Pound, AA Larkin, GR LeCleir, JM DeBruyn, ER Zinser, ZI Johnson and SW Wilhelm. Seasonal and Spatial Analysis of Bacterial Co-occurrences in the North Pacific Ocean. ASM TN-KY Regional Branch Meeting, Nov 2017.

Coy SR, ER Gann, CM Gibson, X Sun, ME Holder, NJ Ajami, JF Petrosino, JL Van Etten, SR Campagna and SW Wilhelm. Chlorovirus methylation: a model for elucidating epigenetic functions in dsDNA viruses. International Association for Great Lakes Research, Detroit, MI, May 2017.

Stough JMA, X Tang, LE Krausfeldt, MM Steffen, G Gao, GL Boyer and SW Wilhelm. Discrimination of temperate vs lytic phage activity in *Microcystis* blooms using a systems biology approach. International Association for Great Lakes Research, Detroit, MI, May 2017.

Denney M, A Farmer, LE Krausfeldt, A Zastepa, CE Binding, SB Watson, SR Campagna and SW Wilhelm. Characterizing the lipidome of Microcystis blooms in Lake Erie (2015). International Association for Great Lakes Research, Detroit, MI, May 2017.

Martin RM, LM Steenhauser, M Moniruzzaman, JMA Stough, AJ Koster, CPD Brussaard and SW Wilhelm. Genome sequence of *Cylindrospermopsis raciborskii* virus and host: from test tube to invasion ecology. International Association for Great Lakes Research, Detroit, MI, May 2017.

Krausfeldt LE, GL Boyer and SW Wilhelm. The plot thickens: the *mlr* pathway for microcystin degradation may not be relevant in Lake Erie and Lake Tai (*Taihu*). International Association for Great Lakes Research, Detroit, MI, May 2017.

Paerl HW, WS Gardner, MJ McCarthy, SE Newell, H Xu, G Zhu, B Qin, TG Otten, JT Scott, KE Havens, WA Wurtsbaugh, NS Hall, KL Rossignol and SW Wilhelm. Controlling a global proliferation of toxic cyanobacterial blooms in large lakes: The case for dual nutrient (N & P) input reduction strategies. International Association for Great Lakes Research, Detroit, MI, May 2017.

Boyer GL, WW Carmichael, SW Wilhelm and SB Watson. Microcystins and the toxicity of hazardous algal blooms. Lake Erie at the Millennium Conference, Windsor ON, Feb 2017.

Gilbert NE, SW Wilhelm and MM Steffen. Global survey of urea degrader diversity associated with freshwater toxic cyanobacterial blooms. ASLO Aquatic Sciences Meeting, Honolulu, HI, Feb 2017.

Steffen MM, TW Davis, JMA Stough, Rm McKay, GS Bullerjahn, LE Krausfeldt, ML Neitzy, GL Boyer, T Johengen, D Gossiaux, AM Burtner, D Palladino, MD Rowe, GJ Dick, KA Meyer, S Levy, B Boone and SW Wilhelm. Transcriptional profiles of the 2014 Lake Erie *Microcystis* bloom. ASLO Aquatic Sciences Meeting, Honolulu, HI, Feb 2017.

Davenport EJ, GS Bullerjahn, TW Davis, SW Wilhelm, MK Denney, LE Krausfeldt, JMA Stough, KA Meyer, GJ Dick, TH Johengen, SG Tringe, RML McKay. Diel regulation of metabolic function of a western Lake Erie cHAB informed by metatranscriptome analysis. International Conference on Toxic Cyanobacteria, Wuhan, China, October 2016.

Schmidt J, SW Wilhelm, T Henry and GL Boyer. Metabolism of microcystin in fish, a comparison of laboratory and field data. International Conference on Toxic Cyanobacteria, Wuhan, China, October 2016.

Tang X, LE Krausfeldt, GR LeCleir, JMA Stough, G Gao, GL Boyer and SW Wilhelm. Metatranscriptomics reveals significant temporal gene expression patterns of Microcystis aeruginosa in Lake Taihu. International Conference on Toxic Cyanobacteria, Wuhan, China, October 2016.

Peng G, RM Martin, GL Boyer, SP Dearth, SR Campagna, X. Wang and SW Wilhelm. The effect of temperature and nitrogen on the regulation of microcystin and photosynthesis in the *Microcystis aeruginosa* NIES 843. International Conference on Toxic Cyanobacteria, Wuhan, China, October 2016.

Steffen MM, T Davis, JMA Stough, RM McKay, GS Bullerjahn, LE Krausfeldt, ML Neitzey, GL Boyer, T Johengen, D Goggiaux, A Burtner, D Palladino, S Levy, B Boon and SW Wilhelm. Lessons from the 2014 Lake Erie bloom: was it business as usual in the western basin? International Conference on Toxic Cyanobacteria, Wuhan, China, October 2016.

Hellweger FL, ND Fredrick, MJ McCarthy, WS Gardner, SW Wilhelm and HW Paerl. Dynamic, mechanistic, molecular-level modeling of cyanobacteria: *Anabaena* and nitrogen interaction. ISME Montreal, August 2016.

Steen AD, J Vazin, K Mulligan S Hagan and SW Wilhelm. What we talk about when we talk about peptidases: quantifying substrate specificities of amino peptidases in fresh and estuarine water. Enzymes in the Environment, Bangor, Wales, July 2016.

Coy SR, ER Gann, CM Gibson, ME Holder, NJ Ajami, JR Petrosino, JL Van Etten, SR Campagna and SW Wilhelm. Chlorovirus methylation: a model for elucidating the function of epigenetics in dsDNA viruses. Aquatic Virus Workshop 8, Plymouth, UK July 2016.

Wilhelm SW. Using metatranscriptomics to characterize *Microcystis* bloom events. Lake Taihu workshop, Wuxi, China. June 2016.

Krausfeldt LE, X Tang, L Bodrossy, J van de Kamp, GL Boyer and SW Wilhelm. Examination of nitrogen cycling pathways and their activity in Taihu across space and time. Lake Taihu workshop, Wuxi, China, June 2016.

Davenport ES, LE Krausfeldt, MK Denney, SW Wilhelm, RML McKay and GS Bullerjahn. Diel metatranscriptomics of the 2014 Lake Erie *Microcystis* bloom. IAGLR Guelph, June 2016.

Steffen MM, MM Neitzey, X Tang, HW Paerl and SW Wilhelm. A lakewide microbial metatranscriptomic survey of the eutrophic shallow Lake Tai (China) for 2013. ASLO Santa Fe, June 2016.

Gardner WS, MJ McCarthy, SW Newell, K Lu, D Hoffman, PJ Lavrentyev, FL Hellweger, SW Wilhelm, Z Liu and HW Paerl. Photic Ammonium Demand, a new concept in examining N-limitation in eutrophic ecosystems: potential implications to regional CyanoHABs in large lakes. ASLO Santa Fe, June 2016.

Moniruzzaman M and SW Wilhelm. Nature's genetic engineers – giant viruses of the picoeukaryotes and *Aureococcus anophagefferens* – AaV as a model system. EMBL/GBMF Symposium (A new age of discovery for Aquatic Microeukaryotes). Heidelberg DE, Jan 2016.

Calfee BC, ZI Johnson, SW Wilhelm and ER Zinser. Seasonal effects on the population structure of *Prochlorococcus* in the North Pacific Ocean. ASLO, New Orleans, Feb 2016.

Krausfeldt LE, X Tang, GR LeCleir, J Vandicamp, L Bodrossy, GL Boyer, HW Paerl, G Guang and SW Wilhelm. Investigation of the nitrogen cycle within harmful algal bloom communities. Eighth Symposium on Harmful Algae in the U.S., Long Beach CA, Nov 2015.

Neitzey M, MM Steffen, HW Paerl, XM Tang, G Gao and SW Wilhelm. A lakewide metatranscriptomic survey of the eutrophic shallow Lake Tai (China). Eighth Symposium on Harmful Algae in the U.S., Long Beach CA, Nov 2015.

Martin RM, SP Dearth, GR LeCleir, SR Campagna, EM Fozo, ER Zinser and SW Wilhelm. The effects of microcystin-LR on Escherichia coli evaluated through transcriptomics, metabolomics, and lipidomics. Eighth Symposium on Harmful Algae in the U.S., Long Beach CA, Nov 2015.

Gardner WS, MJ McCarthy, K Lu, SE Newell, PJ Lavrentyev, Z Liu, HW Paerl, SW Wilhelm and F Hellweger. Evaluating "Perfect Storm" conditions for how NH_4^+ and urea may stimulate regional *Microcystis* blooms in Lakes Taihu and Lake Erie, using "Community NH_4^+ Demand (CAD)" dynamics. Workshop to collect global expertise to address the problem of harmful algal blooms, Bowling Green, OH, April 2015.

Webber AT, NYD Ankrah, A Buchan, AD Steen and SW Wilhelm. The generation of DOC and POC by viral infection of marine bacteria. 2nd Annual Southeastern Biogeochemistry Symposium, Atlanta, GA, April 2015.

Ankrah N, S Dearth, E Zinser, S Wilhelm, S Campagna and A Buchan. Metabolism of viral lysates by marine bacterioplankton communities. ASLO, Grenada Spain, Feb 2015.

Steffen MM, RA Bourbonniere, SB Watson, LE Krausfeldt and SW Wilhelm. Metatranscriptomic and targeted insights into what makes *Microcystis* bloom. ASLO, Grenada Spain, Feb 2015.

Paerl HW, WG Garnder, MJ McCarthy, TG Otten, BL Peierls, KL Rossignol, HS Hall and SW Wilhelm. Nutrient controls of toxic cyanobacterial blooms in the context of global change: moving beyond the "phosphorus only" paradigm. ASLO, Grenada Spain, Feb 2015.

Moniruzzaman M, E Gann, GR LeCleir, CM Brown, CJ Gobler, KD Bidle, WH Wilson, and SW Wilhelm. Probing the diversity of algal Megaviridae members during a harmful Brown Tide bloom. ASLO, Grenada Spain, Feb 2015.

Gainer PJ, HL Pound, JM DeBruyn, GR LeCLeir, ER Zinser, ZI Johnson, and SW Wilhelm. Bacterial diversity and viruses: a study of phage dynamics in the north Pacific Ocean. ASLO, Grenada Spain, Feb 2015.

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Belisle BS, MM Steffen, HL Pound, SB Watson, RA Bourbonniere and SW Wilhelm. Is urea a driver for *Microcystis* blooms in Lake Erie? 1st Annual Southeastern Biogeochemistry Symposium, Atlanta, GA, April 2014.

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DeBruyn JM, HW Paerl, GL Boyer, MM Steffen, H Xu, G Zhu, G Gao, X Tang, B Qin and SW Wilhelm. Ecology of hypereutrophic Lake Taihu, China: implications for nutrient management strategies Annual Symposium of US-China Ecopartnership and Joint Research Center: Environmental Health and Green Development. Gatlinburg, TN, November 18-19, 2013

Gainer PJ, T Pimentel, A Ponsero, ER Zinser, ZI Johnson, and SW Wilhelm. The role of temperature in North Pacific virus dynamics. Aquatic Virus Workshop 7, St Petersburg, FL, Nov 2013

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Vazin JP, AD Steen and SW Wilhelm. What's for dinner? The study of substrate specificities of extracellular peptidases in the Tennessee River to determine microbe consumption options. EUReCA, Knoxville TN, March 2013.

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Paerl HW, SW Wilhelm, GL Boyer, L Dong, AR Joyner and MM Steffen. Evaluating nutrient reductions to control cyanobacteria and ensure large lake sustainability: Lake Taihu (China) as a model for North American systems. CBET Grantees Conference, Washington DC, June 2012.

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Cusick KD, SC Minkin, SW Wilhelm and GS Sayler. The plasma membrane copper transporter as a molecular target of saxitoxin in microbial cells. ASLO Puerto Rico Feb 2011.

Zhou L, LJ Hauser, MM Steffen, M Leuze, B Dill, N VerBerkmoes and SW Wilhelm. Metagenomic comparisons of toxic *Microcystis* blooms. 18th Annual International Meeting on Microbial Genomics, Lake Arrowhead, CA Sept 2010

Dill BD, RJ Arnold, B Zhang, PE Abraham, M Shah, NC VerBerkmoes, CJ Gobler, SW Wilhelm. Proteomic profiles of *Aureococcus anophagefferens* CCMP1784 during nitrogen replete, nitrogen limited, and urea-supplemented growth. International Society for Microbial Ecology, Seattle, August 2010.

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Matteson AR, JM Rowe, PW Boyd and SW Wilhelm. Direct quantification and production of cyanophage in marine and freshwater ecosystems using a quantitative PCR approach. International Society for Microbial Ecology, Seattle, August 2010.

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MR Twiss, SW Wilhelm, RML McKay, RA Bourbonniere, GS Bullerjahn, HJ Carrick, and REH Smith. CACHE: Unique Limnological Features in Ice Covered Lake Erie. ASLO Santa Fe, June 2010.

Carrick HJ, RA Bourbonniere, GS Bullerjahn, NA D'Souza, RML McKay, MA Saxton, REH Smith, MR Twiss and SW Wilhelm. Plankton on Ice: Taxonomic composition, production, and grazing loss of winter assemblages in Lake Erie. IAGLR, Toronto, May 2010

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Boyer GL, AM Hotto, SW Wilhelm, JM Rinta-Kanto, JM DeBruyn and SB Watson. MERHAB-LGL: The role of embayments, nearshore nutrient shunts and offshore waters in the initiation and maintenance of toxic algal blooms in the lower Great Lakes. US HAB meeting, Ocean Shores WA, Nov 2009

Rogers ED, TB Henry, MJ Twiner, JS Gouffon, JT McPherson, GS Sayler and SW Wilhelm. Interpretation of global gene expression and the biochemical pathways affected by exposure to microcystin-lr and *Microcystis aeruginosa* in larval Zebrafish. SETAC, New Orleans, LA, Nov 2009.

Matteson A, JM Rowe and SW Wilhelm. Direct quantification of cyanophage in marine and freshwater ecosystems using a quantitative PCR approach. ASM KY-TN Branch Meeting, Knoxville TN, October 2009

Farnsley SE, GR LeCleir, JM DeBruyn, GL Boyer, G Zhu, HW Paerl and SW Wilhelm. Spatial distribution of toxic cyanobacteria and microbes in China's Lake Tai. ASM KY-TN Branch Meeting, Knoxville TN, October 2009

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Loar, S. A Matteson, and SW Wilhelm. Seasonal variation in Lake Erie picoplankton. ASM KY-TN Branch Meeting, Knoxville TN, October 2009.

Boyer GL, AM Hotto, SW Wilhelm, JM Rinta-Kanto and JM DeBruyn What large Lake Ecosystems can tell us about toxic cyanobacteria in small lakes and vice versa. North American Lake Management Society, Hartford, Conn. Oct 2009

Morris JJ, MJ Szul, Martin, A Buchan, J Dunlap, M Keller, SW Wilhelm, M Saxton, Matthew and ER Zinser. Algae of the Oxycline: Cultivation Using Strategies to Alleviate Oxidative Stress Plant Society of Plant Biologists, Honolulu, HI. July 2009.

Ong HC, SW Wilhelm, CJ Gobler, G Bullerjahn, G Rocap, MA Jacobs, RA Cattolico. The complete chloroplast genome sequences of two brown tide agents: *Aureococcus anophagefferens* CCMP1984 and *Aureoumbra lagunensis* CCMP1507. Plant Society of Plant Biologists, Honolulu, HI. July 2009

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Rowe JM, M-F Fabre, D Gobena, WH Wilson, and SW Wilhelm Application of the major capsid protein gene as a marker of phylogenetic diversity of *Emiliania huxleyi* Phycodnaviruses in the North Atlantic. WG 126 Meeting, Newark, DE, May 2009.

Budinoff CR, ME Jones, SW Wilhelm, and A Buchan. Isolation and characterization of roseobacters and roseophage from two distinct coastal environments. SCOR WG 126 Meeting, Newark, DE, May 2009.

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D'Souza N, SW Wilhelm, MR Twiss, HJ Carrick, RA Bourbonniere, GS Bullerjahn, and RML McKay. Primary production in ice-covered Lake Erie. IAGLR, Toledo, OH. May 2009.

Cusick KD, SW Wilhelm and GS Sayler. Transcriptional profile comparison of *S. cerevisiae* to copper and the algal toxin saxitoxin. ISME, Cairns, Australia, August 2008

Rowe JM, JM DeBruyn, MA Saxton, L Poorvin, DA Hutchins, ER Zinser, ZI Johnson and SW Wilhelm. Marine viruses across oceanic regimes: analyses of virus-host parameters from the Sargasso Sea, North Atlantic, and Western Pacific. ASLO St John's NL, June 2008

Wilhelm SW, RA Bourbonniere, GS Bullerjahn, HJ Carrick, NE Ostrom, CJ Marvin, RML McKay, MR Twiss and REH Smith. Winter assessment of microbial biomass and metabolism (WAMBAM): the implications for climate change on winter biological activity in a Laurentian great lake. ASLO St John's NL, June 2008

Wilhelm SW, RML McKay, MR Twiss, GS Bullerjahn, RA Bourbonniere, HJ Carrick, NE Ostrom, MMD Al-Rshaidat, GR LeCleir, RW Sterner, CJ Marvin and REH Smith. Winter assessment of microbial biomass and metabolism

(WAMBAM): The implications of ice formation on biological activity in a Laurentian Great Lake. IAGLR, Peterborough, ON, May 2008.

Twiss MR, SW Wilhelm, RML McKay, and GS Bullerjahn. The CACHE: a unique limnological feature in ice covered Lake Erie. IAGLR, Peterborough, ON, May 2008

Rogers ED, TB Henry, MJ Twiner, RJ Strange, GL Boyer, GS Sayler and SW Wilhelm. Global gene expression in larval Zebrafish exposed to *Microcystis aeruginosa*: more than just microcystin. IAGLR, Peterborough, ON, May 2008

******2008 HydroLab Award for best student oral presentation***

Allender, CJ and SW Wilhelm. Identifying the source of unknown microcystin genes and predicting microcystin variants by linking multi-gene diversity within uncultured cyanobacteria. IAGLR, Peterborough, ON, May 2008

Saxton MA, D Truitt, RML McKay, RA Bourbonniere and SW Wilhelm. Defining the role(s) of phosphorus in promoting toxic cyanobacterial blooms. IAGLR, Peterborough, ON, May 2008

Juby AL, RS Davis, SW Wilhelm and MR Twiss. Thallium resistance in bacteria isolated from the St. Lawrence River. Great Lakes Research Consortium, Syracuse NY, March 2008

Gobler CJ, DL Berry, SW Wilhelm, I Grigorev, A Terry, M Berg, ST Dyhrman, C. Koyne, J Berges, J Collier. Preliminary insight from the first genome sequence of a harmful algal bloom species, the brown tide alga, *Aureococcus anophagefferens.* ASLO Orlando, March 2008.

Rogers ED, TB Henry, MJ Twiner and SW Wilhelm. Changes in global gene expression in larval zebrafish exposed to microcystin. The Society of Environmental Toxicology & Chemistry, Milwaukee, Wisconsin, USA. November 2007

Wilhelm SW and GL Boyer. Molecular characterization of toxic cyanobacterial communities in the lower great lakes: a seven-year synopsis. Fourth symposium on Harmful Algae in the US. Woods Hole, MA, October 2007.

Gobler CJ, SW Wilhelm, DL Berry, L Poorvin, N Sarode, A Terry, I Grigorev, M Berg and The *Aureococcus Genome Consortium*. Preliminary insight from the first genome-sequence of a harmful algal bloom species, the brown tide alga, *Aureococcus anophagefferens*. Fourth symposium on Harmful Algae in the US. Woods Hole, MA, October 2007.

Ivanikova NV, GS Bullerjahn, LC Popels, RML McKay, AR Cupp, E Zinser and SW Wilhelm. 2007. Genetic diversity and population dynamics of picocyanobacteria in Lakes Superior and Erie. 30th International Congress on Limnology (SIL 2007), Montreal Quebec, Canada, August 2007.

Wilhelm SW, GS Bullerjahn, RA Bourbonniere, ER Zinser and AR Cupp. Insights into ecosystem metabolism from community structure analyses of microbial communities in Lake Erie. IAGLR, University Park, PA, May 2007.

Wilhelm SW, JM Rinta-Kanto, GL Boyer and RA Bourbonniere. The ecology and biogeography of Lake Erie *Microcystis* blooms. IAGLR, University Park, PA, May 2007.

Boyer GL, J Makarewicz, MC Watzin, SW Wilhelm. Development of a unified monitoring strategy for cyanobacterial toxins in large lake ecosystem. IAGLR, University Park, PA, May 2007.

Feng Y, DA Hutchins, CE Hare, K Leblanc, GR DiTullio, SW Wilhelm, J Sun, JM Rose, U Passow and N Nemcek. The interactive effects of increased temperature and pCo2 on the north Atlantic spring bloom phytoplankton community. ASLO, Santa Fe, NM, February 2007.

Gobler CJ, DL Berry, TW Davis, GL Boyer and SW Wilhelm. Distribution and ecology of toxic and non-toxic strains of *Microcystis* populations in North American Great lakes. International Society for the Study of Harmful Algal Blooms, Copenhagen, Denmark, September 2006.

Rowe JM, MA Saxton, DA Hutchins, GR DiTullio and SW Wilhelm. Characterization of virus dynamics in the Sargasso Sea and during the North Atlantic spring bloom (NASB 2005). ASLO, Victoria, BC. June 2006.

Rowe JM, JR Dunlap, AD Frazier, CJ Gobler, OR Anderson, MD Gastrich, and SW Wilhelm. Isolation and characterization of bacterial and viral agents infectious to Aureococcus anophagefferens. SCOR WG126 – Marine Virus Ecology Meetings, Vancouver, BC. June 2006.

Rinta-Kanto JM and SW Wilhelm. The effect of virus size class enrichment on bacterial production. SCOR WG126 – Marine Virus Ecology Meetings, Vancouver, BC. June 2006.

Wilhelm SW, CJ Gobler, RA Bourbonniere, TW Davis and MA Saxton. Microbial mortality mechanisms prior to and during the onset of seasonal hypoxia in the central basin of Lake Erie. IAGLR, Windsor, ON May 2006.

Gouvê SP, C Melendez, MJ Carberry, GS Bullerjahn, SW Wilhelm, TA Langen and MR Twiss. Assessment of phosphorus-microbe interactions in Lake Ontario by multiple techniques: LOLA September 20-25, 2003. IAGLR, Windsor, ON May 2006.

Cupp AR, GS Bullerjahn, L Popels and SW Wilhelm. Phylogenetic analysis of photosynthetic picoplankton and bacterioplankton in Lake Erie during seasonal hypoxia. IAGLR, Windsor, ON May 2006.

Rinta-Kanto JM, R Li, GL Boyer, RA Bourbonniere and SW Wilhelm. New views on the diversity of toxic cyanobacterial populations on Lake Erie. IAGLR, Windsor, ON May 2006.

Havens SM, CS Hassler, R North, SJ Guildford, SW Wilhelm, and MR Twiss. Ironing out phytoplankton abundance in the surface waters of Lake Erie (IFYLE 2005). IAGLR, Windsor, ON May 2006

Havens SM, CS Hassler, R North, SJ Guildford, SW Wilhelm, and MR Twiss. Iron distributions in relation to phytoplankton abundance and nitrate drawdown in the surface waters of Lake Erie (IFYLE 2005). Great Lakes Research Consortium, Syracuse, NY. March 2006

******Awarded Great Lakes Research Consortium student award for excellence in research and presentation.***

Wilhelm SW, GS Bullerjahn, AR Cupp, JM Rinta-Kanto and RA Bourbonniere. Unmasking the hidden diversity of photosynthetic picoplankton and bacterioplankton in Lake Erie during seasonal hypoxia. Fourth Annual Millenium Conference on Lake Erie, Windsor ON Feb 2006

Gobler CJ, SW Wilhelm, RA Bourbonniere, TW Davis, and MA Saxton. Microbial mortality mechanisms (virus lysis and grazing) prior to and during the onset of seasonal hypoxia in the central basin of Lake Erie. Fourth Annual Millenium Conference on Lake Erie, Windsor ON Feb 2006

Frew RD, PW Boyd, CS Law, DA Hutchins, SW Wilhelm. FeCycle: attempting an iron biogeochemical budget from a mesoscale sulfur hexafluoride tracer experiment in unperturbed low iron waters. ASLO / AGU Ocean Sciences Meeting, Honolulu HI, Feb 2006

Kenst AB, Perfect E, Zhang J, McCarthy J and SW Wilhelm. Virus transport during transient flow into a horizontal air-dry soil column. American Geophysical Union, Dec 2005, San Francisco CA

Boyer GL, JC Makarewicz, M Watzin, T Mihuc, JF Atkinson, M Sultan and Steven W. Wilhelm. MERHAB – lower great lakes - monitoring for harmful algal blooms in our inland seas. Third Symposium on Harmful Algae in the US, October 2005, Asilomar CA

Rowe JM, JR Dunlap, CJ Gobler, MD Gastrich, OR Anderson, and SW Wilhelm. Analysis of a virus-like particle associated with the lysis of the brown tide forming algae, *Aureococcus anophagefferens*. ASLO, June 2005, Santiago de Compostela, Spain

Gobler CJ, G Pererya, MD Gastrich, OR Anderson and SW Wilhelm. Environmental and biological factors influencing the ability of viruses lyse the harmful brown tide pelagophyte, *Aureococcus anophagefferens*. ASLO, June 2005, Santiago de Compostela, Spain.

Twiss MR, TA Langen, GS Bullerjahn, SW Wilhelm and DA Rockwell. LOLIPOP: Lake Ontario Limnology Practicum Opportunity. IAGLR, May 2005, Ann Arbor, MI

Wilhelm SW, GS Bullerjahn, and ML Eldridge. *Synechococcus* and *Prochlorococcus* associated with the Lake Erie "dead zone". ASLO, February 2005, Salt Lake City UT

Higgins JL, I Kudo, A Tsuda, and SW Wilhelm. Tracking the response of the virus community to a mesoscale iron fertilization in the subarctic Pacific. ASLO, February 2005, Salt Lake City UT

Poorvin L, CE Mioni, and SW Wilhelm. Characterization and bioavailability of iron released by viral lysis of marine plankton. ASLO, February 2005, Salt Lake City UT.

Mioni CE, L Poorvin and SW Wilhelm. Bioluminescent bacterial beporters: A tool of biological and chemical relevance to estimate iron bioavailability in aquatic systems. ASLO, February 2005, Salt Lake City UT.

Rinta-Kanto JM, GL Boyer, MF Satchwell, MT Smith, R Li and SW Wilhelm. Analysis of toxic *Microcystis* blooms on Lake Erie using quantitative real-time PCR. ASLO, February 2005, Salt Lake City UT.

Li R, W Carmichael, MM Watanabe, and SW Wilhelm. Water bloom forming *Raphidiopsis* (Cyanobacteria): Its taxonomy, phylogeny and toxins. Phycological Society of American, Williamsburg VA, August 2004.

Boyer GL, Makarewic JC, Watzin M, Mihuc T, Atkinson JF and Wilhelm SW. Monitoring strategies for harmful algal blooms in the Lower Great Lakes: Lake Erie, Lake Ontario and Lake Champlain, USA. XIth International Conference on Harmful Algae, Cape Town, South Africa, 15-19 November 2004.

Dean AL, JM Rinta-Kanto, JL Higgins, JM DeBruyn, SW Wilhelm. Viruses in Lake Erie microbial communities. IAGLR, Waterloo, ON, May 2004.

Rinta-Kanto JM, NL Neal, GL Boyer, AJA Ouellette and Steven W. Wilhelm. Real time PCR based detection and quantification of Microcystis in the lower Great Lakes. IAGLR, Waterloo, ON, May 2004.

Eldridge M.L., MW Cadotte, KW Bruland and SW Wilhelm. The effect of iron availability on microbial community structure: A comparison of natural and artificial Fe gradients. ASLO, Savannah, GA, June 2004.

Rinta-Kanto JM, MR Twiss, T Bridgeman, GL Boyer, SW Wilhelm. Detection of toxic *Microcystis* on Lake Erie through quantitative real-time PCR. Great Lakes Research Consortium, Syracuse, NY. March 2004.

******Awarded Great Lakes Research Consortium student award for excellence in research and presentation.***

Twiss MR, GS Bullerjahn, T.A. Langen, and S.W. Wilhelm. Lake Ontario Great Lakes Science Practicum 2003: a field course sponsored by the Clarkson University Center for the Environment and the USEPA-GLNPO. Great Lakes Research Consortium, Syracuse, NY. March 2004.

Boyd PW, DA Hutchins, CS Law, SW Wilhelm, RML McKay, RD Frew, M Maldonado, E Abraham, J Hall, and S Nodder. FeCycle – A sulfur hexafluoride labeled mesoscale study of iron biogeochemistry in unperturbed HNLC waters. ASLO/TOS Ocean Sciences Meeting, Honolulu HI, Feb 2004

Gobler GJ, G Pererya, MD Gastrich, OR Anderson, and SW Wilhelm. Characterization of viruses isolated from New York estuaries capable of lysing the harmful brown tide alga, Aureococcus anophagefferens. ASLO / TOS Ocean Sciences Meeting, Honolulu HI, Feb 2004

Twiss MR, SP Gouvêa, SW Wilhelm, RML McKay, A Mistry, TD Patey, D Polet. Responses of pelagic Great Lakes phytoplankton communities to trace metal (Fe, Co, Cd, Zn) enrichments. ASLO / TOS Ocean Sciences Meeting, Honolulu HI, Feb 2004

Higgins JL, A Cumming, L Poorvin, J Hall and SW Wilhelm. Viral production rates in the Antarctic subtropical convergence: estimates of Fe regeneration. ASLO / TOS Ocean Sciences Meeting, Honolulu HI, Feb 2004

Gobler CJ, J Krause, K Mauer, G Pererya, MD Gastrich, OR Anderson, and SW Wilhelm. Impacts of viruses isolated from New York waters on growth of the brown tide alga, *Aureococcus anophagefferens*: a field and laboratory assessment. Second Symposium on Harmful Algae in the USA, Woods Hole, MA, Dec 2003.

Gastrich MD, OR Anderson, CJ Gobler, SW Wilhelm, J Leigh-Bell, CA Rentz, R Lathrop, S Haag, MP Weinstein, M Danko, DA Caron, R Schaffner. Viruses as potential regulators of regional brown tide blooms caused by the alga, *Aureococcus anophagefferens* and the assessment of brown tide blooms and related environmental factors in coastal waters of New Jersey (2000-2002). Symposium on Harmful Algae in the USA, Woods Hole, MA, Dec 2003.

Applegate BM Jr., NG Bright, CE Mioni, SM Husseiny, SW Wilhelm, LJ Mauer, and BM Applegate, Sr. Development of a bioluminescence-based assay to evaluate the efficacy of lactoferrin as a bacteriostatic agent. Institute of Food Technologies Annual Meeting, Chicago, IL, July 2003

McKay RML, D Porta, SW Wilhelm, MR Twiss and GS Bullerjahn. Iron availability in the Great Lakes assessed using a luminescent bioreporter. Third European Phycological Congress, Belfast Ireland, July 2003.

McKay RML, D Porta, MR Twiss, SW Wilhelm, L Poorvin, GS Bullerjahn. Iron availability in Lake Erie assessed using a luminescent bioreporter. IAGLR, Chicago, IL, June 2003.

Carberry MJ, ML Eldridge, L Poorvin, F Chen and SW Wilhelm. Viruses infecting *Synechococcus* in Lake Erie – Diversity and Characterization. IAGLR, Chicago, IL, June 2003

DeBruyn JM, RML McKay, MR Twiss, O Gillor, RA Bourbonniere, and SW Wilhelm. P-Loading, phytoplankton community structure and the microbial ecology of Lake Erie. IAGLR, Chicago, IL, June 2003

Ouellette AJA, SM Handy, M Satchwell, GL Boyer and SW. Wilhelm. Development and application of molecular probes for *Microcystis* in Lake Erie. IAGLR, Chicago, IL, June 2003.

Twiss MR, SW Wilhelm, RA Bourbonniere, and RML McKay. Field investigations (1999-2002) of P, Zn, and Fe limitation in Lake Erie phytoplankton. IAGLR, Chicago, IL, June 2003.

Wilhelm SW, JM DeBruyn, O Gillor, MR Twiss, RA Bourbonniere, CG Trick, and RML McKay. The effect of phosphorus amendments on present day plankton communities in pelagic Lake Erie. The Third Biennial Conference of the Lake Erie Millennium Network. Windsor, ON, Canada, May 2003

Ouellette AJA, MF Satchwell, ET Howell, SM Handy, GL Boyer and SW Wilhelm PCR methods to detect and quantify toxic Microcystis: applications in Lakes Erie and Ontario. The Third Biennial Conference of the Lake Erie Millennium Network. Windsor, ON, Canada, May 2003

Twiss, MR, SW Wilhelm, RA Bourbonniere and RML McKay. Field investigations (1999-2002) of P, Zn, and Fe limitation in Lake Erie phytoplankton. The Third Biennial Conference of the Lake Erie Millennium Network. Windsor, ON, Canada, May 2003

Balsom AL, JM Grebmeier, LW Cooper and SW Wilhelm. Sediment bacterial and viral abundances in the SBI study region of the Chukchi and Beaufort Seas. Western Arctic Shelf-Basin Interactions (SBI) Project Phase II PI meeting, Miami, FL March 4-7, 2003

DeBruyn JM, JA Leigh-Bell, M Falcone, RML McKay, RA Bourbonniere, and SW Wilhelm. Phosphorus loading in Lake Erie: Impacts on microbial food web dynamics. Great Lakes Research Consortium, Syracuse, NY, March 2003.

Deonarine S, CJ Gobler, J. Leigh-Bell, MD Gastrich, OR Anderson, and SW Wilhelm. Phytoplankton ecology of algal communities dominated by *Aureococcus anophagefferens*: importance of nutrients, viruses, and zooplankton. ASLO, Salt Lake City, UT, Feb 2003.

Carberry MJ, ML Eldridge, L Poorvin, and SW Wilhelm. What are marine cyanophage doing in Lake Erie? Great Lakes Research Consortium, Syracuse, NY. March 2003

Ouellette AJA, Satchwell MF, Howell ET, Boyer GL, and SW Wilhelm. PCR methods to detect and quantify toxic *Microcystis*: applications in Lakes Erie and Ontario. Great Lakes Research Consortium, Syracuse, NY. March 2003

DeBruyn JM, JA Leigh–Bell, M. Falcone, RML McKay, RA Bourbonniere and SW Wilhelm. Phosphorus loading in Lake Erie: impacts on microbial food web dynamics Great Lakes Research Consortium, Syracuse, NY. March 2003.

Ouellette AJA, GL Boyer and SW Wilhelm. Quantitative PCR and sequence analysis for determination of microbial community structure and the detection of toxic *Microcystis* in Lake Erie. Tenth International Conference on Harmful Algae, St. Petersburg Fl October 2002.

Gobler C J, C Debenham, M Donoghue, DA Caron, and SW Wilhelm, AL Dean. The role of nutrients, microzooplankton grazing, and viral lysis in the occurrence of brown tide blooms (*Aureococcus anophagefferens*) in New York, USA. Tenth International Conference on Harmful Algae, St. Petersburg Fl October 2002.

Porta D, GS Bullerjahn, K Durham, SW Wilhelm, MR Twiss, R Sterner and RML McKay. Physiological characterization of a *Synechococcus* sp. PCC 7942 iron-dependent bioreporter grown in defined media. ASLO, Victoria BC June 2002.

Wilhelm SW, JM Rinta-Kanto, L Poorvin and DA Hutchins. Viral generation of dissolved organic-Fe in a coastal HNLC system. Ocean Sciences Meeting-American Geophysical Union, Honolulu HI February 2002.

Poorvin L, J Donat and SW Wilhelm. The fate of cellular Fe in marine microbes following viral lysis. Ocean Sciences Meeting-American Geophysical Union, Honolulu HI February 2002.

Mioni CE, AM Howard, JM DeBruyn, NG Bright, BM Applegate and SW Wilhelm. Characterization and preliminary field trials of a bioluminescent reporter of iron bioavailability. Ocean Sciences Meeting-American Geophysical Union, Honolulu HI February 2002.

Balsom AL, JM Grebmeier, LW Cooper and SW Wilhelm. Benthic community composition and biomass distribution: viral, bacterial, and infaunal associations from the Gulf of Alaska to the Canadian Archipelago. Ocean Sciences Meeting-American Geophysical Union, Honolulu HI February 2002.

Jeffrey WH, AL Dean, DL Mitchell, J Meador and SW Wilhelm. Ultraviolet radiation induced DNA damage in marine viruses along a latitudinal gradient. Ocean Sciences Meeting, AGU, Honolulu HI February 2002.

Trick CG, R Weaver, DA Hutchins and SW Wilhelm. Short-term iron acquisition rates amongst group-specific phytoplankton: studies in HNLC waters of the subtropical Pacific Ocean and the Laboratory. Ocean Sciences Meeting-American Geophysical Union, Honolulu HI February 2002.

Chen F, Y Zhong, J.R. Lu, L Poorvin, SW Wilhelm, and R Hodson. What do you learn from gene and genomic sequences of cyanophages? Ninth International Symposium of Microbial Ecology, Amsterdam, Netherlands, August 2001

McKay RML, MR Twiss, RA Bourbonniere, CG Trick and SW Wilhelm. Trace metals in pelagic Lake Erie: toxic or tonic? Ninth International Symposium of Microbial Ecology, Amsterdam, Netherlands, August 2001

Wilhelm SW, RA Bourbonniere, RML McKay, CG Trick and MR Twiss MR. Stimulation of autotrophic picoplankton photosynthesis in Lake Erie: the roles of Fe, Zn, Co and Cd availability. IAGLR, Green Bay, WI, June 2001.

Eldridge ML, KW Bruland, GR DiTullio, DA Hutchins, CG Trick, and SW Wilhelm. Influence of iron availability on microbial communities in HNLC waters of the eastern subtropical Pacific Ocean. American Society of Microbiology, Orlando, Fl, May 2001.

Pakulski JD, A Baldwin, AL Dean, S Durkin, D Karentz, C Kelley, SW Wilhelm, and WH Jeffrey. Translatitudinal assessment of biological acclimation to solar conditions in the oceans (TABASCO). American Society of Limnology and Oceanography, Albuquerque, NM, Feb 2001.

Wilhelm SW, Poorvin L, and DA Hutchins. Viral regeneration of bioavailable iron in the coastal Californian upwelling. ASLO, Albuquerque, NM, Feb 2001.

Trick CG, DiTullio GR, Hutchins DA, Weaver RS and SW Wilhelm. Effects of artificial chelators on phytoplankton community structure in the oligotrophic subtropical pacific. ASLO, Albuquerque, NM, Feb 2001.

McKay RML, Twiss, Bourbonniere R., Trick CG, and SW Wilhelm. Evidence of trace element limitation of phytoplankton growth in pelagic Lake Erie. ASLO, Albuquerque, NM, Feb 2001.

Eldridge ML, Trick CG, Alm MB, DiTullio GR, and SW Wilhelm. Influence of iron availability on group-specific phytoplankton success in HNLC waters of the subtropical Pacific Ocean. ASLO, Albuquerque, NM, Feb 2001.

McKay RML, MR Twiss, RA Bourbonniere, X Qin and SW Wilhelm. Effect of trace nutrient additions on phytoplankton growth and photosynthetic response in Lake Erie. International Association for Great Lakes Research, Cornwall, ON, May 2000.

Bright NG, BM Applegate, ML Eldridge, GS Sayler and SW Wilhelm. Development of a bioluminescent reporter for the determination of aqueous iron bioavailability. American Society of Microbiology, Los Angeles May 2000.

Eldridge ML and SW Wilhelm. The ferric uptake regulatory (fur) gene is common amongst marine prokaryotes. Ocean Sciences Meeting-American Geophysical Union, San Antonio, TX, January 2000.

Kirby RS and SW Wilhelm. Response of the blue-green algae *Microcystis aeruginosa* to levels of ultraviolet radiation. International Association for Great Lakes Research (42nd Meeting), Cleveland, OH, May 1999.

Wilhelm SW and REH Smith. Viral ecology and bacterial production in Lake Erie. ASLO, Santa Fe, NM, February 1999.

Smith REH, Allen C and SW Wilhelm. Solar ultraviolet radiation and bacterial communities in Lake Erie. ASLO, Santa Fe, NM, February 1999.

Wilhelm SW, Jeffrey WH, Suttle, CA and DL Mitchell. Decay rates *in situ* of marine viral infectivity and its relationship to pyrimidine dimer formation: an argument for the use of viruses as dosimeters for the exposure of aquatic communities to biologically damaging radiation. ISME, Halifax, NS, August 1998.

Wilhelm SW, S Brigden and CA Suttle. Microbial dynamics in stratified and tidally mixed regimes in the Strait of Georgia Ocean Sciences Meeting- AGU, San Diego CA, February 1998. Eos Transactions 79(1): OS 21N-5.

Wilhelm SW, MG Weinbauer and CA Suttle. Quantifying photoreactivation in marine viral communities. ASM, Miami FL, May 1997.

Wilhelm SW, MG Weinbauer, DR Garza, RJ Pledger, DL Mitchell and CA Suttle. Sunlight-mediated DNA damage in marine viral communities. ASLO. Santa Fe, NM. Feb 1997.

Weinbauer MG, SW Wilhelm and CA Suttle. Significance of photoreactivation in maintaining concentrations of infectious viruses in the sea. American Society of Microbiology, New Orleans, May 1996.

Wilhelm SW, MG Weinbauer, DR Garza, KM Rodda, WH Jeffrey and CA Suttle. Light driven decay and repair of viruses in the Gulf of Mexico. Ocean Sciences Meeting-AGU, San Diego CA, February 1996. Eos Transactions 76: OS 51 I-10.

Suttle CA, AM Chan, SM Short, MG Weinbauer, SW Wilhelm. The effect of cyanophages on *Synechococcus* during a bloom in the western Gulf of Mexico. Ocean Sciences Meeting-American Geophysical Union, San Diego CA, February 1996. Eos Transactions 76: OS 51 I-7.

Weinbauer MG, SW Wilhelm, DR Garza and CA Suttle. Photoreactivation of ultraviolet radiation induced damage in marine bacteriophages. Ocean Sciences Meeting-AGU, San Diego CA, February 1996.

Wilhelm SW. Iron acquisition in *Synechococcus* spp.; a change in affinity. ASLO DIALOG Symposium, Bermuda Biological Station, December 1994.

Wilhelm SW and CG Trick. Growth in a low iron environment; the cyanobacterial response. ASLO DIALOG Symposium, Bermuda, December 1994.

Lewis BL, SW Taylor, GW Luther III, PD Holt, A Butler, SW Wilhelm and CG Trick. Voltametric estimation of iron (III) thermodynamic stability constants for catecholate siderophores isolated from marine bacteria and cyanobacteria. American Chemical Society. November 1994.

Wilhelm SW and CG Trick. Iron-limited physiology of *Synechococcus* sp. ASLO. Edmonton, ALTA. June 1993.

Trick CG, SW Wilhelm, KE Murphy and NM Rooney. Iron-limited algal ecology. ASLO. Edmonton, ALTA. June 1993.

Wilhelm SW and CG Trick. Physiology of iron stress in Synechococcus spp. Northeast Algal Society. Woods Hole, MA. April 1993.

Wilhelm SW and CG Trick. Iron acquisition in *Synechococcus*. Northeast Algal Society. Woods Hole, MA. April 1992.

***R.T. Wilce Award for Best Paper.*

Wilhelm SW and CG Trick. Siderophore variability in *Synechococcus* spp. (Cyanophyceae). ASLO. Santa Fe, NM. Feb 1992.

Wilhelm SW and CG Trick. Response of cyanobacteria to low iron and vitamin B_{12}. Northeast Algal Society. Woods Hole, MA. April 1991

Brown CM, SW Wilhelm and CG Trick. Iron limitation in *Oscillatoria tenuis*. ASLO. San Diego, CA. February 1991.

Technology Disclosures

A tool for the validation of degenerate primer sets and for data mining using publicly available metagenomes: DeMetaST-BLAST. C Gulvik, TC Effler, SW Wilhelm and A Buchan. April 2012.

Treatment of malaria by modulating the gut microbiota and/or their metabolic products. NW Schmidt and SW Wilhelm. February 2014.

Invited Workshop Participation

Lake Superior Chautauqua – Duluth MN, November 2000.

Lake Erie Trophic Status Study (EPA) – Windsor ON, November 2002 and again May 2003

EPA – International Symposium on Cyanobacterial Harmful Algal Blooms – Raleigh NC, September 2005.

Panelist: “International Symposium on Cyanobacterial Harmful Algal Blooms”. EPA/NOAA Durham NC, Sept 2005

EPA – US/China Harmful Cyanobacterial Work, Morehead City, NC, March 2007

NOAA - National Scientific Research, Development, Demonstration, and Technology Transfer Plan on Reducing Impacts from HABs (RDDTT Plan)", Woods Hole, MA, June 2007.
Panelist: Woodrow Wilson Center “Comprehensive environmental assessment of potential ecological impacts of synthetic biology”, July 2011.
Panelist and Expert. New York Department of Environmental Conservation Harmful Algae Symposium, SUNY-ESF, March 2018.
Panelist and committee member, Lake Erie Aquatic Life Use Panel, The State of Ohio – Oct 2020 – present.

Professional Affiliations, Activities and Service

Associate Editor: Limnology and Oceanography: Methods (October 2002 – present)
Editorial Board Member: Harmful Algae (Jan 2011 – August 2021)
Editorial Board Member: Applied and Environmental Microbiology (Jan 2007 – present)
Editorial Board Member: The ISME Journal (Jan 2013 – present)
Publications committee: American Society for Limnology and Oceanography (ASLO, Sept 2011 – 2015)

- Co-chair. Scientific Committee on Oceanographic Research working group on marine viruses (2005 – 2009)
- Adjunct member, Scientific Committee on Oceanographic Research working group marine carbon cycles (2009 – 2012).
- Member, International Committee on the Taxonomy of Viruses (Fungus Virus Subcommittee, Mimiviridae Study Group) (2013 – present)
- Co-Chair. NIMBioS working group on marine viruses (2011 – 2015)
- Contracted advisor to the *International Joint Commission* for the Great Lakes concerning harmful algae (2013)
- Chair – Environmental Microbiology Communications committee for the *American Society for Microbiology* (2015 – 2016)
- Steering committee – CIFAR Continuum of Persistence meeting, Portugal May 2017.

Grant Panels
NSF, IRES – Feb 2021
NSF, BioOce – Nov 2020
NSF, IOS – EDGE – August 2016.
NASA, Exobiology, October 2014 (virtual member)
NSF, Dimensions of Biodiversity, July 2013.
NIH, Bacterial Pathogenesis Study Section, special reviewer, June 2013
Ontario Ministry for Research and Innovation – OCRIF, September 2011, 2012
NSF, IOS – Organism Environment Interactions, March 2011, March 2015
NSF, STC – Site Visit Review Team (Chair) for NSF STC (C-MORE), Feb 2010.
NSF, SBIR – Agricultural Biotechnology RFP, March 2006
NSF, SBIR - Marine Biotechnology and Aquaculture RFP (March 2003, October 2003, September 2004)
DOE, LDRD Program (ORNL), August 2003
NSF, Biocomplexity in the Environment RFP, June 2001

Other Service
DIALOG (Dissertation Initiatives and Abstracts for Limnology and Oceanography) Review Panel (ASLO), July 2003
Invited panelist - DIALOG “Workshop for Landing the Right Job: Applications to Interviews”, Honolulu HI, Feb 2004
Technical Reviewer: The Environmental Protection Agency, Mar 2008
Darbaker Awards committee, Phycological Society of America (2011 – present)

Conference & meeting chair/co-chair
SCOR Marine Virus Ecology (co-chair with CA Suttle & MG Weinbauer), Vancouver, BC, Jun 2006.
SCOR Marine Virus Techniques Inter-calibration (with G Bratbak & MG Weinbauer) Bergen, Norway, Jun 2007
ASLO Emerging Issues Seminar II: Microbial Carbon Pump in the Ocean (with N Jiao, G Kattner and F Azam), San Juan, Puerto Rico, Feb 2011.
Invited Expert. NOAA Lake Erie Bloom Forecast Event, Stone Lab, Put-In-Bay, OH. July 2018.

Conference / Workshop Steering Committees
AVW11, Laval Quebec, May 2023 (in progress)
Ohio State Viromics Workshop – Organizing Committee. Oct 2017.

Continuum of Persistence- a Joint CIFAR and GBMF workshop. Oitavos, Portugal, May 2017
Environmental Virology: A workshop on experimental methods, informatic tools, and theory, Tuscon, Jan 2013
Aquatic Virus Workshop, Texel, The Netherlands, Oct 2011
USHAB meeting, Austin, TX, November 2011

Session Organizer

Viruses and virus-mediate processes, ASLO Granada Spain (Feb 2015)
Microbial Carbon Pump: A focus on origins, cycling and storage of DOM, ASLO Puerto Rico (Feb 2011)
Viruses as drivers of global processes, ISME Seattle (August 2010)
HAB events in the Great Lakes, IAGLR Toronto (May 2010)
Twenty years of virus ecology, ASM, Philadelphia (June 2009)
Plankton Diversity, Detection & Enumeration– SIL, Montreal (Aug 2007)
The Influence of Global Climate Change on Biological Processes in Surface Waters – ASLO, Santa Fe (Feb 2007)
Hypoxia in Large Lake Ecosystems: Causes and Consequences - IAGLR, Windsor ON (May 2006)
Viruses, Microbial Diversity and Ecosystem Function – ASLO Santiago de Compostela Spain (June 2005)
The Biogeochemical Cycling of Iron in the Ocean – From Genes to Gyres, ASLO, Honolulu (Feb 2004)
Mechanisms of Microbial Mortality, AGU, San Antonio (Jan 2000)
Trace Elements from Rivers to the Sea, ASLO, Santa Fe (February 1999)

Memberships: American Society for Limnology and Oceanography; American Society of Microbiology; International Society for Microbial Ecology; International Association for Great Lakes Research; International Society for the Study of Harmful Algae, Phycological Society of America

Frequent ad hoc reviewer for several journals including *Nature, Aquatic Microbial Ecology, Canadian Journal of Botany, Limnology and Oceanography, Marine Ecol*ogy *Progress Series, Journal of Phycology, Environmental Science and Technology* (complete list available). Also, on the *board of readers* for *Nature* 2009-2010.

Frequent ad hoc reviewer for granting agencies including the *National Science Foundation* (US), *Natural Environment Research Council* (UK), *National SeaGrant Program* (US), *Netherlands Earth and Life Sciences Council*, *Natural Science and Engineering Research Council* (Canada), (complete list available).

External committee member

Clinton Hare (advisor: DA Hutchins, University of Delaware Marine Sciences –defended 2006)
Sonya Havens (advisor: MR Twiss, Clarkson University Center for the Environment – defended 2006)
Alicia Hanson (advisors E. Young and J Berges, University of Wisconsin, Milwaukee – defended 2010)
Sherry Flogge (advisor WH Wilson, Bigelow Lab / U Maine – defended 2014)
Justine Schmidt (advisor GL Boyer, SUNY ESF – defended 2014)
Kristina Mojica (advisor CPD Brussaard, U Amsterdam – defended 2015)
Dominique Derminio (advisor GL Boyer, SUNY ESF – Oct 2018 – defended May 2020)

External examiner

Jamal Al Tebrineh (University of New South Wales – defended 2011)
Te Shu Harn (Nanyang Technological University, Singapore – defended 2011)
Anne- Kristin Dahse (University of Otago, NZ – defended 2013)
Yeo Bee Hui (Nanyang Technological University, Singapore – defended 2013)
Miroslava Jonlija (University of Waterloo – defended 2014)

External tenure/promotion /qualifications review - University of Maryland (2007); University of Delaware (2009); Wisconsin-Milwaukee (2010); Rutgers (2010); University of Texas – Austin (2011); University of South Carolina (2012); South African National Research Council (2012); Columbia University (2012); Kent State (2013); College of William & Mary (2013); University of South Alabama (2013); Wisconsin-Milwaukee (2013); University of Nebraska – Lincoln (2014); UNC Marine Sciences (2015); Bristol University (UK) 2017; Max-Planck Institute for Medical Research (2017); Stroud Research Center (2017); University of North Texas Health Science Center (2017). University of Texas at Austin (2018). Hong Kong University of Science and Technology (2018); Technion University (2019); University of Georgia (2019); Miami University – OH (2019); U Texas (2020); Kent State (2020); Weizmann Institute (Israel) (2020); Tulane School of Public Health (2021); UCSD (2021)

University Service Activities

Associate Head, Department of Microbiology (2007 – 2020)
Director of Graduate Studies (2009 – 2020)

Committees:

Search Committee – Director of the Division of Biology (99-00)
Search Committees – UTK Microbiology Positions (98-99), (2001-02), (2002-03), (2003-04), (2010-11 - chair) (2014-2015), (2016/17 – chair), (2021-22)
Faculty Recruitment Committee – UT/ORNL JIBS (2005-07)
Science Alliance Grad Student Awards – Biology (2000, 2009)
Deans Advisory Committee (2002 - 03)
Scholarship Committee –Environmental Biotechnology (2001-03)
Student Advisory Committee – GST (2001- 04), Committee Chair (2004 – 05)
Graduate Affairs Committee – GST (2005 - 06)
Graduate Advisory Committee – Micro (2006 – 2020)
Microbiology Curriculum committee (2003 - 06)
Graduate Admissions Committee (Micro) (02 – 2020, chair 2008-2014, 2021-22)
Faculty Advisor for UT Clubs – UT Paintball Club (05 - 07), UT Curling Club (2010 – 2012)
Deans committee on biological reorganization (2006 -07)
Comprehensive examination committee for GST (2008)
College of Arts and Science, Promotion and Tenure committee (2011-2012)
College of Arts and Science Building design team (2012)
Chair of Departmental Communications, Development and social media (2020-present)

Invited speaker. *Workshop on Research Experience for Undergraduates (REU), UTK Office of Research, Nov 18, 2010*

Faculty Mentor:

UT Pre-collegiate Scholars Program (2007, 2008); RT McNair Minority Program (2001/2); NIH-RISE Program (2000); University Junior Faculty Mentoring Program (A. Buchan 2005 – 2011; E. Zinser 2005 – 2011; L. Fozo 2010-2016; J. Mikucki 2012 – 2020; J. Johnson 2019-present); Office of Research Summer Grant writing Boot camp (A. Classen, 2011)

Student committee service (with advisor)

Completed (Tennessee):

James Rice (Sayler) – Microbiology, 1999
Sunitha Vege (McCracken)– Ecol./ Evolution. Bio, 2000
Michael Allen (Sayler) – Microbiology, 2002
Maria Siopsis (Hallam) –Mathematics, 2003
Arianne Balsom (Grebmeier) – Ecol./ Evolution. Bio, 2003
Terry Alford (Small) – Microbiology, 2004
Nathan verBerkmoes (Hettich)– GST, 2005
Andy Kenst (Perfect) – Earth & Planetary Sciences, 2005
David McWilliams (Bruce) – GST, 2006
David Allison (Becker) – Microbiology 2007
Aysu Ozen (Sayler) – Microbiology 2007
Rachel Slightom (Buchan) – Microbiology 2007
David Mann (Sayler) – Microbiology 2007
Steven Borst (Scott McElroy) – Plant Science 2008
Steven Minkin (Becker) – Microbiology 2008
Kathleen Daumer Cusick (Sayler) – Microbiology 2009
Franklin Damann (Kilppel) – Anthropology 2010
Emily Rogers (Henry) - Fisheries & Wildlife Sciences 2010
Jeff Morris (Zinser) - Microbiology 2010
Alison Russell (Hettich) – GST 2011
Charles Budinoff (Buchan) – Microbiology 2011
Chris Gulvik (Buchan) – Microbiology 2013
Rachel Adams (Hettich) – GST 2013
Daniel Gobena (Lamour) – GST 2012
Matthew Scholz (Sayler) – Microbiology 2012
Jacqui Young (Hettich) – GST 2012
Paul Abraham (Hettich) –GST 2013
Alicia Purcell (Mikucki) – Microbiology 2014
Jeremy Chandler (Zinser) – Microbiology 2014
Zhou Li (Hettich) – GST 2014
Melissa Hage (Fedo) – Earth & Planetary Sciences 2015
Latisha Brengman (Fedo) – Earth & Planetary Sciences 2015
Nana Ankrah (Buchan) – Microbiology 2015
Elizabeth Padilla (Loeffler) – Microbiology 2015
Lanying Ma (Zinser) – Microbiology 2016
Kathleen Brannen (Engel)– Earth & Planetary Sciences 2016
Evan Williams (Jonsson) – Microbiology (Transferred)
Ashley Berg (Kah) Earth & Planetary Sciences 2018
Laurel Seus (Loeffler) – Microbiology (change of program)
Xiaolong Liang (Radosevich) – BESS 2019
Jonelle Basso (Buchan) – Microbiology 2019
Chris Cook (Steen) – EPS 2020
Ivan Villalobos Solis (Hettich) – GST 2020
Lauren Mullen (Steen) – EPS 2020
Spiridon Papoulis (Zinser) - Microbiology 2020
William (Quint) Brewer (Fozo) – Microbiology 2020

Bikash Bogati (Fozo) – Microbiology 2021
Briana McDowell (Loeffler) - Microbiology 2021
Ben Calfee (Zinser) – Microbiology 2021

Current (Tennessee):
Regan Wagner (Radosevich) – BESS
Liz Glasgo (Zinser) – Microbiology
Caleb Schuler (Mikucki) – Microbiology
Cameron Jackson (Buchan) – Microbiology
Kyla Hooker (Talmy) – GST
Jennifer Bailey (Lloyd) - Microbiology

ACADEMIC REFERENCES

Dr Curtis A. Suttle, FRSC
Professor of the Departments of Microbiology, Botany, Earth and Ocean Sciences, The University of British Columbia, Vancouver, BC, V6T 1Z4 604-822-8610 suttle@eos.ubc.ca

Dr George S. Bullerjahn
Professor of Biological Science and former Chair, Department of Biology, Bowling Green State University, Bowling Green OH 43403 419-372-8527 bullerj@bgnet.bgsu.edu

Dr R Michael L McKay
Executive Director and Professor, Great Lakes Institute for Environmental Research, The University of Windsor, Windsor, ON. N9B 3P4 519-253-3000 x 2797 Robert.McKay@uwindsor.ca

PRIOR ACADEMIC ADVISORS

Dr Charles G Trick (Doctoral advisor, *retired*)
Beryl Ivey Chair in Ecosystem Health and Professor, Department of Biology, The University of Western Ontario, London, Ontario Canada N6A 5B7 trick@uwo.ca

Dr Curtis A. Suttle, FRSC (Postdoctoral advisor)
Professor of the Departments of Microbiology, Botany, Earth and Ocean Sciences, The University of British Columbia, Vancouver, BC, V6T 1Z4 suttle@eos.ubc.ca

Recent recognition in print and the press

- Dr Wilhelm (along with CA Suttle) received the ***John H Martin award*** from ASLO. (March 4, 2020 announcement, June 22, 2021 presentation at ASLO meeting)
- Dr Wilhelm appeared on the "Finding Genius" podcast (https://www.findinggeniuspodcast.com/podcasts/a-dive-into-the-deep-blue-green-sea-steven-w-wilhelm-phd-aquatic-microbial-ecology-research-lab-university-of-tennessee/) – July 2020
- Story in **Tennessee Alumnus** magazine on work in winter months in Lake Erie. https://alumnus.tennessee.edu/2020/to-the-extreme/ - May 2020
- **UT News report** on DOE funded work. https://news.utk.edu/2020/01/27/microbiologist-receives-doe-grant-to-investigate-peatland-carbon-processes/ - Jan 2020
- Article on the results of our work studying toxic cyanobacteria posted by Arts & Sciences and Microbiology Dept.. *https://micro.utk.edu/newsitem.php?news_id=1480&utm_source=newsletter&utm_medium=email&utm_content=sixth%20annual%C2%A0&utm_campaign=tntoday*
- Our collaboration with the Bullerjahn and McKay groups was selected as a **NIEHS "Environmental Factor Paper of the Month "** – December 2019.
- Professor Wilhelm was a guest on **This Week in Virology** (#575, http://www.microbe.tv/twiv/twiv-575/) and our work discussed on **This Week in Evolution** (#49, http://www.microbe.tv/twievo/twievo-49/)
- The **National Science Foundation** featured our work published with the Bullerjahn and McKay groups (and others) on their web page. October 18, 2019. Picked up by multiple news sources. https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=299409#.Xa4fpaVsrbE.twitter
  - - https://phys.org/news/2019-10-reveals-algal-blooms-daily_1.html
  - https://factor.niehs.nih.gov/2019/12/papers/dert/index.htm#a4 -NIEHS Environmental paper of the month
- Interviewed with WBIR and The Knoxville News Sentinel on the growing concern about harmful algal blooms across the country (August 12-13, 2019). Also with WVLT (Aug 21) and the University of Memphis Daily Helmsman (Aug 26)
- Our paper on a new giant virus (CpV) and the virophage that infect it were featured in an article in ***The Atlantic***. https://www.theatlantic.com/science/archive/2019/04/virophages-are-viruses-only-infect-other-viruses/586153/
- Interviewed by Oregon Public Broadcasting / NPR for piece on toxic algae in Salem, OR. Aired on ***All Things Considered*** Sept 3, 2018. https://n.pr/2Lnf5Y8
- Interviewed by Syracuse University student TV station concerning Governor Cuomo's plan to abate Harmful Algal Blooms March 2018
- Research on viral infection in *Microcystis* blooms of Lake Erie – interviews and stories including Michigan NPR, Cleveland NPR, ABC (Toledo), NBC (Toledo) and Detroit Free Press.

http://tntoday.utk.edu/2017/05/31/ut-study-shows-virus-infection-linked-toledo-water-crisis/
http://www.wtol.com/story/35560458/scientists-make-discovery-on-virus-that-caused-2014-water-crisis
http://www.detroitnews.com/story/news/local/michigan/2017/05/31/algae-blooms/102360464/
http://www.13abc.com/content/news/Study-shows-425590933.html
http://nbc24.com/news/local/bgsu-studies-suggest-2014-lake-erie-water-crisis-may-be-linked-to-a-viral-infection
http://michiganradio.org/post/study-virus-likely-contributed-2014-toledo-water-shutdown

- Research on single virus genomics highlighted in US and European reports (May 2017)

http://tntoday.utk.edu/2017/05/19/ut-scientists-discover-hidden-world-giant-viruses-seawater/

- Environmental Health Perspectives – Dr Wilhelm interviewed for *Microcystis* story (Feb 2017)
- Scientific American article on our malaria microbiome study (Feb 2016)

http://www.scientificamerican.com/podcast/episode/gut-microbes-lessen-mice-malarial-malaise/

- Earth Day Going Green – feature on NSF website of our research (April 2015) http://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=134374&org=NSF
- Featured in the 2013 annual report from the **UT Office of Research** (Oct 2014)
- Interviewed for Lab Links – ThermoScientifics internal newsletter (Sept 2013 issue)
- Interviewed and quoted for an article in the trade journal Lab Manager. http://photos.labmanager.com/magazinePDFs/2013/LMM-Jul-2013.pdf (July 2013)
- Quoted for an article in the online magazine Motherboard (http://motherboard.vice.com/blog/global-warming-plays-favorites) (June 2013)
- Pre-game showcase presentation was the topic of an article in **UTK's Daily Beacon** http://utdailybeacon.com/news/2012/nov/12/pregame-showcase-discusses-critical-water-quality-/
- Our metatranscriptomics project on Lake Erie *Microcystis* was featured in the **Science Alliance 2011-2012** ***Making Opportunities*** report for October 2012 *http://scialli.utk.edu/troubled-waters-steven-wilhelm/*

- Our Lake Erie winter limnology collaboration was covered in Fall 2012 Ohio SeaGrant's Twineline (pg 14-15) http://ohioseagrant.osu.edu/publications/twineline/;
- New NSF projects from the DIMENSIONS IN BIODIVERSITY and INSPIRE programs were featured in **Tennessee Today**, and **UTK's Daily Beacon** (Aug 2012) *http://www.utk.edu/tntoday/2012/08/28/nsf-support-study-toxic-water-china/*
- Wilhelm and Suttle 1999 (from ***BioScience***) was republished (2011) in a compilation of top papers in a compendium entitled *Topics in Prokaryotic and Virus Biology* *http://www.ucpressjournals.com/ucpress.php?page=BioProkaryotic*
- Research on winter limnology in the Great Lakes was covered in **Science News** (Jan 2012) http://www.sciencedaily.com/releases/2012/01/120110192723.htm
- A story on our winter research in Lake Erie was published in the **Erie Times-News** (goerie.com) (Nov 2011)
- Funding from NOAA generated press releases picked up by local television (WVLT) and newspapers in Columbus (IN) and Park Forest (IN). *http://www.utk.edu/tntoday/2011/11/10/microbiologist-develops-biofilter/*
- Research article in the Journal of Great Lakes Research highlighted in a IAGLR press release (*http://www.iaglr.org/jglr/release/37/2011.07.004_wilhelm.php*)
- Interviewed for article in ***SCIENCE*** on condition in Lake Taihu, (Vol 333:1210-1211, 2011).
- Interviewed for article in Yale's ***Environment 360*** (July 21, 2011). http://e360.yale.edu/feature/on_lake_taihu_china_moves_to_battle_massive_algae_blooms/2429/
- Interviewed by **BlinkFilms (UK)** for documentary on microbes (June 29, 2011)
- Featured in the **Stratford Beacon Herald** news article (front page, May 7, 2011)
- Interviewed for the ***Buckeye Sportsman*** radio show regarding Lake Erie and Grand Lake St Marys (Mar 26, 2011) http://www.buckeyesportsman.net
- Featured in the ***Knoxville News Sentinel*** **(**Mar 2011) http://www.knoxnews.com/news/2011/mar/20/scientists-crack-code/
- Featured in the ***Chancellor of The University of Tennessee's*** report for 2010.

http://chancellor.utk.edu/annualreport/2010/.

- Our publication by Gobler et al. 2011 was featured in the ***New York Times*** online http://green.blogs.nytimes.com/2011/02/22/genetic-code-of-brown-tides-cracked/?partner=rss&emc=rss
- Press release from UTK and stories by a freelance writer in ***C&EN News*** feature our publication by Rogers et al. 2011 http://pubs.acs.org/cen/news/89/i07/8907scene1.html
- Featured article in ***QUEST*** (published by UTK Office of Research). Fall 2010, pp 20-21. http://quest.utk.edu/wp-content/media/quest_fall_10.pdf
- Featured as a panel member discussing toxic cyanobacterial blooms on **PBS** (***The NW Ohio Journal***, WBGU)(Oct 2010) available at http://video.wbgu.org/video/1612629426/
- Interviewed for article in ***SCIENCE*** on recent publication with colleagues (Vol 328: 1476-1477, 2010)
- Work with collaborators featured in ***Coastlines*** (published by the New York Sea Grant, Summer 2010 issue)
- Featured in the ***American Society for Limnology and Oceanography Bulletin*** (Dec 2009, 18(4): 94) for work as Associate Editor of Limnology and Oceanography: Methods. ASLO Bulletin
- Work with collaborators featured in ***Twineline*** (published by the Ohio Sea Grant, Summer 2009 issue)
- Featured in Higher Ground (cover story). Exploring the sea in Tennessee. UTK Arts and Sciences, Spring 2008