

Joseph Anthony Moss, M. S.

Associate

Center for Environmental Diagnostics and Bioremediation

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Education

M.S. in Biology, 2005

University of West Florida, Thesis Title: *Stability and Change in Estuarine Biofilm Bacterial Community Diversity*

B.S. Biology, 2001

Florida State University, Tallahassee, Florida

A. S., 1998

Southern Nevada Community College, Las Vegas, Nevada

Professional and Employment Experience

Associate, 2007-present

Center for Environmental Diagnostics and Bioremediation (CEDB)

11,000 University Parkway

Pensacola, Florida 32514

Biological Research Contractor, 2005-2007

U.S. E.P.A., Gulf Ecology Division

1 Sabine Island

Gulf Breeze, Florida 32561

Research Technician, 2005

Center for Environmental Diagnostics and Bioremediation (CEDB)

11,000 University Parkway

Pensacola, Florida 32514

Research Assistant, 2002-2005

Microbial Biofilms as Indicators of Estuarine Ecosystem Condition

Supervisor: Dr. Richard A. Snyder

C. E. D. B.
11000 University Parkway
Pensacola, Florida 32514

Research Assistant, 2000

U.S. E.P.A., Gulf Ecology Division
1 Sabine Island
Gulf Breeze, Florida 32561

Research Assistant, 1999-2000

Microzooplankton dynamics in Pensacola Bay/Top Down control in the Microbial Loop of Estuarine Plankton
Biology Department, U.W.F. (Dr. Richard Snyder)
Bldg 58; 117
11000 University Parkway
Pensacola, Florida 32514

Teaching Assistant, U. W. F. (2001-2003)

Courses taught:

- Ecology (lab instructor)
- Biology (lab instructor)
- Cell Biology (lab instructor)

Recent Specialization(s)

Competent in the development and application of molecular techniques for the detection, enumeration, and differentiation of various microbial pathogens (*Enterococcus*, *Cryptosporidium*, *Giardia*, *Microsporidia*, etc)

Development of alternate testing protocols (ATP), for the replacement of IMS/microscopy-based procedures (i.e. US EPA method 1623)

Area(s) of expertise

- Field sampling design and implementation
- DNA, RNA, protein extraction
- Molecular fingerprinting/DNA analysis (T-RFLP, ARDRA, sequence analysis)
- Statistical analysis (univariate and multivariate techniques)
- Hydrolab and Fluorometer maintenance, calibration, and repair

Qualifications/Certification(s)

Environmental Protection Agency Safety Training Certification 2003-2008
University of West Florida Hazardous Materials Certified 2002-2011

Community Service

Project Greenshores (2008-2011)-S.A.V. re-introduction volunteer
UWF day at the Capital (2004, 2008); C.E.D.B. representative
Festival on the Green-University of West Florida, April 2003; C.E.D.B. representative
Earth Day (2009-2011)

Professional Affiliations

Estuarine Research Federation

Professional Service

Manuscript review (scientific journals)
Aquatic Microbial Ecology
Limnology and Oceanography
Microbial Ecology

Grantmanship

New Florida (2010) State University Research Commercialization Assistance Grant; “A device and improved method for the detection of protozoan pathogens in portable and environmental waters,” \$30,000

FDA/Estuarine Biofilm Enzyme Activity Assay (2003), Graduate Student Scholarly Activity Award, University of West Florida, \$300

FDA Estuarine Biofilm Enzyme Assay (2002), Graduate Student Scholarly Activity Award, University of West Florida, \$1000

Oceanographic Research Cruises

R/V Weatherbird/Bellows, UWF. Chief Scientist: Snyder, R.A.
NWFL Bight Shelf BP/FIO (monthly): Dec 12, 2010-present

FWC Research Cruise, UWF. Chief Scientist: Patterson, W.
Reef Habitat Study: May 5, 2010-present

R/V Bold, U.S. EPA. Chief Scientist: Campbell, J.
Gulf of Mexico Hypoxia Study: June, 2006

R/V Nathaniel B. Palmer, Ratheon/N.S.F. Chief Scientist: Jeffrey, W.H.
Pacific Trans-latitude expedition: 70°N - 45°S, Aug 20-Oct.15, 2003

R/V Suncoaster, Florida Institute of Oceanography (F.I.O.)
Pensacola Bay, June, 2002
Gulf of Mexico, June, 2002
Mobile Bay, June, 2002

Recent accolades

US Provisional Patent, “Filter Apparatus and Method”, Inventor: **Moss J.A.**, University of West Florida, US Patent application # 12924860, Oct. 6, 2010

Publications

Moss, JA., A. Nocker, and R.A. Snyder 2011. Microbial characteristics of a submerged karst cave system in Northern Florida. *Geomicrobiol.* Issue 8:719-731; DOI: 10.1080/01490451.2010.517235

Moss, JA., R.A. Snyder 2011. Protozoan pathogens. In C. Hagedorn, A. Blanche and V.J. Harwood (Eds.) *Microbial Source Tracking: Methods, Applications, and Case Studies*. Springer-US., New York, NY. <http://dx.doi.org/10.1007/978-1-4419-9386-1>

Meador, JA, Baldwin, AJ, Catala, P, Jeffrey, WH, Joux, F, **Moss, JA**, Pakulski, JD, Stevens, R, and Mitchell, DL. 2009. Sunlight-induced DNA damage in marine microorganisms collected along a latitudinal gradient from 70°N to 68°S. *Photochemistry and Photobiology* 1:412-20.

Moss, J.A., Nocker, A., Lepo, J., and Snyder, R.A. 2006. Stability and Change in Estuarine Biofilm Bacterial Community Diversity. *Applied and Environmental Microbiology* Vol. 72, No. 9, p5679-5688.

Baldwin, A. J., **Moss, J. A.**, Pakulski, J. D., Joux, F., Jeffrey, W. H. 2005. Microbial diversity in a Pacific Ocean Transect from the Arctic to Antarctic Circles *Aquatic Microbial Ecology* 41:91-102

In preparation:

Moss, J.A. and R.A. Snyder. Improved method for the separation of protistan pathogens from complex environmental samples.

Pakulski, J. D., Baldwin A. J., **Moss J.A.**, Stevens R. A., Meador J. A. and Jeffrey W. H. Responses of heterotrophic bacteria to solar irradiance along a Pacific Ocean transect from the Arctic to Antarctic Circles.

Abstracts and Presentations

Snyder, R.A., Lepo, J.E., **Moss, J.A.** 2008

Traditional field sampling and molecular approaches to MST

Gulf of Mexico Alliance Monitoring Forum, St. Petersburg, FL, June 3-5

Jeffrey, W. H., Baldwin, A. J., **Moss, J. A.**, Pakulski, J. D., Joux, F. 2005

Diversity in a Pacific Ocean Transect From the Arctic to Antarctic Circles

American Society of Limnology and Oceanography, Santiago de Compostela, Spain, June 19-24

Moss, J. A., Nocker, A., Lepo, J. E., Snyder, R. A. 2005

Alternating Stable States in Estuarine Biofilm Bacterial Community Structure

SWS-SCC/GERS Joint Society Meeting, Pensacola, April 1-3

Moss, J. A., Nocker, A., Lepo, J. E., Snyder, R. A. 2004

Temporal Variation in Estuarine Biofilm Bacterial Diversity

10th International Symposium on Microbial Ecology ISME-10, Cancun, Mexico August 23-28

Pakulski, J. D., Baldwin, A. J., **Moss, J. A.**, Stephens, R. A., Meador, J. D., Jeffrey, W.

H. 2004. Viable Responses of Heterotrophic Bacteria to Surface Solar Irradiance in the Pacific Ocean. *American Society of Limnology and Oceanography*, Honolulu, Hawaii, February 17-19

Nocker, A., Lepo, J. E., Martin, L., **Moss, J. A.**, Launder, A.D., Snyder, R. A. 2004

Molecular Analysis of Microbial Biofilm Communities in a Sewage Outfall Impacted

Environment in Comparison with a Reference Site in Pensacola Bay, Florida, *10th*

General Meeting for the American Society of Microbiology, May

Moss, J. A., Lepo, J. E., Snyder, R. A. 2003. Fluorescein diacetate hydrolysis as a

surrogate for microbial heterotrophic activity in estuarine biofilms. *Annual meeting of the Estuarine Research Federation*, Seattle, W.A. September 14-18

Nocker, A., Snyder, R. A., Lepo, J. E., **Moss, J. A.**, Huggins, T. 2003 Molecular

Analysis of habitat specificity in estuarine microbial biofilm community structures.

Annual meeting of the Estuarine Research Federation, Seattle, W.A. September 14-18

Snyder, R. A., Lepo, J. E., Nocker, A., Proctor, L., Pennington, L. **Moss, J.**, Huggins, T.

2003. Microbial biofilms as indicators of estuarine condition. *Annual meeting of the*

Estuarine Research Federation, Seattle, W.A. September 14-18