

Biosketch John P. Berry (co-PI)

Associate Professor

Department of Chemistry and Biochemistry
(Marine Science Program)
354 Marine Science Building
Florida International University

Phone: (305) 919 4569
FAX: (305) 919 4030
E-mail: berryj@fiu.edu
North Miami, FL 33181

Professional Preparation

University of Michigan, Ann Arbor, MI	Biology	B. Sc.	1993
Cornell University, Ithaca, NY	Phytochemistry	Ph.D.	1998
Cornell University, Ithaca, NY	Environ. Toxicol.	Postdoc.	1998-2000
University of Miami, Miami, FL	Nat. Prod. Chem.	Postdoc.	2000-2002

Appointments

2012-present Associate Professor, Florida International University
2006-2012 Assistant Professor, Florida International University, Miami, FL
2006-present Adjunct Professor, University of Miami, Miami, FL
2002-2006 Assistant Scientist, University of Miami, Miami, FL

Products

Publications Related to the Project

Jaja-Chimedza, A., C. Saez, M. Gantar, P. D. L. Gibbs, M. C. Schmale and **J. P. Berry** "Toxic polymethoxy-1-alkenes isolated from *Cylindrospermopsis raciborskii* apparently derived from the polyketide synthase (PKS) biosynthetic pathway" *Journal of Natural Products*, **2014**, submitted.

Walton, K., M. Gantar, P. D. L. Gibbs, M. C. Schmale and **J. P. Berry** "Indole alkaloids from freshwater cyanobacterial isolate, *Fischerella* 52-1, inhibit vertebrate development in the zebrafish (*Danio rerio*) embryo model" *Phytochemistry*, **2014**, submitted.

Jaja-Chimedza, A., M. Gantar, P.D.L. Gibbs, M.C. Schmale and **J. P. Berry** "Polymethoxy-1-alkenes from *Aphanizomenon ovalisporum* inhibit vertebrate development in the Zebrafish (*Danio rerio*) embryo model" *Marine Drugs*, **2012**, *10*, 2322-2336.

Berry J.P., P.D.L Gibbs, M. Gantar and M.C. Schmale. "Identification of Developmental Toxins from Marine and Freshwater Algae Using the Zebrafish Embryo as a Model of Vertebrate Development" *Comparative Biochemistry and Physiology - Part C: Toxicology & Pharmacology*, **2007**, *145*, 61-72.

Berry, J. P., P. D. L. Gibbs, M. C. Schmale and M. L. Saker "Toxicity of cylindrospermopsin, and other apparent metabolites from *Cylindrospermopsis raciborskii* and *Aphanizomenon ovalisporum*, to the zebrafish (*Danio rerio*) embryo. *Toxicon*, **2009**, *53*, 289-299.

Other Significant Publications

Jaja-Chimedza, A., M. Gantar, G. Mayer, P.D.L. Gibbs and **J.P. Berry**. "Effects of cyanobacterial lipopolysaccharides from *Microcystis* on glutathione-based detoxification pathways in the zebrafish (*Danio rerio*) embryo. *Toxins*, **2012**, *4*, 390-404.

Suchy P. and **J. P. Berry** "Detection of total microcystin in fish tissues based on Lemieux oxidation and recovery of the analyte, 2-methyl-3-methoxy-4-phenylbutanoic acid (MMPB), by solid-phase microextraction gas chromatography-mass spectrometry (SPME-GC/MS)" *International Journal of Environmental Analytical Chemistry*, **2012**, *92*, 1443-1456.

Notch, E.G., D.M. Miniutti, C.A. Patenaude, **J.P. Berry** and G.D. Mayer. "Cyanobacterial LPS potentiates cadmium toxicity in zebrafish (*Danio rerio*) embryos." *Environmental Toxicology*, **2011**, *26*, 498-505.

Berry J.P., E. Lee, K. Walton, A. Wilson and F. Bernal-Brooks “Microcystin production by a recurring cyanobacterial bloom in Lago de Patzcuaro (Michoacan, Mexico), and apparent bioaccumulation in small commercial catches of fish.” *Environmental Toxicology and Chemistry*, **2011**, 30, 1621-1628.

Berry J.P., K.S. Reece, K.S. Rein, D.G. Baden, L.W. Haas, W. Ribeiro, J.D. Shields, R.V. Snyder, W.K. Vogelbein and R.E. Gawley “Are *Pfiesteria* species toxicogenic? Evidence against production of ichthyotoxins by *Pfiesteria shumwayae*” *Proceedings of the National Academy of Sciences*, **2002**, 99, 10970-10975.

Synergistic Activities

1. Developed, and served as the Associate Director of, the NIH-funded Cornell University Biomedical Undergraduate Research Program in the Caribbean providing research training opportunities for undergraduates.
2. Currently mentor, and member of the Training Advisory Committee, for the NIH Minority Health and Health Disparities International Research Training (MHIRT) program based out of Cornell University.
3. Mentor for several minority undergraduate research programs at FIU, including the FIU Minority Opportunities in Research (MORE) programs (i.e. MBRS RISE, MARC U-STAR) and the Ronald E. McNair Post-Baccalaureate Achievement Program.
4. Mentor for the American Chemical Society’s *SEED* Program that provides research training opportunities for promising, but socioeconomically disadvantaged, high school students interested in careers in Chemistry.

Collaborators (last 48 months)

Manuel Aregullin, Plant Biology/Molecular Biology and Genetics, Cornell University, Ithaca, NY

Miroslav Gantar, Department of Biological Science, Florida International University, Miami, FL

Patrick D. L. Gibbs, Division of Marine Biology and Fisheries, Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, Miami, FL

Stephanie J. Guildford, Department of Biology and Large Lake Observatory, University of Minnesota, Duluth, MN

Owen Lind, Department of Biology, Baylor University, Waco, TX

Alejandro M. S. Mayer, Department of Pharmacology, CCOM, Midwestern University, Downers Grove, IL

Gregory Mayer, The Institute for Environmental and Human Health, Texas Tech University, Lubbock, TX

Fernando Noriega, Department of Biology, Florida International University, Miami, FL

Kathleen Rein, Department of Chemistry and Biochemistry, Florida International University, Miami, FL

Michael C. Schmale, Division of Marine Biology and Fisheries, Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, Miami, FL

Peter A. Willis, Jet Propulsion Laboratory, National Aeronautic and Space Administration, Pasadena, CA

Alan Wilson, Department of Fisheries and Allied Aquatic Sciences, Auburn University, Auburn, AL

Graduate and Post-Doctoral Advisors

Robert E. Gawley, Distinguished Professor, Department of Chemistry and Biochemistry, University of Arkansas, Fayetteville, AR (deceased; previously University of Miami)

Eloy Rodriguez, James A. Perkins Professor of Environmental Science, Department of Plant Biology, Cornell University, Ithaca, NY

Postgraduate-Scholar Sponsor (last five years)

Shunmei Liu, Visiting Scholar/Researcher, 2012-13 (from Weifang Medical University, China)
Total number of postgraduate scholars advised to date: 1

Thesis Advisor (last five years)

Asha Jaja (Ph. D., current; M. Sc., 2009); Gerald Berry (Ph. D., current); Katherine Walton (M. Sc., 2012); Patricia Suchy (M. Sc., 2009); Bingxue Zhen (Ph. D., current); Christina Lydon (Ph. D., current); Christopher Lawrence de Jesus (Ph.D., current); Laura Conklin (M.Sc., current); Diane Caitlin (M.Sc., current); Mark Pannekens (M.Sc., Germany/visiting student, 2013-14); Helena Bielak (M.Sc., Germany/visiting student, 2013-14)

Total number of graduate students advised to date: 11

Ongoing Research Support

USDA AFRI Proposal Berry (PI) 02/01/06-01/31/16
SELECTION FOR STRAINS OF SACCHAROMYCES CEREVISIAE WITH ENHANCED
OCHRATOXIN-A DETOXIFICATION CAPABILITIES
Role: PI (Funded by the European Research Council)