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EMPLOYMENT/POSITIONS

Associate Professor	Department of Chemistry and Biochemistry Florida International University Miami, FL	August 2012 – present
Assistant Professor	Department of Chemistry and Biochemistry Florida International University Miami, FL	August 2006 – August 2011
Adjunct Professor	Marine Biology and Fisheries/RSMAS University of Miami, Miami, FL	August 2006 – present
Assistant Scientist	Marine Biology and Fisheries/RSMAS University of Miami, Miami, FL	Feb. 2002 – Aug. 2006
Postdoctoral Fellow (NIH-NIEHS)	MFBCS/Department of Chemistry University of Miami, Coral Gables, FL	February 2000 – 2002
Postdoctoral Fellow (NIH-NCI)	Environmental Toxicology Cornell University, Ithaca, NY	August 1998-February 2000

EDUCATION

B. Sc. , Biology	University of Michigan Ann Arbor, MI	August 1989-May 1993
Ph. D. , Phytochemistry	Cornell University Ithaca, NY	August 1993-August 1998
NIH-NCI Postdoctoral Trainee , Environmental Toxicology	Cornell University Ithaca, NY	May 1999-February 2000
NIH-NIEHS Postdoctoral Trainee , Toxicology/Chemistry	University of Miami Coral Gables, FL	February 2000-2002

PUBLICATIONS

Journal Articles

1. Gebreab, K., Lawson, A., Garcia, G., Fox, J., Benetti, D., Stieglitz, J.D., Quinete, N.S. and **Berry, J.P.** (2025) Bioconcentration and toxicity of perfluoroalkyl substances (PFAS) in embryonic stages of the ecologically relevant Olive Flounder (*Paralichthys olivaceus*), and the zebrafish (*Danio rerio*) embryo model system. *Ecotoxicol.*, 34: 973-987.
2. Lawson, A., Annunziato, M., Bashirova, N., Eeza, M.N.H., Matysik, J., Alia, A. and **Berry, J.P.** (2024) High-resolution magic-angle spinning nuclear magnetic resonance identifies impairment of metabolism by T-2 toxin, in relation to toxicity, in the Zebrafish embryo model. *Toxins*, 16: 424.
3. Annunziato, M., Bashirova, N., Eeza, M. N. H., Lawson, A., Fernandez-Lima, F., Tose, L. V., Matysik, J., Alia, A. and **Berry, J. P.** (2024) An integrated metabolomics-based model, and identification of potential biomarkers, of perfluorooctane sulfonic acid toxicity in zebrafish embryos. *Environ. Toxicol. Chem.*, 43: 896-914.
4. Annunziato, M., Bashirova, N., Eeza, M.N.H., Lawson, A., Benetti, D., Stieglitz, J.D., Matysik, J., Alia, A. and **Berry, J.P.** (2023) High-resolution magic angle spinning (HRMAS) NMR identifies oxidative stress and impairment of energy metabolism by zearalenone in embryonic stages of Zebrafish (*Danio rerio*), Olive Flounder (*Paralichthys olivaceus*) and Yellowtail Snapper (*Ocyurus chrysurus*). *Toxins*, 15: 397.
5. Annunziato, M., Eeza, M. N. H., Bashirova, N., Lawson, A., Matysik, J., Benetti, D., Grosell, M., Stieglitz, J. D., Alia, A. and **Berry, J. P.** (2022) An integrated systems-level model of the toxicity of brevetoxin based on high-resolution magic-angle spinning nuclear magnetic resonance (HRMAS NMR) metabolic profiling of zebrafish embryos. *Sci. Tot. Environ.*, 803: 149858.
6. Eeza, M. N. H., Bashirova, N., Zuberi, Z., Matysik, J., **Berry, J. P.** and Alia, A. (2022) An integrated systems-level model of ochratoxin A toxicity in zebrafish (*Danio rerio*) embryo based on NMR metabolic profiling. *Sci. Rep.*, 12: 6341.
7. Lydon, C., Mejia-Fava, J., Collado-Vides, L., Eskelinen, H. and **Berry, J.P.** (2022) Identification of apparently neurotoxic metabolites from assemblages of marine filamentous cyanobacteria associated with the intoxication of captive bottlenose dolphins (*Tursiops truncatus*) in the Florida Keys. *Chemosphere*, 288: 132423.
8. Gebreab, K. Y., Benetti, D., Grosell, M., Stieglitz, J. D. and **Berry, J. P.** (2022) Toxicity of perfluoroalkyl substances (PFAS) toward embryonic stages of mahi-mahi (*Coryphaena hippurus*). *Ecotoxicology*, 31: 1057-1067.
9. Gebreab, K., Eeza, M. N. H., Bai, T., Zuberi, Z., Matysik, J., O'Shea K., Alia, A. and **Berry, J. P.** (2020) Comparative toxicometabolomics of perfluorooctanoic acid (PFOA) and next-generation perfluoroalkyl substances. *Environ. Pollut.*, 265: 114928.
10. Lydon, C., Mathivathanan, L., Sanchez, J., dos Santos, L.A.H., Sauvage, T., Gunasekera, S.P., Paul, V.J. and **Berry, J.P.** (2020) Eudesmacarbonate, a eudesmane-type sesquiterpene from a marine filamentous cyanobacterial mat (Oscillatoriales) in the Florida Keys. *J. Nat. Prod.*, 83: 2030-2035.
11. Zuberi, Z., Eeza, M. N. H., Matysik, J., **Berry, J. P.** and Alia, A. (2019) NMR-based metabolic profiles of intact zebrafish embryos exposed to aflatoxin B1 recapitulates hepatotoxicity and supports possible neurotoxicity. *Toxins*, 11: 258.
12. De Jesus, C. L., Bartley, A., Welch, A. Z. and **Berry, J. P.** (2018) High incidence and levels of ochratoxin A in wines sourced from the United States. *Toxins*, 10: 1.
13. Jaja-Chimedza, A., Sanchez, K., Gantar, M., Gibbs, P., Schmale, M. and **Berry, J. P.** (2017) Carotenoid glycosides from cyanobacteria are teratogenic in the zebrafish (*Danio rerio*) embryo model. *Chemosphere*, 174: 478-489.
14. Roy, U., Conklin, L., Schiller, J., Matysik, J., **Berry, J. P.** and Alia, A. (2017) Metabolic profiling of zebrafish (*Danio rerio*) embryos by NMR spectroscopy reveals multifaceted toxicity of b-methylamino-L-alanine (BMAA). *Sci. Rep.*, 7: 17305.
15. Weiss-Errico, M. J., **Berry, J. P.** and O'Shea, K. (2017) β -Cyclodextrin attenuates perfluorooctanoic acid toxicity in the zebrafish embryo model. *Toxics*, 5: 31.
16. **Berry, J. P.**, Roy, U., Jaja-Chimedza, A., Sanchez, K., Matysik, J. and Alia, A. (2016) High-resolution magic angle spinning nuclear magnetic resonance of intact zebrafish embryos detects

- metabolic changes following exposure to teratogenic polymethoxyalkenes from algae. *Zebrafish*, 13: 456-465.
17. Haq, M., Gonzalez, N., Mintz, K., Jaja-Chimedza, A., De Jesus C. L., Lydon, C., Welch, A. Z. and **Berry, J. P.** (2016) Teratogenicity of achratoxin A and the degradation product, achratoxin α , in the Zebrafish (*Danio rerio*) embryo model of vertebrate development. *Toxins*, 8: 40.
 18. Zheng, B., Fu, H., **Berry, J. P.** and McCord, B. (2016) A rapid method for separation and identification of microcystins using capillary electrophoresis and time-of-flight mass spectrometry. *J. Chromatography A*, 1431: 205-214.
 19. Jaja-Chimedza, A., Gantar, M., Gibbs, P.D.L., Saez, C. and **Berry, J. P.** (2015) Identification of toxic polymethoxy-1-alkenes from *Cylindrospermopsis raciborskii*, and taxonomically diverse cyanobacteria and green algae. *Harmful Algae*, 156-161.
 20. Walton, K., Gantar, M., Gibbs, P.D.L. and **Berry, J.P.** Indole alkaloids from a freshwater cyanobacterial isolate, *Fischerella* 52-1, inhibit development in the zebrafish (*Danio rerio*) embryo model. *Toxins*, 6: 3568-3581.
 21. Jaja-Chimedza, A., Gantar, M., Gibbs, P.D.L., Schmale, M.C. and **Berry, J. P.** (2012) Polymethoxy-1-alkenes from *Aphanizomenon ovalisporum* inhibit vertebrate development in the Zebrafish (*Danio rerio*) embryo model. *Mar. Drugs*, 10: 2322-2336
 22. Jaja-Chimedza, A., Gantar, M., Mayer, G., Gibbs, P. D. L. and **Berry, J. P.** (2012) Effects of cyanobacterial lipopolysaccharides from *Microcystis* on glutathione-based detoxification pathways in the zebrafish (*Danio rerio*) embryo. *Toxins*, 4(6), 390-404
 23. Suchy, P. and **Berry, J. P.** (2012) Detection of total microcystin in fish tissue based on Lemieux oxidation and recovery of 2-methyl-3-methoxy-4-phenylbutanoic acid (MMPB) by solid-phase microextraction/gas chromatography/mass spectrometry (SPME-GC-MS). *Int. J. Environ. Anal. Chem.*, 92 (12): 1443-1456.
 24. **Berry, J. P.**, Jaja-Chimedza, A., Dávalos-Lind, L. and Lind, O. (2012) Apparent bioaccumulation of cylindrospermopsin and “paralytic shellfish toxins” by finfish in Lake Catemaco (Veracruz, Mexico). *Food Additives and Contaminants*, 29: 314-21
 25. **Berry, J. P.**, Lee, E., Walton, K., Wilson, A. and Bernal-Brooks, F. (2011) Bioaccumulation of microcystins by fish associated with a persistent cyanobacterial bloom in Lago de Patzcuaro (Michoacan, Mexico). *Environ. Toxicol. Chem.*, 30: 1621-1628
 26. Mayer, A. M. S., Clifford, J., Aldulescu, M., Frenkel, J., Holland, M. A., Hall, M. L., Glaser, K. B., **Berry, J. P.** (2011) Cyanobacterial *Microcystis aeruginosa* lipopolysaccharide elicits release of superoxide anion, thromboxane B₂, cytokines, chemokines, and matrix metalloproteinase-9 by rat microglia. *Toxicol. Sci.*, 121: 63-72
 27. Notch, E. G., Miniutti, D. M., Patenaude, C. A., **Berry, J. P.** and Mayer, G. D. (2011) Cyanobacterial LPS potentiates cadmium toxicity in zebrafish (*Danio rerio*) embryos. *Environ. Toxicol.*, 26: 498–505.
 28. **Berry, J. P.** and Lind, O. (2010) First report of cylindrospermopsin and saxitoxin in a Mexican freshwater system, and apparent accumulation of the toxins in the “tegogolo” snail (*Pomacea patula catemacensis*). *Toxicon*, 55: 930-938.
 29. **Berry, J. P.**, Gibbs, P. D. L., Schmale, M. C. and Saker, M. L. (2009) Toxicity of Cylindrospermopsin and Other Apparent Metabolites from *Cylindrospermopsis raciborskii* and *Aphanizomenon ovalisporum*, to the Zebrafish (*Danio rerio*) Embryo. *Toxicon*, 53: 289-299.
 30. Wilson, A. E., Gossiaux, D. C., Hook, T. O., **Berry, J. P.**, Landrum, P. F., Dyble, J. and Guildford, S. J. (2008). Evaluation of the human health threat associated with the hepatotoxin, microcystin, in the muscle and liver tissues of yellow perch (*Perca flavescens*). *Can. J. Fish. Aquat. Sci.*, 65: 1487-1497.
 31. **Berry, J.P.**, Gantar, M., Perez, M. H., Berry, G. and Noriega, F. G. (2008) Cyanobacterial Toxins as Allelochemicals with Potential Applications as Algaecides, Herbicides and Insecticides. *Mar. Drugs*, 6: 117-146.
 32. Gantar, M., **Berry, J.**, Thomas, S., Wang, M., Perez, R., Rein, K. (2008) Allelopathic activity among cyanobacteria and microalgae isolated from Florida freshwater habitats, *FEMS Microbiol. Ecol.*, 64: 55-64.

33. An, T., Kumar, T.K.S., Wang, M., Liu, L., Lay, J. O., Liyanage, R., **Berry, J.**, Gantar, M., Marks, V., Gawley, R. E. and Rein, K. S. (2007) Structures of Pahayokolides A and B, Cyclic Peptide from a *Lyngbya* sp. *J. Nat. Prod.*, 70: 730-735.
34. **Berry, J. P.**, Gibbs, P. D. L., Gantar, M. and Schmale, M. C. (2007). Identification of developmental toxins from marine and freshwater algae using the zebrafish embryo as a model of vertebrate development. *Comp. Biochem. Physiol. C Toxicol. Pharmacol.*, 145 (1): 61-72.
35. Aregullin, M., **Berry, J. P.** and Cadena, L. (2006). Antioxidant activity and inhibition of cancer cells by the herbal product, ARCOMIG. *J. Med. Sci.*, 6 (2): 229-234.
36. **Berry, John P.**, Gantar, M., Gawley, R. E. and Rein, K. S. (2005) Isolation of bioactive metabolites from a *Lyngbya* species isolated from periphyton of the Florida Everglades. Pp. 192-194. In: K.A. Steidinger, J.H. Landsberg, C.R. Tomas and G.A. Vargo (eds.) *Harmful Algae*, 2002. Florida Fish and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernmental Oceanographic Commission of UNESCO.
37. **Berry, John P.**, Gantar, M., Gawley, R. E., Wang, M. and Rein, K. S. (2004) Pharmacology and toxicology of pahayokolide A, a bioactive metabolite from a freshwater species of *Lyngbya* isolated from the Florida Everglades. *Comp. Biochem. Physiol.*, 139: 231-238.
38. Mayer, G. D., **Berry, J. P.**, Patenaude, C. A. and Walsh, P. J. (2004) Effect of lipopolysaccharides from *Microcystis* and *Lyngbya* on metal toxicity in *Fundulus heteroclitus*. *Bull. MDIBL* 43: 143-44.
39. Laux, M. T., Aregullin, M. A., **Berry, J. P.**, Flanders, J. A. and Rodriguez, E. (2004) Identification of a p53 dependent pathway in the induction of apoptosis of human breast cancer cells by the natural product, resveratrol. *J. Alt. Comp. Med.* 10 (2): 235-40.
40. **Berry, John P.**, Reece, K. S., Rein, K. S., Baden, D. G., Haas, L. W., Ribeiro, W., Shields, J. D., Snyder, R. V., Vogelbein, W. K. and Gawley, R. E. (2002) Are *Pfiesteria* species toxicogenic? Evidence against production of ichthyotoxins by *Pfiesteria shumwayae*. *Proc Nat Acad Sci* 99 (17): 10970-10975.
41. Laux, M. T., **Berry, John P.**, Flanders, J. A. and Rodriguez, E. (2002) Recent advances in the study of cancer and phytomedicine: A review. *Rev. Latinoam. Quim.* 30 (3): 103-127.
42. Kohen, E., Hirschberg, J. G., Örnek, C., **Berry, J. P.**, Monti, M. and Schachtschabel, D. O. (2002) Fourier interferometry/spectral imaging of response to metabolic challenges in perinuclear mitochondria of normal and malignant cells. *Proc Eur Mol Biol Soc*, published on CD-ROM (print copies available upon request)
43. **Berry, John P.**, Laux, M., and Rodriguez, E. (2002) Inhibition of protein tyrosine kinase and induction of apoptosis by oxindole alkaloids from *Uncaria tomentosa*. *J Med Sci.* 2(3): 110-114.
44. Kohen, E., Hirschberg, J. G., Ornek, C., Monti, M. and **Berry, J. P.** (2002) Fluorescence imaging of mitochondrial localization and metabolism in malignant cells. In *Proc. Optical Soc. Am. Biomedical Topical Meeting: Biomedical Optical Spectroscopy and Diagnostics*, pp. 562-564.
45. Laux, Maria T., Ketzis, Jennifer and **Berry, J. P.** (2002) Plant natural products as source of anti-cancer drugs, a review. *Rev Latinoam Quim* 30 (1): 29-36.
46. Laux, M. T., Aregullin, M., Golod, O., **Berry, J. P.**, Flanders, J. A. and Rodriguez, E. (2002) Induction of apoptosis in human breast cancer cells by extracted constituents from *Fluorensia cernua* (Asteraceae). *Rev. Latinoam. Quim.* 30 (1): 5-11.
47. Hirschberg, J. S., Kohen, E., Kohen, C., Ornek, C. and **Berry, J. P.** (2001) Fourier interferometry with special fluorescence imaging for the study of mitochondrial distribution and function in living normal/malignant cells. *Prog. Biomed. Opt. Imag.* 2 (34): 165-182.
48. **Berry, J.P.** and Wilkinson, B. (1994) Paleoclimatic and tectonic control on the accumulation of North American cratonic sediments. *GSA Bull.*, 106: 855-865.

Book Chapters

- Berry, John P.** (2021) Toxicology and Climate Change. In: *Toxicology for the Health and Pharmaceutical Sciences*, A. Peña-Fernandez, M. D. Evans and M. S. Cooke (Eds.), CRC Press, Boca Raton, FL USA, 38 pp.
- Berry, John** (2013) Cyanobacterial Toxins in Freshwater Food-Webs: Implications for Human and Environmental Health. In: *Current Topics in Public Health*, A. J. Rodriguez-Morales (Ed.), Intech, Croatia, pp. 531-589.

- Berry, John** (2011) Marine and Freshwater Microalgae as a Potential Source of Novel Herbicides. In: *Herbicides and Environment*, A. Kortekamp (Ed.), InTech, Rijeka, Croatia, pp. 705-734.
- Berry, John P.**, McFerren, Marcus A., and Rodriguez, Eloy (1995) Zoopharmacognosy: A “biorational” strategy for phytochemical prospecting. In *Phytochemicals and Health*, D.L. Gustine and H.E. Flores (Eds.) pp. 165-178.

FUNDING

Current Grants

USDA National Institute of Food and Agriculture Rapid, In-Plant Veterinary Drug Screening in Animal Carcasses Using Electrochemical Aptamer-Based Sensor, \$500,000, Role: PD, May 1, 2020 – April 30, 2025

Past Grants

- USDA National Institute of Food and Agriculture: Machine Learning Approach to Identify Parameters Affecting Mycotoxin Risk in US Wines**, \$258,253, Role: Co-PI, May 1, 2017 – April 30, 2022
- USDA Agriculture and Food Research Initiative: Agriculture and Natural Resources Science for Climate Variability and Change**, \$279,104/2 years, Role: Co-PI, November 1, 2013 – October 31, 2015
- NSF Catalyzing New International Collaborations: U.S.-Netherlands/Germany Collaborative Development of the Zebrafish as a Toxicological Model Using Magnetic Resonance Spectroscopy and Imaging Techniques**, \$57,595, Role: PI, September 1, 2014 – August 31, 2015
- FIU Faculty Research Support Program Seed Funds: Carbon-13 Labeled Cyanobacterial Toxins as a Means to Visualize their Fate in the Zebrafish (*Danio rerio*) Embryo Model Using 13-C Magnetic Resonance Imaging (MRI) techniques**, \$30,000, Role: PI, May 2013 – May 2014
- NOAA Oceans and Human Health Initiative Program: *Transgenic Zebrafish as Sentinels for Detection of Toxins in Oceanic and Fresh Water***, \$111,550 total cost/3 years, Role: Co-PI. July 1, 2009-June 30, 2012.
- NIH/NIEHS ARCH Pilot Project: *Transgenic Zebrafish Based on Inducible Cytochrome P450 (CYP) Promoters as Reporters for HAB Toxin Detection***, \$100,000 direct cost/2 years, Role: PI. September 1, 2009-August 31, 2011.
- NIEHS Exploratory/Developmental Research Grant Award (R21): *Zebrafish Embryos as a Model for Cyanobacterial Toxins***, \$396,984 (\$286,149 direct, \$110,835 indirect), Role: PI. August 16, 2006-May 31, 2008
- FIU Faculty Research Support Program: The Cyanobacterial Toxin, Microcystin, in the Food-Web of Lago Patzcuaro, Mexico**. \$19,554.10, Role: PI, July 1, 2008 – June 30, 2009.
- Great Lakes Fisheries Commission (GLFC): *Bioconcentration of Microcystin in the Bay of Quinte Food-Web***, \$75,232 total/2 years, Role: Co-PI with S. Guildford (University of Waterloo), January 2006 – December 2007
- NIEHS Advanced Research Cooperation in Environmental Health (ARCH) Program: *New Toxins from Algae and Cyanobacteria***, \$248,345 direct cost, Role: Co-PI with K. Rein (FIU) from 2002-6, September 2001-August 2006
- NIEHS ARCH Pilot Project Program: *Developmental Toxins from Cyanobacteria***, \$75,000 direct cost/year, Role: Co-Investigator with PI's M. Gantar (FIU)/M. Schmale (UM), September 2003-February 2006.

OTHER ACADEMIC HONORS/POSITIONS

<i>Center Investigator</i> , NIH/NIEHS Marine and Freshwater Biomedical Sciences Center	2004-2006
NIH/NIEHS National Research Service Award	2000, 2001
NIH/NCI National Research Service Award	1999
Mario Einuadi International Studies Center fellow	1997
Cornell Institute for International Food and Agricultural Development fellow	1997
Cornell University Graduate Summer Fellowship	1994, 1995, 1996

OTHER PROFESSIONAL ACTIVITIES/SERVICE

Programmatic Activities/Service

Invited *Discussion Leader*, Gordon Conference on “Mycotoxins & Phycotoxins” (Colby College, Waterville, ME), Jun 17-22, 2007

Research Mentor and *Training Advisory Committee*, NIH/Cornell University Minority Health and Health Disparities International Research Training (MHIRT) summer program, Punta Cana, Dominican Republic, 2009 – 2015

Research Mentor, American Chemical Society SEED Summer Research Program, 2009 – 2015

Member of Steering Committee, 5th *Symposium on Harmful Algae in the U.S.* (Ocean Shores, WA, Nov 15-19, 2009)

Invited *Moderator*, II International Symposium on Algal and Fungal Toxins for Industry (Merida, Mexico), Jun 27-Jul 1, 2010.

Member of Steering Committee, 9th *International Symposium of Persistent Toxic Substances* (Miami, FL, Oct. 23-27, 2012)

Member of Advisory/Steering Committee, International Society for Ion Mobility Spectrometry (ISIMS) 2024, July 20-26, 2024, Miami Beach, FL

Grant Review Panels

NIH-NIEHS *Superfund Research Program*, 2008 and 2009

NIH-NIEHS R21: *Mechanism for Time-Sensitive Research Opportunities in Environmental Health Sciences* (Sampling for Gauging Environmental Stressors, Deepwater Horizon Gulf oil spill), 2010
NOAA *Ecology of Harmful Algal Blooms* (ECOHAB) Program, 2010

NIH, *Neurological, Aging and Musculoskeletal Epidemiology* (NAME) study section, 2011

Israeli Science Foundation, 2012

Hungarian Scientific Research Fund (OTKA), 2012

Czech Science Foundation (GACR), 2023

European Science Foundation (ESF), 2023 and 2025

Journal Peer-Review

Applied and Environmental Microbiology; Aquatic Toxicology; Comparative Biochemistry and Physiology; Chemosphere; Environmental Monitoring and Assessment; Environmental Toxicology; Environmental Toxicology and Chemistry; Harmful Algae; Journal of Experimental Marine Biology and Ecology; Journal of Phycology; Marine Drugs; Microbial Ecology; Toxicon; Toxins
(approximately one review per 2 months)

Editorial Boards

Marine Drugs (MDPI Publishing, Basel, Switzerland)

2011 – Invited Guest Editor, Special Issue on “Algal Toxins”

2010 – Invited Guest Editor, Special Issue on “Algal Toxins”

Toxins (MDPI Publishing, Basel, Switzerland)