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## JEREMY L. CONKLE

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### RESEARCH INTERESTS

Pollutants in sediment and water, wetlands biogeochemistry, spatial analysis of contaminant flows, water chemistry/quality, environmental policy

### EDUCATION

2010: Ph.D., Oceanography & Coastal Sciences  
Louisiana State University  
Conc. in Wetland Science and Mgmt.  
Minor in Disaster Science and Mgmt.  
Advisor: John R. White  
Dissertation: Pharmaceutical Compounds in Treatment Wetlands: Potential Removal and Effects on Microbial Processes

2006: M.S., Environmental Studies The College of Charleston  
Master's Thesis: Remediation of Hog Island Inlet: Site overview and Assessment of Factors Influencing Site Clean up

2003: B.S., Biology & Chemistry Longwood University  
Concentration in Ecology

### PROFESSIONAL EXPERIENCE

2010 – present: Postdoctoral Scholar under the guidance of Jay Gan. Department of Environmental Sciences, University of California. Presence, fate and transport of organic pollutants (PPCPs, Pesticides, PCBs) in soil, sediments, water and plants.

2002-2006: Field Chemist. Earth Tech, Richmond VA. Characterization of unknown chemicals, validation of lab analysis and emergency response to biological and chemical contamination.

### PEER REVIEWED MANUSCRIPTS

**Conkle, J. L.,** W. Huang, J. Sickman, J. Gan. Development of a simple index to numerically evaluate total pharmaceutical

and personal care product contamination in aquatic environments. (*In Prep*)

Huang, W., **J. L. Conkle,** J. Sickman, J. Gan. A comprehensive method for the determination of groundwater contamination using isotopes and pharmaceuticals. (*In Prep*)

Theriot, J, **J. L. Conkle,** S. R. Pezeshki, R. D. DeLaune, J. R. White. Will hydrologically resorted Mississippi River riparian wetlands promote critical biogeochemical function? (*In Prep*)

Wu, S., **J. L. Conkle,** J. Gan. Multi-residue determination of pharmaceutical and personal care products (PPCPs) in vegetables. Journal of Chromatography A. (*IN PRESS*: **10.1016/j.chroma.2012.07.041**)

Wang, W., L. Delgado-Moreno, J. Conkle, M. Anderson, C. Amrhein, Q. Ye, and J. Gan. Characterization of sediment contamination patterns by hydrophobic pesticides to preserve ecosystem functions of drainage lakes. Journal of Soils and Sediments (*IN PRESS*: **<http://dx.doi.org/10.1007/s11368-012-0560-7>**)

**Conkle, J. L.,** J Gan, M. A. Anderson (2012). Degradation and sorption of commonly detected PPCPs in wetland sediments under aerobic and anaerobic conditions. Journal of Soils and Sediments. **12**(7): 1164-1173.

**Conkle, J. L.,** J. R. White. (2012) An initial screening of antibiotic effects on microbial respiration in wetland soils. Journal of Environmental Science and Health, Part A **47** (10): 1381-1390

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**Conkle, J. L.,** C. V. Lattao, J. R. White, R. L. Cook. (2010). Competitive sorption and desorption behavior for three fluoroquinolone antibiotics in a wastewater treatment wetland soil. Chemosphere **80**: 1353-1359.

**Conkle, J. L.,** C. V. Lattao, J. R. White, R. L. Cook. (2009). Pharmaceutical Analysis for Environmental Samples: Individual and Simultaneous Determination of Ciprofloxacin, Ofloxacin and Norfloxacin Using an HPLC with Fluorescence and UV Detection with a Wetland Soil Matrix. Analytical Letters **42**(18): 2937 - 2950.

**Conkle, J. L.,** J. R. White, C. D. Metcalfe. (2008). Reduction of pharmaceutically active compounds by a lagoon wetland wastewater treatment system in Southeast Louisiana. Chemosphere **73**(11): 1741-1748.

Akers, S. M., **J. L. Conkle,** S. N. Thomas, K. B. Rider. (2006). "Determination of the heat of combustion of biodiesel using bomb calorimetry Aker2006). Determination of the heat of combustion of biodiesel using bomb calorimetry - A multidisciplinary undergraduate chemistry experiment. Journal of Chemical Education **83**(2): 260-262.

### CHAPTERS/CONTRIBUTION TO BOOKS

**Conkle, J. L.,** J. R. White, C.D. Metcalfe. Analytical Methods for Emerging Contaminants. Methods in Biogeochemistry of Wetlands. K. R. Reddy, R. DeLaune and P. Megonigal. Soil Science Society of America. **(IN PRESS: May 2012)**

White, J. R., J. Hendrickson, **J. L. Conkle.** (2008). Effect of changing land use on water quality in the coastal zone. Coastal Watershed Management. A. Fares and A. I. El-Kadi. Southampton, UK, WIT Press.

### TECHNICAL REPORTS

Conkle, J. L., L. Delgado-Moreno, M. Anderson, J. Gan. (2012). Survey of organochlorine

pesticides and PCBs in McGrath Lake. Final Report. California State Water Resources Control Board.

Huang, W., J. O. Sickman, **J. L. Conkle,** J. Gan. (2012). Water quality assessment of the Beaumont Management Zone: Identifying sources of groundwater contamination using chemical and isotopic tracers. Final Report. California State Water Resources Control Board.

### DIGITAL PUBLICATIONS

Update for the Ecological Society of America's Communicating Ecosystem Services: tools for scientists to engage the public. Water Purification Toolkit. <http://www.esa.org/ecoservices/>. 2008.

Update for the Ecological Society of America's Communicating Ecosystem Services: tools for scientists to engage the public. Flood Damage Control Toolkit. <http://www.esa.org/ecoservices/>. 2008.

### AWARDS & HONORS

2012: American Chemistry Society AGRO Division New Investigator Award **Finalist**. I was chosen as one of three finalists from a pool of applicants and will present my work at the 2012 ACS conference in Philadelphia.

2009: Dr. Theodore "Ted" Ford Scholarship recipient for cutting edge research on environmental issues LSU Department of Oceanography and Coastal Sciences.

2009: Joseph Lipsey, Sr. Memorial Scholarship recipient for excellence in the studies of marine science LSU Department of Oceanography and Coastal Sciences.

2008: 2<sup>nd</sup> place graduate student oral presentation, Division S-10. 2008 Joint Meeting of the GSA, SSSA, ASA, CSSA, GCAGS and HGS. Houston, Texas.

2007: Philip H. Jones award for best graduate student presentation. 23<sup>rd</sup> Eastern

## J. L. CONKLE

Canadian Symposium on Water Quality Research, Sherbrooke, Quebec, Canada.

2006-2010: \$3,000 Annual LSU Graduate School Supplement Award.

2001: Beta Beta Beta National Biological Honor Society at Longwood University.

### INVITED ORAL PRESENTATION

A survey of water groundwater quality in the Beaumont Groundwater Management Zone. Inland Empire Geological Society monthly meeting, Riverside, CA (07/11)

Septic waste contamination in the Beaumont groundwater basin. Beaumont Cherry Valley Water Agency, Beaumont, CA (04/11)

Detection of septic system waste in the groundwater of Beaumont California using chemical and isotopic tracers. San Gorgonio Pass Water Agency, Beaumont, CA (11/10 & 01/11)

Pharmaceuticals and Personal Care Products in terrestrial and aquatic environments. Environmental Toxicology seminar. University of California, Riverside (10/10)

Pharmaceuticals in environmental systems. Longwood University Chemistry Seminar (10/10)

Removal of pharmaceutically active compounds by a lagoon-wetland wastewater treatment system in Southeast Louisiana. LSU Student Chapter of the Society for Wetland Scientists (01/08)

Led Discussion on the production and use of biodiesel as an alternate fuel source. College of Charleston; Alliance for Planet Earth's Alternative Energy Symposium (04/05)

### PRESENTATIONS (\*presenter)

A novel approach to describe the total PPCP contamination in aqueous environments. \*Conkle, J.L., Huang, W., Sickman, J., Gan, J. Oral presentation at the SETAC North American 33<sup>rd</sup> Annual Meeting, Long Beach, CA (11/12)

40 years later: a reconnaissance of DDT in sediments of two Southern California lakes. \*Conkle, J.L., Delgado-Moreno, L., Anderson, M.J., Gan, J. 244<sup>th</sup> American Chemical Society National Meeting and Exposition, Philadelphia, PA. **Finalist AGRO Division New Investigator Award.** (08/12)

Pharmaceuticals and personal care products in wetlands, wastewater irrigation and groundwater. \*Conkle, J.L., Gan, J. Oral presentation at the 2012 USDA Working Group W-2082 (Evaluating the Physical and Biological Availability of Pesticides and Contaminants in Agricultural Ecosystems) Annual Meeting, Texas A&M Kingsville Citrus Center, Weslaco, TX. (01/12)

Degradation and sorption of PPCPs in oxic and anoxic wetland soils. \*Conkle, J.L., Gan, J. Oral presentation at the ASA-CSSA-SSSA 2011 International Annual Meeting, San Antonio, TX. (10/11)

Distribution of Organochlorine and Current-Use Pesticides in Sediments of the Salton Sea. Wang, Wei, \*Conkle, J.L., Delgado-Moreno, L., Anderson, M., Amrhein, C., Gan, J. Oral Presentation at the 2011 Southern California Regional Chapter of the Society of Environmental Toxicology and Chemistry Annual Meeting, Huntington Beach, CA. (04/11)

Wetland Removal of PPCPs in Treated Wastewater. \*Conkle, J.L., White, J.R., C. Latta, R.L. Cook, C.D. Metcalfe, J. Gan. Poster Presentation at the Global Implications for Domestic and Industrial Water Reuse Workshop, Tucson, AZ. (01/11)

## J. L. CONKLE

- Antibiotic Effects on Microbial Respiration in Two Wetland Soils. \*Conkle, J.L., White, J.R. Oral presentation at ASA-CSSA-SSSA International Annual Meeting, Long Beach, CA. (11/10)
- Pharmaceutical compounds in Wastewater: Potential for removal in treatment wetlands. Conkle, J.L., \*White, J.R., Metcalfe, C. Poster presentation at the Urban Environmental Pollution (ENPO2010) Conference. Boston, MA. (06/10)
- Effects of antibiotics on soil microbe mediated CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub> evolution in wetland peat soil. \*Conkle, J.L., White, J.R. Oral presentation at the 10<sup>th</sup> International Congress on Ecology (INTECOL 10). Brisbane, QLD, AU. (08/09)
- Sorption and desorption of three fluoroquinolone antibiotics to a wetland soil. \*Conkle, J.L., Latta, C., White, J.R., Cook, R.L. Oral presentation at the Joint Meeting of the GSA-SSSA-ASA-CSSA-GCAGS-HGS. Houston, Texas. **2<sup>nd</sup> Place Graduate Student Oral Presentation, Division S-10.** (10/08)
- Sorption and desorption of three fluoroquinolone antibiotics to a wetland soil. \*Conkle, J.L., Latta, C., White, J.R., Cook, R.L. Oral presentation at the Department of Oceanography and Coastal Sciences annual Graduate Student Symposium, LSU, Baton Rouge, LA. (04/08)
- Analysis and sorption of pharmaceutical compounds to organic-rich wetland soil. \*Conkle, J.L., Latta, C., White, J.R., Cook, R.L. Poster presentation at the 235<sup>th</sup> American Chemical Society National Meeting, New Orleans, LA. (04/08)
- Removal of pharmaceutically active compounds by a lagoon-wetland wastewater treatment system in Southeast Louisiana. \*Conkle, J.L., White, J.R., Metcalfe, C. Oral presentation at the Graduate Student Symposium, LUMCON, Cocodrie, LA. (02/08)
- Removal of pharmaceutically active compounds by a lagoon-wetland wastewater treatment system in Southeast Louisiana. \*Conkle, J.L., White, J.R., Metcalfe, C. Oral presentation at the ASA-CSSA-SSSA 2007 International Annual Meeting, New Orleans, LA. (11/07)
- Removal of pharmaceutically active compounds by a lagoon-wetland wastewater treatment system in Southeast Louisiana. \*Conkle, J.L., White, J.R., Metcalfe, C. Oral presentation at the 23<sup>rd</sup> Eastern Canadian Symposium on Water Quality Research, Sherbrooke, Quebec, Canada. **Philip H. Jones award for best graduate student presentation.**(10/07)
- Removal of Anthropogenic Nitrogen by Marshes in a Mississippi River Freshwater Diversion Project. \*Conkle, J.L., Gardner, L., Fry, B., White, J.R. 10<sup>th</sup> Poster presentation at the International Wetlands Biogeochemistry Symposium, Annapolis, MD. (4/07)

### TEACHING EXPERIENCE

#### University of California Riverside

2010: Guest lecturer. Fate and Transport of Contaminants in Soil (ENSC 127 - Graduate). Department of Environmental Sciences, University of California Riverside

#### Louisiana State University

2010: Supervised teaching (OCS 7000). Wetlands and Water Quality (OCS 4000). Department of Oceanography and Coastal Sciences, Louisiana State University. Responsibilities included preparing and delivering lectures to students that incorporated various learning styles along with designing and grading tests.

2006, 2007 and 2010: Teaching Assistant. Introduction to Oceanography (OCS 1005). Department of Oceanography and Coastal Sciences, Louisiana State University.

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Responsibilities included attending all lectures, guest lecturing multiple times, grading assignments and administering tests to 75-120 students.

2007 - 2009: Guest lecturer. Coastal Physical/Chemical System: Analytical Methods (OCS 7132 - Graduate). Department of Oceanography and Coastal Sciences, Louisiana State University. Lectured on the setup and use of multiple gas chromatograms and a discrete nutrient analyzer.

2007 - 2008: Guest lecturer. Wetlands and Water Quality (OCS 4000). Department of Oceanography and Coastal Sciences, Louisiana State University. Lectured on Pharmaceuticals in the Environment

### **Longwood University**

2003: Teaching Assistant. Introduction to Chemistry (CHEM 101 - 4 sections). Department of Chemistry, Longwood University. Responsibilities included organizing and running labs along with grading all assignments.

### **ANALYTICAL EXPERIENCE**

Analysis of pharmaceuticals using an Aquity UPLC-Trinity triple quadrupole mass spectrometer (Waters)

Method development and analysis of PCBs and pesticides using a Varian CP 3800 GC with 1200 quadrupole MS/MS

Solid Phase Microextraction (SPME) of organochlorine pesticides using a Varian CP 3800 GC with 1200 quadrupole MS/MS equipped with a Combi Pal auto sampler

Method development and analysis of PCBs and pesticides using an GC-MS (Agilent 6890N)

Extraction of pharmaceuticals, pesticides and PCBs from water and soil

Method development and analysis using an HPLC (Agilent 1100) with UV and Fluorescence

Analysis of nutrients using a discrete nutrient analyzer (Seal)

Method development and analysis using a GC (Shimadzu) with ECD, FID, and TCD detectors

### **GRANT REVIEW PANELS**

2012: Gulf of Mexico Research Initiative: RFP-II. Funding for research provided by British Petroleum (\$500 million) to research the Deep-water Horizon Oil Spill in the Gulf of Mexico. Served on the panel evaluating "Environmental effects of the petroleum/dispersant system on the sea floor, water column, coastal waters, beach sediments, wetlands, marshes, and organisms; and the science of ecosystem recovery." The panel helped to select consortiums that will receive \$22.5 million dollars over the next three years. Reviewed 21 proposals and was the lead reviewer on 5.

2011: National Science Foundation. Environmental Chemical Science. Reviewed 1 proposal.

2011: Gulf of Mexico Research Initiative: RFP-I. Funding for research provided by British Petroleum (\$500 million) to research the Deep-water Horizon Oil Spill in the Gulf of Mexico. Served on the panel evaluating "Environmental effects of the petroleum/dispersant system on the sea floor, water column, coastal waters, beach sediments, wetlands, marshes and organisms; and the science of ecosystem recovery." The panel helped to select 8 consortiums that will receive \$112.5 million dollars over the next three years. Reviewed 17 proposals and was lead reviewer for 4.

### **GRANTS APPLIED**

## **J. L. CONKLE**

2010: USDA NIFA Postdoctoral Fellowship Grant Program. "Exploring Mitigation Mechanisms of Pharmaceuticals and Personal Care Products in Wetlands."

### **PROFESSIONAL ORGANIZATIONS**

2011 – present: Society of Environmental Toxicology and Chemistry

2007 – present: Society for Wetland Scientists

2007 – present: Soil Science Society of America Co-Chair S-10/S-11 Topical Session: "Treatment Wetlands and Vegetative Strips for Water Quality Improvement." 2011 ASA-CSA-SSSA National Meeting San Antonio Texas. (10/11)

2008: American Chemical Society

2007: American Society of Limnology and Oceanography

2007: Canadian Association of Water Quality

### **AD HOC MANUSCRIPT REVIEWER**

Environmental Science and Technology

Journal of Environmental Quality

Chemosphere

Journal of Soils and Sediments

2009: Exhibitor. Louisiana Sea Grant Ocean Commotions.

2009: Science Fair Judge. Louisiana Science and Engineering Fair Region 7.

2006 – 2007: Beach Sweep. Cleaned areas around the Lake Pontchartrain basin.

2005: Beach Sweep. Cleaned beaches of the Cooper River in Charleston, SC.

2004 – 2005: Adopt a Highway. Removed trash along roads in coastal South Carolina.

2004 – 2005: MESSA 8K for H<sub>2</sub>O. Volunteered at races to raise money for education and improvement of water quality in Charleston, SC.

Soil Science Society of America Journal

### **LEADERSHIP ACTIVITIES**

2011 – present: University of California Postdoc Union (UAW 5810) Campus Recording Secretary.

2008 – 2009: Marine Environmental Researchers (MER) Vice-President.

2007 – 2008: Marine Environmental Researchers (MER) Seminar Chair.

2007 – 2010: Society for Wetland Scientists Student Chapter at Louisiana State University Charter Member.

2005 – 2006: Masters of Environmental Studies Student Association (MESSA) Social Chair.

### **VOLUNTEER ACTIVITIES**

2011: Thanksgiving Volunteer. Helped serve 5,000 meals to families in Riverside, CA.

2011: Science Fair Judge. Riverside Unified School District Science & Engineering Fair.

2009 – 2011: M0vember. Fundraising for prostate and testicular cancer research.

### **CERTIFICATIONS**

2001 – 2007: Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations (HAZWOPER) 40 hour certification.

2005: Federal Emergency Management Agency Courses.

IS-055: Household hazardous materials; a guide for citizens

IS-100: Introduction to the Incident Command System

IS-100 for federal disaster workers

IS-120: An orientation to community disaster exercises

IS-195: Basic incident command system

IS-630: Introduction to the public assistance process

### **REFERENCES**

## **J. L. CONKLE**

### **Jay Gan**

#### **Relationship: Postdoctoral Supervisor**

Professor of Env. Chemistry &  
Water Quality Specialist  
Science Labs 1 Building Room 210  
Dept. of Env. Sciences  
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<http://www.envisci.ucr.edu/faculty/gan.html>

### **John R. White**

#### **Relationship: Ph.D. Advisor**

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Energy, Coast and Env. Building Room 3239  
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### **Ron DeLaune**

#### **Relationship: Ph.D. Committee Member**

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