

## Biographical Sketch

**MIRELES DEWITT, Christina A.**, Director, OSU Seafood Research & Education Center Experiment Station, Associate Professor of Food Science and Technology, Oregon State University

### **Professional Preparation:**

Texas A&M University	Food Science & Technology	B.S.	1989
Oregon State University	Food Science & Technology	M.S.	1994
Oregon State University	Food Science & Technology	Ph.D.	2000

### **PROFESSIONAL EXPERIENCE:**

2011 Director, Seafood Research & Education Center, Oregon State University  
2011 Associate professor, Food Science & Technology, Oregon State University  
2008-2010 Food Chemist, Food & Agricultural Products Center, Oklahoma State University  
2008-2010 Associate Professor, Food By-product Utilization, Department of Animal Science, Oklahoma State University  
2006-2010 Assistant Professor, Food By-product Utilization, Department of Animal Science, Oklahoma State University  
1999 Adjunct Teaching Faculty, Seafood Microbiology, Sheldon Jackson College, Sitka, AK  
1994-1997 Food Chemistry Operations Manager, Dallas, TX, Silliker Laboratories  
1992-1996 Food Chemistry Operations Supervisor, College Station, TX, Silliker Laboratories  
1988-1990 Food Chemistry Technician, Applied. Microbiological Services, Inc, College Station, TX

**RESEARCH INTEREST:** General interest in utilization of Food Chemistry to enhance food quality, nutrition and safety. Interested in processes that alter and enhance protein functionality and safety of marinated and injected muscle foods. Application of novel processing techniques, example low temperature high pressure, to maintain muscle food quality while improving food safety. Utilization and extraction of bioactive compounds from food processing waste.

### **TEACHING EXPERIENCE**

Oregon State University: FST 599: Seafood Technology  
Oklahoma State University: FDSC 3373 Food Chemistry I, FDSC 4373 Food Chemistry II, FDSC 5373 Advanced Food Chemistry, FDSC 3763 Food Analysis, FDSC 3603 Dairy Processing Foods, FDSC 1133 Introduction to Food Science

### **GRADUATE STUDENTS ADVISED**

Major Advisor – M.S. 12, Ph.D. 4; Post-doc 2, Committee Member – M.S. 34, Ph.D. 17

### **PROFESSIONAL ACTIVITIES**

**Honorary societies:** Phi Tau Sigma, Sigma Xi, Gamma Sigma Delta

**Professional organizations:** Pacific Fisheries Technologist, Institute of Food Technologist

### **CERTIFICATIONS**

**AFDO/Seafood HACCP Alliance “Trainer Re-Qualification Course” 01/22/12**

**AFDO/Seafood HACCP Alliance “Train the Trainer Course” 5/6/98**

**AFDO/Seafood HACCP Alliance “Basic Course” 07/19/12**

SELECTED PUBLICATIONS

**Refereed Papers**

1. Ramirez Lopez LM, Mireles DeWitt CA. 2014. Analysis of Phenolic Compounds in Commercial Dried Grape Pomace by High Performance Liquid Chromatography Electrospray-Ionization Mass Spectrometry. *Food Science & Nutrition*. doi: 10.1002/fsn3.136
2. Ramirez-Lopez LM, McGlynn W, Goad CL, Mireles DeWitt CA. 2014. Simultaneous determination of phenolic compounds in Cynthiana grape (*Vitis aestivalis*) by High Performance Liquid Chromatography-Electrospray Ionization Mass Spectrometry. *Journal Food Chemistry*. doi: 10.1016/j
3. Lowder A, Mireles DeWitt CA. 2013. Impact of high pressure processing on the functional aspects of beef muscle injected with salt and/or sodium phosphates. *J Food Processing Preservation*. 38, 1840-1848.
4. Lowder AC, Goad C, Lou X, Morgan B, Koh CL, Deakins AP, Mireles DeWitt CA. 2013. Response surface modeling to predict fluid loss from beef strip loins and steaks injected with salt and phosphate with or without a dehydrated beef protein water binding adjunct. *Meat Science* 94(1):9-18.
5. Brown T, Kleinholz C, Shraeder K, Mireles DeWitt CA\*. 2012. Evaluation of a modified pH-shift process to reduce 2-methylisoborneol and geosmin in spiked catfish and produce a consumer acceptable fried catfish nugget-like product. *J Food Sci* 77(10):S377-83.
6. Hellberg RS, Mireles DeWitt CA, Morrissey MT. 2012. Risk-benefit analysis of seafood consumption: a review. *Comp Rev Food Sci Technol*. 11(5): 490-517.
7. Lowder AC, Goad CL, Lou X, Morgan JB, Mireles DeWitt CA\*. 2011. Evaluation of a dehydrated beef protein to replace sodium-based phosphates in injected beef striploins. *Meat Science* 89:491-499.
8. Cerruto-Noya CA, Goad CL, Mireles DeWitt CA\*. 2011. Research Note: Antimicrobial effect of ammonium hydroxide when used as an alkaline agent in the formulation of injection brine solutions. *J Food Protect* 74(3):475-479.
9. Rowland S, Bower C, Patil K, Mireles DeWitt CA\*. 2009. Gasification of salmon processing waste. *J Food Sci*. *J Food Sci* 74(8):E426-E431.
10. T.J. Bowser\*, K.N. Patil, P.R. Weckler and C. DeWitt. 2005. Design and testing of a low-cost, pilot-scale batch gasifier for food processing byproducts. *Applied Engineering Ag* 21(5):901-906.
11. Mireles DeWitt C\*, Morrissey MT. 2002. Parameters for the recovery of proteases from surimi wash water. *Bioresource Technol* 81:241-247.
12. Mireles DeWitt C\*, Morrissey MT. 2002. Pilot-plant recovery of catheptic proteases from surimi wash water. *Bioresource Technol* 82:295-301.
13. Mireles DeWitt C\*, Morrissey MT. 1999. HACCP implementation and research issues. *J Aquatic Food Prod Technol* 8(3):5-22.

\*Corresponding Author

**Research Abstracts**

1. Keys DR, Lowder AC, Koh C, Mireles DeWitt CA. 2014. Evaluation of a sub-micron slurry ice system compared to chilled seawater to improve seafood safety and quality. *Institute of Food Technologists Annual Meeting and Food Expo*. New Orleans, LA. Session:165-10. Selected in top six for graduate competition of Aquatic Food Products Division.

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2. Lowder A, Waite-Cuisic J, DeWitt C. 2014. High pressure low temperature processing of whole muscle, non-intact beef: effects on quality factors and internalized *E. Coli*O157:H7. *Institute of Food Technologists Annual Meeting and Food Expo*. New Orleans, LA. Session:178-01.
3. Keys DR, Lowder AC, Mireles DeWitt C. 2014. Evaluation of a sub-micron slurry ice system compared to a conventional slurry ice system. 65<sup>th</sup> Pacific Fisheries Technologists Conference, Feb 24. Monterrey, CA.
4. Koh CL, Keys D, Mireles DeWitt C. 2014. Evaluation of drip loss in injected fish fillet after freezing and thawing. 65<sup>th</sup> Pacific Fisheries Technologists Conference, Feb 24. Monterrey, CA.
5. Lowder, A.C., Mireles DeWitt, C.A. 2013. *E. coli* O157:H7 inactivation in whole muscle, non-intact beef by high pressure-low temperature treatment. *Institute of Food Technologists Annual Meeting and Food Expo*. Chicago, Illinois.
6. Koh C-l, Mireles DeWitt CA. 2013. Evaluation of real-time PCR method for detection of soy in food matrices. In: 2013 IFT Annual Meeting Technical Program Abstracts, Institute of Food Technologists, Chicago, IL. Session: .
7. Mireles DeWitt, C.A., Morrissey, M. Borresen, T, Green, D.P. 2012. Seafood Research and Education: development of strategies to preserve research and education for the profession. 4<sup>th</sup> *Trans-Atlantic Fisheries Technology Conference 2012, Clearwater Beach, FL (Panel Discussion and Breakout Session)*.
8. Tahergorabi R, Mireles DeWitt C.A, Matak K, Jaczynski J. Development of cardioprotective fish product by using isoelectric solubilization/precipitation and  $\omega$ -3 rich oils. 4<sup>th</sup> *Trans-Atlantic Fisheries Technology Conference 2012, Clearwater Beach, FL (Oral Presentation)*.