

WASHINGTON STATE PATROL TOXICOLOGY LAB
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GWYNYTH ALMENDAREZ **(FORMERLY GWYNYTH SCHERPEREL)**

EDUCATION

- ❖ **Michigan State University:** East Lansing, MI ♦ 2004 – 2007
 - MS in Forensic Chemistry, June 2007
 - Thesis advisor: Dr. Ruth Waddell
 - MS in Analytical Chemistry, December 2006
 - Thesis advisor: Dr. Gavin E. Reid
- ❖ **Florida Atlantic University:** Boca Raton, FL ♦ May 2004
 - BS in Chemistry (ACS Program; Cum Laude)
- ❖ **Kenyon College:** Gambier, OH ♦ May 2002
 - BA in Anthropology (Magna Cum Laude)
- ❖ **Broward Community College:** Davie, FL ♦ Summer 2001, 2002-2003
- ❖ **Mercyhurst College:** Erie, PA ♦ May 29 – June 15, 2001
 - Certificate of Achievement for the seminar: Laboratory Methods in the Documentation, Analysis, and Interpretation of Human Remains from Forensic Context
 - Certificate of Achievement for the field school: Advanced Methods in Forensic Archaeological Recovery
- ❖ **University of Wales:** Swansea, Wales, UK ♦ Fall 2000

WORK EXPERIENCE

- ❖ **Forensic Scientist:** Washington State Patrol Toxicology Lab, Seattle, WA ♦ October 2007 – present
- ❖ **Michigan State Police Crime Lab Internship:** Northville, MI ♦ January 2007 - May 2007
- ❖ **Graduate Teaching Assistant:** Department of Chemistry at Michigan State University, East Lansing, MI ♦ August 2004 – May 2005, May 2006 – May 2007

July 29, 2009

- ❖ **Graduate Research Assistant:** Department of Chemistry at Michigan State University, East Lansing, MI ♦ May 2005 –May 2006
- ❖ **Broward County Medical Examiner and Trauma Services Toxicology Department Internship Program:** Broward County, FL ♦ December 2003 - April 2004

PUBLICATIONS AND PRESENTATIONS

- ❖ **Scherperel, G.,** Reid, G. E., and Waddell Smith, R. "Characterization of Smokeless Powders using Nano electrospray Ionization Mass Spectrometry (nESI-MS)" *Anal. Bioanal. Chem.* **2009**.
- ❖ **Scherperel, G.** and Reid, G. E. " Emerging Methods in Proteomics: Top-down Protein Characterization by Multistage Tandem Mass Spectrometry" *The Analyst* **2007**, *132*, 500-506. Also highlighted as a Research Article in *Chemical Biology*, **2007**, *7*.
- ❖ Wang, Y., **Scherperel, G.**, Roberts, K. D., Jones, A. D., Reid, G. E., and Yan, H. "A Point Mutation Converts Dihydroneopterin Aldolase to a Cofactor-Independent Oxygenase" *J. Am. Chem. Soc.* **2006**, *128*, 13216-13223.
- ❖ **Scherperel, G.,** Yan, H., Wang, Y., and Reid, G. E. "Characterization of Dihydroneopterin Aldolase Site-directed Mutagenesis Products from Staphylococcus Aureus by 'Top-down' Multistage Tandem Mass Spectrometry in a Linear Quadrupole Ion Trap" *The Analyst* **2006**, *131*, 291-302.
- ❖ **Gwynyth Scherperel,** Katherine Rank, and Gavin E. Reid "Quantitative Evaluation of Product Ion Abundances from the Top-down and Bottom-up Dissociation of *S. aureus* and *E. coli* Dihydroneopterin Aldolase " (poster presentation), 54th American Society for Mass Spectrometry Conference, Washington State Convention & Trade Center, Seattle, WA, May 28 - June 1, 2006.
- ❖ **Gwynyth Scherperel,** "Homeland Security and Forensic Science Applications of Ion Mobility Spectrometry and Hyphenated Techniques" (oral presentation), Department of Chemistry, Michigan State University, November 11, 2005.
- ❖ **Gwynyth Scherperel,** Katherine Rank, Honggao Yan, Yi Wang, and Gavin E. Reid "Characterization of Dihydroneopterin Aldolase Site-directed Mutagenesis Products from Staphylococcus Aureus by 'Top-down' Multistage Tandem Mass Spectrometry in a Linear Quadrupole Ion Trap" (poster presentation).
 - Anachem/SAS Symposium, Burton Manor, Livonia, MI, November 10, 2005.
 - Biochemistry Symposium, Michigan State University, November 8, 2005.

ORGANIZATIONS

- ❖ American Academy of Forensic Sciences, 2002 - present
- ❖ American Chemical Society, 2004 - present
- ❖ American Society for Mass Spectrometry, 2005-2007
- ❖ Phi Beta Kappa, 2002 - present

PROFESSIONAL TRAINING

- ❖ **To Hell and Back: The Ethics of Stewardship and the Stewardship of Ethics (recorded version)**, online continuing education sponsored by National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ June 11, 2009
- ❖ **Solid Phase Extraction**, Phenomenex: Seattle, WA ♦ April 17, 2009
- ❖ **Introduction to Uncertainty in Forensic Chemistry and Toxicology, Part III**, online continuing education sponsored by National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ March 31, 2009
- ❖ **Introduction to Uncertainty in Forensic Chemistry and Toxicology, Part II Live Examples**, online continuing education sponsored by National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ March 17, 2009
- ❖ **Introduction to Uncertainty in Forensic Chemistry and Toxicology**, online continuing education sponsored by National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ February 19, 2009
- ❖ **Fundamentals of LC/MS/MS**, online continuing education sponsored by National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ 2008
- ❖ **Volumetric Measurement Best Practices**, online continuing education sponsored by National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ December 9, 2008
- ❖ **The Zzzz Drugs: from Analysis to Interpretation**, online continuing education sponsored by National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ July 8, 2008
- ❖ **Opioids and Pain Management**, online continuing education sponsored by National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ June 19, 2008
- ❖ **Expert Testimony for the Prosecutor and Scientist II**, online continuing education sponsored by the National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ May 14, 2008

- ❖ **Expert Testimony for the Prosecutor and Scientist**, online continuing education sponsored by the National Institute of Justice and the Center for Forensic Sciences at RTI International ♦ May 13, 2008
- ❖ **The Robert F. Borkenstein Course on Alcohol and Highway Safety: Testing, Research, and Litigation**, Indiana University, Department of Criminal Justice, Center for Studies of Law in Action: Bloomington, IN ♦ May 5-9, 2008
- ❖ **Advanced Horizontal Gaze Nystagmus Training** (Dr. Karl Citek), Washington DEC Program: Bainbridge Island, WA ♦ April 23, 2008
- ❖ **Olympus AU400e Training**, Olympus America, Inc. Diagnostic Systems Group: Seattle, WA ♦ March 4-5, 2008
- ❖ **BAC Technician Testimony Training**, Washington State Breath Test Program: Seattle, WA ♦ February 26, 2008
- ❖ **Courtroom Testimony Techniques – Success Instead of Survival**, Ron Smith and Associates, Inc.: Seattle, WA ♦ January 28-29, 2008