
POLY 305

EDUCATION

University of Oregon, Eugene, OR- Master of Science, Polymer Science

June 2017 - Spring/Fall 2018 (expected graduation)

Rochester Institute of Technology, Rochester, NY- Bachelor of Science, Chemistry

August 2011 - May 2015 GPA: 3.59

EXPERIENCE

Machaon Diagnostics, Inc., Oakland, CA - laboratory technician, clinical research associate

March 2016 - May 2017

- Validated clinical antibody ELISA assay by identifying literature procedure, finding and screening donors, running experiments, and analyzing data. Also routinely ran Western blotting and osmolality assays.
- Coordinated clinical research studies in thromboelastography (TEG) and platelet aggregation by screening and scheduling donors, coordinating blood draws and experiment times, running daily controls on TEG analyzer, running experiments, organizing data, proofreading final reports to sponsor.
- Edited SOPs based on identified deviances occurring in lab and common user errors and consolidated company's master document control system.
- Logged patient data and ensured accurate patient information by identifying and clarifying errors with outside labs and ensured on-time completion of test orders by coordinating testing within lab with technicians. Also processed samples, including DNA extraction and measurement with Nanodrop spectrophotometer, prepared reagents, and aliquoted using micropipettes.

RIT Magnetic Resonance laboratory, Rochester, NY - research assistant

February 2014 - December 2015

- Responsible for several simultaneously-running projects in low frequency EPR, focused on developing nondestructive technique to analyze cultural heritage artifacts.
- Developed automated tuning program using LabVIEW. Decreased tuning time from an hour per day to <5 minutes per day, with less physical labor.
- Helped manufacture parts in machine shop, including new mobile device for surface spectrometer and mapping of magnetic field using device. Also set up new electronic mechanisms in spectrometer.
- Troubleshooting electronic malfunctions and unexpected results, such as inconsistencies in signal mapping with new sample probes.

Teaching Experience

- Independent Private Tutor, September 2015 - May 2017
- RIT Higher Education Opportunity Program tutor, September 2013 - May 2015
- Horseback riding instructor, Horsehaven Stables, OH, October 2009 - January 2015

PUBLICATIONS

L.E. Switala, W.J. Ryan, M. Hoffman, W. Brown, & J.P. Hornak. Low Frequency EPR and EMR Point Spectroscopy and Imaging of a Surface. Magnetic Resonance Imaging. 17 December 2015.

M. Ero, Y. Bynagari, B. Lewis, K. Powers, J. Cota, & **L. Switala**. Thromboelastography and the Functional Confirmation of Heparin-Induced Thrombocytopenia in Donor Whole Blood. Blood. 2016.

L.E. Switala, W.J. Ryan, M. Hoffman, S. J. Santana, B.E. Black, J.P. Hornak. A Wide-Line Low Frequency Electron Paramagnetic Resonance Spectrometer. Manuscript submitted for publication. 2017.

SELECTED PRESENTATIONS

L. Switala, J. Cota, B. Lewis, M. Ero, Y. Bynagari. Complement factor abnormalities detected in patients with suspected heparin-induced thrombocytopenia but not thrombotic thrombocytopenia purpura. International Society for Laboratory Hematology. Honolulu, HI May 4-6, 2017.

L. Switala, E.I. Hornak, W. J. Ryan, N. Zumbulyadis, J.P. Hornak. A Low Frequency Electron Paramagnetic Resonance Spectroscopy Study of the Firing Temperature of Redart Clay. 2015 Rochester American Chemical Society Undergraduate Research Symposium. Geneseo, NY, April 18, 2015. Also presented at Rochester Academy of Science Paper Session. Brockport, NY, Nov 15, 2014.

N. Zumbulyadis, W.J. Ryan, **L. Switala**, J.P. Hornak. Low Frequency EPR: A Novel, Non-invasive, Spectroscopic Approach to Studying Ceramic Objects. Gordon Research Conference: Scientific Methods in Cultural Heritage Research. Newry, ME, Jul 27-Aug 4, 2014.

OTHER INTERESTS AND ACTIVITIES

RIT OUTING CLUB - vice president spring semester 2015, active member 2011-2015

- Planned and led weekly hiking trips for groups of 10-40 students
- Communicated details of trips with Student Government such as number of students and miles traveled, in order to accumulate long-term activity records to gain funds in later years

CENTER FOR ENVIRONMENTAL INITIATIVES - volunteer July 2015- September 2015

- Contacted area towns to inspect water policies surrounding Rochester, NY
- Identified dairy farms along streams in order to determine effect on water quality