

Elyse Marder

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Education

Bachelor of Science (Chemistry) Furman University | Greenville, SC May 2014
Dean's List, 6 of 7 semesters

High School Diploma (Medical Science) Highland School of Technology | Gastonia, NC June 2010
Valedictorian

Work Experience

Furman Advantage Research Fellowship (May '13 - Present)

Department of Chemistry, Furman University, Greenville, SC

- Conducted original, independent analytical chemistry research in the field of neurochemistry under the supervision of Assistant Professor of Chemistry, Dr. Nick Kuklinski.
- Contributed to a team with three other students and frequently served as lab leader and mentor.
- Explored the process of method development using high performance liquid chromatography (HPLC) for the separation and detection of neurochemicals.

Howard Hughes Medical Institute (HHMI) Research Fellowship (May '11 - July '12)

Department of Chemistry, Furman University, Greenville, SC

- Conducted original, independent analytical chemistry research in the field of transition metal photochemistry under the supervision of Professors of Chemistry, Dr. John Wheeler, Dr. Sandy Wheeler, and Dr. Noel Kane-Maguire.
- Contributed to a team of 10-14 students and communicated research progress through weekly lab meetings.
- Studied the anti-cancer potential of a class of UV-activated chromium(III) compounds using a variety of analytical techniques including electrospray ionization-mass spectrometry (ESI-MS), isothermal titration calorimetry (ITC), UV-visible absorption spectroscopy, and inductively coupled plasma-atomic emission spectroscopy (ICP-AES).

Tutor (January '11 - May '13)

Center for Academic Assistance, Furman University, Greenville, SC

- Tutored Furman students in various courses including Introduction to Chemistry, Introduction to Kinetics and Thermodynamics, Introduction to Biology, and Calculus/Analytical Geometry I.

USDA Intern (October '09 - December '09)

National Science Laboratory, USDA Agricultural Marketing Service, Gastonia, NC

- Worked under the supervision of analytical chemist, Amanda Canady, learning about analytical separations instrumentation such as liquid and gas chromatography with mass spectrometry.
- Observed Ms. Canady performing routine maintenance on GC and LC instruments.
- Performed the following tasks under the supervision of Ms. Canady: prepared calibration standards and samples of tobacco and honey for analysis using a provided protocol, calibrating instruments, preparing and reviewing data folders, analyzing data recovered by separations instruments, and inputting data into the laboratory inventory management system.
- Passed a proficiency examination created by Ms. Canady.

Conference Presentations and Publications

Thakker, P.U., Aru, R.G., Sun, C., Pennington, W.T., Siegfried, A.M., **Marder, E.C.**, Wagenknecht, P.S. (2014) Synthesis of trans Bis-alkynyl Complexes of Co(III) Supported by a Tetradentate Macrocyclic Amine: A Spectroscopic, Structural, and Electrochemical Analysis of pi-Interactions and Electronic Communication in the CC-M-CC Structural Unit. *Inorganica Chimica Acta*. *In press*.

Marder, E.C., Steagall, S.B., Dorismond, C., Hallman, C.D., Kuklinski, N.J. (2014) Separation and detection of 19 neurochemically significant biogenic amines and acids in non-mammalian systems. Oral presentation delivered at SERMACS 2013 (Atlanta, GA) and to be delivered at Engaged Day 2014, Furman University (Greenville, SC).

Marder, E.C., Sprinkle, M.M., Kane-Maguire, N.A.P., Wheeler, S.K., Wheeler, J.F. (2013) Investigation of the thermodynamics of binding between $\text{rac-[Cr(dip)}_2\text{(dppz)]}^{3+}$ with DNA as a potential anti-tumor agent. Oral presentation delivered at Engaged Day 2013, Furman University (Greenville, SC).

Marder, E.C., Wade, J.H., Kane-Maguire, N.A.P., Wheeler, S.K., Wheeler, J. F. (2012) Analysis of novel homo- and heteroleptic Cr(III) complexes using electrospray ionization-mass spectrometry (ESI-MS). Poster presentation delivered at SERMACS 2011 (Richmond, VA), CASE 2012, University of Florida (Gainesville, FL), and Engaged Day 2012, Furman University (Greenville, SC).