MCS RESUME 5

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EDUCATION

Carnegie Mellon University (CMU), Pittsburgh, PA — May 2016
Bachelor of Science in Chemistry, Minor in Mathematical Sciences
Cumulative GPA: 3.98, Dean's List High Honors

ACADEMIC PROJECTS

Synthesis of 4,4-dimethyl-1-phenylpent-1-en-3-ol, Molecular Design & Synthesis — Fall 2014

- Given a target molecule and limited starting materials, designed a procedure to synthesize, isolate, and characterize the target
- Carried the procedure out in the lab
- Performed trouble-shooting to solve problems in lab. Delivered a poster presentation of important results

Sugar and Dye Content in Gummy Bear Candy, Introduction to Chemical Analysis — Fall 2013

- Four-person team project to analyze dye and sugar concentrations in multiple brands of gummy bear candy
- Performed dye analysis by UV-Vis spectroscopy and data analysis using Microsoft Excel
- Requisitioned and managed chemicals for the project; culminated in a team PowerPoint presentation

WORK EXPERIENCE

Academic Development, CMU
Peer Tutor — Oct 2013 – Present

- Lead weekly tutoring sessions for individual students. Also conduct weekly walk-in tutoring sessions for larger groups; Courses tutored include Modern Biology, Principles of Computing, Biochemistry, and Organic Chemistry

Eureka! First Year Seminar, Mellon College of Science, CMU
Teaching Assistant — Aug 2015 – Dec 2015

- Teaching assistant in a first year seminar course designed to facilitate student success in college
- Work with a faculty partner to plan and lead a weekly recitation section of fifteen students

Drug Metabolism & Pharmacokinetics Group, Pharmaceutical Company, Cambridge, MA
Synthetic Chemistry Intern — Jun 2015 – Aug 2015

- Carried out a new route to synthesize a drug of interest
- Performed analysis of reactions by HPLC and LC/MS, purification by column chromatography and preparatory HPLC, and characterization of new compounds by NMR spectroscopy
- Delivered a PowerPoint presentation to the DMPK group at the end of the internship

RESEARCH EXPERIENCE

Physical Chemistry Lab, Dr. Chemistry Group, CMU — May 2014 – Present

- Analyze the morphological and mechanical properties of polymers by atomic force microscopy
- Study the electronic properties of nanoparticles by UV-Vis spectroscopy
- Analyze data using MATLAB and Mathematica

Nephrology Lab, Hospital, Providence, RI — Jun 2013 – Aug 2013

- Worked under Dr. Nephrology. Analyzed mouse genotypes using polymerase chain reaction and gel electrophoresis

TECHNICAL SKILLS

Computer: Proficient in Python, Mathematica, LaTeX, Microsoft Office; basic Maple, MATLAB, Ruby, Ampac

Laboratory: Synthetic skills, atomic force microscopy, IR, NMR, EPR, UV-Vis, atomic absorption, and fluorescence spectroscopies, column chromatography, HPLC, preparatory HPLC, gas chromatography, gas chromatography-mass spectrometry, liquid chromatography-mass spectrometry, distillation, gel electrophoresis, polymerase chain reaction, exposure to fluorescence microscopy

ACTIVITIES

Murder Mystery Play, Department of Chemistry, CMU, Cast Member — Feb 2015
First-Year Mentor Program, Mellon College of Science, CMU, Peer Mentor — Aug 2014 – Dec 2014

AWARDS & HONORS

ACS Analytical Chemistry Division Award — May 2015
Honor Society of Phi Kappa Phi — Apr 2015
Warner Prize for Sophomores — May 2014