

OBJECTIVE

To obtain a position as a Research Chemist in the field of Food Chemistry

EDUCATION

Michigan Technological University
BS Pharmaceutical Chemistry
GPA: 3.50

Houghton, MI
Expected May 2012

PHARMACEUTICAL CHEMISTRY PROJECT EXPERIENCE

Michigan Technological University - Laboratory of Macromolecular Recognition

Advisor: Dr. Tarun Dam

Project: Biomarkers of Thyroid Cancer

Objective: Study interactions of various lectins which are carbohydrate binding proteins with different proteins and glycoproteins found in the human body, as well as other living organisms

- Ran centrifugation for various samples
- Conducted isothermal titration calorimetry, which determines binding affinity or strength amongst two compounds.
- Prepared hemagglutination and hemagglutination inhibition assay
- Wrote protocols and lab reports documenting the work accomplished
- Research collected was used for the writing of the abstracts below

Abstracts Submitted

Brown, R. K., **Wiltzius, M.**, Jokinen, M., Andre, S., Kaltner, H., Gabius, H. G., Dam, T. K.

“When Two Biomarkers of Thyroid Cancer Meet: Interaction Between Galectin-3 and Thyroglobulin. *Journal of Glycobiology*. Submitted.

Wiltzius, M., Brown, R. K., Dam, T. K. “Mechanistic Basis of Polysaccharide

Recognition by Lectins.” *Journal of Glycobiology*. Submitted.

LABORATORY EXPERIENCE

CH 2410/2411 Organic Chemistry I and II with Lab

- Gas chromatography (GC), thin-layer chromatography (TLC), fractional distillation, column chromatography, IR spectroscopy, chemical identification tests

CH 4222 Bioanalytical Chemistry

- Liquid chromatography (LC), GC, spectrophotometry, fluorescence, titrations

CH 4710 Biomolecular Chemistry

- Amino acids, proteins, and DNA

CH 4110/4120 Pharmaceutical Chemistry: Drug Action and Drug Design

- Pharmacokinetics, pharmacodynamics, and various design techniques for drugs

CH 4412 Spectroscopy of Organic Chemistry

- Mass Spectroscopy (MS) and NMR analysis

SKILLS

Computer:

- MS Office, including Excel, Word, PowerPoint

Technical/Laboratory:

- LC, GC, IR, TLC, MS, NMR, calorimetry, microscopy

Language:

- Basic Spanish

WORK HISTORY

Michigan Tech University – Athletic Communications and Marketing Houghton, MI
Statistician/Office Worker Sept 2010 - present

- Working 10+ hrs/wk while maintaining full-academic and athletic schedule
- Prepare facility for Division I hockey games
- Record stats during hockey games and volleyball matches
- Continuous update and maintenance of Michigan Tech Athletics webpage
- Prepared game notes, rosters, and media news for numerous and diverse sports

SuperOne Foods Iron Mountain, MI
Cashier/Bagger 2009 – 2010

- Used computer cashiering system to provide fast and efficient customer service

General Nutrition Center Iron Mountain, MI
Sales Associate 2008, 2010

- Became knowledgeable about vitamins, herbal supplements and other natural products
- Helped customers reach their goals of weight loss, muscle gain, pain relief, or general nutrition

Nustar Home Health Services Iron Mountain, MI
Cleaner Summer 2008

- Performed household chores for seniors and disabled

LEADERSHIP AND ACCOMPLISHMENTS

Michigan Technological University Varsity Track and Field Team

Captain and 3-Year Letter Winner

- 2-semester daily practice commitment
- Balanced 3 hour daily practice and bi-weekly race travel with full-class and research schedule
- Studied, learned, and executed numerous competition strategies and systems
- Learned and practiced troubleshooting and problem solving techniques in high stress, real-time competition environment
- Developed teamwork, communication skills, time management/prioritizing skills, competitive character, highly disciplined work ethic, and performance excellence

ACHIEVEMENTS:

- **Terry Wilson Award winner (top female freshman student-athlete)**
- **Team MVP in 2009, 2010 and 2011**
- **Set school discus record in 2009 with a throw of 139'4"**
- **Set school hammer record in 2011 with a throw of 153'2"**

Student Athlete Advisory Committee

President

- Organized activities supporting the local area and the Make-A-Wish Foundation.
- United student athletes with the community and faculty