CONNELL CUNNINGHAM, JR.

Phone: (540) 458-4854 | Email: ccunningham@wlu.edu
Address: 204 West Washington Street, Lexington, VA 24450

PROFESSIONAL SUMMARY

- An educator and former North Carolina Teaching fellow with experience teaching in high school, two-year colleges and four-year colleges.

EDUCATION

The University of North Carolina at Chapel Hill · Chapel Hill, NC, (2006) Ph.D. in Chemistry
Dissertation: Increasing peptide sequence information from tandem mass spectrometry
Advisor: Gary L. Glish, Ph.D.
Honors: The University of North Carolina at Chapel Hill Royster Society of Fellows and the Ross and Charlotte Johnson Family Dissertation Fellowship

Research Assistant
- Developed High Amplitude Short Time Excitation using Collision Induced Dissociation (HASTE-CID) for the identification of product ions that appear below the low mass cut-off during CID in a quadrupole ion trap mass analyzer.
- Extended the use of Iterative Accumulation Multiplexing (IAM) with Thermally Assisted Collision Induced Dissociation (TA-CID) and Thermally Assisted Infrared Multiphoton Photo Dissociation (TA-IRMPD) for the identification of multiple peptide product ions in a quadrupole ion trap mass analyzer.
- Utilized liquid chromatography mass spectrometry (LC-MS) method for the separation of digested protein samples.
- Analyzed departmental samples using electrospray ionization and atmospheric pressure chemical ionization using a triple quadrupole ion trap mass spectrometer.

Teaching Assistant
- Instructed and evaluated undergraduate students in Chemistry 41, Chemistry 23, and general chemistry courses.
- Mentored and instructed undergraduate students in research on infrared multiphoton photo dissociation (IRMPD) of peptides using mass spectrometry and HASTE-CID with heavy gases.
- Graduate assistant to the UNC Summer Graduate Research Experience Program, Guided the research of summer students for 10 weeks.

The University of North Carolina at Greensboro · Greensboro, NC, (2002) M.S. in Chemistry
Thesis: ESI-MS for the identification and quantitation of bioactive alkaloids in the aerial portions of the endangered medicinal plant golden seal (Hydrastis canadensis)
Advisor: Nadja B. Cech, Ph.D.
- Developed LC methods for quantitative analysis of alkaloids using quadrupole ion trap mass analyzers.
- Instructed middle and high school science teachers in the North Carolina Teaching Fellows Program.
- Instructed and evaluated undergraduate students in general chemistry labs.

North Carolina Agricultural & Technical State University · Greensboro, NC, (1999) B.S. in Chemistry, Secondary Education

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