

Dwayne L. Daniels, Ph.D

116 Airport Road Extension
Perry, Ga. 31069
(478)-397-2728
E-mail: danielsd@fvsu.edu

Current Position

Chair of Chemistry and the Director of the Peach State LSAMP Program

Education

Bachelor of Sciences, Chemistry; May, 1987; Master of Sciences,
Organic Chemistry, Minor in Analytical Chemistry; August, 1992;
North Carolina Central University; Durham, NC; Doctor of
Philosophy, Organic Chemistry; May, 1997; Clark Atlanta
University; Atlanta, Ga. Post-Doc, Bio-Organic Chemistry; July 1999;
Tufts University; Medford, MA.

Experience

Fort Valley State University

Fort Valley, Ga.

August 1999- present

As an **associate professor**, I am responsible for teaching organic I and II lecture and lab as well as biochemistry, environmental hazard management and physical science. Research involves the synthesis of peptide DNA hybrids and natural products. As the Right-To-Know Coordinator and Environmental Health and Safety Officer from 1999-2003, I was responsible for the training faculty and informing employees about hazards in the work place. I have been the **department chair** since 2009 and is responsible for overseeing the daily operation, course scheduling, planning, management of faculty, staff and students, student advising, student recruitment, program assessment and data collection. I have been the LSAMP STEM Director since 2005. I am responsible for the vision of the program, student research, developing workshops, taking students to conferences and developing collaborations with other programs that would benefit both institutions.

Tufts University

Medford, MA

March 1998-July 1999

As a research associate, synthesized peptide DNA hybrids and cholic acid DNA hybrids in the search for new therapeutic agents that bind to DNA or RNA targets. This work involved the use of combinatorial synthesis and invitro selection to identify hybrids with increased affinity for target strands. Critical positions in the hybrids were randomized to produce small libraries. The survival of the individual members of the libraries were monitored by quantitative laser desorption mass spectrometry. Purification and identification techniques used were reverse phase HPLC, 1D and 2D NMR, UV, and Maldi-tof Mass Spectrometry.

Clark Atlanta University

Atlanta, Ga.

August 1992-May 1997

Working under the direction of the late Dr. H.C. McBay investigated the photobromination of epoxides in order to gather more information on the rearrangement of epoxidyl free radicals and to develop feasible methods of generating the epoxidyl free radical. Was responsible for syntheses, purification, and identification of products. Assisted in supervising undergraduate researchers.

Spelman College

Atlanta, Ga.

August 1992-July 1995

As chemistry instructor, directed approximately twenty students on laboratory safety, procedures and techniques. Demonstrated how to use and interpret data from various instruments, such as FTIR, GC, and proton NMR. Responsible for teaching students how to organize laboratory notebooks and collect data. Taught students how to purify and characterize unknown compounds by wet chemistry and analytical methods.

North Carolina Central University

Durham, NC

May 1988-July 1991

Studied the reaction between diakylmalonyl chlorides and benzohydroxamic acids in the presence of pyridine, which led to the isolation of 3,5-Isoxazolidinediones. The stability of the compounds was investigated by refluxing in methanol for twelve hours and analyzing the residue by HPLC. Assisted in teaching and preparing for general and organic chemistry labs.

Awards and Scholarships

Certificate of Appreciation for FVSU President's Inauguration-2014

Mentorship Award Research Day-2014

Certificate of Appreciation FVSU Science Club -2014

Professor's Award Georgia Bible College-2013

Minnesota School of Theology-Associates Degree-Summa cum Laude-2013

FVSU Outstanding PI/Project Director of the Year-2013

Leadership Award-Mt Air Baptist Church 2013

Service Award -Mt Air Baptist Church-2012

Service Award-Shiloh Baptist Church 2011

Earned the Department of Energy Scholarship.

Earned the Veterans Administration Scholarship.

Earned the Minority Access to Research Careers Scholarship.

Earned the Minority Biomedical Research Support Scholarship.

Outstanding Senior in Chemistry Award by the American Institute of Chemists.

Served as President and Vice President of the Graduate School Chemistry Club.

NIH Fellow

Peach County Big Brother of the Year 2002

Elected to the Board of Directors of Big Brothers Big Sisters of Georgia 2003

Elected to Southeastern Regional Council of Beta Kappa Chi Honor Society 2005

Peach County Big Brother of the Year 2005

Big Brothers Big Sisters Board Member of the year 2005

Who's Who Among American Teachers 2006

Bill Glass Champions for Life 2006

Publications

Robert A. Izydore, Joseph T. Jones, Benjamin Mogesa, Ira N. Swain, Ronda G. Davis-Ward, Dwayne L. Daniels, Felicia Frazier Kpakima, and Sharnelle T. Spaulding-Phifer, II, Synthesis of 3,5-Isoxazolidinediones and 1H-2,3-Benzoxazine-1,4(3H)-diones from Aliphatic Oximes and Dicarboxylic Acid Chlorides, *J. Org. Chem.*, 79 (7), 2874-2882, **2014**

Biswas BK, Rogers K, McLaughlin F, Daniels DL and Yadav A., Antimicrobial Activities of Leaf

Extracts of Guava (*Psidium guajava* L.) on Two Gram Negative & Gram Positive Bacteria. *International Journal of Microbiology*, **2013**.

Daniels DL, Richert C. One-Pot Synthesis of L-Felinine, *Tetrahedron Lett.*, **1999**,40,4463-4465.

Daniels DL, Izydore R, Hall, Taylor K. Effects of Benzohydroxamic Acids on L1210 Lymphoid Leukemia Cell Nucleic Acid Metabolism. *Pharmazie*, 53, 794-799, **1998**.

Grants

UNCF/MERCK Undergraduate Science Research Scholarship – Principal Investigator-\$10,000, 2014.

Peach State LSAMP- Fort Valley State University's Principal Investigator -\$5,000,000,000 over 5 years- Funded by NSF, 2011.

Updating Entomology program at FVSU to Reflect Advances in Insects Chemical Ecology and Pathology- Co-Principal Investigator, Funded by NSF, \$300,000 for 3 years, 2008

Health Disparities Grant- Co-Principal Investigator-\$255,000, Funded by the Kellogg Foundation, 2006

Peach State LSAMP- Fort Valley State University's Principal Investigator -\$5,000,000,000 over 5 years- Funded by NSF, 2005.

Enhancing the Chemistry Curriculum and Research Capabilities Via Laboratory Instrumentation- Principal Investigator, \$155,275 from the Department of Defense, 2003

Collaborations

Research Project with Dr. Owolabi-Federal University of Technology, Akure, Nigeria 2014

Math and Science Partnership with Middle Ga RESA-2014

Math and Science TEP with CoE and Dean Hill-2014

Co-Chaired the Annual BXX/NIS Conference with CAU 2011-(Dr. Bettye Clark & Tia Minnis)

Summer Research Opportunities NSF-CREST 2008-2011 (Dr. Ishrat Khan-CAU)

Summer Research Opportunities, Dr. Glake Hill, Jackson 2008-2011 State University

Chemistry Team Leader for the NSF HBCU-UP Grant 2007 (Dr. Sarwan Dhir)

Chemistry Team Leader for the NIH Bridges Grant 2006 (Dr. Deepa Arora)

Chemistry Facilitator for the HCOP MCAT Preparation 2005 (Medical College of Ga.)

Chemistry Instructor for Pipeline Program 2004 (Dr. Clinton Dixon)

Courses Taught

Introductory Chemistry I- Chem 1101k

Introductory Chemistry I Lab- Chem 1101

Introductory Physical Science I- PHSC 1101

Principles of Organic Chemistry I- Chem 2221k

Principles of Organic Chemistry I Lab- Chem 2221

Principles of Organic Chemistry II- Chem 2222k

Principles of Organic Chemistry II Lab- Chem 2222

Advanced Organic Chemistry-Chem 3320

Polymer Chemistry-4350K

Biochemistry-3250K

Biochemistry Lab-3250

Chemistry Seminar- Chem 4210
Senior Project- Chem 4450
Environmental Hazard Management ENVH 5193 (**Graduate level**)

Professional Development

Grantsmanship Workshop Akure, Nigeria 2014
Ordained a Minister-Shiloh Baptist 2011
Annual Peach State LSAMP Conference 2005-2013
Annual Biomedical Research Conference for Minority Students 2007-2013
BKX/NISConference 2007-2013
Commencement Speaker 2007 Northwest High School (Alma Mater)
Summer Public Health Institute-2006
Quality Education for Minorities Teacher Professional Continuum-2006
Introducing Science Faculty to Material Science and Engineering Workshop-2005
Right-To-Know Coordinators Conference-2003
Licensed Minister 2011
Pastor of Mt. Air Baptist Church, Hawkinsville, GA 2012.

Memberships

American Chemical Society
National Institute of Science
Beta Kappa Chi
Alpha Phi Alpha Fraternity Inc.
Big Brothers Big Sisters of the Heart of Ga.
Bill Glass Champions for Life Prison Ministry
Shiloh Baptist Associate Minister
Pastor Mt. Air Baptist Church