



# NASA's HBCU/MI Engagement Forum at **Johnson C. Smith University**



**Claflin  
University**  
Derrick J. Swinton

# Research Capabilities

## *MOLECULAR SCIENCES RESEARCH LABORATORY*

The Claflin University Molecular Science Research Center has been designated a Research Core Facility Core Research Facility for the state by the South Carolina Research Authority because of specialized analytical equipment in the Molecular Science Research Center. Claflin has the second largest NMR in the state of South Carolina, 700 MHz Bruker NMR.

### *Major & Specialized Instrumentation-* for Materials Characterization

- 700 MHz Nuclear Magnetic Resonance Spectrometer (NMR)
- 300 MHz Nuclear Magnetic Resonance Spectrometer (NMR)
- Bruker High Resolution Time-of-Flight Mass Spectrometer equipped with a UHPLC
- Bruker Electron Spin Resonance Spectrometer (ESR)
- Powder and Single Crystal X-Ray Diffractometers

# Recently Funded Grants and Contracts

Jie Ling                      Department of Energy    (Savannah River Nuclear Laboratory)  
Synthesis and Characterization of Inorganic Solids with Noncentrosymmetric Structures

Derrick Swinton and Marlena Washington  
MUSC Foundation for Research Development (not-for-profit 501©(3) corporation)  
High Throughput Screening of Obesogens

Derrick Swinton                      NSF  
Utilization of Advanced Biomaterials to Drive Cellular Organization and Differentiation in Vascular Grafts

Omar Bagasra                      NSF  
Intersection of Epigenetic Regulation and Mitochondrial Function in Autism

Marlena Washington                      NSF  
Lithium Sulfur Battery Design and Electrolyte Chemistry

# Claflin University – Points of Contacts

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