



Meet the Scientist!



Chemists have no limitations. We must be multifaceted to create, isolate, and characterize while utilizing a variety of chemicals and instrumentation.

Dr. Roderquita K. Moore

Research Chemist

Ph.D., Clark Atlanta University
USDA Forest Service scientist



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Important Scientist Characteristics:

Visionary, Observant, Strategic, Solver. We need solutions to grand challenges. A team of interdisciplinary thinkers, with the knowledge base and ability to look at problems objectively, is key to innovation. Critical thinking and good communication skills are very important. Much of what I do requires that I read and understand scientific research. I assimilate key points into research ideas to address the Forest Service mission.

Example of a simple research question I have tried to answer: Are the chemical compositions, including trace chemicals, for all wood species identified? If so, where is the catalog? If not, what would be the best way to establish a chemical profile for various wood chemicals?

Technology or equipment used in research:

GCxGC technology is used to separate and identify chemicals in complex mixtures. Two different columns are used to separate chemicals according to volatility and polarity, which creates a 3D molecular map of chemicals with similar characteristics. The peak capacity is expanded so we can identify trace chemicals that may have an effect on living organisms.

Most Exciting Discovery

I was excited to participate with the Urban Water Federal Partnership, a collaboration between Federal and local agencies and communities. Proctor Creek in Atlanta had become highly urbanized by impervious areas and eroded stream and sewer overflows. I presented to the Stewardship Council how the Forest Service could help improve the creek by revitalizing the community.

When did you know you wanted to be a scientist?

I was bitten with the science bug in elementary school. Field trips and frequent visits to Fernbank Science Center inspired me. My passion for chemistry was ignited by an overly excited chemistry teacher, Ms. Heath, at Southwest Dekalb High School.

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