

Lane College Science Club: Engaging Students in Undergraduate Research and Outreach

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Abstract

Lane College is a Historically Black College located in Jackson, TN with a strong history of educating underserved, minority students. Our overall goal within the Science Division is to increase the number of African American students entering STEM fields. To that end, the Lane College Science Club was first established, to provide students with an interest in Biology and Chemistry information about careers, scholarships, awards, and to connect students with Biology and Chemistry faculty. Since affiliating with ASBMB Student Chapters and the ASCB MAC Linkage Fellows Program, we have expanded Science Club to include undergraduate research experiences and community outreach. Also, Science Club is partnering with the Lane College Career Center to provide students with support for applying to internships and graduate programs. Science Club students have completed research projects surveying microorganisms in the Lane College Pond and antibiotic resistance bacteria on the campus. Additionally, in collaboration with Dr. Margaret Franzen at Milwaukee School of Engineering Center for Biomolecular Modeling CREST program, our Science Club students have built 3D models of proteins involved in signal transduction and drug resistance. Students have also participated in community outreach with Madison County and Shelby County Schools. For example, Science Club students have worked with over 350 K-5 children at Lincoln Elementary and 40 second graders at Denmark Elementary between 2017 and 2020. Outreach projects have included lessons on cell structure, phototaxis, DNA extraction, acid-base chemistry, microscopy, enzyme catalysis, and static electricity. These activities have positively impacted Lane College students, with an increase in the number of Biology and Chemistry graduates entering Master and Doctoral programs or entering the STEM workforce.