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HANDS ON EDUCATION and RESEARCH for BIOMEDICAL and ANALYTICAL LEARNING (HERBAL)

Proposal Abstract:

The University of Rhode Island (URI) plays a pivotal role in the region’s biotechnology infrastructure and workforce development with its world-class research laboratories and expert faculty. Future biotech growth requires a highly trained and talented workforce to fill high-skill, high-wage jobs. As a leading example, in the URI College of Pharmacy undergraduate students enrolled in Techniques in Medicinal Chemistry and Molecular Biology (BPS 451) contribute to building a drug-compound library from herbal specimens collected from the Heber W. Youngken Jr. Medicinal Garden at URI. Course participants are more than just learners; they become motivated researchers involved in a genuine scientific effort designed to enable future biomedical discoveries. The course provides job-relevant experience with modern instrumentation (e.g., high-performance liquid chromatography systems, mass spectrometers, bioassay development) that elevates the competitiveness of URI students for positions in the pharmaceutical industry. We propose to extend the concept of authentic research experiences with medicinal plants to the high school level by developing HERBAL: Hands-on Education and Research for Biomedical and Analytical Learning. To demonstrate the effectiveness and utility of HERBAL in high school education, the proposed work will conduct a pilot version of HERBAL with Woonsocket High School students.

Awarded: $10,000