KAYLEE HAUGHT & RACHEL COOK, Dept of Biology, Fairmont State University, Fairmont, WV, 26554. The effect of latex sap from the Poinsettia plant (*Euphorbia pulcherrima*) on the production of roots in propagated *Tradescantia zebrina* cuttings

Previous studies suggest that the latex sap produced by species in the *Euphorbia* family may play a role in promoting root growth in other plant species. In this study, this hypothesis was tested by extracting latex sap from *Euphorbia pulcherrima* and applying it to cuttings from *Tradescantia zebrina*. These cuttings, 10 per group, were assigned to one of three treatments of either undiluted sap, a sap-water mixture, or a water control. Each treatment group was then propagated in soil or water, resulting in six total experimental groups. The number and length of the roots were recorded after one week of growth in the water groups and two weeks in the soil groups. An ANOVA test was performed to determine significant differences across treatments. This analysis revealed a statistically significant difference in both the root length and number for the water propagated cuttings, with the control group having greater average root development than the sap-containing groups. However, there was not a significant difference between the soil propagated cuttings for either variable. These findings suggest that latex sap from *E. pulcherrima* does not enhance root growth in *T. zebrina* during water propagation and has no noticeable effect in soil. This study contributes to the understanding of hormone interactions between plants and highlights the importance of the propagation environment in stimulating growth. This research was made possible by WV Higher Education Policy Commission, STaR Division.