

Austin Dikeman & Claire McGettigan-Fries

*Fluorescent Reactions Under Ultraviolet Light in Dianthus caryophyllus and Apium Graveolens*

The purpose of this experiment was to determine if plants have the ability to glow under ultraviolet light after absorbing phosphors from liquids that glow under ultraviolet light. Samples of *Dianthus caryophyllus* (carnations) and *Apium graveolens* (celery) were placed in varying concentrations of three different liquids that glow under ultraviolet light: Tide, highlighter ink, and tonic water. The carnations and celery placed in the different concentrations of Tide all glowed under the ultraviolet light but had withered and browned by the end of the experiment. The carnations and celery in the highlighter ink also glowed under the ultraviolet light but seemed to be in better condition than those in the Tide. The carnations and celery in the varying concentrations of tonic water did not glow under the ultraviolet light; however, these plant samples remained very healthy throughout the experiment. The results indicate that it is possible for plant samples to absorb phosphors from liquids causing them to glow under ultraviolet light. These results could help design a method for creating huge, glowing, botanical gardens to raise money and educate kids and adults about plants. These methods could also be used as a learning tool in classrooms to help students study absorption in plants.