



California Science Center
CALIFORNIA STATE SCIENCE FAIR
2001 PROJECT SUMMARY

Your Name (List all student names if multiple authors.)

Noah P Elhardt

Science Fair Use Only

S1605

Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9)

Cloning Savages: Tissue Culture of Carnivorous Plants

Division

 Junior (6-8) X Senior (9-12)

Preferred Category (See page 5 for descriptions.)

16 - Plant Biology

Abstract (Include Objective, Methods, Results, Conclusion. See samples on page 14.)

Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.

Objective: The purpose of this experiment was to test whether the type of water I had used to make media for the micropropagation of sundews was causing them to turn brown and die. I had been trying to grow several different kinds of carnivorous plants in tissue culture. Some of a batch of sundews I had germinated in culture were turning brown and dying. I had read that chemical imbalances in a medium could cause precipitates to form, making the nutrients unavailable to the plantlets.

Method: To test whether the tap water I had used was causing the problems, I transferred three healthy *drosera anglica x spathulata* seedlings into two different cultures, one made with tap water and the other with distilled water. I also sowed *drosera auriculata* seeds in culture on both distilled and tap water media. All variables but the water were kept the same for both groups of cultures.

Result: To my surprise, all the plantlets in the medium made with distilled water died, while those in the culture made with tap water thrived. The germination rate of the seeds on the tap water medium was also higher than that of the seeds on distilled water culture, and the resulting plantlets were greener and healthier.

Conclusion: My results lead me to conclude that tap water does not harm, and may in fact be better for the culture of *drosera* than distilled water. I would like to try this experiment again to verify my results. I would also like to find the reason for these results.

Summary Statement (In one sentence, state what your project is about.)

I was comparing the effect of tap versus distilled water when used in media for tissue culture of *drosera*.

Help Received in Doing Project (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4.

Dr. Carol Stiff of Kitchen Culture Kits donated materials. Mr. Craig Gardner donated cultures and seeds. Both mentored me over the internet.