

## CALIFORNIA STATE SCIENCE FAIR

## 2001 PROJECT SUMMARY



California Science Center

**Your Name** (List all student names if multiple authors.)**Jennifer Berry; Marci Scott****Science Fair Use Only****J1603****Project Title** (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9)**Stimulation of Plant Growth with Gibberellic Acid****Division**X **Junior (6-8)** \_ **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 objective of this project is to determine which concentration of gibberellic acid has the greatest effect on the growth of snow dwarf grey sugar pea plants: 5%, 0.5%, 0.05%, 0.005%, 0.0005%, 0.00005%, 0.000005%, or tap water.

**Materials and Methods:** A brief procedure of the experiment is as follows. Germinate 75 to 100 pea seeds. When the peas have germinated, fill 64 drinking cups with potting soil. Plant one sprouted pea in each cup. Arrange the cups into eight groups of eight according to the concentration of gibberellic acid the group is to receive. Prepare solutions of 5%, 0.5%, 0.05%, 0.005%, 0.0005%, 0.00005%, and 0.000005% gibberellic acid. Also prepare a solution of water to use for the control. Each plant was treated with 10ccs of a given solution every 48 hours for 14 days. Data (height) was taken and recorded.

**Results:** The plants that were treated with the 0.05% gibberellic acid concentration grew the tallest in two weeks. Next in height were the plants treated with the 0.005% concentration followed by the 0.5%, then the 0.0005%, and then the 0.000005%. The control plants grew the sixth tallest while the plants treated with the 0.00005% Gibberellic acid grew slightly smaller than the control group. The plants that were treated with the 5% gibberellic acid did not grow at all.

**Conclusion:** The hypothesis was that the plant group that was treated with the 0.005% gibberellic acid would grow the tallest in two weeks. The results showed that the 0.05% gibberellic acid grew the tallest. Therefore, the hypothesis was not supported.

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

This experiment tested pea plants treated with gibberellic acid to monitor its effects on the growth of the plants.

**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.

Marci Scott's uncle helped with the construction of the board. A local farmer gave direction on how to treat the plants with the gibberellic acid.