



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Leonard L. Pinto	Project Number J1216
Project Title Comparing Methods of Biostatistical Sampling	
Abstract Objectives/Goals My objective was to determine which is the most accurate method of bioassay sampling statistically in a 2-dimensional format; radial sampling of hectares or transect line sampling of the same dimension. Methods/Materials A scale model board of 50 cm X 50 cm with washers randomly scattered on it represent the base statistical population area to be surveyed. Five radial hectares and five transect lines (encompassing an area of one hectare) were randomly plotted within the base population model and a comparative study was done using standard deviation and means. Results The calculations indicated that the transect line population samples produced a much smaller standard deviation, and when compared to the radial hectare population samples taken, were the most accurate. Conclusions/Discussion The comparative study and calculations prove that the transect lines are the most accurate method bioassay sampling method within this 2-dimensional model.	
Summary Statement I statistically determined the most accurate method of bioassay sampling through calculations and comparison of radial sampling and transect line sampling in a 2-dimensional hypothetical model.	
Help Received	