



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> <b>Emily J. Zolfaghari</b>	<b>Project Number</b> <b>S0422</b>
<b>Project Title</b> <b>The Correlation between the Glycemic Index and the Development of Ovarian Serous Tumors of Low Malignant Potential</b>	
<b>Abstract</b> <b>Objectives/Goals</b> Question: Does the consumption of foods high on the glycemic index increase the potential of developing Low Malignant Ovarian Serous Tumors? Hypothesis: If foods consumed with high glycemic values relates to the development of Ovarian Serous Tumors of Low Malignant potential, then a diet low on the glycemic scale will inhibit the growth of Low Malignant Ovarian Serous Tumors. <b>Methods/Materials</b> Biology Workbench 3.2 ( tools CLUSTALW, AASTATS, PELE ) Department of Health and Nutrition Science, Montclair University, 613 women enrolled in Natinal Screening Study (18-80 yrs. old) Food Frequency Quesionnniare (FFQ), Cox Proportional Hazard Models. Procedure:613 women enrolled in FFQ at University. COX estimated hazard ratios for association between energy-adjusted quartile levels of Glycemic load. Determined % of carbohydrates, total sugar, and ovarian tumor risk from collected data in women's ovaries after consumption of food varied within glcemic index. Used Biology Workbench tools to compare multiple sequence alignments, protein structures, and amino acid abundance of both an ovarian tumor cell to glucose using the database. <b>Results</b> Seventy-Two percent increase in the risk of developing ovarian tumor cells after a mean of 16.4 years of follow-ups. Magnitude of the assoication was slightly greaty among postmenopausal than among pre-menopuasal women. Using Biology Workbench 3.2, evident both ovarian tumor cell and glucose molecule had numerous single, fully conserved residue. 264 incident ovarian tumor cases were found to be invasive; thereby having increased percentages of Ki-67 within ovaries, increasing chances of becoming malignant. <b>Conclusions/Discussion</b> Referring to the University of Montclair's research and the result's I found from Biology Workbench 3.2, I had been able to support my hypothesis in that foods consumed with a high glycemic index leads to the development of Ovarian Serous Tumors of Low Malignant Potential.	
<b>Summary Statement</b> High Glycemic Values Relating to the Development of Ovarian Serous Tumors of Low Malignant Potential	
<b>Help Received</b> Mother for believing in me and motivating me to continue on with my project.	