



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Jessica N. Beltran	Project Number S1804
Project Title Investigating the Effectiveness of Glutathione as a Melanin Inhibitor	
Abstract Objectives/Goals The study seeks to investigate how effective glutathione is in preventing the over production of melanin thereby lightening the color of the skin. It also tried to determine the effects of glutathione in the protein levels of the volunteers. Methods/Materials Volunteers were asked a copy of their physical examination report before and after taking glutathione as a pill, as a lotion, and for the other five, using both. Photographs before and after the treatment were also taken. The testing period was three months. During this time, volunteers will be asked to have zero or minimum exposure to the sun. Results Based on the results, the effects of using glutathione vary in each person. Factors affecting its effectiveness are original skin tone, metabolism, and ability of the body to absorb the pill. It is interesting to note that although majority of the subjects tested experienced a significant lightening of their skin tone especially for those who took the pill and use the lotion, one develop spots on her face which was less visible as a result of her original darker skin tone. It is important to note that glutathione users who originally have abnormal protein levels had a reduction in their protein levels. Since glutathione pill leaves the body as you urinate, it must be taken continually to maintain a fairer skin. Conclusions/Discussion Glutathione inactivates the enzyme tyrosinase; cleanses the body from free radicals which contribute to tyrosinase activation and the formation of melanin, thus causing the skin to lighten. Another interesting fact that I've known through this study is that glutathione could be injected which means faster absorption rate which equates to faster results in lightening the color of the skin.	
Summary Statement Glutathione can be used as a skin lightening agent and it is effective when taken as a pill and also used as a lotion.	
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