



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Ryan H. Parry	Project Number 22786
Project Title Can Amino Acids Form Under the Conditions of Europa?	
Abstract Objectives/Goals My project was if amino acids could form under the conditions of Europa. I believe that if Europa's conditions are present, then amino acids will form. Methods/Materials In order for this project to be done, it required a lot of research. I first found all the information I needed in the library and on the Internet. I needed to find out about the amino acids, what the conditions and chemical composition of Europa was, and finally, I needed to determine my procedure. What I did was I took a beaker, put the things that were in Europa in it, set it in a heat bath (basically a pan of water that will regulate a constant temperature), let it set in there for a few days and then sprinkled a chemical called ninhydrin on a sample from my beaker and if it turned yellow, amino acids were present. Results After completing my experiment, I found that amino acids did form in my experiment. Conclusions/Discussion In conclusion, I found that if Europa's conditions in real life are the same as my experiment, then amino acids will form. Since amino acids are essential for life to exist, then life itself may currently exist, waiting to be found by a space probe that would be most likely launched within this century.	
Summary Statement Amino acids can form under the conditions of Europa based on current data.	
Help Received Parents transported me to science fairs and helped obtain materials; Ms. Ligeti and Mr. Newell helped narrow down question; Tri-Essences helped obtain rare materials	