



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

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Project Title MedHack: The Impact of Malware Attack upon Biomedical Devices	
Abstract Objectives/Goals The purpose of this project concerns the security of medical devices and preventing them from various malware attacks. While the field of technology and medicine revolutionizes daily, the amount and different types of threats also evolve. Methods/Materials To simulate this condition, a blood pressure monitor was utilized and manipulated to see how malware impacts a blood pressure reading. Different types of manipulations occurred on each day of the testing period. Results The data was scattered. After simulating the malware, vitals were drastically impacted. The prevention code, however, proved to be accurate 99% of the time. Conclusions/Discussion Interferences and uncertainty based off of incorrect blood pressure readings endanger the lives of many as these uncertain readings happen in other types of medical devices as well. In order to maintain a prospective health care system, it is important and necessary that these concerns are taken care of as soon as possible.	
Summary Statement This project examines the impact of malware attacks on data produced by a blood pressure monitor and how to prevent such attacks.	
Help Received Dr. Rajkumar Thirumalainambi, Dr. Ahalya Joisha	