



**CALIFORNIA STATE SCIENCE FAIR  
2004 PROJECT SUMMARY**

<b>Name(s)</b> <b>Joshua Soleno; Joseph Soleno</b>	<b>Project Number</b> <b>J1424</b>
<b>Project Title</b> <b>A Blood Level Comparison Study of 11 Year Twin Brothers Diabetic Non-Functional and a Non-Diabetic Functional Pancreas</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To compare different blood sugar levels from a working pancreas and a non working pancreas. Two twin brothers are on the same diet for one month. One twin is a diabetic. Each brother tested their blood 5 times a day at the same times. The blood was compared and charted over a month long period. This will show how often each person is in a non-safe blood sugar level.</p> <p><b>Methods/Materials</b> Blood glucose free style monitor. Blood glucose lancer blood glucose test strip insulin pump novolog Human Insulin Micro infusion set and accessories Each twin will be using the lancer, monitor and test strip to check blood sugar levels. Twin with diabetes will use the insulin and insulin pump, along with microinfusion pump</p> <p><b>Results</b> After the one month test period we were able to see how often the blood sugar level was in a dangerous zone. We graphed the results. We were also able to see how much insulin was needed to put twin with diabetes back into safe zone</p> <p><b>Conclusions/Discussion</b> We have a better understanding and appreciation of what a person with diabetes must do on a daily basis to correct the blood glucose levels and how much insulin a diabetic must take to correct the high readings. We will also have a better understanding of how diet effects blood glucose readings</p>	
<b>Summary Statement</b> To clearly show the working pancreas shows know how to keep blood glucose level at a safe level, a non-working pancreas will have high and low peaks on a daily basis.	
<b>Help Received</b>	