

Project #26

Development of a Device for Neurochemical Sample Collection from Freely Moving Monkeys

Week 12-13 –November 21 to December 4, 2008

Team Members:

Paul Schildgen – Team Leader
Lauren Eichaker – BSAC
Cole Drifka – BWIG
Angwei Law – Communicator

Client:

Ei Terasawa
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Advisor:

John G. Webster
Professor Emeritus, Dept. of Biomedical Engineering
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Problem Statement:

To improve on the device created last semester that protects the microdialysis apparatus used during cranial experiments on non-human primates. This involves making the device lighter, more secure around the monkey's head, and better able to cushion the microdrive unit.

Summary of Accomplishment:

A second round of testing occurred on Friday (11/21/08). Unfortunately, only Angwei was able to view it. Modifications were done on our design prior to the testing. Those modifications included shortening and drilling more holes in the cylindrical top. These efforts were made in an attempt to further decrease the weight of our device. Also, on Monday (12/1/08) we met as a group outside of class and finished our final poster. The poster was then printed on Wednesday (12/3/08).

Statement of Team Goals:

Our team will practice the final presentation on Thursday (12/4/08) and give the final presentation the next day. We then hope to have our final meeting with our client and complete our final report.

Difficulties:

None at this point.

Activities:

Paul Schildgen	Worked on progress report and notebook. Also generated pictures for final poster presentation, printed poster, and watched video on poster presentations	4 hours
Angwei Law	Communications and collecting materials, viewed and evaluated second live testing, took prototype pictures and edited poster, watched video on poster presentations, and prepared for poster presentation	4.5 hours
Lauren Eichaker	Worked on the "final design" portion of the final report and updated our mid semester report with Professor Webster's suggestions.	3.5 hours
Cole Drifka	Worked on notebook, researched titanium and carbon fiber shell alternatives and reviewed final poster.	4.5 hours
Team	Attended the required lecture and met with advisor. Also met outside of class to complete final poster.	3.5 hours

Project Timeline:

	September				October					November				December		
Tasks	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	
Project research	█				█											
PDS		█			█				█							
Brainstorming		█			█											
Prototype design					█				█		█					
Prototype building									█							
Ordering								█				█				
Expected shipping								█				█				
Device manufacturing								█				█				
Testing										█		█				
Re-designing													█			
Re-testing													█			
Meeting with client		█			█			█			█			█		
Group meeting	█															
Presentation							█							█		
Progress report	█															
Website	█															

Expenses:

1lb of RTV Silicone – 39.08 U.S. Dollars

Riveting Material – 9.77 U.S. Dollars