

Project #26

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

Week 9 – October 31 to November 6, 2008

Team Members:

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

Client:

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Advisor:

John G. Webster
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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:

On Thursday (10/30/08) we met as a group with our advisor and discussed our current progress. On Friday (10/31/08) we met as a group and made the necessary adjustments to our current design. Holes were drilled into the base of the helmet and ring hangers were attached using a rivet gun. Also, holes were drilled into the cylindrical top in linear patterns to reduce the weight and the risk of anaerobic bacteria. Next, small cross stitches were used to sew the straps in the desired orientation and the straps were later sewn using a sewing machine. Lastly, another silicone core was poured without using a vacuum to try to reduce the weight of the silicone core.

Statement of Team Goals:

We will be meeting as a group this Thursday (11/6/08) to cut the new silicone core away from the helmet and trim any unnecessary silicone. Also, we will make sure the straps work properly. Then on Friday (11/7/08) we will be meeting with our client for the last time before the actual testing occurs on the monkey on Friday November 14. Therefore, any last minute changes to our design will be discussed such that we can get our client a sufficient prototype by the testing date.

Difficulties:

None at this point.

Activities:

Paul Schildgen	Worked on progress report and notebook. Also, used a sewing machine to finalize the straps.	3 hours
Angwei Law	Communications and Materials Research	1.5 hours
Lauren Eichaker	Read and noted the material explaining the requirements for the poster presentation along with the corresponding video and slides, e-mailed a few of my team's views to Amy Lenz to bring up on my behalf at the BSAC meeting and investigated other viable materials that we could use when we reconstruct the cylindrical top	2.5 hours
Cole Drifka	Worked on notebook, looked into a "gasket" material, and considered different materials for the upper cylinder	2.5 hours
Team	Met outside of class with advisor to discuss our current progress. Also, met in class to pour a new silicone mold, attach the straps, and drill holes in the cylindrical top.	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