

## ***Physical Function Testing Apparatus for Monkeys***

Client: Dr. Ricki Colman

Advisor: Dr. Elizabeth Meyerand

Team: Benjamin Ratliff bratliff@wisc.edu (Team Leader)  
Benjamin Myers bmyers4@wisc.edu (BWIG and BPAG)  
Eli Stanek estanek@wisc.edu (Communicator)  
Naren Chaudhry nchaudhry@wisc.edu (BSAC)

Date: January 27 to February 2, 2017

### **Problem Statement**

We are looking to have equipment designed/developed that will allow us to test physical function, specifically muscle strength in macaque monkeys. For over 25 years we have been studying the effects of diet on aging in rhesus monkeys. We have learned that like humans, rhesus monkeys lose muscle mass with advancing age. We have shown that long-term intake of a reduced calorie diet can delay this decrease in muscle mass. While we have the ability to measure muscle mass, we are not currently able to measure muscle function or strength, our true outcome variable of interest. We can often use equipment that has been designed for humans with our monkeys. In this case, we are concerned that the muscle strength testing equipment that is commercially available requires the patient to willingly perform at their maximum level. Ideally we would have equipment that would entice the monkeys to perform at their maximum and allow us to determine muscle strength for both hind limbs and fore limbs separately.

### **Last Week's Goals**

- Meet with Client to talk about overview for this semester
- Integrate new team members into the project

### **Summary of Team Role Accomplishments**

- Communicator, Eli – Contact client

### **Summary of Design Accomplishments**

- We met with our client today, and set a couple goals for next week, primarily looking into supplies that are needed for this semester

### Activities

Date	Person(s)	Task	Time (hrs)	Weekly Total	Semester Total
2.2.2017	Ben R.	Brainstorming	0.5	0.5	1
2.2.2017	Eli	Reviewed last semester's work	1	1	1.5
2.2.2017	Ben M.	Brainstorming	0.5	0.5	1
2.2.2017	Naren	Reviewed last semester's work	1	1	1

### Statement of Team Goals

- Begin brainstorming design ideas to improve design from last semester
- Look into getting TB tests as a part of gaining access to working with the monkeys
- Research the automatic reward system used
- Update Literature Review and consider beginning to purchase some supplies to begin second prototype

### Individual Goals

- Ben Ratliff: Research materials
- Ben Myers: Research Materials
- Eli Stanek: set up next meeting with client two weeks from now
- Naren Chaudhry: attend BSAC meeting

### Difficulties

- None

### Project Schedule

- We need to begin our materials research, the client will email us about gaining access to working with the monkeys and access to the automatic reward system currently used

### Expense

Date:	Item:	Cost:	Comments:
9/9/2016	LabArchives Team Notebook	\$10.00	One time purchase for team

**Total Cost:** \$10.00