

Physical Function Testing Apparatus for Monkeys

Client: Dr. Ricki Colman

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Date: March 23 to March 30, 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

- Get TB tests completed, finish online paperwork before spring break
- Have materials ready when we get back from spring break

Summary of Team Role Accomplishments

- Naren – N/A
- Ben M. – Scheduled second TB Test
- Ben R. – Scheduled second TB Test
- Eli – Received first TB test, finished online paperwork

Summary of Design Accomplishments

- Materials arrived – we are picking them up late this week / early next week

Activities

Date	Person(s)	Task	Time (hrs)	Weekly Total	Semester Total
3.26.2017	Ben R.	Scheduled 2 nd TB Test	0.5	0.5	11.5
3.26.2017	Eli	TB Test #1, Finished online paperwork	2	2	10.5
3.26.2017	Ben M.	Scheduled 2 nd TB Test	0.5	0.5	12.5
3.26.2017	Naren	N/A	0	0	8

Statement of Team Goals

- Begin Fabrication, finish TB Testing

Individual Goals

- Ben Ratliff: Fabrication, TB Test #2
- Ben Myers: Fabrication, TB Test #2
- Eli Stanek: Fabrication, TB Test #2
- Naren Chaudhry: Fabrication, TB Test #1, online paperwork

Difficulties

- None

Project Schedule

- Fabrication will occur over the next few weeks

Expense

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

Total Cost: \$10.00