

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: February 17 to February 23, 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

- Create a list of materials that we need to order before we can begin fabrication
- Look into getting TB tests as a part of gaining access to working with the monkeys
- Complete paperwork for lab access
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Summary of Team Role Accomplishments

- Naren – Researched aluminum material, notebook, preliminary paper
- Ben M. – Worked on the paper and notebook
- Ben R. – Worked on the paper and notebook
- Eli – Worked on paper and the notebook

Summary of Design Accomplishments

- We have a materials list ready to present to the client next week
- Everyone will have their initial paperwork completed for next week

Activities

Date	Person(s)	Task	Time (hrs)	Weekly Total	Semester Total
2.20.2017	Ben R.	Paper and Notebook	2.5	2.5	7.5
2.20.2017	Eli	Materials Research, Paper	2	2	7
2.20.2017	Ben M.	Paper and Notebook	2.5	2.5	8.5
2.20.2017	Naren	Materials Research, Paper, Notebook	2	2	6

Statement of Team Goals

- We plan to meet with the client next week and then order our supplies

Individual Goals

- Ben Ratliff: Complete paperwork for lab access
- Ben Myers: Complete paperwork for lab access
- Eli Stanek: Complete paperwork for lab access
- Naren Chaudhry: Complete paperwork for lab access

Difficulties

- None

Project Schedule

- We have a meeting planned next Tuesday with our client to present materials list

Expense

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

Total Cost: \$10.00