Group 11 (Argho Datta, Michelle Le, and Nicholas Iglesias)
Week 11 Report:

Over the weekend, Nicholas and Argho spent reviewing tutorials regarding the circuit design software Eagle. After gaining familiarity with the program, rudimentary circuits were built to practice the principles of circuit design. When the proposed circuit was modelled in Eagle the necessary MOLEX interconnector was not found in the parts library. To accommodate for this, Nicholas modeled the part in Eagle and accounted for the exact locations of all solder pads.

On the 5th, the group visited the lab to clarify issues with circuit modeling and jig design. The location of certain circuit nodes was unclear based on the 3D models provided by MOLEX. After viewing current boards that use MOLEX components, the proper locations of ground nodes was determined. Further, the group was able to handle individual carbon fibers to learn more about their physical properties. It is now clear that they are much more fragile than we originally thought and the jig design will have to accommodate for this. Further, the carbon fibers very easily adhere to one another. This added a level of complexity to the project: not only will a jig be needed to feed the carbon fibers into the circuit, but the jig will also need to separate all of the carbon fibers from one another.

Finally, on the 8th the group met to discuss circuit and jig design as well as proof of concept plans. The circuit printing limitations provided by Coast to Coast circuits were reviewed to finalize dimensions needed for the circuit design. It was decided that a 5x model would be built of the circuit and jig combination. If the feeding mechanism is as quick as desired and the circuit properly conducts signals, it will give the group the go ahead to process with taking the model down to proper scale for rodent implantation.