First Watch This Video To Get An Idea of What the Project Is All About:
https://docs.google.com/presentation/d/1ItQipaxJruyLJplfsMuCIXp64qLJjZPiAWhr-IYFIUk/edit?usp=sharing

Now Check Out These Slides For Last Year's Progress Including Budgets and Timeline:
https://docs.google.com/presentation/d/1seo3N_22kdr81cjgOKAHeEUcSZnaaD4ktwHTVpAW5ro/edit?usp=sharing

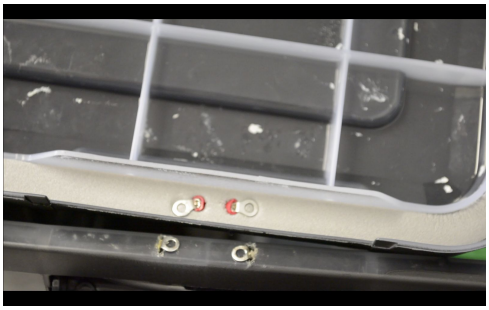
- *Detailed manufacturing instructions are included in the following pages of this document.*

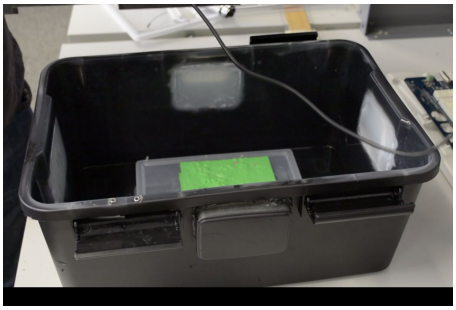
- *Contact information for the developers is on the last page.*

Consult with Dr. Asghari !!

SMICS (Slime Mold Incubator Camera System)
Action Items List
Follow These Steps To Build SMICS

1. Drill holes in LED enclosures to feed wires through
2. Glue enclosures onto four walls, make sure there are no gaps so paint doesn't leak through after spray painting
    a. Pro Tip: SPRAY PAINT EVERYTHING FIRST, USE TAPE TO KEEP THE LED WINDOWS CLEAR THOUGH
3. Drill holes in container perimeter for wiring
4. Fix lights to interior of small containers
5. Fix small containers to exterior of main container
6. Solder leads to one end of lights
    a. Pay attention to series/polarity orientation
    b. Solder and shrink wrap
        i. Put shrink wrap over the wire first, solder, slide the shrink wrap over the connection, heat
7. Shrink wrap solder joint and wire bundle (+5 and Gnd)
8. Feed single ended connections through container holes
9. Solder remaining leads to remaining ends of lights
    a. Feed through holds
10. Heat shrink wrap over solder joint (shrink wrap must be placed prior to step 8)
11. Connect lights to a contact in bottom of container perimeter
    a. Drill holes in container perimeter so LED wiring can be hidden
    b. Solder the connection, shrink wrap it, and secure the contact position
12. Put DC-DC converter and transistor circuit in a black box on top of container and secure
13. Connect Raspberry Pi to circuit
14. Connect Circuit to a contact in the lid
    a. Drill holes in lid
    b. Solder the connection, shrink wrap it, and secure the contact position
15. Test
16. Black-Out enclosure (black primer layer)
17. Deliver to Bio Department
18. See the user guide





OCT Action Items List

Follow These Steps To Set Up The Interferometer, Which Can Be Used To Make An OCT System

1. Mount 90˚ Mirror to reflect laser source to system
2. Mount Reference Corner Cube
3. Mount Sample Corner Cube
4. Mount Beam Splitter
5. Mount Output Collimator
6. Connect Fiber from output collimator to power meter / spectrometer
7. Optimize the alignment
    a. Maximize power delivered to power meter
    b. See fringes on spectrometer that vary based on sample arm distance from splitter
8. Investigate parasitic fringes, make sure there are none
9. Vary sample arm distance from cube and observe the range and resolution
    a. Process the data
        i. Take IFFT of raw spectrum (see code)
        ii. Convert time domain to distance domain
        iii. Consider the width of distance domain peaks for resolution of the system

CONTACT THE DEVELOPERS

Daniel
demcgrath2@gmail.com
408-893-3665

Stephen
stephen.d.board@gmail.com
304-238-8769