

BME 400 Weekly Progress Report
Team #31: Microscope Cell Culture Incubator

Client: Dr. John Puccinelli
 Advisor: Professor Mitch Tyler
 Team: Jack McGinnity - mcginnity@wisc.edu (Leader)
 Trevor Zarecki – tzarecki@wisc.edu (BPAG)
 Steven Gock – gock@wisc.edu (Communicator)
 Jenny Westlund – jwestlund@wisc.edu (BWIG)
 Peter Hartig – phartig@wisc.edu (BSAC)

Progress Report Period: Wednesday, March 1st - Wednesday, March 8th

Project Overview

Live cell imaging systems provide a controlled environment for cells to continue to live in while imaging is performed. Current live cell imaging chambers that are compatible with a standard inverting microscope are expensive do not perform well with small culture vessels such as microfluidic devices. The team’s goal is to design a low-cost incubator for use on a microscope that can sustain cell life while imaging is performed on a variety of cell-culture platforms.

Restatement of Second Semester Team Goals

- Further develop the prototype so that it is user friendly and readily available for extensive testing
- Conduct further testing and systems validation of the model
- Produce comprehensive written report

Summary of Team Accomplishments

- Trevor (BPAG): Integrated code, worked to optimize feedback loops
- Steve (Communicator): Performed humidity test
- Jenny (BWIG): connections to electronics box, imaging protocol research
- Jack (Leader): Primarily worked on the EAGLE design
- Peter (BSAC): Outreach logistics and planning, new structural design planning.

Summary of Design Accomplishments:

Activities

Person	Date	Activity	Time (hr)	Weekly Total (hrs)	Semester Total
Team					
Trevor	3/1/17	Code Integration/Optimization	3.25	6.5	17.5
	3/3/17	Testing, broke atomizer	1.75		
	3/7/17	Fixed Atomizer	1.5		
Steve	3/6/17	Humidity Testing	1.0	1.0	7.5
Jenny	3/8/17	Past imaging protocol research (field of	1.0	1.0	12.0

Advisor		x		x	x												
Client		x															
Website																	
Updates	x	x	x	x	x	x	x										

Colored boxes are anticipated work. X's indicate progress or completion.

Expenses to date for second semester

- Multi-Output AC DC Converter: \$28.48
- 150hm 2W Resistors (2): \$0.40
- 360hm 5W Resistors (2): \$1.12

Total: \$30.00