

## **Calibrated Eye Dropper**

**Week 15:** May 1, 2009 – May 7, 2009

**Team:** Sarah Switalski – Co-Leader  
Michelle Tutkowski – Co-Leader  
Brooke Sampone – Communicator  
Jim Mott – BWIG  
Eamon Bernardoni – BSAC

**Client:** B'Ann Gabelt  
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### **Problem Statement:**

A lab in the Department of Ophthalmology and Visual Sciences needs a device to accurately and efficiently deliver 5 $\mu$ L drops of experimental drugs into the cornea of the eye for glaucoma therapy testing in animals. Currently, the client uses standard micropipettes which deliver exactly 5 $\mu$ L drops, but this method is time consuming, poses a danger to the safety of the animal and makes drop placement difficult. The objective is to optimize accuracy, efficiency, and animal safety in optical drug delivery.

### **Previous Week's Goals:**

- Give poster presentation
- Complete and submit final paper

**Week 15 Activities:**

<b>Individual</b>	<b>Activity</b>	<b>Time (hours)</b>	<b>Weekly Total (hours)</b>	<b>Overall Total (hours)</b>
Michelle	Independent	4.50	10.00	73.00
	Team Meeting	5.00		
	Client Meeting	0.50		
Eamon	Independent Work	4.00	9.50	87.50
	Team Meeting	5.00		
	Client Meeting	0.50		
Sarah	Independent Work	4.50	10.00	76.25
	Team Meeting	5.00		
	Client Meeting	0.50		
Brooke	Independent Work	4.75	10.25	77.50
	Team Meeting	5.00		
	Client Meeting	0.50		
Jim	Independent Work	15.50	21.00	100.25
	Team Meeting	5.00		
	Client Meeting	0.50		

**Summary of Accomplishments:**

The team completed and presented the poster. Also, the final paper was completed. Individuals spend time finishing design notebooks and completing evaluations. The team also went to a final client meeting in order to hand over the prototypes as well as the poster. The team explained the prototype to the client.

**Next Week's Goals:****Individual Goals:**

- Brooke: Do outstandingly well on exams and enjoy summer.
- Eamon: Do outstandingly well on exams and enjoy summer.
- Jim: Do outstandingly well on exams and enjoy summer.
- Michelle: Do outstandingly well on exams and enjoy summer.
- Sarah: Do outstandingly well on exams and enjoy summer.
- **Team Goals:**
  - None.

**Difficulties:**

There are no difficulties at this time.

**Project Schedule:**

Tasks	Jan		Feb				Mar					Apr				May		
	23	29	6	13	20	27	6	11	13	20	27	3	10	17	24	1	6	8
Research	X	X	X	X														
Brainstorming	X	X	X	X	X													
PDS			X															
Prototype Design				X	X	X	X											
Prototype Fabrication								X	X	X	X	X	X	X				
Testing														X	X			
Meeting with Client		X		X							X							X
Team Meeting	X	X	X	X	X	X	X		X		X	X	X	X	X	X		X
Presentation							X											X
Written Reports								X										X
Peer/Self Evaluations									X									X

**Expenses:**

Five miniFIX micropipettes from Dynalab cost \$99.00.

One packet of three Ultra Precision Compression Springs from McMasterCarr cost \$7.70.

The team received a sample package of 0.6 mL Eppendorfs from Professor Kreeger

The team received 4 oz. of PMMA polymer and monomer from Greg Gion.

The team received multiple hygienist rings from a family contact.