

## ***Fine Needle Aspiration, Project 23***

**Client:** Dr. Frederick Kelcz

**Team Members:** Kristen Seashore (Leader)  
Tu Hoang Anh Mai (Communicator)  
Chris Goplen (BWIG)  
Jason Tham (BSAC)

**Date:** 12/8/06 to 12/14/06

**Problem Statement:** Fine needle aspiration is a biopsy method of collecting tissue samples. The procedure is currently manual and requires repetitive low yield sampling to collect enough viable cells for testing. The goal of our project is to maximize tissue sample size in a single, timely procedure. We propose to develop a device that automates the current biopsy procedure, and tests the sample yield by varying the frequency and needle stroke. The test results will determine the optimal operating frequency at various stroke lengths to provide a maximum cell yield. The automation of the device will reduce operating time, cost and discomfort for the patient.

**Restatement of Team Goals:** Update notebooks, write final paper, deliver prototype to client, and set up final advisor meeting.

### **Individual Goals for Next Week:**

Kristen Seashore: Final advisor and client meeting.  
Chou Mai: Final advisor and client meeting.  
Chris Goplen: Final advisor and client meeting.  
Jason Tham: Final advisor and client meeting.

### **Summary of Accomplishments:**

- The team presented our final prototype at the Poster Session on Friday. We demonstrated our prototype and showed that it worked to aspirate a phantom tissue made from jello and egg yolks.
- Each team member wrote sections of the final paper.
- The team met on Tuesday night to edit and finish writing the final report.
- Each team member updated their notebooks.

**Statement of Team Goals:** Final client and advisor meetings, deliver prototype to client.

**Project Schedule:** This week we will set up our final client meeting and deliver the prototype. We will also have our final advisor meeting to discuss our progress this semester.

**Difficulties:** We experienced no major difficulties this week.

**Activities:**

12.08.06	Team met at ECB for final poster presentation	2 hrs
12.10.06	Chou: Worked on final report and notebook	1 hr
12.11.06	Chris: Worked on final report and notebook	1 hr
12.11.06	Jason: Worked on final report and notebook	1 hr
12.11.06	Kristen: Worked on final report and notebook	1 hr
12.12.06	Team met at ECB to edit final report	2.5 hrs
12.14.06	Kristen: Worked on progress report	30 min

TOTAL HOURS THIS WEEK 9 hr

**Project Time Line:**



Expenses: TBD

**Task Delegations/Time Lines:**

<b>Tasks</b>	<b>Member</b>	<b>Date Due</b>
<b>Research</b>		
FNA	all - more Chou	1-Dec
	all - more	
Biopsies/Tissues Tested	Kristen	13-Oct
Tissue/Needle Forces	Kristen, Chris	13-Oct
Current Devices (why fail?)	Chris, Jason	13-Oct
Related Devices	all - Jason	13-Oct
Needle types	Chou	13-Oct
Clinical procedures	Jason	13-Oct
Sample collection	all - more	
testing/procedure	Kristen	13-Oct
Patents	Chris, Jason	13-Oct
Materials for prototypes	all	13-Oct
Construction/Testing methods	all	10-Nov
<b>Designs</b>		
Brainstorming	all	13-Oct
Alternate Designs (3)	all	13-Oct
Design Matrix	all	13-Oct
<b>Prototyping</b>		
Set up checking account	all	ASAP
Research materials	all	3-Nov
Order materials	all	17-Nov
Build prototype	all	17-Nov
Testing/Build phantoms	all	24-Nov
Revise prototype	all	1-Dec
<b>Deliverables</b>		
Mid - PowerPoint	all	20-Oct
Mid - Paper	all	25-Oct
Notebooks	all	25-Oct
Final - Poster	all	8-Dec
Final - Paper	all	15-Dec
Progress Reports	all	every week
PDS	all	often