

## **Osteochondral Transplant System—Week 2, Progress Report**

**Client:** Dr. Brian Walczak

**Advisor:** Dr. Krishanu Saha

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### **Problem Statement**

Osteochondral allografting is a common procedure performed on patients that require replacement of diseased bone. Current methods of implantation require the application of mechanical forces that have a detrimental effect on the live chondrocytes present on the implant. Maximizing the amount of viable tissue during and after the surgery is a crucial factor for the success of the procedure. Hence, the client requests a delivery system that will reduce the amount of mechanical forces required to securely place the implant into the donor site.

### **Summary of Team/Design Accomplishments**

- Met with client to discuss last semester's work and elaborate on our overall objective for this semester
- Developed a rough draft of the Project Design Specification (PDS) document
- Researched various methods used to assess chondrocyte viability in animal and human samples
- Agreed that we must no longer limit our tests to 10 mm diameter bone plugs, rather we hope to perform tests with bone plugs in the 10-20 mm diameter range

### **Project Difficulties**

The tool used to extract bone plugs for experimentation last semester is no longer available for our use. Currently, we do not have a tool and will most likely have to purchase a tool from a hardware store or fabricate one of our own.

### **This Week's Goals (Team and Individual)**

- Begin to gather tools necessary to extract bone plugs for experimentation
- Consider various combinations of taps and dies that will be necessary for our tentative tests with bone plugs in the 10-20 mm diameter range
- Research tools that can be purchased in a hardware store that will allow us to quickly and efficiently extract bone plugs
- Alternatively, we can begin to consider how we will go about fabricating our own bone extraction device

### **Expenses**

- No expenses to report currently.

### Individual Activity Log

Person	Task	Time (hr)	Weekly Total (hr)	Semester Total (hr)
Rodrigo (Leader)	Weekly progress report	1	4	6
	Client meeting	0.5		
	Team meeting	0.5		
	Individual research & work	2		
Eduardo (Communicator)	Team meeting	0.5	4	5
	Client meeting	0.5		
	Individual research & work	3		
Nick (BSAC & BWIG)	Client meeting	0.5	3	4
	Team Meeting	0.5		
	Personal research & work	2		
Bilin (BPAG)	Advisor Meeting	0.5	4	5
	Team Meeting	0.5		
	Personal research & work	3		

