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## Progress Report

October 17, 2006 – October 23, 2006

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**Team:** Interpenetrating networks for delivery systems

**Team Members:** Ashley Huth- Team Leader  
Max Michalski- BWIG  
Claire Flanagan- Communicator  
Adam Rieves- BSAC

**Client:** Professor John Kao  
UW School of Pharmacy & Department of Biomedical Engineering  
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### Problem Statement:

Interpenetrating networks are a type of biomaterials that polymerize in situ and have been used in drug delivery, wound healing, and tissue engineering applications. This design project involves the development of novel delivery mechanisms that should be clinically easy to use with improved storage life.

### This Week's Goals:

- Purchase more spray bottles
  - Pick up 2 kDa PEG and 3.4 kDa PEG
  - Pick up additional supplies
  - Order different molecular weight gelatins, as well as acid and base gelatins
  - Test using Tween 20%
  - Turn in mid-semester report and note books
  - Continue testing
  - Continue literature research
- This week our main goal will be to pick up and order more supplies for testing. We will also continue to test various factors that could help gelatin dissolve at room temperature. Likewise, we will continue our literature search for more potential research approaches.

### Summary of Accomplishments:

- Finished and gave mid-semester presentation
- Met with Professor Kao
  - Discussed results from testing.
  - Talked about potential areas of further research including different gelatin
  - Clarified criteria for PDS

- Finished mid-semester report
- Testing
  - Tested gelatin at both 10% and 15% for pHs ranging from 1-4 and 10-14. Also tested gelatin at 10% and 15% for different buffer solutions including Hepes, MES, Tris, and Citric buffers.
  - Took pictures of all samples
  - Centrifuged samples to get rid of mixing bubbles and observe the true consistency of the final solution.
  - Also noted time to gel of the samples.
  - Made spreadsheet containing all of our data.

**Activities:**

*Team:* Met in class, gave mid-semester presentation, made different pH solutions, tested pH solutions, tested different buffer solutions, met with Professor Kao, edited design report (12 hr)

*Ashley:* Wrote progress report, basic research, started report section (4 hr)

*Adam:* Basic research, attended BSAC meeting, wrote design report section (4 hr)

*Claire:* Obtained gelatin, basic research, wrote design report section (4 hr)

*Max:* Basic research, wrote design report section, updated website(4 hr)

**Total time this week:** 28 hrs

**Cumulative Time:** 90hrs

**Project Timeline:**

Task	September				October				November				December		
	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15
<b>Design</b>															
Design Brainstorming															
Preliminary Design															
Wednesday Team Meeting															
Research															
<b>Deliverables</b>															
Progress Report															
PDS															
Mid Semester Paper															
Mid Semester Presentation															
End Semester Presentation															
End Semester Paper															
<b>Meetings</b>															
Client															
Advisor															
Other															
<b>Website</b>															
<b>BSAC</b>															

	<b>Done</b>	<b>Goal</b>
All		
Adam		
Ashley		
Claire		
Max		