

## Molecular Antibody Protein Structure Model

**Team:** Jonathan Mantes – Team Leader  
Andy LaCroix – BSAC  
Kimberli Carlson – Communicator  
Kara Murphy – BWIG

**Week:** October 23 – October 30

**Client:** Marge A. Sutinen  
Dept. of Medicine  
UW School of Medicine and Public Health  
Phone - 608.261.1152, 608.279.2127 (Cell)  
Email – ms2@medicine.wisc.edu

**Advisor:** Wan-Ju Li  
3148 Engineering Centers Building  
5051 Wisconsin Institutes Medical Research  
263-1338  
li@ortho.wisc.edu  
[http://www.engr.wisc.edu/bme/faculty/li\\_wan-ju.html](http://www.engr.wisc.edu/bme/faculty/li_wan-ju.html)

### Problem Statement

HIV is a virus that progressively leads to the development of acquired immunodeficiency syndrome (AIDS), a life threatening condition in which the immune system collapses and fails to protect against infection. HIV is an irreversible condition that is most often contracted through sexual activity. Our client, Marge Sutinen of the UW School of Medicine and Public Health, works to educate students on the permanent effects of HIV in her *Contemporary Issues in HIV/AIDS Prevention* course. She has asked our team to develop a 3D model that captivates the attention of a class of undergraduates and visually illustrates the HIV attachment to CD4 cells and the permanent effect it has on the body. This model will be used as an aid in demonstrating the irreversibility of contracting the HIV virus to persuade students to use preventative measures to protect themselves.

**Last Week's Goals**

- Start to purchase materials
- Start fabrication and construction

**Accomplishments**

- Developed new design ideas
- Met with advisor about project focus
- Researched materials for new design

**Next Week's Goals**

- Meet with client about new design idea
- Finalize design
- Start to purchase materials
- Start fabrication and construction

**Difficulties**

- Need to develop more challenging design concept
- Need to discuss with client possible expansions on current design
- Need to find inexpensive materials to purchase
- Need to start fabrication once materials have arrived

**Team Effort**

Team Member	Accomplishments	Time (Hrs)	Running Total (Hrs)
Jonathan Mantes	Research materials, brainstorm and develop new design idea	5.5	29.25
Andy LaCroix	Research materials, brainstorm and develop new design idea	5.0	28.5
Kimberli Carlson	Research materials, brainstorm and develop new design idea	5.0	29.0
Kara Murphy	Research materials, brainstorm and develop new design idea	5.5	29.25
Entire Team	Team meeting and Advisor Meeting	3.0	13.0

### Project Schedule

TASK	September			October					November				December		
DATES	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18
<b>WORK</b>															
Brainstorming															
Research															
Designing Prototype															
Selecting Prototype															
Obtaining Materials															
Building Prototype															
Testing Prototype															
Modifications															
<b>DELIVERABLES</b>															
PDS															
Mid-Sem. Report															
Mid-Sem. Presentation															
Final Report															
Final Presentation															
Weekly Reports															
Notebooks															
<b>MEETINGS</b>															
Team Meetings															
Client Meetings															
Advisor Meetings															
BSAC Meetings															
Other Meetings															
<b>OTHER</b>															
Web Page															
Special Lectures															

### Expenses to Date:

- No expenses to report at this time.