

Bronchoalveolar Lavage Trap

Group 17

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Team: Laura Zeitler (Team Leader)

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Problem Statement:

In order to diagnose respiratory problems in immunosuppressed patients, bronchoalveolar lavage is used to obtain a bronchiole fluid sample. A bronchoscope is guided through the respiratory tract and wedged into a bronchiole, which is then flushed with saline solution. The solution is then extracted with a vacuum and accumulates in the sterile collection trap. In the current procedural setup, the lavage trap is free-hanging and unstable. Manipulation of the bronchoscope and surrounding movement can displace the trap resulting in loss of sample to the vacuum line. To prevent unnecessary expense and patient inconvenience from sample loss, a new trap needs to be developed.

Last Week's Goals

- Finish dimensions and Solidworks threads for final prototype
 - Meet with Amit to get help with cap threads
- Submit design to rapid prototyping lab

Summary of Accomplishments

- Rapid Prototyping lab has printed the prototype

This Week's Goals

- Complete prototype by inserting ball and rubber stopper into design
- Test hospital vacuum with prototype
- Start working on final deliverables

Activities

Collaboration Group Activities		
Date	Activity	Duration
4/14/2009	3D Printing Meeting	30 minutes
4/16/2009	3D Printing Meeting- updating Solidworks dimensions	30 minutes

Team	Date	Activity	Duration
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Member			
Kim Kamer	4/10/2009	Determining dimensions and Solidworks modeling	4 hours
	4/12/2009	Competing Designs/Patent Research	2 hours 15 min.
	4/13/2009	Poster Work	30 min.
	4/14/2009	Final Paper Work--Competing Designs	30 min.
	4/15/2009	Patent Research	30 min.
Ali Johnson	4/14/2009	Patent Research	1 hour
	4/15/2009	Patent Research	1 hour
Elise Larson	4/10/2009	Determining dimensions/Solidworks Modeling	4 hours
	4/13/2009	Formatting Screenshots/Email Solidworks Pictures	30 minutes
Laura Zeitler	4/10/2009	Determining dimensions and Solidworks modeling	4 hours
	4/14/2009	Working with Biotech center to get right file format for model	30 minutes

Expenses

Date	Item	Cost	Comments
3/19/09	Miscellaneous Prototype Supplies	\$3.70	American Science and Surplus Store

