Heating Pad for MicroPET/CT Scanner

Week: February 22 - February March 1

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Team: Eric Printz – Team Leader
Justin Schmidt – Communications
Ryan Carroll – BWIG
Ben Engel – BSAC

Problem Statement
During anesthesia metabolism slows down, which can lead to hypothermia and eventual death. For prolonged microPET or microCT scans, where animals are kept for an extended period of time under anesthesia, it is important to keep the animals at steady temperature. Currently heating lights are used to provide that; however they lead to non-uniform and poorly controlled temperature regulation. Therefore, we proposed to design a heating pad that could be used to provide controllable and steady temperature during prolonged scans. Because of the imaging requirements, the heating pad should not contain metal parts.

Last Week’s Goals
• Finish up research and shift focus to creating our design matrix

Accomplishments
• We thought about all the designs that we have come up with so far.
  o It was clear to us which was the best choice.
  o We are going to pursue a design involving an air pump, a box for the mouse to sit in inside the machine, and a heater that we will make using PVC tubing and a heating element.
• Contacted client to get a meeting setup to discuss our design to make sure there are no concerns with the design

This Week’s Goals
• Create mid-semester presentation
• Get a good start on our mid-semester paper
**Difficulties**
- No difficulties to report at this time

**Team Effort**

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Accomplishments</th>
<th>Time (Hrs)</th>
<th>Running Total (Hrs)</th>
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<td>Ryan Carroll</td>
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<td>Ben Engel</td>
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<td>Eric Printz</td>
<td>Class Time, Design discussion, Progress Report</td>
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<td>Justin Schmidt</td>
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## Project Schedule

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### WORK
- Brainstorming
- Research
- Designing Prototype
- Selecting Prototype
- Obtaining Materials
- Building Prototype
- Testing Prototype
- Modifications

### DELIVERABLES
- PDS
- Mid-Sem. Report
- Mid-Sem. Presentation
- Final Report
- Final Presentation
- Weekly Reports
- Notebooks

### MEETINGS
- Team Meetings
- Client Meetings
- Advisor Meetings
- BSAC Meetings

### OTHER
- Web Page
- Special Lectures

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**Expenses to Date:**
- No expenses to report at this time