Weekly Report #3

Date: 9/23/2013

Project Name: Bloodless Glucose Testing

Group Number: 20

Group Members: Nelson Wu, Cong Zhang, Tianyi Zhou

Current status of project: We have retrieved the data from last week’s Raman spectroscopy experiments. We were able to successfully identify the 1125 cm-1 shift but other peaks were not identifiable (potentially due to noise). In addition, we met with members of the WashU legal clinic to discuss the NDA in full detail. While we clarified that IP rights were not a problem, we identified that we will need to get Dr. Brooks’ approval in order to present our project to the class. In the worst case, we may have to present our project solely to the professors.

Work planned for next week: When reviewing FDA regulations on lasers for human use, we found that lasers were safe up until 15 mW. In these experiments, the laser used 0.5 mW, and we plan to run the experiment again at a higher laser power over a wider range of glucose concentrations (from 105 mmol/dL down to 50mmol/dL). In addition, we will research methods to increase the accuracy, reduce the size and lower the cost of Raman spectroscopy specifically for the purpose of glucose monitoring. We will also ask Dr. Brooks if he will allow us to give oral presentations on our project to the class.

Anything needed from client or TA or instructor to continue work: The contact information of an optical specialist with experience with Raman spectroscopy. We also need signatures from all professors for the NDA.