Weekly Report #8

Date: 10/28/2013

Project Name: Bloodless Glucose Testing

Group Number: 20

Group Members: Nelson Wu, Cong Zhang, Tianyi Zhou

Current status of project: We have finalized our comparative study of alternative glucose testing methods and determined that some form of Raman spectroscopy will be the best solution in terms of all design considerations. We have also performed a detailed analysis of the parts required for our prototype from Thor labs (source, lenses, beam splitters, photo-detectors, etc.) including the necessary data required to construct a model in CAD. The optical components will cost approximately $1000.

Work planned for next week: We will finalize the list of parts required for the prototype and create a schematic in CAD. We will also discuss 3D printing with Patricia Widder for parts not from Thor labs. Additionally, we must consider the wavelength of the light source. We will also meet with Dr. Brooks to get the “ok” on our finalized parts list.

Anything needed from client or TA or instructor to continue work: We would like advice for choosing a data acquisition unit (DAQ). The Thor labs recommended that we choose a DAQ from national instruments.