

Abstract Submitted  
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**Non-Invasive Glucose Measurement** DANIEL BLAKLEY, Brigham Young University, DANIEL BLAKLEY (BYU), DR. STEVE SIMSKE (HP), DR. TONG ZANG (HP), & DR. PANKAJ VADGAMA(QMU) TEAM<sup>1</sup> — There are two little words, when taken together have great implications: “What IF” In the US alone, there are millions who are burdened with diabetes and who must maintain their glucose levels by taking blood samples and having it analyzed. Even though this procedure has improved over time, still it is very intrusive and is a burden to many that must live with it. What if it were not necessary? Although it is current practice to measure glucose levels invasively (using blood samples), it may be possible to measure glucose non-invasively. Although several companies around the world have invested millions of dollars to address this problem, none have been successful thus far. However, there are many methods that hold a potential and many approaches that have not yet been explored. We are working on a review of what has been approached thus far and are entertaining proposals for a combined interdisciplinary approach which combines expertise from bioengineering, physics, and biology. We hope to learn from the unsuccessful attempts of others whilst employing innovative new approaches to this problem.

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