Insulin is an important modulator of lipid and glucose metabolism in the body and dysregulation of the level of circulating insulin can lead to various diseases. In particular, hyperinsulinemia, a condition in which there are excess levels of circulating insulin, has been found to play a major role in the development of obesity and diabetes. While the adverse effects of these diseases on the cardiovascular system is well-documented, the changes to the cardiac proteome as a result of hyperinsulinemia have yet to be studied. To elucidate these alterations, we would first conduct a comparative proteomic analysis of cardiomyocytes from mice incapable of hyperinsulinemia (Ins1-/-; Ins2+/-) compared with littermate controls (Ins1-/-; Ins2+/+). Secondly, we would perform co-immunoprecipitation for key cardiomyocyte protein complexes followed by mass spectroscopy to identify any changes to cardiac protein complexes in mice with hyperinsulinemia. The results of our study would expand our understanding of the effects of hyperinsulinemia on the heart and may potentially guide future therapeutic strategies to reduce cardiac dysfunction in people suffering from and at risk of developing obesity and diabetes.

Themes:
Check (highlight) the most applicable theme according to the abstract.

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<tr>
<th>Innovation and Technology</th>
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Comments:

This is a well written abstract.