RESEARCH INTERESTS
The long range goals of our research are to evaluate metabolic adaptations to pregnancy and the short and long term effects on the mother and fetus. The dramatic increase in the prevalence of obesity worldwide has reached such a degree as to being declared an epidemic level by the WHO. Recent studies have suggested that overgrowth in the fetus is a primary risk factor for developing obesity and associated diseases in children as well as in adults. Our earlier studies have established that maternal pre-gravid obesity and glucose intolerance as observed in gestational diabetes appear to be the strongest risk factors for increased fetal growth. Currently our grant support is focused on evaluating mechanisms by which the maternal metabolic environment affects placental function and nutrient availability for the fetus. In obese women we are evaluating the mechanisms linking the increase in insulin sensitivity and the abnormal expression of adipokines leading to inflammation. Other grants are focused on the ability of nutrient supplements, using a RCT, to decrease inflammation in overweight and obese pregnant women in order to improve insulin sensitivity and subsequently to decrease nutrient availability, particularly lipids, to prevent fetal overgrowth. All of the above studies are currently funded through the National Institutes of Health. Based on our initial results, we hypothesize that the in utero environment is the opportune time to begin the prevention of obesity and subsequent metabolic dysregulation for both the mother and her offspring.

SELECTED REFERENCES


