Thesis Title	The Effect of *Irvingia Gabonensis* on Postprandial Glycemic Control and Insulin Sensitivity in Non-diabetic Subjects
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ABSTRACT

Recent epidemiology study has estimated that the prevalence of diabetes is increasing at an extremely higher rate. One of the most well known oriental herbs is *Irvingia Gabonensis*, which has been shown to be efficacious for the treatment and prevention of diabetes in rat (Omoruyi F, Adamson I. Department of Biochemistry, University of Benin, Nigeria). The purpose of this study is to evaluate the influence of *Irvingia Gabonensis* on postprandial plasma glucose level and insulin sensitivity. This study was conducted on 14 subjects, with a crossover design. Subjects were initially screened for non-diabetic status (FBS: < 126 mg/dL). Subjects were randomized to drink either 100ml of *Irvingia Gabonensis* or water 30 minutes prior to 75 grams sucrose solution. Venous blood samples were collected before sucrose ingestion (time point 0) and at 30, 60, 90, 120, and 150 minutes after. After OGTT, participants kept a diary of severity of abdominal and other symptoms score scales. The author found that the *Irvingia Gabonensis* sample group tends to have a lower level of plasma glucose, serum insulin concentrations compared to the controlled group, with significant difference of plasma glocose at 30 (P=0.015), 60 (P=0.022),120 (0.012) and 150 (P<0.01) minutes. The mean difference of the incremental glucose level at each time point also tends to be lower for the *Irvingia Gabonensis* group, with significant difference at 30-min time point

(*P*< 0.01), 60-min time point (P=0.008), 90-min time point (*P*=0.039), 120-min time point (*P*=0.019), 150-min time point (*P*<0.001). To conclude, in non-diabetic subjects, consumption of *Irvingia Gabonensis* aid in postprandial glycemic control during the first 30, 60, 120 and 150 minutes after meal. *Irvingia Gabonensis* does not influence the physiological insulin sensitivity and does not cause significant adverse events.

Keywords: Antihyperglycemic/Insulin sensitivity/*Irvingia Gabonensis*/OGTT/ Pre-diabetes/Non-diabetes