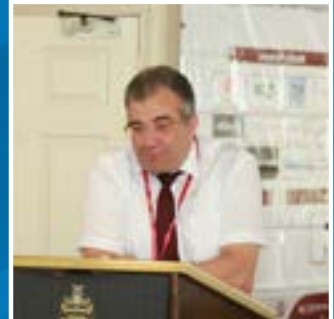


3<sup>rd</sup> International Conference on  
**DIABETES, NUTRITION, METABOLISM  
& MEDICARE**  
July 25-26, 2019 | Amsterdam, Netherlands

DIABETES CONFERENCE 2019



**SCIENTIFIC TRACKS & ABSTRACTS  
DAY 1**

# DAY 1 SESSIONS

## JULY 25, 2019

### Diabetes Mellitus | Type 2 Diabetes

#### SESSION CHAIR

**Varsha Gandhi**

University of Texas MD Anderson Cancer Centre, USA

#### SESSION CO-CHAIR

**Erfried Pichler**

Austrian Society of Homeopathic Medicine, Austria

### SESSION INTRODUCTION

- Title:** [Blood pressure and heart rate variability of recent and long standing diabetes](#)  
**Ana Leonor Rivera**, Universidad Nacional Autónoma de México (UNAM), Mexico
- Title:** [Glycemic activity of cathinone in type 2 diabetes-induced rats](#)  
**Abdul Samad Ahmed Mokbel Al-Salahi**, University of Malaya, Malaysia
- Title:** [The glyceimic role of immature Carob fruit on in vitro  \$\alpha\$ -amylase/ \$\alpha\$ -glucosidase inhibition and in vivo diabetes-induced rats](#)  
**Mousa Abdullah Qasem Ahmed**, University of Malaya, Malaysia

# 3<sup>rd</sup> International Conference on **DIABETES, NUTRITION, METABOLISM & MEDICARE**

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Ana Leonor Rivera et al., J Diabetol 2019, Volume 3

## **BLOOD PRESSURE AND HEART RATE VARIABILITY OF RECENT AND LONG STANDING DIABETES**

**Ana Leonor Rivera, B Estañol, R Fossion and A Frank**

Universidad Nacional Autónoma de México (UNAM), USA

Cardiovascular variability (blood pressure and heart rate) is affected by Diabetes Mellitus (DM). To study this effect, simultaneous non-invasive records of interbeat intervals (IBI) and beat-to-beat systolic blood pressure (SBP) variability of patients during supine, standing and controlled breathing tests were analyzed for recently diagnosed and long-standing DM patients comparing the results for 30 rigorously screened healthy subjects (Control). The most relevant changes as diabetes evolves are the loss of the cardio-respiratory modulation, standard deviation of the IBI detrended signal diminishes (Heart rate signal becomes more “rigid”) while for SBP increases, skewness for IBI approaches zero (Signal fluctuations gain symmetry), while for SBP becomes asymmetric and kurtosis increases (Fluctuations concentrate around the median). This may be due to a progressive decrease of parasympathetic and sympathetic activity to the heart and blood vessels as diabetes evolves.

## **BIOGRAPHY**

Ana Leonor Rivera has completed her PhD from Universidad Nacional Autónoma de México (UNAM). She works at UNAM as researcher on Complex Systems. She has 50 publications that have been cited over 500 times and her publication H-index is 12. She is interested on blood pressure and heart rate variability.

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Note:

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Abdulsamad Alsalahi et al., J Diabetol 2019, Volume 3

## **GLYCEMIC ACTIVITY OF CATHINONE IN TYPE 2 DIABETES-INDUCED RATS**

**Abdulsamad Alsalahi, Zahurin Mohamed, Zamri Chik and Mohammed A Alshawsh**

University of Malaya, Malaysia

The glycemic activity of cathinone (Bioactive alkaloid of the plant *Catha edulis*; Khat) in non-diabetic animals was reported, however; its *in vivo* glycemic activity in diabetes-induced animals has not yet been reported. Therefore, the *in vitro* inhibitory effect of cathinone against  $\alpha$ -amylase and  $\alpha$ -glucosidase and its *in vivo* glycemic activity in diabetes-induced rats were investigated. Totally, 15 rats were fed on high-fat diet for five weeks followed by IP-injection with 30mg/kg streptozotocin. Diabetic rats were distributed into four groups (n=5); diabetic control (DC), 10 mg/kg glibenclamide (DG), 1.6mg/kg cathinone. Another five rats were fed on normal diet and designed as a non-diabetic control (NC). Four weeks after treatment, rats were sacrificed to collect blood for biochemistry and pancreas for histopathology. The *in vitro* inhibitory activity of cathinone was significantly less potent than that of  $\alpha$ -acarbose against  $\alpha$ -amylase and  $\alpha$ -glucosidase (IC<sub>50</sub>: 92.60±3.29 and 194.21±0.89µg/ml, respectively). Cathinone significantly increased fasting blood sugar, but significantly decreased body weight and caloric intake as compared to baseline. Cathinone significantly decreased insulin levels as compared to the DC group. In conclusion, cathinone could not exert substantial *in vitro* inhibitory effects against  $\alpha$ -amylase and  $\alpha$ -glucosidase; however, it exacerbated hyperglycemia of diabetes-induced rats.

## **BIOGRAPHY**

Abdulsamad Alsalahi is about to complete his PhD from University of Malaya, Malaysia. He is a PhD student at Department of Pharmacology, Faculty of Medicine, University of Malaya, Malaysia. He is a Lecturer at the Faculty of Pharmacy, Sana'a University, Yemen. He has 10 publications (ISI) that have been cited 93 times, and has been serving as a reviewer of reputed BMC Complementary and Alternative Medicine.

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## **THE GLYCEMIC ROLE OF IMMATURE CAROB FRUIT ON *IN VITRO* A-AMYLASE/A-GLUCOSIDASE INHIBITION AND *IN VIVO* DIABETES-INDUCED RATS**

**Mousa Qasem**

University of Malaya, Malaysia

In Yemen, the immature Carob Pods (ICP) have been traditionally used for the control of high blood glucose levels in diabetics, but its hypoglycaemic activity has not yet been evaluated. The current study has assessed the glycaemic properties of methanolic extract of ICP against *in vitro* key enzymes linked to type 2 diabetes mellitus (amylase and glucosidase) and *in vivo* diabetes induced rats. To induced diabetes mellitus in rats, 55mg/kg streptozotocin and 210mg/kg nicotinamide were used to intraperitoneally injection of 24 male Sprague-Dawley rats and distributed randomly into high dose (1000mg/kg extract, n=6) low dose (500mg/kg extract, n=6) positive control (10mg/kg glibenclamide, n=6) and untreated diabetic control (5ml/kg distilled water, n=6) groups. Subsequently, all groups have been treated with a single oral daily dose during 28 days of the treatments. Further, a normal control group (n=6) has been added and receiving 5ml/kg distilled water. The ICP have exerted an inhibitory effect against  $\alpha$ -glucosidase (IC<sub>50</sub> 97.13±4.11 µg/ml) and  $\alpha$ -amylase (IC<sub>50</sub>: 92.99±0.22 µg/ml) as compared to  $\alpha$ -acarbose. In the diabetic-induced rats, high dose of ICP could decrease significantly the fasting blood sugar as compared to the untreated diabetic control. In conclusion, the methanolic extract of ICP could inhibit the *in vitro*  $\alpha$ -amylase and  $\alpha$ -glucosidase enzymes and exert a hypoglycemic effect in diabetes-induced rats.

## **BIOGRAPHY**

Mousa Qasem is a Master student at Department of Pharmacy, Faculty of Medicine, University of Malaya. He is a researcher in pharmacology and drug discovery, in the field of diabetes mellitus. He published an ISI article related to type 2 diabetes mellitus. He is serving as a reviewer for reputed journals "Scientific Reports, Chines Herbal Medicines (CHM) and Nutrition & Food Science".

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