

International Conference on

Metabolic Syndromes

October 17-18, 2016 Rome, Italy

Evaluation of *Curcuma zedoaria* powder as a functional product against hyperlipidemia

Nosheen Asghar¹, Zarina Mushtaq¹, Muhammad Imran¹ and Bilal Asghar²¹Government College University, Pakistan²University of Agriculture, Pakistan

Curcuma zedoaria is a medicinal tuber plant belonging to ginger family Zingiberaceae and is native to the subcontinent. This plant has also been reported effective against various maladies like cancer, hepatoprotective, diabetes and hyperlipidemia. The present study was carried out for characterization of *Curcuma zedoaria* powder, characterization of *Curcuma zedoaria* tea and bio-evaluation of *Curcuma zedoaria* powder in hypercholesterolemic subjects. For this purpose, raw material (*Curcuma zedoaria* powder) was analyzed for chemical composition (proximate composition), minerals content (manganese, magnesium, iron and calcium), dietary fiber and total phenolic content. Furthermore, three treatments were prepared with various percentages of *Curcuma zedoaria* (500, 600 and 700 mg) in 200 mL of water. Treatments of tea were also analyzed for mineral content like manganese, magnesium, iron and calcium content. Physico-chemical analysis of tea (colour, total soluble solids, pH and total acidity) was determined. Functional tea was also evaluated sensorically. Afterward, all the three treatments were used in efficacy study to observe the potential of *Curcuma zedoaria* tea for serum lipid profile (total cholesterol, triglycerides, HDL, LDL and total lipids) of humans while anthropometric measurements (body weight and BMI) were recorded during eight weeks of efficacy study. Results depicted that the *Curcuma zedoaria* powder is very nutritious and a rich source of dietary fiber; $2.5 \pm 0.12\%$ and TPC; 32.5 ± 1.0 GAE/g Db. The results exhibited that the *Curcuma zedoaria* is an affluent source of mineral like manganese, magnesium, iron and calcium content. Physico-chemical analysis showed that *Curcuma zedoaria* tea is safe to consume. For sensory perspectives, the acceptable treatment was T₂ (600 mg infusion of *Curcuma zedoaria* powder in 200 mL water). In efficacy trials, distinct change was evaluated in G₃ (diet based on 700 mg *Curcuma zedoaria* powder in 200 mL water) in lipid profile after completion of study as compared to base line values. Tea prepared from *Curcuma zedoaria* powder have functional/nutraceutical worth against hyperlipidemia and thus could be a useful tool for the treatment of several life threatening related diseases.

nosheenasgharfn@gmail.com

Heritability and familiarity of type 2 diabetes in Yazd population, Iran

Ensieh Shahvazian¹, Mohammad Bagher Mahmoudi², Saba Gharibi¹ and Ehsan Farashahi Yazd¹¹Shahid Sadoughi University of Medical Sciences, Iran²ROJETechnologies, Iran

Type 2 diabetes (T2D) is the growing health problem in Yazd population, having a prevalence of 16.3% among adolescent. The level of consanguineous marriage is high (46%), hence a high level of homozygosity is predictable. Besides, this population has special predisposing life style of low relocation rates, a relatively high standard of living, large family sizes. To direct association and linkage studies in Yazd, we decided to calculate the heritability of type 2 diabetes in a population based family study. 2065 individuals were participated in the Yazd Diabetes Study (YDS). The study was conducted among diabetic probands between 35-80 years, whose disease were confirmed in Yazd Diabetes Research Center, and their expanded families. Heritability was calculated for type 2 diabetes in SOLAR software package and was adjusted for common covariates (age, sex, age $\times$ sex, age² and BMI). The strongest heritability for type 2 diabetes ($h^2=0.56 \pm 0.28$, P value=0.016) was seen in age group 40-60 years. However, in age group 20-60 years, heritability reduced to 0.22 ± 0.2 . The heritability for 40-75 years was 0.28 ± 0.11 . $\lambda_R=2.4$ and $\lambda_{R(nuclear\ family)}=3.42$ and $\lambda_S=3.14$ was seen in age group of 35 to 80 years. As a conclusion, for detecting high influenced genetic risk factor with $OR \geq 2$, it is recommended to conduct studies on individuals between 40 to 60 years. To cover all genetic risk factor either with less OR, it is better to limit the sample study on individuals with onset 40 to 75 years.

nc.shahvazian@gmail.com