purpose of this study was to evaluate the MA of patients with T2DM who received polytherapy and identify other factors that can affect the MA. **Material and Methods:** This was a cross-sectional study with HbA1C represent their MA level. Uncontrolled blood glucose with HbA1C of >7 is indicated to have low MA. All characteristics were collected to identify factors that potentially associated with low MA. SPSS version 24 was applied in this study using Chi-Square as univariate analysis to analyze factors that potentially associate with low MA. Multiple logistic regression analysis was performed in the factors appeared to be statistically significant to find their relationship with low MA. **Results:** The study obtained 70 patients with a female dominance (67.1%) and mean+SD age of 58.11 + 9.17 years. 72.85% of the patients had low MA (HbA1C>7). Univariate analysis found that duration of T2DM significantly (P = 0.007) related to MA where patients with T2DM of < 5 years tended to have low MA. Logistic regression showed that patient with T2DM < 5 years (P 0.015; OR 6.982; 95% CI 1.459 to 33.411) associated with low MA. **Conclusion:** Patient with the duration of T2DM less than 5 years surprisingly was susceptible to have low MA. Low MA was not affected by polytherapy.

Keywords: *Medication adherence, polytherapy, type 2 diabetes Mellitus*

ID 176. Effect of Different Drying Treatments and Different Extraction Methods on Alpha-Glucosidase Inhibitory Activities of S. Zalacca Fruit

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Introduction: *Salacca zalacca* (Gaertn Voss), commonly known as snake fruit and belongs to the *Arecaceae* family and natives of Southeast Asia. This fruit is edible and have certain medicinal values. **Objectives:** The aim of this study was to compare the α-glucosidase inhibitory activities of different drying and extraction methods. **Material and methods:** Flesh of this fruit was subjected to two different drying methods namely; oven dried (OD) and freeze dried (FD) and extracts were prepared using soxhlet (SX), sonication (SC) and maceration (MC) techniques. The α-glucosidase inhibitory activity of extracts were evaluated using α-glucosidase enzyme. **Results:** The *S. zalacca* fruit extracts obtained through SC and MC demonstrated better α-glucosidase inhibitory activity as compared to SX method, specifically, the FD extracts showed higher activity compared to the OD extracts. Analysis of α-glucosidase inhibitory activity of the OD *S. zalacca* fruit extract indicates that extract obtained through SC method possesses significantly higher activity (IC50 79.42 μg/mL) than that of SX extracted sample which displayed IC50 at 125.73 μg/mL. Considering the effects of both methods (drying and extraction) on the α-glucosidase inhibitory activity of S. zalacca fruit extracts, extract obtained through SC of the FD fruits demonstrated the highest activity (IC50 19.40 μg/mL) Meanwhile, extracts obtained via OD and different extraction methods such as SX, MC and SC showed the least inhibition with IC50 125.73, 87.23 and 79.42 μg/mL, respectively. **Conclusion:** This study suggests that *S. zalacca* fruit has the potential for nutraceutical enhancement and as ingredient in medicinal preparation.

ID 177. Antihyperglycaemic Property of the Stem of *Bauhinia aculeata L.* in Diabetic-induced Zebrafish

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Introduction: *Bauhinia aculeata* contains phytoconstituents having antidiabetic property. However, there is no report yet of antihyperglycaemic activity of *B. aculeata*. Therefore, a preliminary study to investigate the potential of *B. aculeata* in lowering blood glucose level was conducted. **Objectives:** To evaluate the ability of the ethanol extract of the stem of *B. aculeata* in reducing blood glucose level in diabetic induced zebrafish. **Materials and Methods:** The extract of *B. aculeata* was obtained by maceration using ethanol 96%. The antihyperglycaemic evaluation was carried out by inducing the zebrafish with alloxan followed by soaking in 2% of glucose solution for 24 hours up to seven days. Positive control was given metformin 25 mg/2L and treatment group was given the extracts of *B. aculeata* 100 mg/2L and 200 mg/2L. Zebrafish was fasted for 24 hours before blood collection. The specimens were collected by head excision on day eight and was measured using glucometer (Autocheck®). The data was analyzed by Mann-Whitney U Test using SPSS v20.0 for Windows®. **Results:** The ethanol extracts of *B. aculeata* 100 mg/2L and 200 mg/2L were able to decrease the fasting blood glucose level of zebrafish to 84.5±12.92 mg/dL and to 109.4±47.65 mg/dL, respectively. Statistical analysis showed that both extracts could decrease fasting blood glucose level in zebrafish significantly ($p<0.05$). The ability of extract 100 mg/2L was comparable to metformin 25 mg/2L (77.5 ± 11.787 mg/dL). **Conclusion:** The ethanol extract of the stem of *B. aculeata* showed antihyperglycaemic activity to diabetic induced zebrafish.

Keywords: *Alloxan, Bauhinia aculeata, blood glucose level, zebrafish*

ID 178. The Effectiveness of Inabah Programme among Malaysian Drug Addicts in Recovery

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