'Diabetes Asia 2014' Conference

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13th Continuing Professional Development (CPD) Series

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CENTRE OF EXCELLENCE-DEDICATED TO DIABETICS

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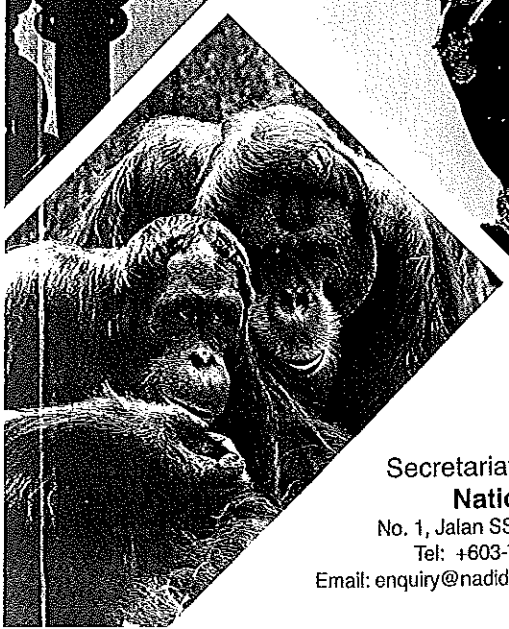
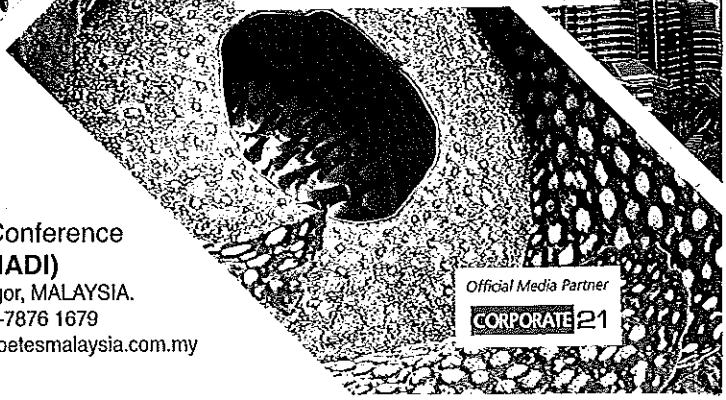
Ministry of Health Malaysia

October 16 – 19, 2014
Sunway Pyramid Convention Centre
Selangor, Malaysia





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"Prof Mustaffa Young Investigators Awards"

"Oral Presentation Awards"

"Poster Presentation Awards"

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8 **KNOWLEDGE, ATTITUDE AND PRACTISE (KAP) ON INSULIN INJECTION AMONG TYPE 2 DIABETES MELLITUS PATIENTS IN HRPZ II: CONVENTIONAL COUNSELING VERSUS MULTIMEDIA-AIDED COUNSELING.**
Ms. Norsilawati Binti Ramli, Hospital Raja Perempuan Zainab II, Kelantan

9 **AN EVALUATION ON DIABETES MELLITUS PATIENTS' PROFILE AND MANAGEMENT IN DIABETIC CLINIC, HOSPITAL TUANKU JAA'FAR SEREMBAN FOR JUNE, YEAR 2014**
Dr. Yong Lit Sin, Hospital Tuanku Jaafar, Negeri Sembilan

10 ***IN VIVO* AND IN VITRO ANTIDIABETIC STUDIES OF *PERESKIA BLEO* LEAVES**
Dr. Qamar Uddin Ahmed, International Islamic University Malaysia, Pahang

11 **EFFECTIVENESS OF EMPOWER-PAR INTERVENTION ON PRIMARY CARE PROVIDERS' ADHERENCE TO CLINICAL PRACTICE GUIDELINES IN MANAGING PATIENTS WITH TYPE 2 DIABETES MELLITUS: A PRAGMATIC CLUSTER RANDOMISED CONTROLLED TRIAL**
Dr. Maryam Hannah Daud, University Technology MARA, Selangor

12 **PREVALENCE OF DIASTOLIC DYSFUNCTION AMONGST TYPE 2 DIABETES MELLITUS SUBJECTS IN THE COMMUNITY**
Dr. Sharifah Faradila WM Hatta, University Malaya Medical Centre, Selangor

13 **FACTORS ASSOCIATED WITH POOR GLYCEMIC CONTROL AMONG PATIENTS WITH UNCONTROLLED TYPE 2 DIABETES AT A PRIMARY CARE SETTING**
Ms. Tai Chia Woon, Mahmoodiah Health Clinic, Johor Bahru, Johor

14 **EFFECTIVENESS OF EMPOWER-PAR INTERVENTION ON PRIMARY CARE PROVIDERS' PRESCRIBING OF ANTI-DIABETIC, ANTI-HYPERTENSIVE, AND LIPID LOWERING AGENTS AMONG TYPE 2 DIABETIC PATIENTS: A PRAGMATIC CLUSTER RANDOMISED CONTROLLED TRIAL**
Ms. Nur Khairul Bariyyah Mohd Hatta, National Clinical Research

15 **TYPE 2 DIABETES MELLITUS CARE BASED ON HBA1C IN JOHOR STATE FOR 4 YEARS (2010-2013)**
Dr. Mawaddah Binti Abdul Malik, Johor State Health Department, Johor

16 **OUTCOME OF THE SCREENING FOR DIABETIC COMPLICATIONS IN INTEGRATED DIABETIC CLINICS FOR 9 HOSPITALS IN KEDAH STATE (COHORT 2014)**
Dr. Ng Yen Kim, Kedah State Health Department, Kedah

17 **PROSPECTS OF FULLERENE (C60) IN AMPLIFYING THE SENSITIVITY OF NEW GENERATION NONINVASIVE DIABETES BIOSENSORS BASED ON VOC DETECTION TECHNIQUE**
Ms. Sadia Afreen, The University of Notthingham,Malaysia Campus, Semenyih

Date : **16th – 18th October 2014 (Thursday - Saturday)**
Time : **0915 – 0945- Coffee Break**
1300 – 1400 - Lunch Break
1600 – 1630 - Tea Break
Venue : **Foyer Pyramid**
Chief : **Professor Dato' Anuar Zaini Md Zain,** *Monash University Malaysia*
Head Judge : **Dr. Zanariah Hussein,** *Putrajaya Hospital*
Judging Panel : **Professor Z. Sehnaz Karadeniz,** *TURKEY*
: **Associate Professor Muhammad Yazid Jalaludin,** *University Malaya Medical Centre*
: **Datuk Dr. Mohamed Badrulnizam Long Bidin,** *Kuala Lumpur Hospital*

POSTER NO. 10

IN VIVO AND *IN VITRO* ANTIDIABETIC STUDIES OF *PERESKIA BLEO* LEAVES

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Background review
Since ancient times, plants have been used as natural agents to treat diseases particularly diabetes whose prevalence is increasing worldwide. Leaves of *Pereskia bleo* (Jarum Tujuh Bilah) are traditionally used to treat diabetes in many countries including Malaysia, however, no scientific claim exists in literature.

Objective
To investigate *in vivo* and *in vitro* antidiabetic activity of *P. bleo* with respect to understand its role in the management of diabetes.

Methods
Freeze dried aqueous (AQ) and ethanol (ETOH) extracts of the leaves were examined for *in vivo* antidiabetic activity (alloxan induced diabetic adult albino male rats of Sprague Dawley strain) and *in vitro* activity (inhibition of alpha-glucosidase and alpha-amylase enzymes). Two doses (250 and 500 mg/kg body weight) of both extracts were administered orally to the normal and diabetic rats. The blood glucose level of the rats was measured by using glucometer at 0, 2, 4, 6, 8 and 24 h after administering both extracts. For *in vitro* method, the inhibitory activities of both extracts against α- amylase and α-glucosidase were evaluated at 5 different concentrations (i.e. 50, 100, 250, 500, and 1000 µg/ml). Toxicological study was also performed to know the safe nature of both extracts.

Results and Conclusion

The acute toxicity study revealed LD_{50} for the both AQ and ETOH extracts above 2500 mg/kg b.w. Both extracts exhibited a significant antihyperglycemic effect in diabetic rats after 24 h treatment of the extracts without showing hypoglycemic effect in normal rats. The highest blood glucose reduction (from 28.3 to 9.0 mmol/l) in diabetic rats was seen in ETOH extract at 250 mg/kg b.w. after 24 h. For *in vitro* antidiabetic study, both extracts showed high inhibitory activity against α-amylase. The highest inhibition (99.23%) was seen at 1000 µg/mL by AQ extract. On the other hand, AQ extract did not show inhibitory activity against α-glucosidase and ETOH showed a moderate inhibition (15.46%) against α-glucosidase at 1000 µg/mL. The results from this study further justify the traditional claims of *P. bleo* in the management of diabetes in Malaysia.