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### Biography

Barakatun Nisak Bt Mohd Yusof, is an Associate Professor and a practising dietitian in the Department of Nutrition and Dietetics, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia (UPM). She currently holds a position of Dietetics Program Coordinator and a member of the Research Centre in Nutrition and Non-Communicable Chronic Diseases (NNCD). Dr Nisak received her PhD in Dietetics from Universiti Kebangsaan Malaysia before completing the Postdoctoral Research Fellowship at Joslin Diabetes Centre, Harvard Medical School in the field of Diabetes Nutrition.

Broadly, her research aims to improve metabolic control and quality of life in those with type 2 diabetes, women with gestational diabetes and obese individuals. Within this framework, she has published various articles and book chapters including the Diabetes Nutrition Plan during Ramadan organized by the International Diabetes Federation (IDF). She has actively involved with multiple stakeholders. She shared her experience with Ministry of Health, industrial partnership and professional associations in developing diabetes nutrition-related guidelines such as "Clinical Practice Guidelines for Adults with Type 2 Diabetes" and "Diabetes in Pregnancy". She received invitations to deliver lectures on diabetes nutrition topics in national diabetes conferences with the most recent at the 12<sup>th</sup> International Diabetes Federation-Western Pacific Region Congress on 27-29<sup>th</sup> November in Kuala Lumpur.

Recent honors include a Fundamental Research Grant Scheme Awards from Ministry of Education Malaysia to identify the 'Nutritype' signatures for the prevention of diabetes in women with previous GDM. She firmly believed that such knowledge would not be beneficial if they are not transferred to the community. In this conjunction, she presently involved in running the diabetes clinic at UPM health centre with a focus on nutrition and diabetes education. It is her greatest aspiration that her research contributions will lead to a better quality of life in individuals and community with diabetes.

## Abstract

Asia has been experiencing a tremendous surge in diabetes and Malaysia is no exception. The situation triggers my continuous motivation to work on diabetes and nutrition among individuals and community with diabetes. My primary research interests lie in understanding the integrative approaches between basic science and applied research in developing the best model of nutrition therapy for prevention and management of diabetes.

Generally, the research aims to improve metabolic control and quality of life in people with diabetes. Towards this overarching aim, various interventions were implemented including medical nutrition therapy, low glycemic index diet, and use of adjuvant therapy such as probiotics and herbs (*Ulam*s) resulting in an improvement in some parameters of diabetes control. Efforts were also made to understand the metabolites profiles associated with *Ulam*s consumptions through metabolomics research. The research approaches have increasingly adopted a collaborative strategy. One of my studies reported differences in gut microbiota between diabetes, obese and healthy individuals. We reported those with diabetes benefited from probiotic supplementations. This project brought together a team comprising an endocrinologist, microbiologist, immunologist, dietitian and food scientist.

Working on diabetes nutrition since PhD makes me realize the critical needs of people with diabetes. In 2015, I had the opportunity to work with Dr Osama Hamdy, Joslin Diabetes Centre during the postdoctoral training. We identified the best nutrition therapy models for overweight and obese people with type 2 diabetes. With his mentorship, we published various articles including the Ramadan Nutrition Plan for Diabetes organized by the International Diabetes Federation (IDF). It is hope that my research commitment on diabetes nutrition would further expand through participation in international collaborations, such as the Malaspina International Scholars Travel Award. It is my greatest hope and aspiration that my research contributions will lead to a better quality of life in individuals and community with diabetes.

## Current or Prior Engagement in ILSI activities

- Attended the seminar organised by ILSI such as on Carbohydrates in Health and Diseases (2006), Probiotics in Health and Diseases (2017), and Maternal and Infants Nutrition (2018).
- Participated in the dialogue between the UPM lecturers and ILSI representative to enhance industrial partnership