

2<sup>nd</sup> International Conference on

## NUTRACEUTICALS

&amp;

5<sup>th</sup> International Conference on

## FOOD AND BEVERAGES

April 22-23, 2019 | Osaka, Japan

**Formulation optimization of protein- enriched nami (*Dioscorea hispida dennst.*) cookies using soybean [*Glycine max* (L.) merr.], mung bean [*Vigna radiata* (L.) r. wilczek] and white beans (*Phaseolus vulgaris* L.) flour****Compendio Mcm, Algar Afc, Atienza Lm and Santiago Dmo**  
University of the Philippines Los Baños, , Philippines

**N**ami (*Dioscorea hispida* Dennst) is an underutilized tuber because of its inherent high alkaloids and hydrogen cyanide composition, and low protein content. Due to the drawbacks and limitations of this tuber, this study aimed to utilize detoxified nami flour in cookie processing and fortified it with protein using different types of legume flour. A 2, 3 Simplex Lattice Design was used to determine the optimum combination of composite flour of soybean, mung bean, and white bean that would enrich the protein content of nami cookies. The optimum

protein-enriched nami cookie showed a level of 61.7% soybean flour, 25.53% white bean flour and 12.77% mung bean flour providing at least 12.1% protein at the price of ₱6.9/ 40g pack. Particularly, each 40-gram serving will also provide 13.2% of the total recommended energy intake (RENI) and 51% of the recommended protein requirement of children aged 4-6 years. Ultimately, consumer preference test showed that the optimum product can fairly compete in the market compared with non-altered ingredient cookies

**Biography**

Compendio Mcm has completed her MS Degree in Food Science minor in Applied Nutrition at the age of 23 from the University of the Philippines- Los Baños, Laguna, Philippines. Currently, she is a Senior Science Research Specialist at the Food Processing Division of Industrial Technology Development Institute, Department of Science and Technology (DOST). She also has another publication which still focuses on further utilization of Nami. Her interest really focuses on the study of this tuber since it's abundant in Philippines but was quite forgotten due to its hassle preparation and presence of neurotoxic substance if improperly detoxified.

mmcompendio@up.edu.ph