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# Abstracts of the Asian Congress of Nutrition 2019

## Nutrition and Food Innovation for Sustained Well-Being

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Guest Editors

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giene practices among preschool children. **Methods:** Training of teachers with the knowledge on Balanced Nutrition and 'My Plate' program was piloted at 10 preschools in Subang district, West Java, in February 2018. **Results:** Knowledge of the teachers increased from an average of 69 to 82 (from total 100) from pre- and post-test. Several good hygiene practices were adopted such as hand washing with soap after playing and before eating and monthly growth monitoring. Moreover, mothers became more aware of the portion of vegetables and fruits that should be provided in a child's meal and the need for preschoolers to drink at least six glasses of water daily. Ten months after the training, teaching aids such as flip charts, puzzles, story books, and finger puppets were still used by the teachers in all preschools. Food, nutrition and hygiene information were also continued to be taught weekly as they could be easily integrated into the school curriculum. Hand washing with soap were still practiced every day and weight monitoring was continued to be conducted monthly. **Conclusions:** Training of preschool teachers on nutrition and hygiene practices could be accelerated using Train of Trainers and Cascade Training schemes for effective dissemination of the knowledge to the children.

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#### Development of Black *Oncom* Biscuit as Supplementary Food for Underweight Children

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**Keywords:** Biscuit · Black *oncom* · Children · Underweight

**Background/Aims:** There is a high prevalence of underweight among children in Indonesia. Black *oncom* is a local food from West Hava that is highly nutritious and has the potential to be utilized as an ingredient in development of biscuit as supplementary food for underweight children. The aim of the research was to develop black *oncom* as an ingredient in biscuit formulation and to assess its nutrient profile and safety. **Methods:** The experiment was conducted as a completely randomized factorial design, with three levels of black *oncom* (30, 50, 70%) and two levels of corn starch (0 and 10%) used in the formulation. The samples produced were analyzed with hedonic and ranking tests. **Results:** The biscuit sample with 50% black *oncom* and without addition of corn starch was assessed to be the most preferred sample. Each serving size of the biscuit (36 g) contributed to the Recommended Dietary Allowance for children as much as 10.87% energy, 15.08% protein, 10.74% fat, 10.58% carbohydrate, 5.68% fiber, 90.67% Fe, and 32.4% Zn. These biscuit samples were found to have aflatoxin level below the tolerance limit of B1 < 3.86 ppb, with the total aflatoxin level of < 9.94 ppb. **Conclusions:** Black *oncom* biscuits have the potential to help improving the nutrition status of underweight children.

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#### Nutritional Value, Antioxidant Activity, Sensory Properties, and Glycemic Index of Cookies with the Addition of Cassava (*Manihot utilissima*) Leaf Flour

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**Keywords:** Cassava leaf · Cookies · Nutritional value · Antioxidant · Glycemic index

**Background/Aims:** Cassava leaves contain albumin, fat, carbohydrate, vitamin A, vitamin B1, and fiber, thus having the potential to be used as an ingredient in production of cookies. The purpose of this research was to determine the optimum ratios between wheat flour, cassava puree, and cassava leaves flour to produce cookies with good nutrition profile. **Methods:** This study was conducted as a Completely Randomized Design with five treatments, namely the ratios between wheat flour: cassava puree: cassava leaf flour (50:50:0), (49:49:2), (48:48:45), (47:47:6), and (46:46:8). Each treatment was replicated thrice. Parameters observed were the nutrient content, sensory acceptance, antioxidant activity, and glycemic index (GI) of the cookies. The data obtained were analyzed with ANOVA; if the test had a significant effect on the treatment, it was then continued with the Least Significant Difference test with at  $\alpha = 0.05$ . **Results:** The samples had moisture content ranged between 1.46 and 5.12%, with 0.23–10.10% ash, 10.67–20.76% fat, 1.20–4.26% fiber, 8.36–10.94% protein, 64.75–74.09% carbohydrates, and 426.31–480.30 kcal energy. Antioxidant activity (IC50) of the cookies ranged between 151 and 200 ppm. The most accepted sample was the one with the ratio of 49 g wheat flour: 49 g cassava puree: 2 g cassava leaf flour, with GI value as high as 77.4. **Conclusions:** Cassava leaf flour has potential to be used as an alternative ingredient in production of cookies with improved nutrition profile.

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#### Effectiveness of Intervention Program with Modified Instant Liquid Food based on Catfish (*Clarias gariepinus*) Flour and Nutrition Education for Stunted Children

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**Keywords:** *Clarias gariepinus* · Nutrition education · Stunting · Under-five

**Background/Aims:** Children under five vulnerable to the risk of stunting. Supplementary feeding is one of the strategies to over-

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