



**3<sup>rd</sup> ICNF**

IPB INTERNATIONAL  
CONFERENCE  
ON NUTRITION  
AND FOOD 2024

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# PROGRAMME BOOK

# ICNF 2024

The 3<sup>rd</sup> IPB International Conference  
on Nutrition and Food

*“Sustainable Nutrition and Food for Human Development”*  
**7 - 8 October 2024**

**Organized by**  
Department of Community Nutrition  
Faculty of Human Ecology  
IPB University

**Co-Organized by**  
Department of Nutrition  
Faculty of Medicine and Health Sciences  
Universiti Putra Malaysia

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# TABLE OF CONTENTS

## ICNF 2024

TABLE OF CONTENTS .....	02
WELCOME MESSAGE FROM DEAN OF FACULTY OF HUMAN ECOLOGY .....	03
WELCOME MESSAGE FROM HEAD OF DEPARTMENT OF COMMUNITY NUTRITION .....	04
SCIENTIFIC COMMITTEE.....	05
ORGANIZING COMMITTEE.....	08
INVITED SPEAKERS .....	12
PARTICIPANTS AND PRESENTERS .....	13
INFORMATION FOR ORAL PRESENTERS .....	14
INFORMATION FOR POSTER PRESENTERS .....	15
CONFERENCE SCHEDULE .....	16
PROGRAMME AT A GLANCE .....	16
PRE-CONFERENCE SESSION.....	17
CONFERENCE DAY 1 .....	19
CONFERENCE DAY 2 .....	23
SPONSORSHIP .....	26
LIST OF SUMMARIES .....	27
SUMMARIES .....	37



# WELCOME MESSAGE FROM DEAN OF FACULTY OF HUMAN ECOLOGY



Dr. Sofyan Sjaf, S.Pt., M.Si

## **Distinguished Guests, Esteemed Speakers, and Dear Participants,**

Good day to all of you, wherever you may be joining from around the world. It is a great honor to welcome you to the International Conference on Nutrition and Food (ICNF) 2024, hosted by IPB University. While we may not be able to meet in person, I am delighted that we are still able to connect and engage in meaningful discussions through this online platform.

The theme of this year's conference, "Sustainable Nutrition and Food for Human Development" is more relevant now than ever. As we face increasingly complex challenges related to food security, malnutrition, and the sustainability of our food systems, the work we do together becomes even more crucial. We must continue to find innovative, practical, and inclusive solutions that not only address immediate needs but also support long-term human development.

As the Dean of the Faculty of Human Ecology at IPB University, I take great pride in the role we play in shaping the future of food and nutrition research. Our faculty is dedicated to understanding the intricate relationship between humans and their environment, and how that relationship impacts the food we grow, produce, and consume. We believe that to achieve truly sustainable solutions, we must take a holistic view—considering not only the environmental impacts but also the social, cultural, and economic dimensions of food systems.

I'd like to acknowledge the tremendous efforts of the organizing committee in bringing this event to life, especially in an online format. I know this year's format presents its own unique challenges, but it also allows us to reach a broader, more diverse audience, and that is something we are grateful for.

To our speakers, thank you for sharing your knowledge, research, and insights with us. I am confident that the expertise you bring will spark important discussions and inspire new ways of thinking about the future of nutrition and food.

To our participants, I encourage you to take full advantage of the opportunities this conference provides. Engage with the presentations, ask questions, and connect with your fellow attendees. Even though we are meeting virtually, I believe we can still build strong connections that can lead to future collaborations.

In closing, I hope that over the course of this conference, we not only exchange ideas but also leave with a renewed sense of purpose—knowing that the work we do today will help create a better, healthier, and more sustainable future for all.

Thank you, and I look forward to the insightful discussions ahead.



# WELCOME MESSAGE FROM HEAD OF DEPARTMENT OF COMMUNITY NUTRITION



**Prof. Dr. Katrin Roosita, S.P., M.Si**

## **Greetings,**

It is with great pleasure that we welcome you to The 3<sup>rd</sup> International Conference on Nutrition and Food (ICNF 2024), organized by the Department of Community Nutrition, Faculty of Human Ecology, IPB University, in collaboration with Department of Nutrition, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia. Our department is a pioneer in higher education in nutrition in Indonesia, with a vision to be a leading institution in the Asia Pacific region by 2033. We are committed, both directly and indirectly, to improving public health by enhancing the nutritional status of communities at national and international levels.

This conference serves as a global platform for the exchange of knowledge and the discussion of recent advancements in nutrition science, particularly those related to sustainable food systems and nutrition for human development. We are honored to have distinguished speakers and participants from around the world, whose diverse perspectives and ideas will enrich our discussions.

We strongly believe that this conference will foster academic collaboration, broaden research opportunities, and promote scholarly publications among researchers, graduate students, policymakers, private sector representatives, and other key stakeholders. For government officials and stakeholders, the conference also offers a valuable opportunity to formulate strategies for sustainable development in the fields of nutrition and food.

Thank you for your participation and contributions to this important dialogue. We look forward to engaging discussions and productive sessions throughout the event.

We hope you enjoy the conference and the wealth of knowledge it promises to deliver!



# SCIENTIFIC COMMITTEE



Prof. Dr. Ir. Ali Khomsan, MS  
IPB University

**EDITOR**



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IPB University

**EDITOR**



Prof Dr. Loh Su Peng  
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Prof Dr Norhaizan Mohd Esa  
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Prof Dr Azrina Azlan  
Universiti Putra Malaysia



Prof. Dr. Ir. Dodik Briawan, MCN  
IPB University





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Assoc Prof Dr Gan Wan Ying  
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Universiti Putra Malaysia



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Dr Siti Raihanah Shafie  
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Purnawati Hustina R, S.Gz, M.Gizi  
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Muhammad Aries, SP., MSI  
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Hana Fitria Navratilova, S.Gz., M.Sc  
IPB University



dr. Naufal Muharam Nurdin,  
S.Ked, M.Si



Desiani Rizki P, S.Gz, M.Si



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Dwi Inne Listyorini, S.P



Zhahrina Nasution, S.Par



Nabila Sukma Priyatasari, S.Gz



Alfina Mujtahidah Zaen, S.Gz



Shinta Anisa Dewi, S.Gz



Dian Nurvitadewi, S.Gz





# ORGANIZING COMMITTEE

## STEERING COMMITTEE



Prof. Dr. Katrin Roosita, SP, MSi.



Prof. Dr. Ir. Ali Khomsan, MS



Prof. Dr. Ir. Dodik Briawan, MCN



Prof. Dr. Rimbawan

## HEAD OF ORGANIZING COMMITTEE



Dr. agr. Eny Palupi, STP, MSc



Dr. Zuraidah Nasution, STP, M.Sc

## FINANCE



Reisi Nurdiani, SP, MSi.



Tati Nurhayati



Asy Khofsah, S.K.Pm



# ORGANIZING COMMITTEE

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Desiani Rizki P, S.Gz, M.Si



Suci Nurohmah, A.Md



Fadhilah Nur Valentine, S.Gz

## EVENT AND PROGRAM



Purnawati Hustina Rachman,  
S.Gz, M.Giz



Dr. dr. Karina Rahmadia  
Ekawidyani, M.Gizi



Larasati Khairunnisa, S.Gz



Aisyah, S.Hum



Sarifah, S.E



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## SPONSORSHIP



Muhammad Aries, SP., MSi.



Resa Ana Dina, SKM, M.Epid

## PUBLICATION, DOCUMENTATION, INFORMATION & TECHNOLOGY



dr. Naufal Muharam Nurdin,  
S.Ked, M.Si



Satriyo Nugroho



Ogi Yustianugraha, A.Md

## LOGISTICS



R. Yati Samsiyah, S.IP



Aning Rinawati, A.Md



Ine Amelia, S.Si.



# INVITED SPEAKERS



**Prof. Dr. Hardinsyah, MS**

IPB University, President of FANS Indonesia



**Prof. Dr. Vimal Karani**

University of Reading, United Kingdom



**Prof. Dr. Norhasmah Sulaiman**

Universiti Putra Malaysia, Malaysia



**Assoc. Prof. Dr. Nurul Huda**

Universiti Malaysia Sabah, Malaysia



**Prof. Eleni Andreou, RDN, DProf, FHEA**

University of Nicosia, Cyprus



**Prof. Dr. Aimee Sheree A. Barion**

University of the Philippines Los Banos, Philippines



**Prof. Stephen P. Bird**

University of Southern Queensland, Australia



**Prof. Dr. Ahmad Sulaeman**

IPB University  
Chairman SoyBeaN Indonesia



**Dr. Dadi H Maskar,**

Universitas Sahid,  
U.S Soybean Export Council (USSEC) Indonesia



# PARTICIPANTS AND PRESENTERS

The 3rd IPB International Conference on Nutrition and Food (ICNF 2024) brought together representatives from various public and private universities, research institutions, government bodies, and industries. Participants from twelve countries contributed to the success of ICNF 2024 in various capacities, including keynote speakers, presenters, participants, and manuscript contributors. The countries represented were Indonesia, the United Kingdom, Cyprus, the Philippines, Malaysia, Singapore, Germany, Australia, Japan, South America, Uganda, and Taiwan. In total, ICNF 2024 was attended by 136 participants, comprising 132 presenters and 4 non-presenters.

A total of 132 research articles were presented at the conference, with 129 manuscripts selected for publication in partnership with the Malaysian Journal of Medicine and Health Sciences (MJMHS) and Web of Conferences as part of a special supplement issue. Among those, 10 articles were authored by international contributors, including 1 from Singapore, 1 from Malaysia, 2 from Australia, 1 from South America, 1 from Germany, 1 from Japan, 1 from Taiwan, and 2 from Uganda.

The manuscripts presented at ICNF 2024 were organized into four main thematic areas: Clinical Nutrition (CL), with 6 oral presentations and 4 poster presentations; Community Nutrition (CO), with 49 oral presentations and 17 poster presentations; Food Innovation (FI), with 37 oral presentations and 6 poster presentations; and Food and Nutrition Systems (FN), with 12 oral presentations and 1 poster presentation. In total, the conference featured 104 oral presentations and 28 e-poster presentations.

## PUBLISHING PARTNERS





# INFORMATION FOR ORAL PRESENTERS

## Instructions for Online Oral Presentation

### Equipment Provided by the Presenters

1. A computer with an internet connection (wired connection recommended)
2. USB plug-in headset with a microphone (recommended for optimal audio quality)
3. Webcam (optional): built-in or USB plug-in

### Environment Requirement

1. Quiet location and proper lighting
2. Stable internet connection
3. Suitable background

### Duration

Oral Presentation: 10 – 12 minutes of presentation and 3 – 5 minutes of question and answer

## How to use ZOOM

**Step 1:** Download Zoom from the link: <https://zoom.com.cn/download>

**Step 2:** Sign up an account.

**Step 3:** Set up the languages and do some basic test.

**Step 4:** Get familiar with the basic functions: Rename, chat, etc

1. Rename: Before you enter the conference room, please change your name to Registration code\_Name
2. Chat: If you have any technical problems during the meeting, you can let us know by using the chat room to communicate with the meeting secretary.

You can use the chat room to view questions sent by other participants during the Q&A session.

**Step 5:** How to join the conference online

1. Find your registration code and zoom meeting details in the conference schedule.
    - a. Open the ZOOM application on your device, click Join, enter your meeting ID and passcode, and you are able to join the conference.
  2. The presentation video will be played by the operator, participants should stand with the camera turned on.
  3. This will be followed by a live Q&A session, please pay attention to questions from the audience.
- Please pay attention to the time difference, and all schedules are arranged based on West Indonesian Time (WIB/GMT+7).
  - Please try to find a quiet environment.
  - Please arrive 15 minutes early and stay for the entire session.
  - Please create your PowerPoint presentations, the template provided may be used.
  - Please record your presentation in advance (10 – 12 minutes of presentation) by using the Zoom meeting application. When recording, participants are required to appear on camera. Make sure your voice is clear and well-articulate. Please submit your file and video presentation to your ICNF account in .pptx format and video in mp4 format.
  - Only the organizer can record the zoom session. Please do not record the zoom session during the meeting.



# INFORMATION FOR POSTER PRESENTERS

## Instructions for E-Poster

E-posters provide high resolution images and text. Like traditional posters, e-posters provide a concise snapshot of your work. But instead of a physical poster on a bulletin board, e-posters are a single slide presentation viewed on a computer.

E-posters are required to be submitted in a PDF/PNG and mp4 version using the Record Zoom application in advance (4-6 minutes presentation) to accompany your e-poster presentation.

### Instruction

1. Prepare your e-poster as an electronic version that replicates what a physical poster would look like
2. No animation or embedded video allowed
3. Your e-poster should be created on a single slide (one slide only)
4. There is no required e-poster size. However, note the PDF or MP4 file size limit: 100 MB
5. Poster orientation can be either horizontal or vertical.
6. Include title, author, and institutional affiliation at the top of the e-poster.
7. A short but clearly worded 'Introduction' and 'Conclusions' are key to understand the data presented.
8. Text and figure legends should be short. Use large, clear, easy-to-read type for text and legends.
9. The use of color adds emphasis and interest to the presentation.

### How to Join The Conference Online

1. Find your registration code and zoom meeting details in the conference schedule.
2. Open the ZOOM application on your device, click Join, enter your meeting ID and passcode, rename with Registration code\_Name, and you are able to join the conference.
3. The presentation video will be played by the operator, participants should stand with the camera turned on



# CONFERENCE SCHEDULE

## Programme At A Glance

Time (GMT+7)	Pre-conference	Day 1 Conference October, 7th 2024	Day 2 Conference October, 8th 2024
07.30 – 08.00	Pre-conference	Registration	Registration
08.00 – 08.05		Opening ceremony	Opening of Day 2
08.05 – 08.25		Plenary session 1	Plenary session 4
08.30 – 08.55		Coffee break	Plenary session 5
08.55 – 09.20			Special session 2
09.20 – 09.35			Poster presentation session 4
09.35 – 09.45		Plenary session 2	Oral presentation session 4
09.45 – 09.50			Poster presentation session 5
09.50 – 10.15			Lunch Break
10.15 – 10.35		Poster presentation session 1	Plenary session 6
10.35 – 10.40		Oral Presentation session 1	Poster presentation session 6
10.40 – 11.00		Lunch Break	Oral presentation session 5
11.00 – 11.35			Special session 3
11.35 – 12.00			Awards ceremony & closing ceremony
12.00 – 13.00		Plenary session 3	
13.00 – 13.50		Poster presentation session 2	
13.50 – 13.55		Oral presentation session 2	
13.55 – 14.10		Poster presentation session 3	
14.10 – 14.15		Oral presentation session 3	
14.15 – 15.10		Closing of Day 1	
15.10 – 15.15			
15.15 – 15.30			
15.30 – 16.00			
16.00 – 16.15			
16.15 – 16.30			
16.30 – 16.40			



# PRE-CONFERENCE SESSION

Thursday, 18th July 2024

Time	Activity			
08.30-08.45	Participants start joining Zoom			
08.45-08.50	Opening speech by MC			
08.50-08.55	National anthem of Indonesia "Indonesia Raya"			
08.55-09.00	Hymne IPB			
09.00-09.10	Welcoming speech "Dr.agr Eny Palupi, S.T.P, M.Sc" as head of organizing committee			
09.10-09.20	Welcoming speech "Prof. Dr. Katrin Roosita, S.P., M.Si" as head of Department of Community Nutrition			
	Poster presentation 1			
09.20-09.26	<b>Triagung Yuliyana</b> Reducing Blood Pressure through Intervention with a Herbal Drink of Moringa Leaf Date Extract			
09.26-09.32	<b>Dzul Fadly</b> Indigenous Herbal Tonic of Borneo Developed from <i>Mitragyna speciosa</i> and <i>Uncaria glabrata</i> : Study of Phenol and Antioxidant Activity			
	Breakout Room 1: Oral presentation 1	Breakout Room 2: Oral presentation 1	Breakout Room 3: Oral presentation 1	Breakout Room 4: Oral presentation 1
09.32-09.40	Participants joining breakout room 1	Participants joining breakout room 2	Participants joining breakout room 3	Participants joining breakout room 4
09.40-09.45	Moderator ( <b>dr. Mira Dewi, M.Si, PhD</b> ) deliver the rule of oral presentation	Moderator ( <b>Purnawati Hustina Rahman, S.Gz., M.Gizi</b> ) deliver the rule of oral presentation	Moderator ( <b>Dr. Naufal Muharam Nurdin, M.Si</b> ) deliver the rule of oral presentation	Moderator ( <b>Anna Vipta Resti Mauludyani, S.P., M.Gizi</b> ) deliver the rule of oral presentation
09.45-10.00	1. <b>Mohd Sarli</b> - Description of Body Image Perception and its Relation to Nutrient Intake in Bodybuilders	1. <b>Aulia Dwi Cantika</b> - The Risk Factors of Dyslipidaemia and Obesity Incidence: Result from 2019 Cohort Study of NCDs in Bogor City	1. <b>Sefanadia Putri</b> – Shelf-Life Evaluation Jelly Drink Combining Bay Leaf Water Extract with Guava Juice	1. <b>Dadang Herdiansyah</b> - Comparison of Food Security and Nutritional Status of Adolescent Girls in Highlands and Coastal Areas in Garut Regency, West Java.
10.00-10.15	2. <b>Wawan Saepul Irwan</b> - The Effect of Instant Pumpkin-Base Soups on the Nutritional Status, Blood Pressure, and Constipation Status of Elderly	2. <b>Salma Widya Azhari</b> - Effects of Nutrition Education on the Scores of Nutrition Knowledge, Attitude, and Practice among Adolescent Girls in Bogor, Indonesia	2. <b>Miftahul Ni'maturrohmi</b> - Total Phenolic Content, Flavonoid Content and Antioxidant Potential of Purple Okra Extract Supplement	2. <b>Rofifah Irbah Syahputri</b> - Factors Associated with Food Security of Fisherman Household in West Java
10.15-10.30	3. <b>Afifah Nufaisah</b> - Glycemic Index of Wholemeal Bread with Addition of Bambara Groundnut ( <i>Vigna subterranean</i> L. Verdc)	3. <b>Erika Wahyu Dewanti</b> - Evaluating Lipid Degradation as a Rancidity Indicator in Spirulina Snack Bar Fortified with Collagen	3. <b>Miftahul Jannah</b> - Effect of Okra Mucilage Addition on Antioxidant Properties of Purple Okra ( <i>Abelmoschus esculentus</i> L. Moench) Pudding	3. <b>Kalinaki Hanifar</b> - Food Security and its Determinants Among Rural Households. A case study in Buwenge Eastern Uganda



Time	Activity			
10.30-10.45	4. <b>Grace Marlina Winata</b> - Potency of Fresh Gedi Leaves ( <i>Abelmoschus manihot</i> (L.) Medik) as a Natural Galactagogue in Comparison to Common Natural Galactagogues in Indonesia	4. <b>Ismi Isti'anah, S.Si, M.Si</b> - Exploration of Marine Fungal Endophytes from Buton Island, Southeast Sulawesi: Potential Antibacterial Metabolites for Functional Foods	4. <b>Iza Ayu Saufani</b> - Fatty Acid Composition of Fermented Buffalo Milk (Dadih) as Traditional Probiotics	4. <b>Putri Novitasari</b> - The Relationship of Energy and Macronutrient Intake with Nutritional Status of Obese Young Women in Bandung City
10.45-10.50	Participants moving to main room	Participants moving to main room	Participants moving to main room	Participants moving to main room
	Coffee break & poster presentation 2			
10.50-10.56	<b>Yeni Katon Rahmawati Sujarnoko</b> Role of Post-Harvest Management in Priority Food Security and Nutrition Pillar and Its Implementation in Indonesia			
10.56-11.02	<b>Yuli Indarti</b> Variables of Perceived Behavioral Control and Habit are Potential Variables in Reducing Plate Waste Practices: A Formative Study			
11.02-11.08	<b>Fuadah Ashri Nurfurqoni</b> The Role of Family Function, Social Support, Postpartum Depression, and Maternal Parenting Practices on Infant Growth			
	<b>Breakout Room 1: Oral presentation 2</b>		<b>Breakout Room 2: Oral presentation 2</b>	<b>Breakout Room 3: Oral presentation 2</b>
11.08-11.15	Participants joining breakout room 1		Participants joining breakout room 2	Participants joining breakout room 3
11.15-11.20	Moderator ( <b>Desiani Rizki P., S.Gz., M.Si</b> ) deliver the rule of oral presentation		Moderator ( <b>dr. Karina Rahmadia E., M.Gizi</b> ) deliver the rule of oral presentation	Moderator ( <b>Resa Ana Dina, S.K.M., M.Epid</b> ) deliver the rule of oral presentation
11.20-11.35	1. <b>Wardah Willyanti</b> - Estimated of Protein and Iron Intake Quality among Stunted and Non-stunted Children in Malang City		1. <b>Indhira Shagti</b> - Association between Early Initiation of Breastfeeding (EIB), Mother's Knowledge of Growth and Development and the Nutritional Status of Wasting in Toddlers in East Nusa Tenggara (NTT)	1. <b>Andi Eka Yunianto</b> - The effect of Nudging on Food Waste among Adolescents in High School Dining: A Qualitative Literature Review
11.35-11.50	2. <b>Sazli Tutur Risyahadi</b> - Impact of Extruded Feed Ingredient on Meat Quality of Broiler Chickens: A Meta Analysis		2. <b>Juwita Nur Aisyah</b> - Analysis of Risk Factors for Oxidative Stress in the Kulon Progo Batik Industrial Area	2. <b>Annisa Mayang Soliha</b> - Nutrient Loss among Urban Households in Bogor City, Indonesia
11.50-12.05	3. <b>Muayanah Hardiah</b> - Consumption of Sugar Sweetened Beverages, Body Mass Index and Body Composition among College Student		3. <b>Kitaka Ashraf</b> - Association between Mid-Upper Arm Circumference and Low Birth Weight among Pregnant Women in Rural Bogor	3. <b>Hepti Muliwati</b> - Breastfeeding Culture among the Kaili Tribe in Sigi Regency, Central Sulawesi: A Qualitative Study
12.05-12.10	Participants moving to main room		Participants moving to main room	Participants moving to main room
12.10-12.20	Closing remarks & announcement of the best presenter (Main Room)			





# CONFERENCE DAY 1

Monday, 7th October 2024

Monday, 7th October 2024 (Day 1)		
Time (GMT+7)	Activity	Zoom Link
07.30 – 08.00	Registration	<a href="https://ipb.link/icnf2024-mainzoom">https://ipb.link/icnf2024-mainzoom</a>  Meeting ID: 947 5276 0550 Passcode: 559675
08.00 – 08.05	Opening ceremony	
08.05 – 08.10	Singing National anthem of Indonesia "Indonesia Raya"	
08.10 – 08.15	Singing Hymne IPB	
08.15 – 08.20	Welcome speech by Head of Department of Community Nutrition, IPB University ( <b>Prof. Dr. Katrin Roosita, S.P., M.Si</b> )	
08.20 – 08.25	Opening remark by Rector of IPB University ( <b>Prof. Dr. Arif Satria, S.P., M.Si</b> )	
08.30 – 09.20	Plenary session 1: <b>Prof. Dr. Ir. Hardinsyah, MS</b> - Department of Community Nutrition IPB University, Indonesia "Trending Diet and Lifestyles: Lesson Learned from Asia for Preventing Obesity and NCDs" <i>Moderator: dr. Mira Dewi, M.Si, PhD - IPB University</i>	
09.20 – 09.25	Exercise break	
09.25 – 09.35	Coffee break	
09.35 – 10.40	Plenary session 2: <b>Prof. Vimal Karani S.</b> - Deputy Director of the Institute for Food, Nutrition, and Health, University of Reading, UK "Triangulating Nutrigenomics, Metabolomics, and Microbiomics toward Precision Nutrition" <i>Moderator: Prof. Rimbawan, PhD - IPB University</i>	
10.40 – 11.00	Poster presentation session 1	<a href="https://ipb.link/icnf2024-zoom1">https://ipb.link/icnf2024-zoom1</a>  Meeting ID: 958 0194 9796 Passcode: 489259
	1. PD045CL - Nutrition Management for Ischemic Stroke Patient with Hemorrhagic Transformation, Hemiparesis Dextra and Dysphagia: A Case Report - <b>Fajria Saliha Puspita</b> Prameswari, Naufal Muharram Nurdin 2. PD100CL - The Effect of Ashwagandha ( <i>Withania somnifera</i> ) on Sport Endurance and Muscle Recovery, A Mini Review - <b>Putu Austin Widyasari Wijaya</b> , Ni Wayan Sri Ekayanti, Tanjung Subrata 3. PD123CL - The Potential of Dayak Tribal Herbal Leaves as an Anti-breast Cancer Agent: In-silico Approach - <b>Volta Kelik Setiawan</b> , Ahmad Affan Ali Murtadlo, Arif Nur Muhammad Ansori, Viol Dhea Kharisma, Dora Dayu Rahma Turista 4. PD005CO - The Effect of DASH (Dietary Approaches to Stop Hypertension) Diet Education Using Lectures and Leaflet Media on Diet Compliance Among Hypertension Patients - <b>Taufiq Firdaus AL-Ghifari Atmadja</b> , Sabrina Eka Fitriany, Dika Betaditya, Luh Desi Puspareni, Lutfi Yulmiftiyanto Nurhamzah, Rizka Fikrinnisa, Iseu Siti Aisyah, Neni, Almira Nuraelah, Andi Eka Yunianto, Nur Arifah Qurota A'yunin	
11.00 – 12.00	Oral Presentation session 1	<a href="https://ipb.link/icnf2024-zoom1">https://ipb.link/icnf2024-zoom1</a>  Meeting ID: 958 0194 9796 Passcode: 489259
	<b>Zoom 1: Clinical Nutrition</b> 1. PD022CL - The Relationship between Body Composition, Physical Fitness, and Primary Dysmenorrhea among Adolescents of Urban Area - <b>Desiani Rizki Purwaningtyas</b> , Anna Fitriani, Rony Darmawansyah Alnur 2. PD126CL - Lifestyle and Aerobic Fitness in Youth Volleyball Athletes - <b>Ratna Candra Dewi</b> , Catur Supriyanto, Raymond Ivano Avandi, Ika Nurmaya 3. PD090CL - Knowledge, Attitudes, Consumption Patterns of Saturated Fat and Fiber after Nutritional Counseling in Patients With Coronary Heart Disease at Regional Public - <b>Ade Dian Pratiwi</b> , Kusdalinah, Anang Wahyudi 4. PD128CL - Dietary Inflammatory Level and Nutritional Status of Breast Cancer Patients in Bogor City General Hospital (RSUD Kota Bogor) - <b>Mira Dewi</b> , Justine Gian Semira, Marthino Robinson <i>Moderator: dr. Naufal Muharram Nurdin, M.Si - IPB University</i>	



Monday, 7th October 2024 (Day 1)		
Time (GMT+7)	Activity	Zoom Link
11.00 – 12.00	<b>Zoom 2: Community Nutrition</b> 1. PD015CO - Association between Stress Level, Dietary Pattern, and Smoking Habit with Central Obesity in PT Raputra Jaya Ferry Crews - <b>Betari Julianchika Imaniar</b> , Ibnu Malkan Bahrul Ilmi, Firlia Ayu Arini 2. PD019CO - Factors Associated with Central Obesity among Adults in UIN Syarif Hidayatullah Jakarta - <b>Yustiyan</b> , Febrianti, Mochamad Iqbal Nurmansyah 3. PD028CO - Spatial Analysis of Metabolic Syndrome Among Health Workers in a Sub-urban Area - <b>Apriningsih</b> , Firlia. A Arini, Eflita Meiyetrian 4. PD047CO - Association between Obesity, Cardiometabolic Risk, and Body Composition in Gorontalo Adult Women - <b>Nuryani</b> , Ali Khomsan, Mira Dewi, Cesilia Meti Dwiriani, Widjaja Lukito Moderator: Dr. dr. Karina Rahmadia Ekawidyan, M.Gizi - IPB University	<a href="https://ipb.link/icnf2024-zoom2">https://ipb.link/icnf2024-zoom2</a>  Meeting ID: 989 1065 8158 Passcode: 251426
	<b>Zoom 3: Food Innovation</b> 1. PD016FI - Powder of Kepok Banana ( <i>Musa paradisiaca formatypica</i> ) and Moringa ( <i>Moringa oleifera</i> )-based Prebiotic Products as Functional Food for Wistar Strain Female Rats - <b>Fifi Luthfiah</b> , Retno Ikayanti, Fransisca Dwipajati, Dwi Nastiti Iswarawanti 2. PD006FI - Survival of Probiotic <i>Lactobacillus plantarum</i> Encapsulated with Skim Milk and Maltodextrin - <b>Evy Damayanthi</b> , Eny Ida Rianti, Yopi, Heni Rizqiat 3. PL064FI - Quality Characteristics of Yogurt with Added Pumpkin ( <i>Cucurbita moschata</i> ) Mesocarp, Epicarp, and Endocarp - <b>Jia Jing Ang</b> , Kim Yee Lim, Ai Ling Ho 4. PD096FI - Optimizing the Sensory Profile of 'Daygurt': A Functional Blend of Dadih and Yoghurt Using Response Surface Methodology - <b>Gusnedi, Nur Ahmad Habibi</b> , Wiwi Sartika, Ismanilda Moderator: Dr. Hendry Noer Fadlillah, STP., MP. - International University Liaison Indonesia (IULI) & PT Naviga Indonesia	<a href="https://ipb.link/icnf2024-zoom3">https://ipb.link/icnf2024-zoom3</a>  Meeting ID: 992 4535 7003 Passcode: 687712
	<b>Zoom 4: Food and Nutrition System</b> 1. PD034FN - An Overview of Sustainable Healthy Diets in Urban Household Consumption and Food Waste - <b>Prita Dhyani Swamilaksita</b> , Yayuk Farida Baliwati, Drajat Martianto, Dodik Briawan, Nur Ahzaini Laili 2. PD055FN - Restaurant Food Waste Management Strategy in Asia Using the Restaurant Food Waste Map (RFWM) Approach - <b>Elsa Fajriah</b> , Drajat Martianto, Purnawati Hustina Rachman. 3. PD063CO - Predicting Food Security Index in 514 Districts of Indonesia: A Supervised Machine Learning Regression Analysis - <b>Eflita Meiyetrian</b> , Apriningsih, Budi Utomo, Dwi Nastiti Iswarawanti 4. PD102FN - Household Food Insecurity in Rural and Urban West Java: The Need for Coping Strategies - <b>Anna Vipta Resti Mauludyani</b> , Ali Khomsan Moderator: Prof. Dr. Ir. Dodik Briawan, MCN - IPB University	<a href="https://ipb.link/icnf2024-zoom4">https://ipb.link/icnf2024-zoom4</a>  Meeting ID: 930 8089 7339 Passcode: 131724
12.00 – 13.00	Lunch Break	
13.00 – 13.50	Plenary session 3: <b>Prof. Dr. Norhasmah Sulaiman</b> - Faculty of Medicine and Health, Universiti Putra Malaysia, Malaysia "Food Insecurity and Metabolic Syndrome" Moderator: Anna Vipta Resti M., S.P., M.Gizi - IPB University	
13.50 – 14.10	Poster presentation session 2	<a href="https://ipb.link/icnf2024-mainzoom">https://ipb.link/icnf2024-mainzoom</a>  Meeting ID: 947 5276 0550 Passcode: 559675
	1. PD060CO - The Impact of Digital Training with Mentoring on Early Childhood Education Teachers' Knowledge and Practices Related to Nutrition and Health - <b>Herawati N</b> , Nuraeni B, Efendi R, Herlina Y, Kusumaningtyas N, Zam Zam R, Rudianto, Natakusuma Y, Ramadhan AM 2. PD020CO - Balanced Nutrition Messages Competence Parents of Raudhatul Athfal Students and Kindergarten Parents in Semarang City - <b>Laksmi Widajanti</b> 3. PD023CO - Predictors of Breastfeeding Self Efficacy among Postpartum Women at RSUD IA Moeis Samarinda - <b>Fitria Nur Hastuti</b> , Ratih Wirapuspita Wisnuwardani, Iriyani Kamaruddin 4. PD137CO - Effectiveness of Providing Healthy Local Snacks on the Nutritional Status of Pregnant Women with Chronic Energy Deficiency (CED) - <b>Maya Klementina Dasmase</b> , Hardinsyah, Mira Dewi, Ikeu Ekayanti	



Time (GMT+7)	Activity	Zoom Link
14.10 – 15.10	Oral presentation session 2	
	<b>Zoom 1: Community Nutrition</b> 1. PD024CO - Knowledge to Action: Evaluating the Impact of the Royco Nutrimenu Program on Mothers' Practice in Complementary Feeding - <b>Dodik Briawan</b> , Elma Alfiah, Farida Dwi Rokhmah, Muhammad Aries 2. PD058CO - Effect of Tele-nutrition Education on Weight Loss, Energy and Fat Adequacy Among Obese Adults in Banyumas, Central Java, Indonesia - <b>Teguh Jati Prasetyo</b> , Izzati Nur Khoiriani, Sifa Aulia Wicaksari, Gumintang Ratna Ramadhan 3. PD012CO - Nutritional Supplementation Combined with Balanced Diet and Environmental Health Education Improved the Conversion of Latent Tuberculosis Infection and Daily Nutrients Intake - <b>Suparman Samsidi</b> , Sukmal Fahri, Roro Nur Fauziah, Maryati Dewi, Fahrinda Khairat, Egi Sunanda Putra 4. PD041CO - Effect of Ramadan Fasting on Body Weight and Percent of Body Fat Among Student from Program Nutrition Study of UPN "Veteran" Jakarta, Indonesia - <b>Wida Ayu Nurjanah</b> , Utami Wahyuningsih, Avliya Quratul Marjan, Sintha Fransiske Simanungkalit <i>Moderator: Assoc. Prof. Dr. Hazizi Abu Saad - Universiti Putra Malaysia</i>	<a href="https://ipb.link/icnf2024-zoom1">https://ipb.link/icnf2024-zoom1</a>  Meeting ID: 958 0194 9796 Passcode: 489259
	<b>Zoom 2: Community Nutrition</b> 1. PD061CO - Animal-Source Food Consumption and its Contribution to Iron Adequacy of Women of Reproductive Age in Indonesia - <b>As Syaffa Amalia Adha</b> , Dodik Briawan, Dadang Sukandar 2. PD040CO - Differences of Type of Foods Consumed by Households in Urban and Rural West Java - <b>Vieta Annisa Nurhidayati</b> , Hadi Riyadi 3. PD118CO - Residential and Socio-economic Difference in Protein Intake Among Children Aged 6-35 Months in Indonesia: A National Food Consumption Survey 2014 - <b>Anna Vipta Resti Mauludyani</b> , Suparmi, Yulianti Wibowo 4. PD082CO - Consumption of Legumes and Its Products among Indonesian Population Aged 19 to 55 Years Old - <b>Yuseph Saeful Hidayah</b> , Dodik Briawan <i>Moderator: Dr. Ir. Cesilia Meti Dwiriani, MSc - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom2">https://ipb.link/icnf2024-zoom2</a>  Meeting ID: 989 1065 8158 Passcode: 251426
	<b>Zoom 3: Community Nutrition</b> 1. PD084CO - Household Food-Nutrition Security, Dietary Diversity Patterns and Nutritional Status of Children (6-59 Months) In Lombok Tengah, Indonesia - <b>Lalu Juntra Utama</b> , Lina Yunita, Lalu Khairul Abdi, I Gde Narda Widiada, AASP Chandradewi, Made Darawati 2. PD075CO - Comparison of Food Security and Nutritional Status of Adolescent Girls in Highlands and Coastal Areas in Garut Regency, West Java. - <b>Dadang Herdiansyah</b> , Budi Setiawan, Ikeu Tanziha, Drajat Martianto 3. PD080CO - Food Security and Dietary Diversity Patterns Among Female Farmer Workers: A Cross-Sectional Study from Lombok Tengah, Indonesia - <b>Lina Yunita</b> 4. PD110CO - The Effect of e-Health-Based Nutrition Education for Improving Hedonic Hunger, Dietary Energy Density, and Body Mass Index in Overweight and Obese Adult Women - <b>Anggun Rusyantia</b> , Ali Khomsan, Clara Meliyanti Kusharto, Hadi Pratomo <i>Moderator: Prof. Dr. Ir. Ali Khomsan, MS - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom3">https://ipb.link/icnf2024-zoom3</a>  Meeting ID: 992 4535 7003 Passcode: 687712
	<b>Zoom 4: Food Innovation</b> 1. PD031FI - Snack Bars from Sago Worm Paste ( <i>Rhynchophorus ferrugineus</i> ) as an Alternative Food: Nutrients Content and Sensory Properties - <b>Meda Canti</b> , Shinta Muliawan 2. PL065FI - Effect of Inulin and Xanthan Gum on the Properties of Sugar-Free Green Saba Banana Flour Biscuit - <b>Lee Jau Shya</b> , Yi-Lin Lau 3. PD093FI - Gluten-Free Ready-to-Eat Noodles Based on Mocaf Flour - <b>Dini Ariani</b> , Ervika Rahayu Novita Herawati, Rifa Nurhayati, M. Angwar 4. PD004FI - Instant powdered drink that has antioxidants from a comparison of bajakah ( <i>Spatholobus littoralis</i> Hassk) and tiwai onion ( <i>Eleutherine americana</i> Merr) extracts - <b>Bernatal Saragih</b> , Angela Christina Nababan, Darma Pawwang, Miftakhur Rohmah, Maghfirotn Marta Banin <i>Moderator: Dr. Zuraidah Nasution, STP, M.Sc - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom4">https://ipb.link/icnf2024-zoom4</a>  Meeting ID: 930 8089 7339 Passcode: 131724
15.10 – 15.30	Poster presentation session 3	
	1. PD049CO - Relationship between Diet Quality and Eating Speed with Nutritional Status of Adolescents in Jakarta, Indonesia - <b>Jennifer Natalia Christsanta</b> , Cesilia Meti Dwiriani, Purnawati Hustina Rachman 2. PD054CO - The Correlation Between Fatsecret Application Use with Eating Behavior, Physical Activity, and Weight Changes of College Students - <b>Nadhia Tifallinuha</b> , Cesilia Meti Dwiriani 3. PD098CO - Relationship Between Body Image, Parental and Peer Influence with Nutritional Status of Adolescents in Rural Areas of Sigi Regency - <b>I Made Arisadana</b> , Nikmah Utami Dewi, Siti Aisyah Solechah, Sendhy Krisnasari, Kiki Sanjaya 4. PD108CO - Physical Activity and Milk Consumption were Associated with Nutritional Status of School-Age Children at Primary School in Kaliurang, East Kutai - <b>Denaira Zahwa</b> , Siti Aisyah Solechah, Ainun Nisa, Sigit Yudistira, Atikah Rahayu, Fahrini Yulidasari, Muhammad Irwan Setiawan	<a href="https://ipb.link/icnf2024-mainzoom">https://ipb.link/icnf2024-mainzoom</a>  Meeting ID: 947 5276 0550 Passcode: 559675



Monday, 7th October 2024 (Day 1)		
Time (GMT+7)	Activity	Zoom Link
15.30 – 16.30	Oral presentation session 3	
	<b>Zoom 1: Community Nutrition</b> 1. PD076CO - Impact of Macronutrient Intake and Child Eating Behaviour (Picky Eating) on Growth in Toddlers - <b>Cast Torizellia</b> , Yustin Ari Prihandini 2. PD011CO - The Relationship of Feeding Patterns and History of Infectious Diseases with the Incident of Stunting in Toddler Aged 6 – 23 Months in West Bontang Health Center - <b>Natasya Cicilia</b> , Iriyani Kamaruddin, Erri Larene Safika 3. PD070CO - Care Empowerment for Preventing Child Malnutrition: Lessons from the Psychosocial Recovery of 2009 Tasikmalaya Earthquake Survivors - <b>Euis Sunarti</b> 4. PD115CO - Maternal Parenting Efficacy, Mother-Child Attachment, Home Parenting Environment, and Child Development: Analysis on Stunted and Non-Stunted Children in Bogor City - <b>Melly Latifah</b> , Neti Hernawati, Yulina Eva Riany, Raihan 'Ainun Hasanah <i>Moderator: Purnawati Hustina Rachman, S.Gz., M.Gizi - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom1">https://ipb.link/icnf2024-zoom1</a>  Meeting ID: 958 0194 9796 Passcode: 489259
	<b>Zoom 2: Community Nutrition</b> 1. PD018CO - The Relationship of Physical Fitness, Nutritional Status, Quality of Life and Academic Achievement in Students - <b>Muhammad Irwan Setiawan</b> , Nana Astriana Hasibuan, Azaria Nafisah Pahlavie, Fahrini Yulidasari, Siti Aisyah Solechah 2. PD091CO - Digital-based Nutrition Education on Nutrition Knowledge and Behaviors in Adolescents: A Systematic Review - <b>Destio Dwiyan Fahrizki</b> , Cesilia Meti Dwiriani, Ali Khomsan 3. PD087FN - Designing Stunting Prevention Strategies for Coastal Households in Bengkulu Province - <b>Emy Yuliantini</b> , Ketut Sukiyono, Bambang Sulisty, Zulkarnain Yuliarso 4. PD117CO - Early Marriage: Early Motherhood and its Linkage on Family Food Security - <b>Wardina Humayrah</b> , Atikah Shalihah Nurusalamah, Titien Yusnita, Hariyadi B. Sukamdani <i>Moderator: Desiani Rizki Purwaningtyas, S.Gz., M.Si - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom2">https://ipb.link/icnf2024-zoom2</a>  Meeting ID: 989 1065 8158 Passcode: 251426
	<b>Zoom 3: Community Nutrition</b> 1. PD038CO - Gender Relations in Fisherman's Families - <b>Ikeu Tanziha</b> , Dyah Retna Puspita, Rofifah Irbah Syahputri 2. PD119CO - Vegetable Consumption in Seven Big Cities in Indonesia - <b>Karina Rahmadia Ekawidyan</b> , Rimbawan, Anna Vipta Resti Mauludyani, Yustiyani, Yasu Toride 3. PD121CO - Office Worker has Better Dietary Habits and Physical Activity when Work-From-Home (WFH) Than Work-From-Office (WFO) During Covid-19 Pandemic - <b>Naufal Muharam Nurdin</b> , Annisa Rachmah 4. PD094CO - Effect of Changes in Dietary Fiber on Lipid Profile of Obese Adults in Indonesia - <b>Farida Dwi Rokhmah</b> , Dodik Briawan, Ikeu Ekayanti, Sudikno <i>Moderator: Muhammad Aries, SP., M.Si. - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom3">https://ipb.link/icnf2024-zoom3</a>  Meeting ID: 992 4535 7003 Passcode: 687712
	<b>Zoom 4: Food Innovation</b> 1. PD122FI - Knowledge Drives Food Choices: Meltique Meat Purchase Decisions in Urban Indonesian Households - <b>Nunung Cipta Dainy</b> , Wardina Humayrah, Astari Apriantini, Aida Khairun Nisa 2. PD099FI - Physical and Organoleptic Characteristics of Meat Meltique Grilled with Injected Virgin Coconut Oil as A Food Source of Animal Protein for Stunting Prevention - <b>Astari Apriantini</b> , Nunung Cipta Dainy, Wardina Humayrah, Kania Nurzahra, Edit Lesa Aditia 3. PD104FI - Physicochemical, Nutritional content and Organoleptic of Meltique Beef Steak Injected with Different Concentrations of Coconut Oil ( <i>Cocos nucifera</i> L.) - <b>Dian Permata Sari</b> , Astari Apriantini, Cahyo Budiman, Nunung C. Dainy, Wardina Humayrah, Edit L. Aditia 4. PD125FI - The Effect of Retort Process on Quality of Traditional Meat Products During Storage: Physical and Sensory Aspects - <b>Siti Nurhasanah</b> , Kevin AR Oktaviano, Syamsul Huda <i>Moderator: Prof. Dr. Ir. Budi Setiawan, MS - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom4">https://ipb.link/icnf2024-zoom4</a>  Meeting ID: 930 8089 7339 Passcode: 131724
16.30 – 16.40	Closing of Day 1	<a href="https://ipb.link/icnf2024-mainzoom">https://ipb.link/icnf2024-mainzoom</a>  Meeting ID: 947 5276 0550 Passcode: 559675



# CONFERENCE DAY 2

Tuesday, 8th October 2024

Tuesday, 8th October 2024 (Day 2)		
Time (GMT+7)	Activity	Zoom Link
08.00 – 08.05	Opening of Day 2	<a href="https://ipb.link/icnf2024-mainzoom">https://ipb.link/icnf2024-mainzoom</a>  Meeting ID: 947 5276 0550 Passcode: 559675
08.05 – 08.55	Plenary session 4: <b>Assoc. Prof. Dr. Nurul Huda</b> - Faculty of Sustainable Agriculture, Universiti Malaysia Sabah, Malaysia "Future Food for Sustainable Environment: Can We Use Insect as an Alternative Future Food?" <i>Moderator: Prof. Dr. Ir. Ahmad Sulaeman, MS - IPB University</i>	
08.55 – 09.45	Plenary session 5: <b>Prof. Aimee Sheree A. Barrion</b> - Institute of Human Nutrition and Food, University of the Philippines Los Banos, Philippines "Leveraging Food Loss and Waste in Southeast Asia as a Game Changer for a Sustainable Food System" <i>Moderator: Prof. Dr. Ir. Drajat Martianto, M.Sc - IPB University</i>	
09.45 – 10.15	Special session 1: <b>Prof. Stephen P. Bird</b> - School of Health and Medical Sciences, University of Southern Queensland, Australia "Development of a Sports Nutrition Education for Student-Athletes: The Eat to Win' program" <i>Moderator: Dr. dr. Karina Rahmadia Ekawidyani, M.Gizi - IPB University</i>	
10.15 – 10.35	Poster presentation session 4	
	1. PD025FI - Mocaf Flour, Moringa Leaf Flour, and Mackerel Flour Food Bars as Emergency Food Product (EFP) for Autistic Children in Disaster Condition - <b>Monica Viorafanti Olivia</b> , Yessi Crosita Octaria, Ibnu Malkan Bahrul Ilmi, Nanang Nasrullah 2. PD033FI - Local Wisdom-based Instant Cream Soup Products as Functional Emergency Food for Health Crisis and Disaster Condition - <b>Wiwit Estuti</b> , Lastmi Wayansari, Nur Rahman, Isnar Nurul Alfiah, Samuel, Puspo Edi Giriwono, Kusmiyati, Sinar Pertiwi, Etin Rohmatin, Vera Asti Rahmawati 3. PD130FI - Fiber Source Taro-Based Egg Roll Cookies Extends the Feeling of Fullness - <b>Sharannie</b> , Eny Palupi, Febi Nurilmala, Asmanur Jannah, Nia Sonani 4. PD124FI - Meltique Meat: Urban Household Consumer Behaviour and Perceptions - <b>Wardina Humayrah</b> , Nunung Cipta Dainy, Astari Apriantini, Salwa Nailil Ulya	
10.35 – 11.35	Oral presentation session 4	
	<b>Zoom 1: Community Nutrition</b> 1. PD113CO - Mindful Eating Practices, Diet Quality and Nutritional Status of IPB University Students - <b>Muhammad Aries</b> , Keni Tyradh Megahandayani. 2. PD079CO - Family Characteristics Determine Primary School Students' Nutritional Knowledge, Attitude, And Practice - <b>Sri Anna Marliyati</b> , Dwi Hastuti, Siti Madanijah, Fajria Saliha Puspita Prameswari, Miftah Nur Hasanah, Rizki Y. Pohan, Karyanto Wibowo 3. PD035CO - Diet Quality, Physical Activity, Body Perception and Nutritional Status of School Going Adolescent in West Aceh Indonesia - <b>Ranita Suri Dewi</b> , Cesilia Meti Dwiriani, Ali Khomsan 4. PD039CO - Relationship Between Eating Habits, Sleep Duration, Nutritional Status, and Stress Levels with The Incidence of Hypertension In Adult Group in Central Jakarta - <b>Jasmin Wulansari Hidayat</b> , Avliya Quratul Marjan, Nur Intania Sofianita, Dian Luthfiana Sufyan <i>Moderator: Prof. Dr. Loh Su Peng - Universiti Putra Malaysia</i>	<a href="https://ipb.link/icnf2024-zoom1">https://ipb.link/icnf2024-zoom1</a>  Meeting ID: 958 0194 9796 Passcode: 489259
	<b>Zoom 2: Community Nutrition</b> 1. PD027FN - Consumers and Producers' Preferences for Design of Sugar, Salt, and Fat Content Information and Health Messages on Processed and Ready-to-serve Food - <b>Rimbawan</b> , Zuraidah Nasution, Syifa Qolbiyah Nasir, Deannisa Fajriaty, Aang Sutrisna, Eny Kurnia Sari, Eva Susanti 2. PD044FN - Consumers and Food Producers' Preferences for Types of Sentences for Health Messages on Sugar, Salt, and Fat on Processed Food and Ready-to-serve Food - <b>Rimbawan</b> , Zuraidah Nasution, Syifa Qolbiyah Nasir, Deannisa Fajriaty, Aang Sutrisna, Eny Kurnia Sari <i>Moderator: Resa Ana Dina S.K.M., M.Epid - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom2">https://ipb.link/icnf2024-zoom2</a>  Meeting ID: 989 1065 8158 Passcode: 251426





**Tuesday, 8th October 2024 (Day 2)**

Time (GMT+7)	Activity	Zoom Link
10.35 - 11.35	Oral Presentation session 4 (continued)	
	<b>Zoom 2: Community Nutrition (continued)</b> 3. PD073CO - Consumption Pattern of High-Sugar Processed Foods among Patients with Diabetes - <b>Liya Sutanti</b> , Risda Yulianti, Tetes Wahyu Witradharma, Meriwati Mahyuddin 4. PD053CO - Association of Prudent Diet and Sweet Food with the Risk of Stress, Anxiety, and Depression among Indonesian Students - <b>Noor Rohmah Mayasari</b> , Naila Maya Shofia, Lini Anisfatus Sholihah, Amalia Ruhana, Cleonara Yanuar Dini <i>Moderator: Resa Ana Dina S.K.M., M.Epid - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom2">https://ipb.link/icnf2024-zoom2</a>  Meeting ID: 989 1065 8158 Passcode: 251426
	<b>Zoom 3: Food Innovation</b> 1. PD086FI - Preliminary Study on The Effects of Nixtamalization on Nutrition and Anti-Nutrition Properties of Red Sorghum ( <i>Sorghum bicolor</i> L.) - <b>Erma Maryana</b> , Iim Sukarti1, Ade Saepudin, Nila Kusumawaty, Donowati Tjokrokusumo, Ika Mulawati P.N., Umi Purwandari 2. PD120FI - Nutritional Composition and Organoleptic Quality of Instant Local Black Rice ( <i>Cempo ireng</i> ) with Moderate Glycemic Index - <b>Aprinia Dian Nurhayati</b> , Arindra Nirbaya, Cassandra Permata Nusa, Soenar Soekopitojo, Adi Lukas Kurniawan, Dody Dwi Handoko, Anindya Hapsari, Aurelia Faza Sepbrina, Dwi Oktavia Wahyuningsih Prastiwi, Diah Ayu Puspitasari, Nazhira Athaya, Muhammad Yusuf Al Badwani, Diza Aulia Araminta 3. PD048FI - The Nutritional Content and Physical Characteristics of Sago Starch and Oyster Mushrooms as Potential Functional Food Ingredients - <b>Rahmawati</b> , Evy Damayanthi, Budi Setiawan, Eny Palupi, Lili Purnama Sari, Fitri Wahyuni 4. PL112FI - An Evaluation of the Nutritive Value and Acceptability of Bread Fortified with Moringa Leaf Powder. - <b>Kezia Bess</b> , Yonniq Wallace <i>Moderator: Assoc. Prof. Dr. Mohd. Redzwan - Universiti Putra Malaysia</i>	<a href="https://ipb.link/icnf2024-zoom3">https://ipb.link/icnf2024-zoom3</a>  Meeting ID: 992 4535 7003 Passcode: 687712
	<b>Zoom 4: Food Innovation</b> 1. PD109FI - Optimization of Ready-to-Drink Chrysanthemum Flower Tea Formulation Based on Bioactive Compounds and Sensory Propertie - <b>Elisa Julianti</b> , Linda Masniary Lubis, Michael Gunawan 2. PD001FI - Reduction of Cyanide Concentration in Cassava by Lactic Acid - <b>Muhammad Asyam Jayanegara</b> , Eny Palupi, Anuraga Jayanegara 3. PD106FI - Nutritional Powder Made from <i>Spirulina</i> sp. and Petek Fish for Pregnant Women as an Effort to Prevent Stunting - <b>Rina Maryati</b> , Eny Palupi, Drajat Martianto 4. PD105FI - A Comparison of the Nutritional Content between Fillet and Whole Grasshopper ( <i>Valanga Nigricornis</i> ) - <b>Nabila Sukma Priyatnasari</b> , Eny Palupi, Katrin Roosita, Ahmad Sulaeman, Ade Chandra Iwansyah Moderator: Dr. Ir Moderator: Lilik Kustiyah, MSi - IPB University	<a href="https://ipb.link/icnf2024-zoom4">https://ipb.link/icnf2024-zoom4</a>  Meeting ID: 930 8089 7339 Passcode: 131724
11.35 - 11.55	Poster presentation session 5	
	1. PD042CO - Anemia and Its Related Factors in Female Workers in A Cigarette Factory in Kudus Regency, Central Java, Indonesia - <b>Purbowati</b> , Susi Nurohmi, Rizki Widyan Aisya 2. PD046CO - Correlation of Betel Nut ( <i>Areca catechu</i> L) consumption with Hemoglobin (Hb) Levels and Mid Upper Arm Circumference (MUAC) of Pregnant Women in Jayapura Regency, Papua - <b>Sarni Rante Allo Bela</b> , Annisaa Maharani Halim 3. PD133CO - Exploring the Relationship Between Family Income, Food Purchasing Power, and Nutritional Adequacy in Babakan Village's Elementary School Children - <b>Resa Ana Dina</b> , Annisa Putri Rahardianty 4. PD138CO - Household income and Nutrient Adequacy in Women of Reproductive Age: A Study in Babakan Village, Indonesia - <b>Resa Ana Dina</b> , Fidela Nailan Faza Prasetyaji	<a href="https://ipb.link/icnf2024-mainzoom">https://ipb.link/icnf2024-mainzoom</a>  Meeting ID: 947 5276 0550 Passcode: 559675
12.00 - 13.05	Lunch Break	
13.05 - 13.55	Plenary session 6: <b>Prof. Eleni Andreou, RDN, DProf, FHEA</b> - President of the Cyprus Dietetic and Nutrition Association, University of Nicosia, Cyprus "The Impact of Chrono-Nutrition on Health, Well-Being, and Physical Performance" <i>Moderator: Prof. Dr. Ir. Sri Anna Marliyati, M.Si - IPB University</i>	
13.55 - 14.15	Poster presentation session 6	
	1. PD081CO - Risk Analysis of Overweight Among Adolescent Girls in the Wetland Region of Banjar Regency, South Kalimantan, Indonesia - <b>Atikah Rahayu</b> , Fahrini Yulidasari, Muhammad Irwan Setiawan, Siti Aisyah Solechah, Minna Salsabilla, Naima Nabila 2. PD095FN - Exploring Patient Satisfaction and Food Waste: A Public Hospital Study Using The Acute Care Hospital Food Service Patient Satisfaction Questionnaire - <b>Fathira Armanda</b> , Reisi Nurdiani, Tiurma Sinaga 3. PD021FI - Effectiveness of Catfish Nuggets to Improve Nutritional Status and Prevent Stunting in Toddler - <b>Sus Widayani</b> , Muhammad Ansori, Bambang Triatma, Romiyatun Mijiling Astuti, Tri Hanan Soleh, Hasna Candra Ningsih, Ahmad Fadilah, Diel Piero Junior	<a href="https://ipb.link/icnf2024-mainzoom">https://ipb.link/icnf2024-mainzoom</a>  Meeting ID: 947 5276 0550 Passcode: 559675



Time (GMT+7)	Activity	Zoom Link
	Oral presentation session 5	
	<b>Zoom 1: Food Innovation</b> 1. PD009FI - Cookies Innovation from Moringa Flour and Soybean Flour as an Alternative Snack for Adolescent Girls to Prevent Anaemia - <b>Desika Winasti Imran</b> , Aldiza Intan Randani, Nurdin Rahman, Jamaluddin Sakung 2. PD062FI - Co-Fermentation of Lactic Acid Bacteria Producing Beta-Glucosidase during Tempeh Development Impact Tempeh Microbiome and Nutrient Composition - <b>Rio Jati Kusuma</b> , Aviria Ermamilia 3. PD043FI - Evaluation of Calcium (Ca) and Magnesium (Mg) Content of Sprinkles Produced from Chicken Feet and Mung Bean ( <i>Vigna radiata</i> ). - <b>Kurnia Dwi Juliani</b> , Hardinsyah, Eny Palupi, Isnati Dwijayanti 4. PD003FI - Wader-fish ( <i>Ambassis octava</i> ) and Kidney Beans Serve as a Supplementary Food: A Source of Protein and Minerals for Toddlers Aged 12-24 Months - <b>Eny Palupi</b> , Rachmalia Isn, Ninuk Purnaningsih, Yudhistira Saraswati, Wahyu Eka Putri, Ade Chandra Iwansyah <i>Moderator: Prof. drh. M. Rizal M.Damanik, M.Rep.Sc., Ph.D - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom1">https://ipb.link/icnf2024-zoom1</a>  Meeting ID: 958 0194 9796 Passcode: 489259
14.15 - 15.15	<b>Zoom 2: Food Innovation</b> 1. PD127FI - Development of Plant-Based Milk from Pigeon Peas and White Rice for Vegetarians - <b>Rifka Elizabeth</b> , Reisi Nurdiani, Zuraidah Nasution 2. PD007FI - Increasing the dietary fiber content of chicken sausage with pigeon pea ( <i>Cajanus cajan</i> ) flour - <b>Jeallyza Muthia Azra</b> , Hendra Wijaya, Dr. Zuraidah Nasution 3. PD059FI - Effect of Cowpea ( <i>Vigna unguiculata</i> (L.) Walp) Substitution on Tannin Content, Protein Content and Protein Digestibility of Sorghum ( <i>Sorghum bicolor</i> (L.) Moench) Sprouted Rice - <b>Endah Wulandari</b> , Desi Harneti Putri Huspa, Afra Hafny Noer, Fitri Filianti 4. PD107FI - Feeling of Fullness High-Fiber Purple Sweet Potato ( <i>Ipomoea batatas</i> ) and Kidney Bean ( <i>Phaseolus vulgaris</i> ) Extrudate in Obese People - <b>Fahrian Aif Afwan</b> , Ananda Ragil Septhiani, Eny Palupi, Resa Ana Dina <i>Moderator: Assoc. Prof. Dr. Gan Wan Ying - Universiti Putra Malaysia</i>	<a href="https://ipb.link/icnf2024-zoom2">https://ipb.link/icnf2024-zoom2</a>  Meeting ID: 989 1065 8158 Passcode: 251426
	<b>Zoom 3: Community Nutrition</b> 1. PD068CO - Providing Blood Supplement Tablets to Adolescent Girls in Schools Based on Regions in Indonesia - <b>Haerawati Idris</b> , Efrisna Pratiwi 2. PD072CO - Friends and Parents' Support Factors in the Habits of Eating Sweet Snacks among Adolescents in the Suburbs of Palu City - <b>Nikmah Utami Dewi</b> , Diah Ayu Hartini, Siti Aisyah Solechah, Rasyika Nurul Fadriah 3. PD066CO - The Effect of Interactive Learning on Nutritional Knowledge among Teachers, Parents and Students at Primary Schools in Central Java - <b>Emma Rachmawati</b> , Yuyun Umniyatun, Hidayati, Lia Kharisma Saraswati, Virgo Sulistio Gohardi, Didin Sahidin, Eka Wulandari, Mochamad Iqbal Nurmansyah 4. PD111FN - A Survey of Sodium Content in Processed Food in Bengkulu City based on Food Labels - <b>Risda Yulianti</b> , Okdi Natan, Vina Dwinata, Dahrizal <i>Moderator: Dr. Siti Raihanah Shafie - Universiti Putra Malaysia</i>	<a href="https://ipb.link/icnf2024-zoom3">https://ipb.link/icnf2024-zoom3</a>  Meeting ID: 992 4535 7003 Passcode: 687712
	<b>Zoom 4: Community Nutrition</b> 1. PD101CO - The Relationship Between Parenting Patterns and Socio-Economic with Feeding Difficulties in Toddler - <b>Lidia Fitri</b> , Afritayeni, Penti Dora Yanti, Evis Ritawani Hasibuan, Silvia Nova 2. PD114CO - Mother's Knowledge and Parenting Practices for Stunted and Non-Stunted Children Under Three in Bogor City - <b>Dwi Hastuti</b> , Melly Latifah, Raihan 'Ainun Hasanah 3. PD089CO - Effectiveness of Self-Directed Online Learning in Stunting Knowledge Improvement Among Health Workers: A Pilot Study on Learning Center PDRC FPH UI. - <b>Wahyu Kurnia Yusrin Putra</b> , Asih Setiari, Latifah Farsia, Endang L. Achadi 4. PD092CO - The Influence of Economic Pressure and Financial Management on Parenting Quality in Stunted Children - <b>Nisrina Nurmahfuzhah</b> , Tin Herawati, Defina <i>Moderator: Hana Fitria Navratilova, S.Gz., M.Sc. - IPB University</i>	<a href="https://ipb.link/icnf2024-zoom4">https://ipb.link/icnf2024-zoom4</a>  Meeting ID: 930 8089 7339 Passcode: 131724
15.15 - 15.45	Special session 2: <b>Prof. Dr. Ir. Ahmad Sulaeman, MS</b> and <b>Dr. Dadi H. Maskar</b> - US Soy Export Council (USSEC) "The Potency of soymilk and other soy-based food products as alternative menu for Free Nutritious Food Program" and "Soy Food for Sustainable Human Development" <i>Moderator: Prof. Dr. Ir. Budi Setiawan, MS - IPB University</i>	
15.45 - 16.00	Best presenter & best paper award	<a href="https://ipb.link/icnf2024-mainzoom">https://ipb.link/icnf2024-mainzoom</a>
16.00 - 16.05	Conference report by Head of Organizing Committee	Meeting ID: 947 5276 0550 Passcode: 559675
16.05 - 16.10	Closing remark by Dean of Faculty of Human Ecology, IPB University	
16.10 - 16.15	Closing of the conference	



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# LIST OF SUMMARIES

## PLENARY SESSIONS

<b>Session 1</b>	Trending Diet and Lifestyles: Lesson Learned from Asia for Preventing Obesity and NCDs. <b>Hardinsyah</b> .....	39
<b>Session 2</b>	Triangulating Nutrigenomics, Metabolomics, and Microbiomics toward Precision Nutrition. <b>V. Karani</b> .....	40
<b>Session 3</b>	Food Insecurity and Metabolic Syndrome. <b>N. Sulaiman</b> .....	41
<b>Session 4</b>	Food Innovation for Sustainable Consumption. <b>N. Huda</b> .....	42
<b>Session 5</b>	Leveraging Food Loss and Waste in Southeast Asia as a Game Changer for a Sustainable Food System. <b>A. S. A. Barrion</b> .....	43
<b>Session 6</b>	The Impact of Chrono-nutrition on Health, Well-being, and Physical Performance. <b>E. Andreou</b> .....	44
<b>Special Session 1</b>	Development of a Sports Nutrition Education Program for Student-athletes: 'Eat to Win'. <b>S. P. Bird, A. Fuller</b> .....	45

## PRE-CONFERENCE SESSION

<b>PD010CL</b>	Reducing Blood Pressure through Intervention with A Herbal Drink of Moringa Leaf Date Extract. <b>T. Yuliyana, Rimbawan, E. Damayanthi, E. Palupi</b> .....	47
<b>PD002FI</b>	Blood Glucose Response to Kratom Tea ( <i>Mitragyna speciosa</i> Korth.). <b>D. Fadly</b> .....	48
<b>PD051CL</b>	Description of Body Image Perception and Its Relation to Nutrient Intake in Bodybuilders. <b>M. Sarli, H. Riyadi, B. Setiawan, R. Dzulhijjah</b> .....	49
<b>PD103CL</b>	The Effect of Instant Pumpkin-base Soups on the Nutritional Status, Blood Pressure, and Constipation Status of Elderly. <b>W.S. Irwan, B. Setiawan, A. Sulaeman, Hardinsyah, T. Muhandri</b> .....	50
<b>PD052FI</b>	Glycemic Index and Fibre Content of Wholemeal Bread with Addition of Bambara Groundnut ( <i>Vigna subterranea</i> L. Verdc). <b>A. Nufaisah, Rimbawan, Z. Nasution</b> .....	51
<b>PD014CO</b>	The Risk Factors of Dyslipidaemia and Obesity Incidence: Result from 2019 Cohort Study of NCDs in Bogor City. <b>A.D. Cantika, I. Ekayanti, Rimbawan, Sudikno</b> .....	52
<b>PD036CO</b>	Effects of Nutrition Education on the Scores of Nutrition Knowledge, Attitude, and Practice among Adolescent Girls in Bogor, Indonesia. <b>S. W. Azhari, R. Tande, Z. A. Z. Zulfani, E. Ramadani, K. R. Dinitya, A. F. Toruntju, L. Kustiyah, S. A. Marliyati</b> .....	53
<b>PD067FI</b>	Assessing Lipid Degradation as a Rancidity Indicator in Spirulina Snack Bar Fortified with Collagen. <b>E. W. Dewanti, K. Tarman, J. Santoso, Nurjanah, S. D. Hardiningtyas</b> .....	54



<b>PD069FI</b>	Exploration of Marine Fungal Endophytes from Buton Island, Southeast Sulawesi: Potential Antibacterial Metabolites for Functional Foods. <b>I. Isti'annah, K. Tarman, E. Lukitaningsih, M. A. Manggau, W. C. Lee, S. D. Hardiningtyas, R. F. Pari, S. H. Suseno</b> .....	55
<b>PD017FI</b>	Shelf-life Estimation of Jelly Drink Made from Bay Leaf ( <i>Syzygium polyanthum</i> ) Water Extract and Guava Juice ( <i>Psidium guajava</i> ). <b>S. Putri, S. A. Marliyati, B. Setiawan, Rimbawan</b> .....	56
<b>PD029FI</b>	Total Phenolic Content, Flavonoid Content and Antioxidant Potential of Purple Okra Extract Supplement. <b>M. Ni'maturrohmi, E. Damayanthi, Rimbawan</b> .....	57
<b>PD030FI</b>	Effect of Okra Mucilage Addition on Antioxidant Properties of Purple Okra ( <i>Abelmoschus esculentus</i> L. Moench) Pudding. <b>M. Jannah, E. Damayanthi, Z. Nasution</b> .....	58
<b>PD097FI</b>	Fatty Acid Composition of Fermented Buffalo Milk (Dadih) as Traditional Probiotics. <b>I. A. Saufani, S. A. Marliyati, E. Palupi, E. Handharyani</b> .....	59
<b>PD026FN</b>	Factors Associated with Food Security of Fisherman Household in West Java. <b>R. I. Syahputri, I. Tanziha, Y. F. Baliwati, D. R. Puspita</b> .....	60
<b>PD013FN</b>	Food Security and Its Determinants among Rural Households: A Case Study in Buwenge Eastern Uganda. <b>H. Kalinaki, D. Martianto, A. Khomsan, E. Palupi, H. Riyadi</b> .....	61
<b>PD071CO</b>	The Relationship of Energy and Macronutrient Intake with Nutritional Status of Obese Young Women in Bandung City. <b>P. Novitasari, Rimbawan, Hardinsyah, H. Riyadi</b> .....	62
<b>PD077FN</b>	Enhancing Food Security and Nutrition in Indonesia through Optimization of Post-harvest Management Strategies. <b>Y. K. R. Sujarnoko, N. D. Yuliana, H. N. Lioe</b> .....	63
<b>PD074CO</b>	Perceived Behavioral Control and Habit are Potential Factors in Reducing Plate Waste Practices. <b>Y. Indarti, A. Khomsan, D. Martianto, I. Ekayanti</b> .....	64
<b>PD116CO</b>	The Role of Family Function, Social Support, Postpartum Depression, and Maternal Parenting Practices on Infant Growth. <b>F. A. Nurfurqoni, D. Hastuti, E. Sunarti, Y. E. Riany</b> .....	65
<b>PD078CO</b>	Estimated of Protein and Iron Intake Quality among Stunted and Non-stunted Children in Malang City. <b>W. Willyanti, H. Riyadi, Z. Nasution</b> .....	66
<b>PD083FI</b>	Impact of Extruded Feed Ingredient on Meat Quality of Broiler Chickens: A Meta Analysis. <b>S. T. Risyahadi, Sukarman, H. A. Sukria, Y. Retnani, I. Wijayanti</b> .....	67
<b>PD135CO</b>	Consumption of Sugar Sweetened Beverages, Body Mass Index and Body Composition among College Student. <b>M. Hardiah, Rimbawan, M. Dewi</b> .....	68





<b>PD037CO</b>	Asociation between Early Initiation of Breastfeeding (EIB), Mother's Knowledge of Growth and Development with the Nutritional Status Wasting Toddlers in East Nusa Tenggara (NTT). <b>I. Shagti, A. Khomsan, M. Dewi, S. A. Marliyati, M. Latifah</b> .....	69
<b>PD129CO</b>	Analysis of Risk Factors for Oxidative Stress in the Kulon Progo Batik Industrial Area. <b>J. N. Aisyah, I. Tanziha, M. Dewi, D. A. A. Nugrahaningsih</b> .....	70
<b>PD131CO</b>	Association between Mid-upper Arm Circumference and Low Birth Weight among Pregnant Women in Rural Bogor. <b>K. Ashraf, M. Dewi, Rimbawan</b> .....	71
<b>PD032FN</b>	The Effect of Nudging on Food Waste among Adolescents in School Dining: A Literature Review. <b>A. E. Yuniato, H. Riyadi, A. Khomsan, Y. F. Baliwati</b> .....	72
<b>PD132CO</b>	Nutrient Loss among Urban Households in Bogor City, Indonesia. <b>A. M. Soliha, D. Briawan, C. M. Dwiriani, P. D. Swamilaksana</b> .....	73
<b>PD085CO</b>	Breastfeeding Culture among the Kaili Tribe in Sigi Regency, Central Sulawesi: A Qualitative Study. <b>H. Mulyati, K. Roosita, S. A. Marliyati, I. W. G. A. E. Putra</b> .....	74

## CLINICAL NUTRITION

<b>PD022CL</b>	The Relationship between Body Composition, Physical Fitness, and Primary Dysmenorrhea among Adolescents of Urban Area. <b>D. R. Purwaningtyas, A. Fitriani, R. D. Alnur</b> .....	76
<b>PD045CL</b>	Nutrition Management for Ischemic Stroke Patient with Hemorrhagic Transformation, Hemiparesis Dextra and Dysphagia: A Case Report. <b>F. S. P. Prameswari, N. M. Nurdin</b> .....	77
<b>PD090CL</b>	Knowledge, Attitudes and Consumption Patterns after Nutritional Counseling in Patients with Coronary Heart Disease at Regional Public Hospital Dr. M. Yunus Bengkulu 2024. <b>A. D. Pratiwi, Kusdalinah, A. Wahyudi</b> .....	78
<b>PD100CL</b>	The Effect of Ashwagandha ( <i>Withania somnifera</i> ) on Sport Endurance and Muscle Recovery, A Mini Review. <b>P. A. W. Wijaya, N. W. S. Ekayanti, T. Subrata</b> .....	79
<b>PD123CL</b>	The Potential of Dayak Tribal Herbal Leaves as an Anti-breast Cancer Agent: In Silico Approach. <b>V. K. Setiawan, A. A. A. Murtadlo, A. N. M. Ansori, V. D. Kharisma, D. D. R. Turista</b> .....	80
<b>PD126CL</b>	Lifestyle and Aerobic Fitness in Youth Volleyball Athletes. <b>R. C. Dewi, C. Supriyanto, R. I. Avandi, I. Nurmaya</b> .....	81
<b>PD128CL</b>	Dietary Inflammatory Level and Nutritional Status among Breast Cancer Patients in Bogor City General Hospital. <b>M. Dewi, J. G. Semira, M. Robinson</b> .....	82

## COMMUNITY NUTRITION

<b>PD005CO</b>	The Effect of DASH (Dietary Approaches to Stop Hypertension) Diet Education Using Lectures and Leaflet Media on Diet Compliance Among Hypertension Patients. <b>T. F. A. Atmadja, S. E. Fitriany, D. Betaditya, L. D. Puspareni, L. Y. Nurhamzah, R. Fikrinnisa, I. S. Aisyah, Neni, A. Nuraelah, A. E. Yuniato, N. A. Q. A'yunin</b> .....	84
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<b>PD011CO</b>	The Relation of Feeding Patterns and History of Infectious Diseases with the Stunting Incident in Child Aged 6–23 Months in West Bontang Health Center. <b>N. C. Suwuh, I. Kamaruddin, E. L. Safika</b> .....	85
<b>PD012CO</b>	Nutritional Supplementation Combined with Balanced Diet & Environmental Health Education Improved the Conversion of Latent Tuberculosis Infection and Daily Nutrients Intake. <b>S. Samsidi, S. Fahri, R. N. Fauziyah, M. Dewi, F. Khairat, E. S. Putra</b> .....	86
<b>PD015CO</b>	Association between Stress Level, Dietary Pattern, and Smoking Habit with Central Obesity in PT Raputra Jaya Ferry Crews. <b>B. J. Imaniar, I. M. B. Ilmi, F. A. Arini</b> .....	87
<b>PD018CO</b>	The Relationship of Physical Fitness, Nutritional Status, Quality of Life and Academic Achievement in Students. <b>M. I. Setiawan, N. A. Hasibuan, A. N. Pahlavie, F. Yulidasari, S. A. Solechah</b> .....	88
<b>PD019CO</b>	Factors Associated with Central Obesity among Adults in UIN Syarif Hidayatullah Jakarta. <b>Yustiyani, Febrianti, M. I. Nurmansyah</b> .....	89
<b>PD020CO</b>	Balanced Nutrition Messages Competence Parents of Raudhatul Athfal Students and Kindergarten Parents in Semarang City. <b>L. Widajanti</b> .....	90
<b>PD023CO</b>	Predictors of Breastfeeding Self Efficacy among Postpartum Women at RSUD IA Moeis Samarinda. <b>F. N. Hastuti, R. W. Wisnuwardani, I. Kamaruddin</b> .....	91
<b>PD024CO</b>	Knowledge to Action: Evaluating the Impact of the Royco Nutrimenu Programme on Mothers' Practice in Complementary Feeding. <b>D. Briawan, E. Alfiah, F. D. Rokhmah, M. Aries</b> .....	92
<b>PD028CO</b>	Spatial Analysis of Metabolic Syndrome among Health Workers in a Sub-urban Area. <b>A. Apriningsih, F. A. Arini, E. Meiyetriani</b> .....	93
<b>PD035CO</b>	Diet Quality, Physical Activity and Nutritional Status of School Going Adolescent in West Aceh Indonesia. <b>R. S. Dewi, C. M. Dwiriani, A. Khomsan</b> .....	94
<b>PD038CO</b>	Gender Relations in Fisherman's Families. <b>D. R Puspita, I. Tanziha, R. I. Syahputri</b> .....	95
<b>PD039CO</b>	Relationship Between Eating Habits, Sleep Duration, Nutritional Status, and Stress Levels with the Incidence of Hypertension in Adults In Central Jakarta. <b>J. W. Hidayat, A. Q. Marjan, N. I. Sofianita, D. L. Sufyan</b> .....	96
<b>PD040CO</b>	Differences of Type of Foods Consumed by Households in Urban and Rural West Java, Indonesia. <b>V. A. Nurhidayati, H. Riyadi</b> .....	97
<b>PD041CO</b>	Effect of Ramadan Fasting on Body Weight and Percent of Body Fat Among Student from Program Nutrition Study of UPN "Veteran" Jakarta, Indonesia. <b>W. A. Nurjanah, U. Wahyuningsih, A. Q. Marjan, S. F. Simanungkalit</b> .....	98
<b>PD042CO</b>	Anemia and Its Related Factors in Female Workers in A Cigarette Factory in Kudus Regency, Central Java, Indonesia. <b>Purbowati, S. Nurohmi, R. W. Aisya</b> .....	99



<b>PD046CO</b>	Correlation of Betel Nut ( <i>Areca catechu</i> L) Consumption with Hemoglobin (Hb) Levels and Mid Upper Arm Circumference (MUAC) of Pregnant Women in Jayapura Regency, Papua. <b>S. R. A. Bela, A. M. Halim..</b>	100
<b>PD047CO</b>	Association between Obesity, Cardiometabolic Risk, and Body Composition in Gorontalo Women. <b>Nuryani, A. Khomsan, M. Dewi, C. M. Dwiriani, W. Lukito</b> .....	101
<b>PD049CO</b>	Relationship between Diet Quality and Eating Speed with Nutritional Status of Adolescents in Jakarta, Indonesia. <b>J. N. Christsanta, C. M. Dwiriani, P. H. Rachman</b> .....	102
<b>PD053CO</b>	Association of Prudent-diet and Sweet Food with the Risk of Stress, Anxiety, and Depression among Students. <b>N. R. Mayasari, N. M. Shofia, L. A. Sholihah, A. Ruhana, C. Y. Dini</b> .....	103
<b>PD054CO</b>	The Correlation between Fatsecret Application Use with Eating Behavior, Physical Activity, and Weight Changes of College Students. <b>N. Tifallinuha, C. M. Dwiriani</b> .....	104
<b>PD058CO</b>	Effect of Tele-nutrition Education on Weight Loss, Energy and Fat Adequacy among Obese Adults in Banyumas, Central Java, Indonesia. <b>T. J. Prasetyo, I. N. Khoiriani, S. A. Wicaksari, G. R. Ramadhan</b> .....	105
<b>PD060CO</b>	The Impact of Digital Training with Mentoring on Early Childhood Education Teacher's Knowledge and Practices Related to Nutrition and Health. <b>N. Herawati, B. Nuraeni, R. Efendi, Y. Herlina, N. Kusumaningtyas, R. Zam Zam, Rudianto, Y. Natakusuma, A. M. Ramadhan</b> .....	106
<b>PD061CO</b>	Animal-source Food Consumption and Its Contribution to Iron Adequacy of Women of Reproductive Age in Indonesia. <b>A. S. A. Adha, D. Briawan, D. Sukandar</b> .....	107
<b>PD063CO</b>	Socio-economic Inequality Factors Predicting Food Security Index in 514 Districts of Indonesia: A Supervised Machine Learning Regression Analysis. <b>E. Meiyetriani, Apriningsih, B. Utomo, D. N. Iswarawanti</b> .....	108
<b>PD066CO</b>	The Effect of Interactive Learning on Nutritional Knowledge among Teachers, Parents and Students at Primary Schools in Central Java. <b>E. Rachamawati, Y. Umniyatun, Hidayati, L. K. Saraswati, V. S. Gohardi, D. Sahidin, E. Wulandari, M. I. Nurmansyah</b> .....	109
<b>PD068CO</b>	The Coverage of School Based Iron Supplementation among Adolescent Girls in various Regions in Indonesia. <b>H. Idris. E. Pratiwi</b> .....	110
<b>PD070CO</b>	Care Empowerment for Preventing Child Malnutrition: Lessons from the Psychosocial Recovery of 2009 Tasikmalaya Earthquake Survivors. <b>E. Sunarti</b> .....	111
<b>PD072CO</b>	Influence of Peer and Parental Support on Sweet Snack Consumption Habits among Suburban Adolescents in Palu City. <b>N. U. Dewi, D. A. Hartini, S. A. Solechah, R. N. Fadrijah</b> .....	112
<b>PD073CO</b>	Consumption Pattern of High-sugar Processed Foods among Patients with Diabetes. <b>L. Sutanti, R. Yulianti, T. W. Witradharma, M. Mahyuddin</b> ...	113



<b>PD075CO</b>	Comparison of Food Security and Nutritional Status of Adolescent Girls in Highlands and Coastal Areas in Garut Regency, West Java. <b>D. Herdiansyah, B. Setiawan, I. Tanziha, D. Martianto</b> .....	114
<b>PD076CO</b>	Impact of Macronutrient Intake and Child Eating Behaviour (Picky Eating) on Growth in Toddlers. <b>C. Torizella, Y. A. Prihandini</b> .....	115
<b>PD078CO</b>	Estimated Protein and Iron Intake Quality among Stunted and Non-stunted Children in Malang City. <b>W. Willyanti, H. Riyadi, Z. Nasution</b> .....	116
<b>PD079CO</b>	Family Characteristics Determine Primary School Student's Nutritional Knowledge, Attitude, and Practice. <b>S. A. Marliyati, D. Hastuti, S. Madanijah, F. S. P. Prameswari, M. N. Hasanah, R. Y. Pohan, K. Wibowo</b> .....	117
<b>PD080CO</b>	Analysis of Food Security and Dietary Diversity Patterns among Female Farmer Workers in Lombok Tengah, Indonesia. <b>L. Yunita</b> .....	118
<b>PD081CO</b>	Risk Analysis of Overweight among Adolescent Girls in the Wetland Region of Banjar Regency, South Kalimantan, Indonesia. <b>A. Rahayu, F. Yulidasari, M. I. Setiawan, S. A. Solechah, M. Salsabilla, N. Nabila</b> .....	119
<b>PD082CO</b>	Consumption of Legumes and Its Products among Indonesian Population Aged 19 to 55 Years Old. <b>Y. S. Hidayah, D. Briawan</b> .....	120
<b>PD084CO</b>	Household Food Security, Dietary Diversity and Nutritional Status of Children 6-59 Months Old in Lombok Tengah, Indonesia. <b>L. J. Utama, L. Yunita, L. K. Abdi, I. G. N. Widiada, AASP Chandradewi, M. Darawati</b> .....	121
<b>PD089CO</b>	Effectiveness of Self-directed Online Learning in Stunting Knowledge Improvement Among Health Workers: A Pilot Study on Learning Center PDRC FPH UI. <b>W. K. Y. Putra, A. Setiarini, L. Farsia, E. L. Achadi</b> .....	122
<b>PD091CO</b>	Digital-based Nutrition Education on Nutrition Knowledge and Behaviors in Adolescents: A Systematic Review. <b>D. D. Fahrizki, C. M. Dwiriani, A. Khomsan</b> .....	123
<b>PD092CO</b>	The Influence of Economic Pressure and Financial Management on Parenting Quality in Stunted Children. <b>N. Nurmahfuzhah, T. Herawati, Defina</b> .....	124
<b>PD094CO</b>	Effect of Changes in Dietary Fiber on Lipid Profile of Obese Adults in Bogor City. <b>F. D. Rokhmah, D. Briawan, I. Ekayanti, Sudikno</b> .....	125
<b>PD098CO</b>	Relationship between Body Image, Parental and Peer Influence with Nutritional Status of Adolescents in Rural Areas of Sigi Regency. <b>I M. Arisadana, N. U. Dewi, S. A. Solechah, S. Krisnasari, K. Sanjaya</b> .....	126
<b>PD101CO</b>	The Relationship between Parenting Patterns and Socio-economic with Feeding Difficulties in Toddler. <b>L. Fitri, Afritayeni, P. D.Yanti, E. R. Hasibuan, S. Nova</b> .....	127
<b>PD108CO</b>	Physical Activity and Milk Consumption were Associated with Nutritional Status of School-age Children at Primary School in Kaliorang, East Kutai. <b>D. Zahwa, S. A. Solechah, A. Nisa, S. Yudistira, A. Rahayu, F. Yulidasari, M. I. Setiawan</b> .....	128



<b>PD110CO</b>	The Effect of e-Health-Based Nutrition Education for Improving Hedonic Hunger, Dietary Energy Density, and Body Mass Index in Overweight and Obese Adult Women. <b>A. Rusyantia, A. Khomsan, C. M. Kusharto, H. Pratomo</b> .....	129
<b>PD113CO</b>	Mindful Eating Practices, Diet Quality and Nutritional Status of Institut Pertanian Bogor (IPB) University Students. <b>M. Aries, K. T. Megahandayani</b> .....	130
<b>PD114CO</b>	Mother's Knowledge and Parenting Practices for Stunted and Non-stunted Children under Three in Bogor City. <b>D. Hastuti, M. Latifah, R. A. Hasanah</b> .....	131
<b>PD115CO</b>	Maternal Parenting Efficacy, Mother-child Attachment, Home Parenting Environment, and Child Development: Analysis on Stunted and Non-stunted Children in Bogor City. <b>M. Latifah, N. Hernawati, Y. E. Riany, R. A. Hasanah</b> .....	132
<b>PD117CO</b>	Early Marriage: Early Motherhood and Its Linkage on Family Food Security. <b>W. Humayrah, A. S. Nurusalimah, T. Yusnita, H. B. Sukamdani</b> .....	133
<b>PD118CO</b>	Residential and Socio-economic Difference in Protein Intake among Children Aged 6-35 Months in Indonesia: The 2014 Individual Food Consumption Survey. <b>A. V. R. Mauludyani, Suparmi, Y. Wibowo</b> .....	134
<b>PD119CO</b>	Vegetable Consumption in Seven Big Cities in Indonesia. <b>K. R. Ekawidyani, Rimbawan, A. V. R. Mauludyani, Yustiyan, Y. Toride</b> .....	135
<b>PD121CO</b>	Office Worker has Better Dietary Habits and Physical Activity when Work-From-Home (WFH) than Work-From-Office (WFO) during Covid-19 Pandemic. <b>N. M. Nurdin, A. Rachmah</b> .....	136
<b>PD133CO</b>	Exploring the Relationship Between Family Income, Food Purchasing Power, and Nutritional Adequacy in Babakan Village's Elementary School Children. <b>R. A. Dina, A. P. Rahardianty</b> .....	137
<b>PD137CO</b>	Effectiveness of Providing Healthy Local Snacks on the Nutritional Status of Pregnant Women with Chronic Energy Deficiency (CED). <b>M. K. Dasmase, Hardinsyah, M. Dewi, I. Ekayanti</b> .....	138
<b>PD138CO</b>	Household Income and Nutrient Adequacy in Women of Reproductive Age: A Study in Babakan Village, Indonesia. <b>R. A. Dina, F. N. F. Prasetyaji</b> .....	139

## FOOD INNOVATION

<b>PD001FI</b>	Reduction of Cyanide Concentration in Cassava by Lactic Acid Bacteria Fermentation: A Meta-analysis. <b>M. A. Jayanegara, E. Palupi, A. Jayanegara</b> .....	141
<b>PD003FI</b>	Development of Wader-fish ( <i>Rasbora argyroteenia</i> ) and Kidney Beans as a Supplementary Food: A Source of Protein and Minerals for Toddlers Aged 12-24 Months. <b>E. Palupi, R. Isn, N. Purnaningsih, Y. Saraswati, W. E. Putri, A. C. Iwansyah</b> .....	142





<b>PD004FI</b>	Antioxidant and Nutrient Profile of Instant Powdered Drink Made from Bajakah ( <i>Spatholobus littoralis</i> Hassk) and Tiwai Onion ( <i>Eleutherine americana</i> Merr) Extracts. <b>B. Saragih, A. C. Nababan, D. Pawwang, M. Rohmah, M. M. Banin</b> .....	143
<b>PD006FI</b>	Survival of the Probiotic <i>Lactobacillus Plantarum</i> Encapsulated with Skim Milk and Maltodextrin. <b>E. Damayanthi, E. I. Rianti, Yopi, H. Rizqianti</b> .....	144
<b>PD007FI</b>	Increasing the Dietary Fibre Content of Chicken Sausage using Pigeon Pea ( <i>Cajanus cajan</i> ) Flour. <b>J. M. Azra, H. Wijaya, Z. Nasution</b> .....	145
<b>PD009FI</b>	The Development Cookies from Moringa and Soybean Flour as an Alternative Snack for Adolescent Girls. <b>D. Winasti Imran, A. Intan Randani, N. Rahman, J. Sakung</b> .....	146
<b>PD016FI</b>	Kepok Banana Starch ( <i>Musa paradisiaca</i> Formatypica) and Moringa ( <i>Moringa oleifera</i> )-based Prebiotic Products as Functional Food for Wistar Strain Female Rats. <b>F. Luthfiyah, R. Ikayanti, F. Dwipajati, D. N. Iswarawanti</b> .....	147
<b>PD021FI</b>	Effectiveness of Catfish Nuggets to Improve Nutritional Status and Prevent Stunting in Toddler. <b>S. Widayani, M. Ansori, B. Triatma, R. M. Astuti, T. H. Soleh, H. C. Ningsih, A. Fadilah, D. P. Junior</b> .....	148
<b>PD025FI</b>	Mocaf Flour, Moringa Leaf Flour, and Mackerel Flour Food Bars as Emergency Food Product (EFP) for Autistic Children in Disaster Condition. <b>M. V. Olivia, Y. C. Octaria, I. M. B. Ilmi, N. Nasrullah</b> .....	149
<b>PD031FI</b>	Snack Bars from Sago Worm Paste ( <i>Rhynchophorus ferrugineus</i> ) as an Alternative Food: Nutrients Content and Sensory Properties. <b>M. Canti, S. Muliawan</b> .....	150
<b>PD033FI</b>	Local Wisdom-based Instant Cream Soup Products as Functional Emergency Food for Health Crisis and Disaster Condition. <b>W. Estuti, L. Wayansari, N. Rahman, I. Nurul Alfiyah, Samuel, P.E. Giriwono, Kusmiyati, S. Pertiwi, E. Rohmatin, V. A. Rahmawati</b> .....	151
<b>PD043FI</b>	Evaluation of Calcium (Ca) and Magnesium (Mg) Content of Sprinkles Produced from Chicken Feet and Mung Bean ( <i>Vigna radiata</i> ). <b>K. D. Juliani, Hardinsyah, E. Palupi, I. Dwijayanti</b> .....	152
<b>PD048FI</b>	The Nutritional Content and Physical Characteristics of Sago Starch and Oyster Mushrooms as Potential Functional Food Ingredients. <b>Rahmawati, E. Damayanthi, B. Setiawan, E. Palupi, L. P. Sari, F. Wahyuni</b> .....	153
<b>PD059FI</b>	Effect of Cowpea ( <i>Vigna unguiculata</i> (L.) Walp) Substitution on Tannin, Protein, and in vitro Protein Digestibility of Sorghum ( <i>Sorghum bicolor</i> (L.) Moench) Sprouted Rice. <b>E. Wulandari, D. H. P. Huspa, A. H. Noer, F. Filianty</b> .....	154
<b>PD062FI</b>	Co-fermentation of Lactic Acid Bacteria Producing Beta-Glucosidase during Tempeh Development Impact Tempeh Microbiome and Nutrient Composition. <b>R. J. Kusuma, A. Ermamilia</b> .....	155
<b>PD064FI</b>	Physicochemical and Sensory Characteristics of Yoghurt with Added Mesocarp or Epicarp and Endocarp from Pumpkin ( <i>Cucurbita moschata</i> ). <b>J-J. Ang, K-Y. Lim, A-L. Ho</b> .....	156





<b>PD065FI</b>	Effect of Inulin and Xanthan Gum on the Properties of Sugar-free Green Saba Banana Flour Biscuit. <b>J-S. Lee, Y-L. Lau</b> .....	157
<b>PD086FI</b>	Preliminary Study on the Effects of Nixtamalization on Nutrition and Anti-nutrition Properties of Red Sorghum ( <i>Sorghum bicolor</i> L.). <b>E. Maryana, I. Sukarti, A. Saepudin, N. Kusumawaty, D. Tjokrokusumo, I. Mulawati P. N., U. Purwandari</b> .....	158
<b>PD093FI</b>	Gluten-free Instant Cup Noodles Based on Mocaf Flour. <b>D. Ariani, E. R. N. Herawati, R. Nurhayati, M. Angwar</b> .....	159
<b>PD096FI</b>	Optimizing the Sensory Profile of 'Daygurt': A Functional Blend of Dadih and Yoghurt Using Response Surface Methodology. <b>Gusnedi, N. A. Habibi, W. Sartika, Ismanilda</b> .....	160
<b>PD099FI</b>	Physical and Organoleptic Characteristics of Meltique Beef Steak Injected with Virgin Coconut Oil Emulsion, a Protein Source Food to Prevent Stunting. <b>A. Apriantini, N. C. Dainy, W. Humayrah, K. Nurzahra, E. L. Aditia</b> .....	161
<b>PD104FI</b>	Physicochemical, Nutritional Content and Organoleptic of Meltique Beef Steak Injected with Different Concentrations of Coconut Oil ( <i>Cocos nucifera</i> L.). <b>D. P. Sari, A. Apriantini, C. Budiman, N. C. Dainy, W. Humayrah, E. L. Aditia</b> .....	162
<b>PD105FI</b>	A Comparison of the Nutritional Content between Fillet and Whole Grasshopper ( <i>Valanga nigricornis</i> ). <b>N. S. Priyatnasari, E. Palupi, K. Roosita, A. Sulaeman, A. C. Iwansyah</b> .....	163
<b>PD106FI</b>	Nutritional Powder Made from <i>Spirulina</i> sp. and Petek Fish ( <i>Leiognethus splendens</i> ) for Pregnant Women to Prevent Stunting in Their Babies. <b>R. Maryati, E. Palupi, D. Martianto</b> .....	164
<b>PD107FI</b>	Feeling of Fullness Following Intake of High-fiber Purple Sweet Potato ( <i>Ipomoea batatas</i> ) and Kidney Bean ( <i>Phaseolus vulgaris</i> ) Extrudate in Obese Subjects. <b>F. A. Afwan, A. R. Septhiani, E. Palupi, R. A. Dina</b> .....	165
<b>PD109FI</b>	Optimization of Ready-to-drink Chrysanthemum Flower Tea Formulation Based on Bioactive Compounds and Sensory Properties. <b>E. Julianti, L. M. Lubis, M. Gunawan</b> .....	166
<b>PD109FI</b>	Fortified with Moringa Leaf Powder. <b>K. Bess, Y. Wallace</b> .....	167
<b>PD120FI</b>	Nutritional Composition and Organoleptic Quality of Instant Local Black Rice ( <i>Cempo ireng</i> ) with Moderate Glycemic Index. <b>A. D. Nurhayati, A. Nirbaya1, C. P. Nusa, S. Soekopitojo, A. L. Kurniawan, D. D. Handoko, A. Hapsari, A. F. Sepbrina, D. O. W. Prastiwi, D. A. Puspitasari, N. Athaya, M. Y. A. Badwani, D. A. Araminta</b> .....	168
<b>PD122FI</b>	Knowledge Drives Food Choices: Meltique Meat Purchase Decisions in Urban Indonesian Households. <b>N. C. Dainy, W. Humayrah, A. Apriantini, A. K. Nisa</b> .....	169
<b>PD124FI</b>	Meltique Meat: Urban Household Consumer Behaviour and Perceptions. <b>W. Humayrah, N. C. Dainy, A. Apriantini, S. N.Ulya</b> .....	170



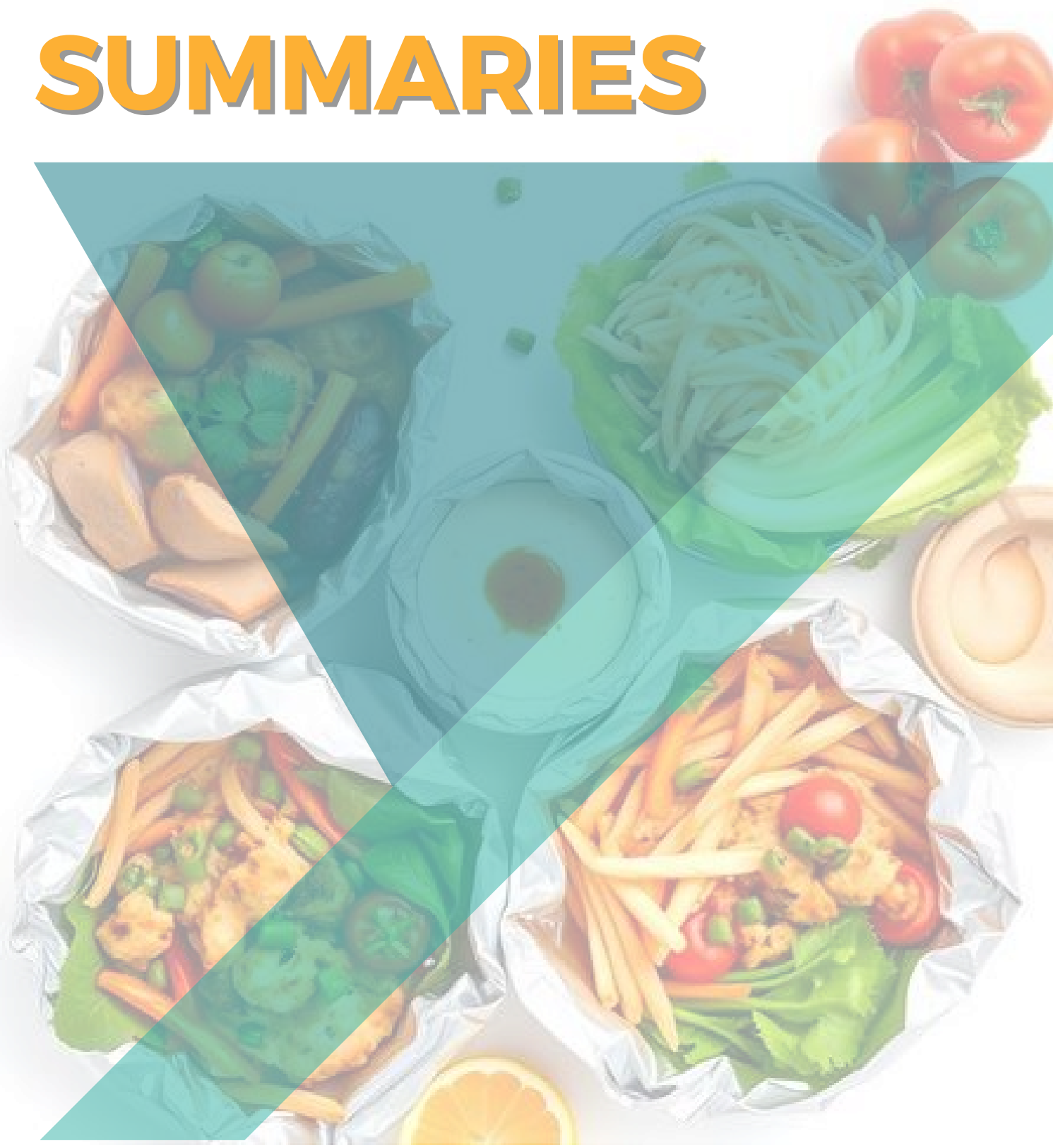
<b>PD125FI</b>	The Effect of Retort Process on Quality of Traditional Meat Products During Storage: Physical and Sensory Aspects. <b>S. Nurhasanah, K. A. R. Oktaviano, S. Huda</b> .....	171
<b>PD127FI</b>	Development of Plant-based Milk from Pigeon Peas and White Rice for Vegetarians. <b>R. Elizabeth, R. Nurdiani, Z. Nasution</b> .....	172
<b>PD130FI</b>	Fiber Source Taro-based Egg Roll Cookies Extends the Feeling of Fullness. <b>Sharannie, E. Palupi, F. Nurilmala, A. Jannah, N. Sonani</b> .....	173

## FOOD AND NUTRITION SYSTEM

<b>PD127FN</b>	Consumers and Producers' Preferences for Design of Sugar, Salt, and Fat Content Information and Health Messages on Processed and Ready-to-serve Food. <b>Rimbawan, Z. Nasution, S. Q. Nasir, D. Fajriaty, A. Sutrisna, E. Kurnia Sari, E. Susanti</b> .....	175
<b>PD034FN</b>	Implementation of Sustainable Healthy Diet in Urban Household Consumption. <b>P. D. Swamilaksita, Y. F. Baliwati, D. Martianto, D. Briawan, N. A. Laili</b> .....	176
<b>PD044FN</b>	Indonesian Consumers and Food Producers' Preferences for Sentences Style for Health Messages on Sugar, Salt, and Fat on Processed Food and Ready-to-serve Food. <b>Rimbawan, Z. Nasution, S. Q. Nasir, D. Fajriaty, A. Sutrisna, E. K. Sari</b> .....	177
<b>PD055FN</b>	Restaurant Food Waste Management Strategy in Asia Using the Restaurant Food Waste Map (RFWM) Approach. <b>E. Fajriah, D. Martianto, P. H. Rachman</b> .....	178
<b>PD087FN</b>	Designing Stunting Prevention Strategies for Coastal Households in Bengkulu Province. <b>E. Yuliantini, K. Sukiyono, B. Sulisty, Z. Yuliarso</b> .....	179
<b>PD095FN</b>	Patient Satisfaction and Food Waste: A Public Hospital Study. <b>F. Armanda, R. Nurdiani, T. Sinaga</b> .....	180
<b>PD102FN</b>	Household Food Insecurity in Rural and Urban West Java: The Need for Coping Strategies. <b>A. V. R. Mauludyani, A. Khomsan</b> .....	181
<b>PD111FN</b>	A Survey of Sodium Content in Processed Food in Bengkulu City based on Food Labels. <b>R. Yulianti, O. Natan, V. Dwinata, Dahrizal</b> .....	182

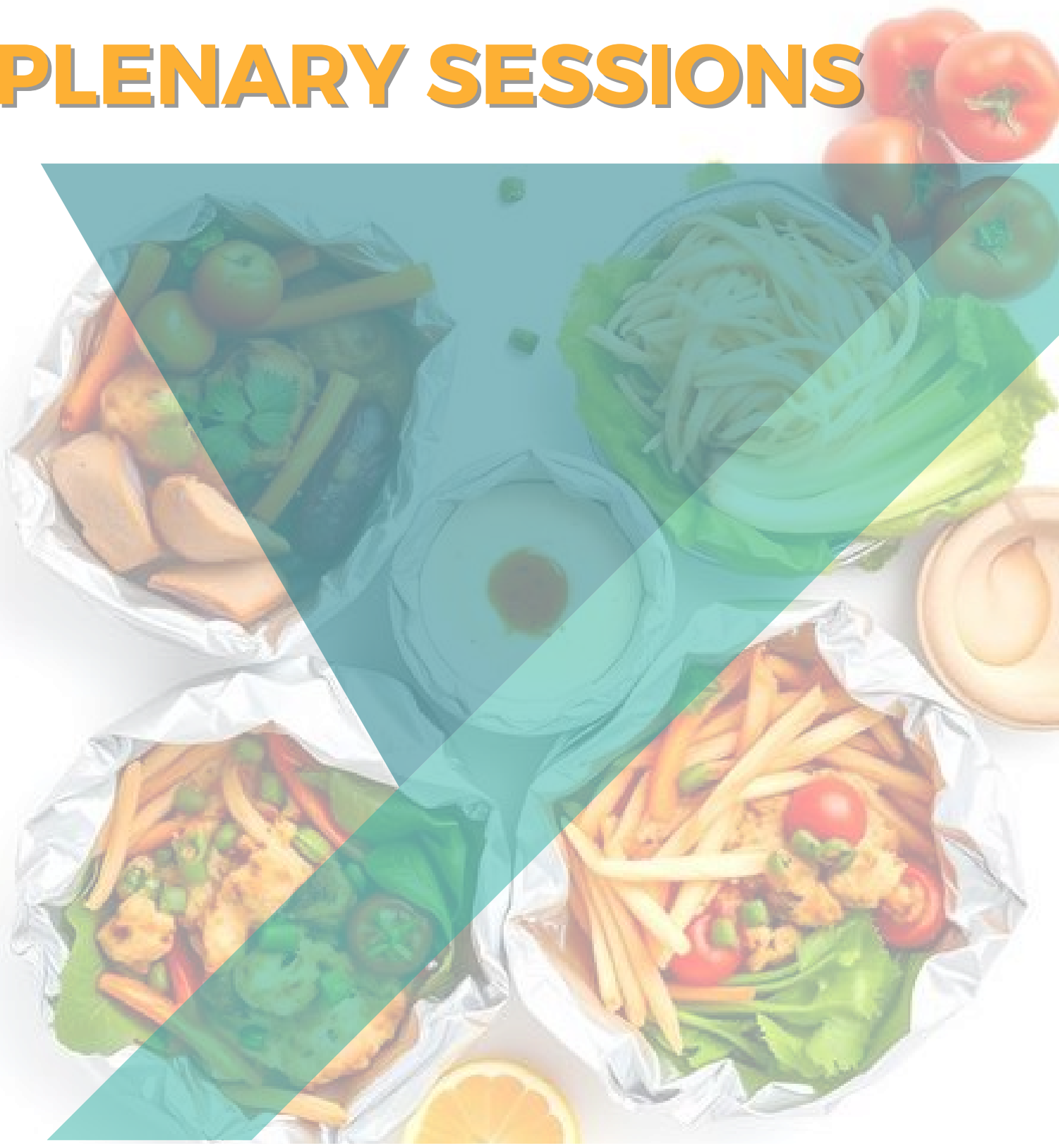


# SUMMARIES





# PLENARY SESSIONS



## **Triangulating Nutrigenomics, Metabolomics, and Microbiomics toward Precision Nutrition**

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### **Summary**

The ability of Nutrigenetics to determine what nutrients will produce the desired impact on metabolic balance (as influenced by individual genetic make-up) is at the core of Precision Nutrition. Nutrigenetics and Nutrigenomics serve as novel tools for nutritional research and help in mitigating the health-related problems of humans. Individuals differ from each other in their genetic makeup due to which individuals respond differently to various lifestyle factors such as diet and physical activity. These genetic differences are the key enabler of the emerging nutrigenetics and nutrigenomics areas of research. Obesity is a heritable trait that arises from the interactions between multiple genes and lifestyle factors such as unhealthy diet and physical inactivity. Dietary factors play an important role in the development of obesity because of the variation in the food that is being consumed in different parts of the world. Although several studies have examined the gene-nutrient interactions, the findings have been quite inconsistent and hence, unable to develop an optimum diet for each ancestral population. Some of the challenges in performing nutrigenetics and nutrigenomics research are genetic heterogeneity, lack of understanding of the metabolic pathways and insufficient sample size. With genome-wide association study (GWAS) data now available on numerous large cohorts, it has become possible to test for association and interaction on a much larger number of candidate genes than previously possible. Nutrigenetics has highlighted the complexity of gene-diet interactions, but it offers opportunities to re-evaluate criteria used to set dietary guidelines and the contribution of genetic variation to optimal nutrition for individuals from different ethnic groups. In line with this, a large-scale collaborative project called GeNulne (Gene-Nutrient Interactions) Collaboration that aims to develop personalized nutrition strategies based on the evidence from nutrigenetics, nutrigenomics, metabolomics, and gut microbiomics using cohorts from various ethnic groups has been initiated. If the interactions between genetic variations and nutritional requirements are better understood in various ethnic groups, dietary recommendations could be personalized according to genotype to ultimately promote health and reduce disease risk.





## **Food Insecurity and Metabolic Syndrome**

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### **Summary**

Food insecurity, defined as inadequate and inconsistent access to sufficient, safe, and nutritious food, is a significant global issue that disproportionately affects vulnerable populations. While traditionally linked to undernutrition, food insecurity is increasingly associated with obesity, poor diet quality, and the development of chronic diseases, particularly metabolic syndrome. Metabolic syndrome is a cluster of conditions, including hypertension, hyperglycemia, abdominal obesity, and dyslipidemia, which together elevate the risk of cardiovascular disease, stroke, and type 2 diabetes. The paradox of food insecurity and metabolic syndrome arises as individuals with limited access to healthy foods often consume inexpensive, calorie-dense, nutrient-poor diets, increasing the prevalence of obesity and related metabolic disorders. Chronic stress, a common consequence of food insecurity, further exacerbates metabolic risks by elevating cortisol levels, leading to increased fat deposition and insulin resistance. Vulnerable populations, including low-income households, racial and ethnic minorities, and children, are particularly susceptible to both food insecurity and metabolic syndrome, often experiencing long-term health consequences. Geographic and socioeconomic disparities amplify this issue, with food deserts and low-income regions exhibiting higher rates of both food insecurity and metabolic conditions. Addressing food insecurity is critical not only to alleviate hunger but also to mitigate the growing burden of metabolic syndrome and associated chronic diseases. Policy interventions aimed at increasing access to affordable, nutritious food, along with community-based programs, are essential in addressing this dual public health challenge and improving long-term health outcomes for at-risk populations.



## **Future Food for Sustainable Environment: Can We Use Insect as an Alternative Future Food?**

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### **Summary**

Insects are most diverse group of animals. They are present in almost every environment with few residing in oceans. It is estimated that 2,000 insects were consumed by 2 million people in more than 113 countries. Some countries reported on consumption of insects as part of their traditional diet. Consumption of edible insects can be promoted for three reasons, namely its positive impact on health, environment and livelihoods. Insects can serve as future solutions for foods due to a) source of protein and other nutrients, b) has economical advantage over conventional meats. Implementing innovative and sustainable food production strategies, such as insect farming, may contribute to several of the SDGs, which are interconnected. Most insects that are consumed are species in the orders Coleoptera (31%), Lepidoptera (18%) and Hymenoptera (14%), with others in Orthoptera (13%), Hemiptera (10%), Isoptera (3%), Odonata (3%), Diptera (2%) and other orders (5%). The result of compositional analysis showed that edible insects are rich in protein with good sources of essential amino acids, fat, minerals and vitamins content, and comparable to those found in commonly eaten meat. Some insects contain significant amount of essential amino acid (EAA) and poly unsaturated fatty acid (PUFA) – omega 3. The eating of insects is faced with 3 main challenges, that is technology, regulation and consumer acceptance. Several strategies suggested by researchers to increase consumers' acceptance such as integrating insects into familiar food product, reducing degree of visibility of insect in the product, integration of minced or powdered insects in the product rather than whole insects, effective communication, appropriate product design and continuous promotion, and education about entomophagy. Muslim consider religion as the main reason for consuming insect. Both cricket and grasshopper belong to the same family and thus cricket is also considered as Halal.



## **Leveraging Food Loss and Waste in Southeast Asia as a Game Changer for a Sustainable Food System**

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### **Summary**

Mitigating food loss and waste (FLW) is integral in transforming the global food system to achieve several sustainable development goals. The quest for a resilient food system that works within the planet's biophysical boundaries, supports inclusivity, and ensures food and nutrition security for the growing and future population can be fulfilled by not squandering the resources. The annual amount of FLW was estimated at 30% worldwide and in Asia, more than 40% of FLW was reported to happen mostly during the post-harvest phase, with central and southeast Asia noted to contribute the most. At the same time, in other regions, much of the FLW was noted to occur at the retail level. Aside from enhancing food security and contributing to climate change mitigation efforts, addressing FLW will also improve economic outcomes by supporting household income. Several studies have taken an interest in the FLW issue through the years covering the different perspectives and various measures have been recommended to tackle the concern. Improving the efficiency of the supply chain by enhancing infrastructure, provisioning of equipment and facilities to reduce spoilage, use of smart packaging to extend shelf life, consumer education, establishing food recovery programs, investing in technologies to improve harvesting, processing, and storage, encouraging collaborations across different sectors to market and implement FLW strategies together with local enforcement of policies and guidelines were identified to drive a systematic change and resolve the problem.



## The Impact of Chrono-nutrition on Health, Well-being, and Physical Performance

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### Summary

Chrono-nutrition examines the relationship between food intake timing and the body's circadian rhythms, emphasizing that "when" we eat can significantly impact metabolic health, well-being, and physical performance. This presentation explores the core principles of chrono-nutrition, including the importance of meal timing, circadian rhythms, and intermittent fasting. It highlights how structured eating schedules aligned with biological rhythms can optimize metabolic functions, improve insulin sensitivity, and promote better physical and mental health outcomes. For athletes, strategically timed meals enhance performance and recovery. Challenges, such as irregular schedules and individual lifestyle factors, are addressed, emphasizing personalized nutrition plans. The presentation concludes by advocating for further research into chrono-nutrition, especially regarding long-term health benefits and its application in diverse populations.



## Development of a Sports Nutrition Education Program for Student-athletes: 'Eat to Win'

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### Summary

The 'Eat to Win' program is a critical component of the University of Southern Queensland (UniSQ) Student-Athlete Empowerment Project '2WIN Series,' which provides a holistic approach to the education and development of student-athletes. Developed to address the nutrition knowledge gap among high school student-athletes, 'Eat to Win' specifically targets the dietary behaviours often seen in this group, such as skipping meals and training without adequate nutritional support. These behaviours can negatively affect both health and performance, stemming from a lack of awareness about the unique dietary needs of student-athletes. The 'Eat to Win' program seeks to improve student-athletes' nutrition knowledge and behaviours by promoting healthier food choices, supporting optimal energy availability, and enhancing overall healthy, well-being and performance. Delivered through a three-part educational series, covering sports nutrition fundamentals, meal planning, and practical cooking skills—the program provides student-athletes with the tools needed to make informed food choices that directly impact their health and performance. The program integrates technology-enhanced learning, giving participants access to digital resources that reinforce key concepts and enable the tracking of their nutritional habits. An important focus of 'Eat to Win' is on the significant role nutrition plays in both sleep and athletic performance. Proper nutrient intake, including sufficient carbohydrates, proteins, and micronutrients, helps regulate energy levels and recovery, which are closely linked to sleep quality. For athletes, poor nutrition can contribute to disrupted sleep patterns, resulting in impaired recovery, reduced cognitive function, and diminished physical performance. Conversely, a well-balanced diet that supports energy availability can enhance sleep quality, improve recovery times, and promote sustained athletic performance. The program emphasizes the need for consistent fueling, both pre- and post-competition, as well as during training periods, to help prevent fatigue and support the physiological processes that underpin high-quality sleep and overall well-being. Practical cooking workshops further equip student-athletes with the skills to prepare nutritious meals that not only meet their nutritional needs but also support their demanding training schedules and sleep quality. Key learning outcomes of the 'Eat to Win' program include (1) Gain insights into the unique nutritional needs of student-athletes; (2) Apply practical strategies for optimizing nutrition in sports performance; and (3) Understand how nutrition affects sleep, recovery, and athletic performance. By addressing student-athlete nutrition habits and behaviours by providing targeted, actionable education, 'Eat to Win' empowers young athletes to make healthier food choices. In doing so, the program contributes to the broader '2WIN' initiative, supporting the holistic development of student-athletes at University of Southern Queensland, ensuring that they are better prepared for the physical, cognitive, and emotional demands of their sport.





# PRE-CONFERENCE SESSION



## **Reducing Blood Pressure through Intervention with a Herbal Drink of Moringa Leaf Date Extract**

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### **Summary**

This study aimed to determine the effect of moringa date extract intervention on blood pressure in women of reproductive age with prehypertension. The randomized controlled crossover design was carried out for 42 days involving two groups of treatment (n1:n2) in 16 women of reproductive age with prehypertension. Moringa leaf date extract in a 150 ml serving contains 31.25 kcal of energy which was given twice a day, in the morning and evening to the study subjects. The results show a significant decrease in blood pressure in the intervention groups, with systolic pressure decreasing by 9.18 mmHg and diastolic pressure decreasing by 4.06 mmHg. This study highlights the potential of herbal drink of moringa date extract as formulas for reducing blood pressure.

**Keywords:** Anti-hypertension, blood pressure, herbal drink, moringa date extract



## Blood Glucose Response to Kratom Tea (*Mitragyna speciosa* Korth.)

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### Summary

This study evaluated the blood glucose response to kratom tea from West Kalimantan, Indonesia, using an experimental design with 10 subjects. Interventions included pure standard glucose in week 1 and standard glucose mixed with 1% kratom tea in week 2, with a 1-week washout period. Postprandial blood glucose levels were measured over 2 hours. Results showed a higher increase in blood glucose levels in the pure glucose group (AUC:  $579.98 \pm 27.15 \text{ mm}^2$ ) compared to the kratom tea group (AUC:  $493.30 \pm 24.27 \text{ mm}^2$ ), with significant differences ( $p=0.007$ ). Kratom tea significantly inhibited the increase in blood glucose levels after meals.

**Keywords:** *Mitragyna speciosa* korth, blood glucose, inhibition, tea, hyperglycemia



## Description of Body Image Perception and Its Relation to Nutrient Intake in Bodybuilders

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### Summary

The problem of body dissatisfaction affects the perception of body image in bodybuilders. The aim study to determine the perception of body image and its relationship with nutrient intake in bodybuilders. A cross-sectional study was conducted on 70 bodybuilders during cutting phase. The group of non-competitive bodybuilders felt dissatisfied with their body shape based on fat mass and muscle mass, which was different from the group of competitive bodybuilders who felt satisfied with their body shape based on body fat mass. Bodybuilders want a leaner body and muscularity by adopting a diet low in carbohydrates and fluids.

**Keywords:** Bodybuilders, nutrient intake, body image perception, cutting phase, reducing body fat



## **The Effect of Instant Pumpkin-base Soups on the Nutritional Status, Blood Pressure, and Constipation Status of Elderly**

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### **Summary**

This study aimed to evaluate the effect of two types of instant pumpkin soup on nutritional status, blood pressure, and constipation in elderly. A total of 21 healthy elderly participated in this quasi-experimental study, divided into two groups: group receiving original instant pumpkin soup (IPS) and group receiving IPS with chicken breast (IPS+CB) (n=9). The soup (15g) was provided for 4 weeks with a frequency of 6 days/week. The results showed a significant decrease in systolic and diastolic blood pressure in IPS+CB group, while shorter duration of defecation, and an increase in Bristol score found in both groups.

**Keywords:**  $\beta$ -carotene, pumpkin, elderly, blood pressure, nutritional status





## **Glycemic Index and Fibre Content of Wholemeal Bread with Addition of Bambara Groundnut (*Vigna subterranea* [L.] Verdc.)**

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### **Summary**

Foods with high dietary fibre may have a lower glycemic index (GI). This experimental study compared the GI of wholemeal bread to percentage of formulations based on whole wheat flour, namely wholemeal bread with 100% whole wheat flour (WW) and wholemeal bread with 80% whole wheat flour and 20% Bambara groundnut flour (WB). Both breads had high total dietary fiber (TDF) content (WW: 6.1 g/100 g and WB: 6.9 g/100 g), as well as medium GI values (WW: 55.1 and WB: 61.1). This study showed that Bambara groundnut has the potential to be used in producing high-fibre products.

**Keywords:** Bambara groundnut, glycemic index, high fibre bread, total dietary fibre, whole grain



## **The Risk Factors of Dyslipidaemia and Obesity Incidence: Result from 2019 Cohort Study of NCDs in Bogor City**

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### **Summary**

Food consumption and lifestyle factors cause dyslipidaemia and obesity, both of which increase the incidence of metabolic syndrome. This study utilized multinomial logistic regression to examine how gender, education, intake of energy, carbohydrates, and fibre affect dyslipidaemia and obesity. The study revealed that intake of energy and carbohydrate, and education status affected dyslipidaemia and obesity. In conclusion, low fibre intake increased dyslipidaemia and obesity by 2.63 times more than sufficient fibre intake. Men had an 81.3% higher likelihood of not suffering dyslipidaemia and obesity than women.

**Keywords:** Bogor cohort NCDs, dyslipidaemia, eating habits, metabolic syndrome, obesity



## Effects of Nutrition Education on the Scores of Nutrition Knowledge, Attitude, and Practice among Adolescent Girls in Bogor, Indonesia

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### Summary

Nutrition education might be a promising intervention for improving adolescent nutrition status. The aim of this study was to analyze the effects of nutrition education on the scores of nutrition knowledge, attitude, and practice of adolescent girls at SMAN 1 Dramaga Bogor in 2024. This study is quasi-experimental research with purposive sampling on 41 adolescent girls. The result showed that both nutrition knowledge and nutrition practice score increased significantly but not for nutrition attitude score. This implies that the existing nutrition education model could improve the nutrition knowledge and nutrition practice scores of adolescent girls.

**Keywords:** Adolescent girls, attitude, practice, knowledge, nutrition education



## **Assessing Lipid Degradation as a Rancidity Indicator in Spirulina Snack Bar Fortified with Collagen**

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### **Summary**

In this study, the impact of lipolysis on snack bars containing spirulina and varying amounts of collagen was examined. Monitoring rancidity is crucial for upholding product quality, as demonstrated through evaluations of collagen protein levels, texture improvement, and peroxide levels indicating lipid oxidation. Analysis of peroxide and anisidine values revealed that the highest levels were observed at 3% collagen, decreasing with higher concentrations. Increased levels of anisidine and total oxidation point to elevated oxidation products and lipid breakdown. This degradation affects the flavor, aroma, and nutritional value of the food product, consequently influencing taste, scent, and shelf life.

**Keywords:** Freshness, oxidation, peroxide value, quality assessment, shelf life



## Exploration of Marine Fungal Endophytes from Buton Island, Southeast Sulawesi: Potential Antibacterial Metabolites for Functional Foods

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### Summary

Marine endophytic fungi produce bioactive compound which can be an alternative sources of aquaculture feed with good nutrition. This research aims to explore the potential of marine endophytic fungi isolated from seaweeds collected from Buton Island in Southeast Sulawesi with focuses on its function as an antibacterial to fish pathogenic bacteria. The antibacterial activity was measured using agar dilution method. A number of 32 selected isolates were tested for their ability to inhibit the growth of fish pathogenic bacteria *Vibrio harveyi* with maximum inhibition zone was 14 mm. The antibacterial compound was suggested as beta glucan with the molecular weight of 35 kDa.

**Keywords:** Aquaculture, mangrove, marine fungi, molecular weight, sustainability



## **Shelf-life Estimation of Jelly Drink Made from Bay Leaf (*Syzygium polyanthum*) Water Extract and Guava Juice (*Psidium guajava*)**

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### **Summary**

Jelly drinks must meet two basic requirements: safety and quality during the storage and distribution. This research aimed to study the shelf life of functional jelly drinks made from bay leaf water extract and guava juice at different temperatures of storage. Design research was using a complete randomized design with two factors, i.e, storage temperature (4 and 25oC) and storage period (0, 2, 4, 6, 8, and 10 days). Storage temperature does not significantly affect sensory characteristics. Jelly drinks stored at room and refrigerator temperatures were well accepted and commercially viable. The maximum shelf life at refrigerator temperature is eight days and should not exceed four days at room temperature.

**Keywords:** Bay leaf, guava, jelly drink, microbiology characteristics, shelf life





## Total Phenolic Content, Flavonoid Content and Antioxidant Potential of Purple Okra Extract Supplement

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### Summary

Reactive oxygen species contribute to disease pathogenesis. Phenolic and flavonoid compounds are known to be strong antioxidants. This study aimed to evaluate the potential of natural antioxidant sources from purple okra extract supplements. The supplements were analyzed using 1,1-diphenyl-2-picrylhydrazyl (DPPH), the Folin–Ciocalteu method and the colorimetric method with  $\text{AlCl}_3$ . The result showed the supplement has  $\text{IC}_{50} = 391.92 \mu\text{g/mL}$ , antioxidant capacity of  $89.57 \pm 8.52 \%$  and  $10.58 \pm 1.61 \text{ mg AEAC/g}$ , total phenolic content of  $68.99 \pm 1.14 \text{ mg GAE/g}$ , and flavonoid content of  $53 \pm 3.29 \text{ mg QE/g}$ . This study demonstrates that purple okra extract supplement could be a potential source of natural antioxidants.

**Keywords:** Phenolic content, flavonoid content, antioxidant capacity, antioxidant activity, purple okra extract supplement



## Effect of Okra Mucilage Addition on Antioxidant Properties of Purple Okra (*Abelmoschus esculentus* L. Moench) Pudding

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### Summary

Bioactive compounds in purple okra mucilage, which come from the extraction, can be utilized in functional food. This study determined the effect of mucilage addition on the antioxidant properties of purple okra pudding. The addition of mucilage significantly ( $p < 0.001$ ) affected the antioxidant activity tested using the DPPH (2,2-diphenyl-1-picrylhydrazyl) method. Purple okra pudding with 20% mucilage has the highest antioxidant activity, which is 59.02% free radical inhibition that is equivalent with 24.95 mg vitamin C g<sup>-1</sup> extract, and an IC<sub>50</sub> value of 351.23. However, the addition of mucilage did not have a significant effect on total flavonoids and phenol content ( $p > 0.05$ ).

**Keywords:** Antioxidant activity, flavonoids, mucilage, phenols, purple okra



## Fatty Acid Composition of Fermented Buffalo Milk (Dadih) as Traditional Probiotics

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### Summary

Dadih is a fermented food contains bacterial that transform buffalo milk properties. Lactic acid bacteria (LAB) in dadih are associated with end-product of health promoting, including dietary fatty acid. This study aims to assess the fatty acid profile, total LAB, and antioxidant activity of dadih. Samples were analyzed in two groups: fresh-dadih and microwave heated-dadih. The research findings indicate that the highest fatty acids in dadih are palmitic and oleic acids, showing 37.65% of antioxidant activity. The total lactic acid bacteria in both samples was more than 7.74 log cfu/g, thus it can be considered as a probiotic food.

**Keywords:** Antioxidant activity, dadih, fatty acids, lactic acid bacteria, probiotics



## Factors Associated with Food Security of Fisherman Household in West Java

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### Summary

Food security is part of sustainable development related to health and nutrition. This research aims to analyze factors related to household food security. This research was conducted in Sukabumi Regency, West Java on 100 fisherman households. Food security is measured using Household Food Insecurity Access Scale (HFIAS). As a result, 80% of fishing households are categorized as food insecure. Income and wife's age at marriage have a relationship with fisherman household food security. It is recommended to improve skills training to support the economic capabilities and marriage should be done at the ideal age to prevent food insecurity.

**Keywords:** Age at marriage, fisherman household, food security, HFIAS, income



## **Food Security and its Determinants among Rural Households: A Case Study in Buwenge Eastern Uganda**

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### **Summary**

The rural areas in Eastern Uganda are still threatened by food insecurity. However, there is still insufficient documentation on food security and the factors influencing it at household level in Buwenge, Eastern Uganda. This study aimed to determine the level of food security and its determinants among these rural households. A cross-sectional study was conducted in 250 households. The study identified 90.4% of the households experienced food insecurity. The number of children, age, gender, marital status of the household head, land availability, and diseases were key determinants of food security. Stakeholders need to focus on alleviating food insecurity effectively and sustainably.

**Keywords:** Buwenge, Eastern Uganda, food security, gender, rural households



## **The Relationship of Energy and Macronutrient Intake with Nutritional Status of Obese Young Women in Bandung City**

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### **Summary**

Obesity in Indonesia has increased and is more frequent in women, along with changes in dietary patterns. This study investigated the relationship between energy and macronutrient intake and nutritional status of obese young women subjects in Bandung City. The findings of this study tend not to support the hypothesis that excess energy and nutrient intake causes obesity. Under-reporting food intake during data collection may be one of the problems in studying subjects' food habits.

**Keywords:** Energy intake, macronutrient intake, nutritional status, obese women, Bandung city





## Enhancing Food Security and Nutrition in Indonesia through Optimization of Post-harvest Management Strategies

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### Summary

Indonesia, one of the largest food producers globally, faces significant challenges with high food loss and waste (FLW). Ranking second in the world for FLW, the country's food security and nutrition (FSN) remain vulnerable. This study investigates the potential of improving Post-Harvest Management (PHM) to reduce FLW and enhance FSN. Using the Analytic Hierarchy Process (AHP), the research prioritizes the key pillars of food security, identifying accessibility as the most critical factor. The analysis suggests that integrated policy implementation focused on PHM can be crucial in addressing food security issues in Indonesia.

**Keywords:** Accessibility, analytical hierarchy process, food loss and waste, food security and nutrition, post-harvest management



## **Perceived Behavioral Control and Habit are Potential Factors in Reducing Plate Waste Practices**

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### **Summary**

This study aimed to determine factors related to the practice of plate waste by combining the Theory of Planned Behavior (TPB) construct and other variables related to eating behavior. The variables studied are knowledge, attitude, subjective norms, perceived behavioral control, intentions, habits, and hunger levels. This study used a cross-sectional design with a sample size of 140 high school students. Knowledge, perceived behavioral control, habit, hunger level and food preference are significant variables to influence in reducing plate waste while the other variables had no influence. Perceived behavioral control, habit and hunger level have strong relationship toward plate waste decrease.

**Keywords:** Food waste, plate waste, food security, food habit, knowledge



## The Role of Family Function, Social Support, Postpartum Depression, and Maternal Parenting Practices on Infant Growth

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### Summary

The postpartum period is challenging for mothers; they must adapt to new roles. This transition increases the postpartum depression risk and affects the mother's ability to care for her baby. The baby depends entirely on the mother in the first year of birth. This research follows a cross-sectional design and involves 130 mothers of six-month-old babies as respondents. This study shows that health-nutrition maternal parenting practices affect infant growth ( $\beta = 0.320$ ). The goodness of fit model is 0.27. The study emphasizes the significance of enhancing family function to decrease depression, and enhance parenting practices for optimal infant growth.

**Keywords:** Family function, health parenting practices, infant growth, nutrition parenting practices, postpartum depression, social support



## **Estimated of Protein and Iron Intake Quality among Stunted and Non-stunted Children in Malang City**

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### **Summary**

Stunted children can be caused by poor quality of food consumption, especially protein and iron. This research aimed to analyze the protein and iron intake quality of children in Malang City. Children aged 6 to 59 months divided into stunted (n=61) and non-stunted (n=65) groups. The protein quality was estimated by the DIAAS method, while the iron quality was estimated by iron bioavailability percent. The results showed that DIAAS and iron bioavailability tend to be different in both groups, however, stunted children had better protein quality but lower in iron absorption due to higher consumption of iron inhibitor.

**Keywords:** DIAAS, iron bioavailability, malnutrition, protein quality, stunted children



## **Extruded Feed Ameliorates Nutrient Meat Quality of Broiler Chickens: A Meta Analysis**

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### **Summary**

Extruded feed has the potential to increase the performance and digestibility of broiler. However, its impact on nutrient meat quality has not been clarified. This study evaluated the effects of extruded feed on meat quality using traditional univariate meta-analysis. The literature was searched and screened using the PRISMA Protocol and calculated using the OpenMee2.0 The number of studies range from to 5-14 data. The results showed decreasing water holding capacity, reducing lipids, and changing omega-3 and omega 6 contents. There were no effect on color, fatty acid composition, oxidative stability, pH and drip loss. These study reveals that extruded feed can improve the meat quality after slaughtering process.

**Keywords:** Extruded feed, broiler, meat quality, meta-analysis



## **Consumption of Sugar Sweetened Beverages, Body Mass Index and Body Fat Percentage among College Student**

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### **Summary**

Consumption of Sugar-Sweetened Beverages (SSB) is a risk factor for obesity and non-communicable diseases. This cross-sectional study looked at SSB consumption correlated with body mass index and body fat percentage among college students. Respondents were 111 college students. Anthropometric measurement was obtained to calculate BMI and body fat percentage measurement with BIA. Consumption of SSBs with SQ-FFQ for the last one month. Consumption of SSBs is significantly associated with BMI and body fat percentage. These findings highlight the importance of reducing SSB consumption to prevent future health risks.

**Keywords:** Added sugar, body fat percent, body mass index, sugar-sweetened beverages, young adults





## **Association between Early Initiation of Breastfeeding (EIB), Mother's Knowledge of Growth and Development and the Nutritional Status of Wasting in Toddlers in East Nusa Tenggara (NTT)**

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### **Summary**

Wasting is one of the leading public health problems in East Nusa Tenggara (NTT) Indonesia. It's caused mainly by malnutrition, which is one of the many factors that influence the nutritional status of toddlers. This study aimed to identify factors associated with severe acute malnutrition among children under five years in NTT. The design used cross-sectional research with 150 respondents. The data on children's characteristics and parental characteristics was analyzed using the Chi-Square test. The results show a significant relationship between mother's education, maternal knowledge, and early breastfeeding initiation in wasting toddlers, so it's necessary to promote and protect optimal infant feeding practices to improve children's nutritional status.

**Keywords:** Early initiation of breastfeeding (EIB), growth and development, mother's knowledge, nutritional status, toddlers



## Analysis of Risk Factors for Oxidative Stress in the Kulon Progo Batik Industrial Area

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### Summary

Less diverse food intake and exposure in the work environment can cause oxidative stress, as seen in DNA damage. This research aims to analyze risk factors for oxidative stress in the Kulon Progo industrial area. The research design used is a cross-sectional study. There is a difference in oxidative stress between subjects who work in the batik industry and those who work outside the batik industry. It can be seen that there is a significant negative relationship between fiber and oxidative stress. Intake of foods such as antioxidants can help prevent further damage.

**Keywords:** Batik industry, dietary intake, DNA damage, oxidative stress, 8-OHdG



## Association between Mid-Upper Arm Circumference and Low Birth Weight among Pregnant Women in Rural Bogor

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### Summary

Maternal nutritional status can have a profound impact on neonatal birth weight and length. This study focused on estimating the relationship between maternal nutritional status and birth size. Results demonstrated that pre-pregnancy body mass index (PP-BMI) and mid-upper arm circumference (MUAC) were significantly associated with birth weight. Binary logistic regression revealed that mothers with normal MUAC measurements were 0.024 times less likely to deliver low birth weight babies compared to mothers with chronic energy deficiency. Low MUAC is a reflection of underlying inadequate energy and protein availability resulting into poor nutrient delivery to the foetus.

**Keywords:** Birth length, birth weight, MUAC, nutritional status, pregnancy



## **The Effect of Nudging on Food Waste among Adolescents in High School Dining: A Narrative Review**

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### **Summary**

Nudging is one of the methods used to reduce food waste among adolescents in school dining services. The purpose of this study was to review the scientific literature on the effect of nudging on food waste in adolescents in school dining. There is an effect of nudging intervention on reducing food waste among adolescents in school food service. Therefore, posters are one of the encouragement media for school food services in evaluating food waste.

**Keywords:** Adolescent, food waste, food service, nudging, school



## Nutrient Loss among Urban Households in Bogor City, Indonesia

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### Summary

Food waste (FW) is increasing globally and households are the largest contributor. This study aimed to analyse the nutrient loss of household FW. The amount of FW was measured directly by applying the methods namely; SNI 19-3964-1994, food weighing, and Wasted Daily Diets (WDD) in 110 households selected by Stratified Random Sampling (SRS). The average FW was 78.38 g/cap/day with nutrient losses of 122.71 kcal in energy and seven other nutrients. This means that 28.23 kg/cap/year of FW could suffice the nutritional requirements of energy and seven other nutrients for one person for 8 days.

**Keywords:** Household food waste, nutrient loss, SNI method, sustainable healthy diet, WDD



## **Breastfeeding Culture among the Kaili Tribe in Sigi Regency, Central Sulawesi: A Qualitative Study**

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### **Summary**

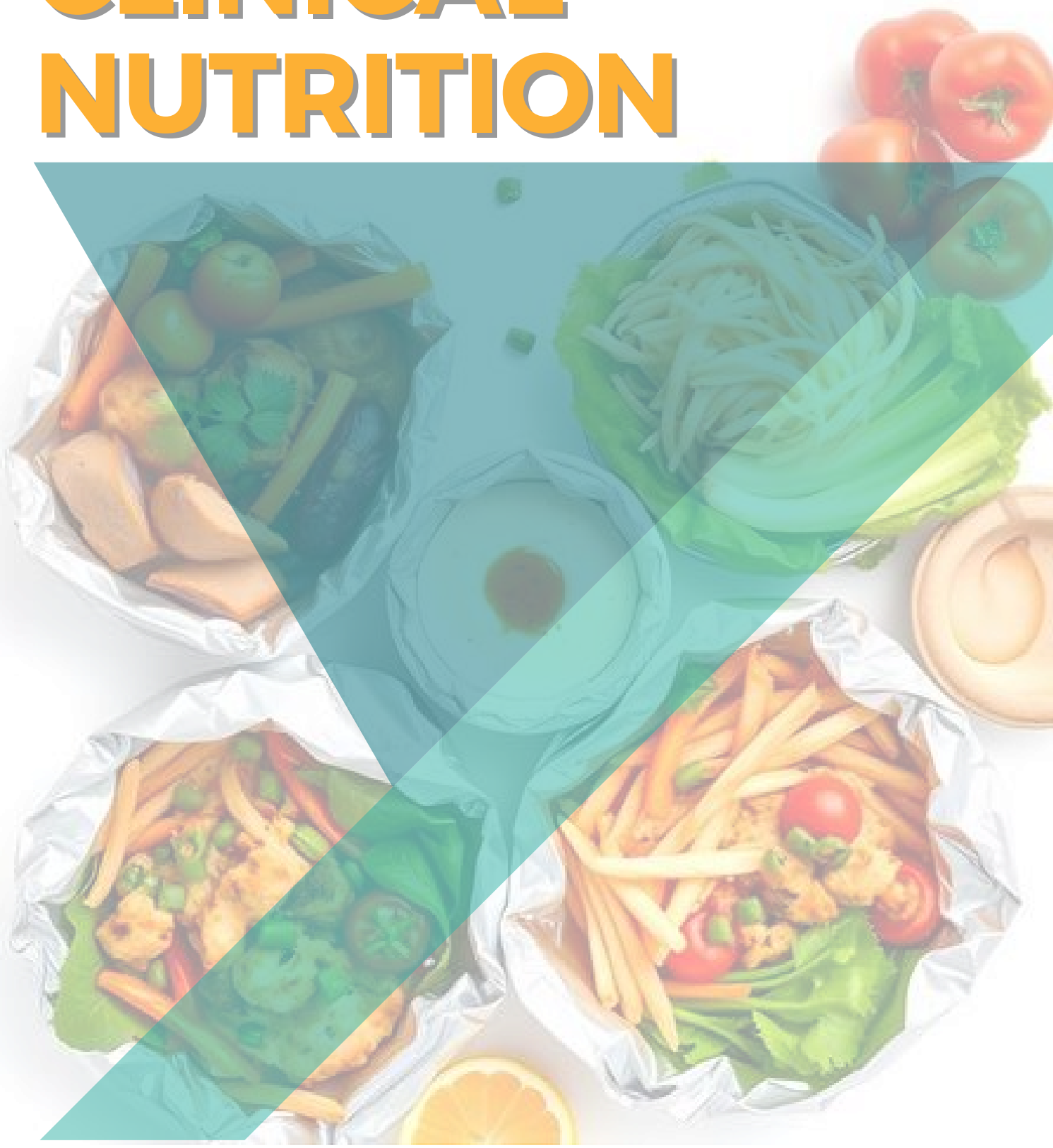
Socio-cultural support is fundamental to successful breastfeeding. This study aimed to explore the breastfeeding culture of the Kaili tribe. Informants were chosen using purposive sampling. The qualitative data was analyzed by triangulation technique, which combined observations, in-depth interviews, and focus group discussions. The data were then analyzed using NVivo 12. The findings indicate that Kaili breastfeeding mothers still practice the nipasoa culture after giving birth and use both breasts when nursing their babies, which should begin from the right breast to the left. This Kaili tribe culture can support the success of exclusive breastfeeding.

**Keywords:** Breastfeeding, breasts, culture, Kaili tribe, nipasoa





# CLINICAL NUTRITION



## **The Relationship between Body Composition, Physical Fitness, and Primary Dysmenorrhea among Adolescents of Urban Area**

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### **Summary**

The relationship between body composition and physical fitness parameters with primary dysmenorrhea hasn't been confirmed robustly to the best of our knowledge. This cross-sectional study involved 80 adolescents from urban areas of Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek). All respondents experienced dysmenorrhea with varying levels, intensity, locations, and duration of pain. Visceral-fat percentage was significantly related to days of pain while total subcutaneous and trunk-fat was significantly associated with pain intensity. Cardiorespiratory fitness was significantly related to the location of the pain. Maintaining visceral-fat, total subcutaneous-fat, subcutaneous trunk-fat within normal limits and good cardiorespiratory fitness can control menstrual pain.

**Keywords:** Adolescents, body composition, dysmenorrhea, physical fitness, urban



## **Nutrition Management for Ischemic Stroke Patient with Hemorrhagic Transformation, Hemiparesis Dextra and Dysphagia: A Case Report**

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### **Summary**

This case report details an 81-year-old man with ischemic stroke and hemorrhagic transformation, experiencing decreased consciousness, right-sided paralysis and dysphagia. At risk of malnutrition, he required tailored nutritional care and was given low-lactose formula via nasogastric tube (NGT) as initial intervention. Secondary prevention was administered by doctors. Monitoring showed his nutritional intake had not met 80% of his needs. Nevertheless, there were improvements in inflammatory indicators swallowing ability.

**Keywords:** Dysphagia, geriatric, ischemic stroke, malnutrition, Nutrition care process (NCP)



## **Knowledge, Attitudes and Consumption Patterns After Nutritional Counseling in Patients with Coronary Heart Disease at Regional Public Hospital dr. M. Yunus Bengkulu 2024**

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### **Summary**

Coronary heart disease usually occurs due to abnormalities that cause the coronary arteries, the arteries that drain blood to the heart muscle to narrow. Fat intake can cause an increase in cholesterol levels; adequate fiber intake can also help stabilize blood fat levels. Factors that can trigger coronary heart disease apart from intake can also be caused by a lack of nutritional knowledge. There are differences in knowledge, attitudes, saturated fat and fiber intake before and after being given nutritional counseling in the video group. There are differences in knowledge and attitudes before and after being given nutrition counseling.

**Keywords:** Coronary heart disease, nutrition counseling, consumption pattern, saturated fat, fiber intake



## **The Effect of Ashwagandha (*Withania somnifera*) on Sport Endurance and Muscle Recovery, A Mini Review**

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### **Summary**

Ashwagandha is known to have many health benefits such as anti-inflammatory, cardioprotective, anti-stress, antioxidant, and revitalising properties. In the field of sport, Ashwagandha can maintain endurance and reduce post-exercise stress response. The purpose of this study is to review the effects of Ashwagandha on sports endurance and recovery. This study is a mini review. The result is consumption of this adaptogen compound can reduce cortisol levels, lactic acid, urea nitrogen levels and dopamine receptors in the brain so as to resist the damaging effects of stress and restore normal physiological functioning.

**Keywords:** Exercise, endurance, ashwagandha, recovery, stress



## The potential of Dayak Tribal Herbal Tea as an Anti-breast Cancer Agent: In Silico Approach

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### Summary

This research aims to know the potential of Dayak tribe herbal tea as anti-breast cancer. Tahongai leaves contain phytochemical had benefit to human. This research carry out with computational method through molecular docking analysis. Druglikeness analysis show the chemical compounds of Tahongai has similarities with drug molecules. Molecular docking analysis show Eleutherol is the most negative binding affinity with JNK, Quercetin with EFGR, and Eleutherol with NUDT5. Further research is needed related to the analysis of herbal tea content and its pathway interactions as an anticancer.

**Keywords:** Tahongai, Kleinhovia hospita L, breast cancer, molecular docking, in silico





## **Lifestyle and Aerobic Fitness in Youth Volleyball Athletes**

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### **Summary**

Aerobic fitness is crucial for maintaining the performance of volleyball athletes. The study aimed to analyze factors related to aerobic fitness in volleyball athletes. The research was designed as a cross-sectional study with a sample size of 41 volleyball athletes aged 14-18 years in the Volleyball Development Club Sidoarjo, Indonesia. Smoking habits and adequate rest were assessed through a questionnaire. Physical activity was measured using the Global Physical Activity Questionnaire (GPAQ), and aerobic fitness was measured using the Multistage Fitness Test (MFT). The results of the Spearman Rank Correlation test indicated a relationship between physical activity, gender, smoking habits, and the aerobic fitness of volleyball athletes.

**Keywords:** Lifestyle, aerobic fitness, volleyball athlete, physical activity



## **Dietary Inflammatory Level and Nutritional Status among Breast Cancer Patients in Bogor City General Hospital**

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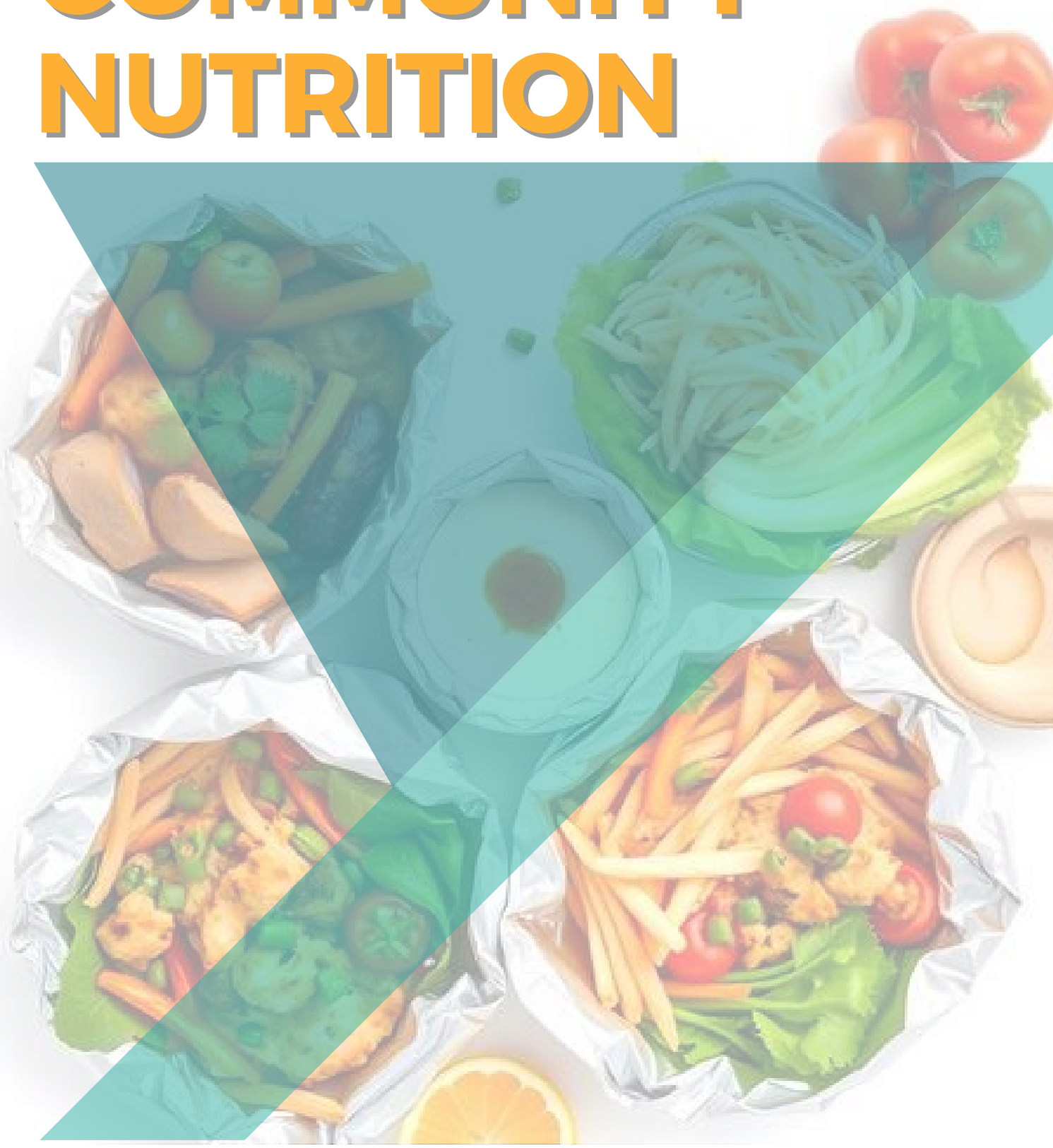
### **Summary**

Dietary level of inflammation and nutritional status are crucial factors that affect breast cancer development. This study involved 93 breast cancer patients from RSUD Kota Bogor and aimed to analyze associations of Dietary Inflammatory Index (DII) score and nutritional status with breast cancer stages. The DII score is the overall dietary inflammation score for each subject (individual). The higher a subject's DII score, the more pro-inflammatory their diet is. Data was collected by interview and medical history. We found that 76.3% of subjects' diet were pro-inflammatory. No associations were found between DII score and nutritional status with the disease stage. This study implies that breast cancer patients' diet is pro-inflammatory which may worsen the condition and therefore efforts should be made to make the diet more anti-inflammatory.

**Keywords:** Anti-inflammatory, breast cancer, dietary inflammatory index, nutritional status, pro-inflammatory



# COMMUNITY NUTRITION



## **The Effect of DASH (Dietary Approaches to Stop Hypertension) Diet Education Using Lectures and Leaflet Media on Diet Compliance Among Hypertension Patients**

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### **Summary**

Hypertension that persists over a long period triggers cardiovascular diseases, which are a major cause of death in the world. The DASH diet effectively reduces blood pressure in hypertensive individuals. This research aimed to assess the impact of DASH diet education using lectures and leaflets on dietary compliance among hypertensive patients at Puspaindah Posbindu, Tasikmalaya City in 2023. This quasi-experimental study utilized one-group pre-test post-test design. The result showed a significant influence ( $p=0.000$ ) of DASH diet education on dietary compliance in hypertensive patients. It concluded that DASH diet education using lectures and leaflet positively affected dietary adherence in hypertensive patients.

**Keywords:** DASH diet, dietary compliance, hypertension



## **The Relation of Feeding Patterns and History of Infectious Diseases with The Stunting Incident in Child Aged 6-23 Months in West Bontang Health Center**

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### **Summary**

Stunting prevalence in Bontang was reaching 21% in 2022 and 14,840 families are at risk of having child with stunting in the West Bontang Health Center. This is cross-sectional research with 74 respondents. Data was collected with questionnaires and analyzed using Fisher's Exact test. The result showed that there were 13 stunted child aged 6-23 months in the West Bontang Health Center (17.6%). The conclusion is that there is a relation of feeding patterns and no relation of history of infection with the stunting incident among child aged 6-23 months in the West Bontang Health Center.

**Keywords:** Feeding patterns, infection, stunting, child, health



## **Nutritional Supplementation Combined with Balanced Diet & Environmental Health Education Improved the Conversion of Latent Tuberculosis Infection and Daily Nutrients Intake**

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### **Summary**

This study evaluates the efficacy of integrated intervention in improving conversion of LTBI (infected with *Mycobacterium tuberculosis*), daily nutrient intake, Body Mass Index (BMI), and housing conditions among closed contact subjects. This study used a field experimental design at two Health Centers (HCs); thirty-six samples (18 treatments and 18 controls) for each HC. There were better daily nutrient intake, and housing conditions in the treatment group (nutritional supplements and education) than in the control group (education) ( $p < 0.05$ ). There was a trend decrease in the proportion of LTBI in the two groups. However, BMI and body weight did not change.

**Keywords:** Balanced diet, environmental health, latent tuberculosis, nutritional supplementation





## **Association between Stress Level, Dietary Pattern, and Smoking Habit with Central Obesity in PT Raputra Jaya Ferry Crews**

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### **Summary**

The ship crew plays a crucial role in ensuring the smooth operation of maritime vessels, thus they must maintain work productivity, where nutritional status can affect work efficiency. This cross-sectional study involved 101 crew members of PT Raputra Jaya ferry selected using stratified random sampling method, and it was found that 43.6% of them had central obesity. The results indicate a relationship between the consumption of fatty foods, sweetened foods and beverages, with central obesity among ship crews. Therefore, interventions to address eating habits are crucial, and further research is needed to explore the long-term effects and effectiveness of interventions.

**Keywords:** Central obesity, dietary pattern, ship crews, smoking habit, stress level



## **The Relationship of Physical Fitness, Nutritional Status, Quality of Life and Academic Achievement in Students**

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### **Summary**

High academic demands during the study period negatively impact students' physical and mental health. Additionally, poor physical fitness exacerbates these mental health issues and contributes to academic achievement. This study to analyze the relationship between physical fitness, nutritional status, quality of life and academic achievement among students at Lambung Mangkurat University. A cross-sectional study was conducted of 263 students. There was a significant relationship ( $p < 0,05$ ) between nutritional status and academic achievement, physical fitness and academic achievement, and physical fitness and quality of life. However, no significant relationship was observed between nutritional status and physical fitness nor quality of life.

**Keywords:** Physical fitness; nutritional status; quality of life; academic achievement



## Factors Associated with Central Obesity among Adults in UIN Syarif Hidayatullah Jakarta

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### Summary

Central obesity poses a greater risk than peripheral or general obesity. This study aimed to investigate the association between socioeconomic status and physical activity level with central obesity. It was a cross-sectional study involving 111 adults aged 18-59 conducted in South Tangerang City, Indonesia. Pregnant women were excluded from the study. The socioeconomic status and physical activity data were collected through interviews. Physical activity was collected using IPAQ. The waist circumference was measured using inelastic tape. More than half of the respondents (57.63%) were centrally obese. Female (OR 3.639), married (OR 3.381), and less active (OR 2.746) individual were more likely to have central obesity. Meanwhile, having a low educational level was protective against central obesity (OR 0.285).

**Keywords:** Adult, central obesity, marital status, physical activity, socioeconomic status



## Balanced Nutrition Messages Competence Parents of Raudhatul Athfal Students and Kindergarten Parents in Semarang City

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### Summary

Parents and caregivers from Raudhatul Athfal (RA) or Kindergarten Balanced nutrition messages competence needs assessed. This study evaluates Balanced Nutrition Messages Competence among parents of RA & Kindergarten in Semarang City. A survey with a cross-sectional approach was conducted using clustered sampling with criteria for public and private schools. A total of 82 parents were selected as subjects. Competence variables included knowledge, attitude, practices of balanced nutrition messages in parents of RA & Kindergarten were rated as very good (95.1%), with a median score of  $95.0 \pm 6.96$ .

**Keywords:** Balanced nutrition, competence, kindergarten, parents, raudhatul athfal



## **Predictors of Breastfeeding Self Efficacy among Postpartum Women at RSUD IA Moeis Samarinda**

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### **Summary**

Exclusive breastfeeding rate in Indonesia have decreased, especially in Samarinda. To increase the rate, it is necessary to identify predictors of breastfeeding behaviour. This study aims to predict the factors associated with Breastfeeding Self Efficacy of postpartum mothers in RSUD IA Moeis. A cross sectional study with multiple logistic regression test was used to analyse 56 postpartum women. Variables associated with Breastfeeding Self Efficacy (BSE) were breastfeeding experience (p-value 0.023) and observation of others (p-value 0.002) was adjusted by occupation, latest education, verbal persuasion and physical emotional conditions. The most dominant variable is observation of others with Odds Ratio = 61.107 (95% CI OR = 5.478-711.504).

**Keywords:** Exclusive breastfeeding, postpartum, breastfeeding self-efficacy, breastfeeding experiences, sociodemographic



## **Knowledge to Action: Evaluating the Impact of the Royco Nutrimentu Programme on Mothers' Practice in Complementary Feeding**

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### **Summary**

The 2022 survey highlighted a significant stunting issue in Indonesia, affecting 21.6% of children. Despite national efforts, stunting persists, leading to the implementation of the Royco Nutrimentu programme aimed at improving mothers' knowledge and practices in providing nutritious complementary feeding for children aged 6-24 months. Conducted in West Bogor between June and August 2023, the study evaluated the programme's impact on 625 mothers, showing significant improvements in maternal knowledge, attitudes, and practices towards child nutrition, notably in meal timing, consistency, and diversity. This underscores the programme's effectiveness in promoting better nutrition among children.

**Keywords:** Attitudes, behaviour, education, feeding, nutrition



## Spatial Analysis of Metabolic Syndrome among Health Workers in a Sub-urban Area

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### Summary

Metabolic syndrome (MetS) prevalence among health workers has been a subject of interest in recent years. This study aimed to investigate the prevalence and spatial distribution of MetS, obesity, hypertension, and high cholesterol levels among health workers in Depok City. A total of 614 respondents were surveyed, with most female (75.1%) and aged 25-34 (44.3%). The study found high rates of high blood pressure (33.2%), high cholesterol levels (30.3%), and MetS (40.7%), with 47.6% classified as obese. Spatial analysis revealed significant correlations between metabolic syndrome and obesity ( $p < 0.05$ ). More study is needed to investigate obesity-targeted interventions to reduce MetS prevalence.

**Keywords:** Health worker, hypertension, metabolic syndrome, obesity, spatial analysis





## **Diet Quality, Physical Activity and Nutritional Status of School Going Adolescent in West Aceh Indonesia**

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### **Summary**

Nutritional problems that occur in adolescents about undernutrition and overnutrition. This cross-sectional study aimed to determine differences among male and female in diet quality, physical activity and their relationship with nutritional status of school-going adolescents in West Aceh. Data collected from 312 subject were food intake (2x24 hour recall), physical activity (IPAQ), and anthropometric (BIA and microtoice). There were significant differences between male and female adolescent that mothers' education, parent's income, physical activity, BAZ and body fat. Diet quality was significantly related to BAZ on male only while physical activity was not related to BMI-for-Age-Z score (BAZ) and body fat.

**Keywords:** BAZ, body fat, diet quality, physical activity, school going adolescent



## Gender Relations in Fisherman's Families

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### Summary

This research aims to analyze differences in gender relations between fisherman families in Cikahuripan village, Sukabumi Regency. This is a quantitative research with a survey method using a questionnaire. The respondents were 100 wives (55 non-stunting families and 45 stunting families). The research results showed that there were no differences in all aspects studied except for the reproductive role in the form of accompanying children to play (p-value 0.034). From these results, it is recommended that fathers from stunted families increase their role in caring for children by paying more attention to their growth and development.

**Keywords:** Coasts, fishermen, gender, household, stunting



## Relationship Between Eating Habits, Sleep Duration, Nutritional Status, and Stress Levels with the Incidence of Hypertension in Adults in Central Jakarta

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### Summary

Hypertension is a serious problem in Indonesia, and the prevalence in Jakarta reached 33.43%. This study aimed to determine the relationship between eating habits, sleep duration, nutritional status, and stress levels with the incidence of hypertension in the adult group. This cross-sectional study was carried out in the Gambir Health Center involving 68 subjects. The sampling technique uses a purposive sampling method and data analysis using univariate and bivariate tests. The results showed no relationship between eating habits ( $p=0.933$ ) and sleep duration ( $p=0.067$ ), but there was a relationship between nutritional status ( $p=0.01$ ) and stress levels ( $p=0.007$ ) with the incidence of hypertension.

**Keywords:** Adulthood, eating habits, hypertension, nutritional status, stress level



## Differences of Type of Foods Consumed by Households in Urban and Rural West Java, Indonesia

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### Summary

This study aims to identify dietary diversity and differences of type of food consumed by households in urban and rural West Java. The study involved 300 households in Sukabumi City and Cianjur District in June 2022. Most of the households had high dietary diversity score. However, there were more households in rural area that had low dietary diversity score, food insecurity, and stunting. Households in low and medium dietary diversity only consumed eggs as primary protein source. Therefore, consumption of diverse protein source foods must be promoted.

**Keywords:** Dietary diversity, food security, stunting, urban, rural



## Effect of Ramadan Fasting on Body Weight and Percent of Body Fat Among Student from Program Nutrition Study of UPN “Veteran” Jakarta, Indonesia

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### Summary

Overweight in 2013 aged over 18 years in Indonesia was 13.3% and it increased to 13.6% in 2018. This study aimed to determine the effect of Ramadan fasting on body weight and percentage of body fat in students. The research design used quasi experiment method with one group pre-test post-test design with 137 students as subjects. Data collection was carried out before fasting, during fasting and one month after fasting ended. The instruments used are BIA (Bioelectrical Impedance Analysis), 24-hour food record and PAL (Physical Activity Level). The results showed that Ramadan fasting can affect body weight and percent of body fat.

**Keywords:** Bioelectrical impedance analysis, overweight, percent of body fat, physical activity level, ramadan fasting



## **Anemia and Its Related Factors in Female Workers in A Cigarette Factory in Kudus Regency, Central Java, Indonesia**

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### **Summary**

Female workers are a group that is vulnerable to anemia. Anemia in workers can have an impact on reducing health and work productivity. The research was conducted on 343 female workers at cigarette companies in Kudus Regency. There were 141 subjects (41.1%) experiencing anemia (59 mild, 73 moderate, 9 severe). Factors related to anemia among female workers were age under 50 years (OR=2.053; 95% CI: 1.224-3.444), adequacy level of energy (OR=0.505; 95 CI: 0.296-0.860), adequacy level of protein (OR=5.773; 95% CI: 3.275-10.177), and caffeine consumption (OR=1.616; 95% CI: 1.003-2.603). Other factors, BMI and MUAC were not related to anemia status.

**Keywords:** Age, anemia, caffeine, female worker, protein intake



## **Correlation of Betel Nut (*Areca catechu* L) consumption with Hemoglobin (Hb) Levels and Mid Upper Arm Circumference (MUAC) of Pregnant Women in Jayapura Regency, Papua**

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### **Summary**

Betel nuts contain high levels of catechin, arginine, and phenylalanine which are believed can inhibit the absorption of nutrients in the body. This research analyzes the correlation between betel nuts, Hb levels and MUAC. This research was conducted on 105 pregnant women taking used Purposive sampling in 3 health center work areas in Jayapura Regency. Data were analyzed using the Pearson correlation. The results of this study show that there is a significant and negative correlation between betel nut consumption and Hb levels. It is recommended that pregnant women limit their consumption of betel nut during pregnancy.

**Keywords:** Pregnant women, hemoglobin levels, MUAC, Betel nut, Papua





## **Association Between Obesity, Cardiometabolic Risk, And Body Composition in Gorontalo Women**

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### **Summary**

Cardiovascular diseases are the current issue that increase morbidity. The study is aimed to determine the association between obesity, cardiometabolic risk, and body composition. Simple random sampling was used for data collection, which was conducted through questionnaires and direct measurements, and statistical analysis utilized Pearson and Spearman correlations. The correlation analysis revealed a significant association between body mass index and blood pressure, fasting blood glucose, waist circumference, visceral fat, muscle mass, body fat, body water and bone mass ( $p=0.000$ ). Cardiometabolic risk refer to the chances of damaging the heart and vascular system. The conclusion is the obesity aggravate risk of cardiovascular disease.

**Keywords:** Body composition, body mass index, cardiometabolic risk, obesity, women



## Relationship between Diet Quality and Eating Speed with Nutritional Status of Adolescents in Jakarta, Indonesia

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### Summary

The nutritional issues in adolescents are influenced by the quality of food consumption and eating behaviors such as eating speed. This study aimed to evaluate diet quality and eating speed and its correlation with nutritional status of adolescents at SMPN 35 Jakarta. The study comprised 79 subjects. Diet quality was measured using a 2 x 24-hours recall of food intake data and analyzed using the diet quality index for adolescents (DQI-A), while eating speed was assessed with the self-reporting questionnaire (SRQ). The results indicated a poor diet quality and moderate eating speed. Furthermore, there is a significant positive correlation existed between eating speed and BMI-for-age.

**Keywords:** Adolescents, DQI-A, diet quality, eating speed, nutritional status



## **Association of Prudent-diet and Sweet Food with the Risk of Stress, Anxiety, and Depression among Students**

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### **Summary**

Mental health disorders are prevalent among students. A cross-sectional survey was conducted to investigate the relationship between prudent-diet and sweet food with the risk of stress, anxiety, and depression among Indonesian students. The study involved 190 Indonesian students who completed online questionnaires, including DASS, HFIAS, and FFQ. Principal component analysis was used to determine prudent-diet among the respondents. Prudent-diet is identified by fruits and vegetables, animal/plant-based protein, whole grains, and sweet food and low consumption of processed meats/fish. A prudent-diet incorporation with sweets was found to be had 22% reduced stress and 8% reduced anxiety among Indonesian students.

**Keywords:** College students, dietary pattern, food insecurity, mental health, prudent-diet



## The Correlation Between Fatsecret Application Use with Eating Behavior, Physical Activity, and Weight Changes of College Students

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### Summary

Fatsecret is an application that contains nutrient of food, intake and physical activity records, and time distribution of meal. This study analyzed correlation of weight changes, physical activity, and eating behavior with Fatsecret application use in undergraduate students. Food intake were calculated using 2x24 hours recall and physical activity using IPAQ. The result showed that the eating behavior such as adequacy level of energy and macronutrients subject were severe deficit. There were weight changes in the subject. Significant correlation was found between Fatsecret application use with eating behavior, weight changes, and physical activity.

**Keywords:** Eating behavior, fatsecret, physical activity, student college, weight changes



## **Effect of Tele-nutrition Education on Weight Loss, Energy and Fat Adequacy Among Obese Adults in Banyumas, Central Java, Indonesia**

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### **Summary**

Obesity can be caused by an imbalance between energy intake and expenditure due to lack of physical activity. This research aimed to analyse the effect of tele-nutrition education on changes in weight loss, energy and fat adequacy in obese adults. Forty-six obese adults were involved in this study and randomly divided into control and intervention group. Tele-nutrition education was carried out in the intervention group for 16 meetings. Dietary and anthropometric measurements were performed. The results indicated that tele-nutrition education had significant benefit on changes in weight loss, levels of energy and fat adequacy among intervention group compare to control.

**Keywords:** Adults, energy adequacy, obese, tele-nutriton education, weight loss



## **The Impact of Digital Training with Mentoring on Early Childhood Education Teacher's Knowledge and Practices Related to Nutrition and Health**

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### **Summary**

This pre-post intervention study aimed to evaluate the impact of digital training with mentoring on early childhood education (ECE) teachers' knowledge and practices related to nutrition and health. The sample of 963 teachers who had been working for at least two years. They received two days of digital training. The mentors received three days of digital training sessions and technical guidance every month digitally. They mentored teachers before and twice a month during four months' implementation. The paired-samples t-test was used to determine the difference score. The teachers' score significantly ( $P=0.019$ ) increased from 61 to meet minimum standar (score  $\geq 70$ ).

Keywords: Early childhood, mentoring, teacher, nutritional, child health, health education



## Animal-source Food Consumption and its Contribution to Iron Adequacy of Women of Reproductive Age in Indonesia

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### Summary

Women of reproductive age (WRA) are vulnerable to anaemia, therefore, the consumption of animal-source foods is crucial. Given the issue outlined, we aim to analyze animal-source foods consumption and their contribution to meeting the iron adequacy of WRA in Indonesia. A total of 33,367 WRA in the range of 15-49 years old was used in this study. The average of iron intake was  $3.4 \pm 3.6$  mg, contributing 19.3% to the iron adequacy level. Most of the WRA (64.7%) has an iron contribution below the average. Iron intake among WRA in urban areas is higher than in rural areas.

**Keywords:** Anaemia, animal-source food consumption, iron contribution, iron intake, women of reproductive age





## **Socio-economic Inequality Factors Predicting Food Security Index in 514 Districts of Indonesia: A Supervised Machine Learning Regression Analysis**

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### **Summary**

This study investigates the relationship between socio-economic inequality and food security across 514 Indonesian districts, using supervised machine learning regression and data from Badan Pangan Nasional from 2018 to 2023. Variables such as normative consumption per capita ratio (NCPR), poverty, food expenditure, lack of electricity, lack of clean water, healthcare worker ratio, female school duration and life expectancy emerge as significant predictors with an R-squared value of 66,42%. However, stunting duration show no significance relationship. Findings provide insights for policymakers to address food insecurity and socio-economic gaps, while further research on confounders is recommended.

**Keywords:** Food security, inequality, regression analysis, socio-economic factors, supervised machine learning



## **The Effect of Interactive Learning on Nutritional Knowledge among Teachers, Parents and Students at Primary Schools in Central Java**

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### **Summary**

Failure of linear growth or stunting is one of childhood's most common nutritional deficiencies. Parenting patterns and food provision greatly influence children's ability to consume balanced nutrition. This study identifies the impact of interactive learning on nutritional knowledge among students, parents and teachers in elementary schools in Central Java. The research involved 252 samples from 51 elementary schools. The instrument assesses the knowledge of children, parents, and teachers regarding the components of a plate, protein sources, children's nutritional needs, children's ideal body weight, the significance of breakfast, the role of vitamins and vegetables, the benefits of tempeh or tofu, and proper hand washing techniques. Measurements were taken before and after the intervention. There is a significant difference in nutritional knowledge in the teacher and parent groups but not in the student group (p-value: 0.751). Continuous efforts are needed to educate students regarding nutrition. Apart from interactive games, the lecture method can also emphasize several important points during learning.

**Keywords:** Balance diet, interactive learning, nutritional status, parent and teacher, primary school children



## **The Coverage of School Based Iron Supplementation among Adolescent Girls in Various Regions in Indonesia**

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### **SUMMARY**

Anemia represents a significant global public health concern, particularly impacting adolescent girls. This study aims to examine the distribution of school-based blood supplement programs among adolescent girls across different regions in Indonesia. Using a cross-sectional design, we analyzed secondary data from the 2018 Basic Health Research (Riskesdas). The highest coverage was observed in Sulawesi (83.6%), whereas Papua reported the lowest coverage (64.4%). Disparities in the provision of school-based blood supplements among adolescent girls across Indonesian regions are evident. Highlighting regional differences in the provision of blood supplements underscores the need for tailored strategies to address disparities in healthcare access and outcomes across Indonesia

**Keywords:** Anemia, adolescent girls, Indonesia



## Care Empowerment for Preventing Child Malnutrition: Lessons from the Psychosocial Recovery of 2009 Tasikmalaya Earthquake Survivors

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### Summary

A breakthrough method to accelerate the elimination of stunting in Indonesia is urgently needed. This study highlights care empowerment resources and practices involving parents, cadres, community leaders, and regional officials in supporting supplementary feeding (PMT) interventions to combat hunger (SDGs-2) and malnutrition in children under five. This study uses secondary data regarding the nutritional status of 500 children under five who were victims of the 2009 Tasikmalaya earthquake. Success is indicated by high stakeholder involvement, compliance with PMT consumption, and significant improvements in children's nutritional status. These findings emphasize the importance of a collaborative, community-based approach in addressing child malnutrition.

**Keywords:** Care empowerment, Child malnutrition, Combat hunger, Disaster psycho-social recovery, SDGs-2



## **Influence of Peer and Parental Support on Sweet Snack Consumption Habits Among Suburban Adolescents in Palu City**

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### **Summary**

Indonesian adolescents like sweet foods. This study aimed to analyse the relation of parental and peer support to sweet snack habits in suburban adolescents. A total of 395 adolescents aged 15-17 living in the suburbs of Palu were selected randomly. The data collection involved the use of validated questionnaires to gather information and the Food Frequency Questionnaire to assess eating habits. Correlation analysis was performed using the Spearman Rank test. Positive peer support was negatively correlated with the habit of eating sweet snacks ( $r=-0.27$ ), and negative peer support was positively correlated with this habit ( $r=0.19$ ) in adolescent boys ( $p<0.05$ ).

**Keywords:** Adolescents, parental support, peer support, suburban area, sweet snacks



## Consumption Pattern of High-sugar Processed Foods among Patients with Diabetes

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### Summary

This study examined the quantity of high-sugar processed food and the consumption patterns of high-sugar processed foods among patients with diabetes using a Food Frequency Questionnaire (FFQ). The population studied consisted of diabetes patients registered at the Telaga Dewa primary healthcare center in Bengkulu City. Among the 50 respondents selected purposively, it was found that 20-34% daily consumed high-sugar dairy products, 14% daily consumed confectionery/candy/chocolate, and 44% frequently (3-6 times/week) consumed high-sugar cereal products. These findings highlighted a significant intake of high-sugar processed foods among diabetes patients, underscoring the need for targeted dietary interventions and education to manage blood sugar levels effectively.

**Keywords:** Consumption pattern, diabetes, high sugar, packaged foods, processed foods



## **Comparison of Food Security and Nutritional Status of Adolescent Girls in Highlands and Coastal Areas in Garut Regency, West Java**

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### **Summary**

Food security and nutritional status among adolescents are two interrelated aspects that directly impact health. These conditions can vary across different geographical such as highlands and coastal areas. The research is an observational study with a cross-sectional design conducted in Cigedug (highlands) and Caringin (coastal) of Garut Regency. The research sample consists of adolescent girls aged 15-19 years. There is a significant difference between food security and hemoglobin levels among adolescent girls living in highlands and coastal areas. In conclusion, coastal areas tend to be more food security when compared to highland areas.

**Keywords:** Adolescent girls, coastal, food security, highlands, nutritional status





## **Impact of Macronutrient Intake and Child Eating Behaviour (Picky Eating) on Growth in Toddlers**

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### **Summary**

Picky eater tends to consume less energy, protein, carbohydrates, and vitamin. This is a quantitative study with a case-control design of a sample of 35 children. Relation between nutritional status, carbohydrate intake, protein intake, fat intake and behaviour with growth toddlers that the nutrition of children with picky eating behaviour is inadequate (micro and macro are not enough because few types of food enter the body) Nutritional status, carbohydrate intake, protein intake, fat intake and behaviour with growth toddlers that impact of picky eating behaviour is that the growth and development of children is decreased and inhibited.

**Keywords:** Child eating behaviour, macronutrient intake, picky eating, toddler



## **Estimated Protein and Iron Intake Quality among Stunted and Non-stunted Children in Malang City**

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### **Summary**

Stunted children can be caused by poor quality of food consumption, especially protein and iron. This research aimed to analyze the protein and iron intake quality of children in Malang City. Children aged 6 to 59 months divided into stunted (n=61) and non-stunted (n=65) groups. The protein quality was estimated by the DIAAS method, while the iron quality was estimated by iron bioavailability percent. The results showed that DIAAS and iron bioavailability tend to be different in both groups, however, stunted children had better protein quality but lower in iron absorption due to higher consumption of iron inhibitor.

**Keywords:** DIAAS, iron bioavailability, malnutrition, protein quality, stunted children



## **Family Characteristics Determine Primary School Students' Nutritional Knowledge, Attitude, and Practice**

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### **Summary**

This study investigates the correlation of family characteristics with the nutritional knowledge, attitudes, and practices of primary school students. Conducted between September 2022 and January 2023 in Bogor City, the research involved 146 students and their parents from eight primary schools. The findings reveal that maternal education is positively associated with the nutritional knowledge and attitudes of children, while family size correlates with their nutritional practices. These results highlight the critical role of family involvement in developing and maintaining healthy nutritional habits among primary school-aged children.

**Keywords:** Maternal education, school-aged children, knowledge, attitude, practice



## **Analysis of Food Security and Dietary Diversity Patterns among Female Farmer Workers in Lombok Tengah, Indonesia**

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### **Summary**

Malnutrition and lack of access to food are ongoing problems in the world, and Lombok Tengah, West Nusa Tenggara, is not an exception. Female farmworkers have been among the most impacted populations in this socioeconomic transformation. The research has a purpose to evaluate the dietary diversity and food security of female farmworkers in Lombok Tengah. Meat, poultry, and similar goods were found to have statistically significant correlations with food security status in unadjusted studies. Additionally, a high correlation was seen between food security and household dietary diversity. The community's appalling nutrition status was made clear by the findings.

**Keywords:** Dietary diversity, female farmer, food security



## **Risk Analysis of Overweight among Adolescent Girls in the Wetland Region of Banjar Regency, South Kalimantan, Indonesia**

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### **Summary**

One of the impacts of protein deficiency, calcium deficiency, and obesity is low bone density. Adolescents before the age of 20 years experience rapid bone formation. This study aims to analyze the risk of protein and calcium intake with obesity in female adolescents. This study used a cross-sectional design. The subjects were female adolescents who were natives of Banjar Regency studying at the Department of Public Health, Faculty of Medicine and Health Sciences, Lambung Mangkurat. Of the 90 subjects, 37.8% and 42.2% had inadequate protein and calcium intakes, respectively. Inadequate calcium intake was associated with obesity nutritional status ( $p= 0.000$ ).

**Keywords:** Risk of overweight, protein intake, calcium intake, bone density, adolescent girls



## Consumption of Legumes and Its Products among Indonesian Population Aged 19 to 55 Years Old

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### Summary

Legumes have the potential to serve as a significant source of high-quality protein. The research aims to analyse legume consumption patterns among individuals aged 19 to 55 in the Indonesian population, using the Individual Food Consumption Survey (SKMI) 2014. There are significant differences in legume consumption based on sex, age, and regional classification with  $p\text{-value} < 0.05$ . The most consumed legumes and its product group was soybeans, averaging 42.96 g per capita daily, representing 81.8% of the population. Then, peanuts were the next most consumed legumes (1.99 g/capita/day), followed by other nuts (0.89 g/capita/day).

**Keywords:** Adult, food consumption, legumes, tempeh, tofu



## **Household Food Security, Dietary Diversity and Nutritional Status of Children 6-59 Months Old in Lombok Tengah, Indonesia**

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### **Summary**

Chronic nutritional problems have become a general health issues. This research aims to evaluate the condition of food security and household dietary diversity and nutritional status of children in Central Lombok. Food security in households is measured by the Household Food Access Scale (HFIAS) and Household Dietary Diversity Score (HDDS), as well as for anthropometric categorization. Prevalence of stunting in children was 42.5%, while children with low food diversity consumption (<4 food groups) were 2.1%. In summary, the condition in Central Lombok with the high incidence of child stunting, followed by households that have low consumption of dietary diversity.

**Keywords:** Food security, individual dietary diversity score, stunting





## Effectiveness of Self-directed Online Learning in Stunting Knowledge Improvement Among Health Workers: A Pilot Study on Learning Center PDRC FPH UI

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### Summary

The knowledge of stunting among health workers varies widely. Self-directed online learning is currently one of the main options in the learning process. This study aimed to investigate the effectiveness of self-directed online learning on stunting knowledge among health workers. Forty-one participants from five provinces were purposively selected to complete stunting courses at the Learning Center PDRC FPH UI. The learning materials consisted of 15 animated videos and 1 e-book. A paired t-test was conducted to determine changes in knowledge before and after completing the course. The results indicate that self-directed online learning effectively improves health workers' knowledge about stunting.

**Keywords:** Health worker, knowledge improvement, online learning, self-directed learning, stunting knowledge



## **Digital-based Nutrition Education on Nutrition Knowledge and Behaviors in Adolescents: A Systematic Review**

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### **Summary**

The advancement of technology gives rise to new media, one of which is digital media. Digital media such as mobile apps, social media, and video games are shown to be an effective media in nutrition education on improving people's nutritional knowledge and behaviors, including in adolescents. This PRISMA review aimed to identify and synthesize all related studies to assess the effectiveness of digital-based nutrition educations in adolescents' nutrition knowledge and behaviors. All studies reported some positive outcomes on nutrition knowledge and behaviors in adolescents. In the future, randomized controlled studies with longer duration is recommended for the digital-based nutrition education.

**Keywords:** Adolescents, digital-based, nutrition behaviors, nutrition education, nutrition knowledge



## **The Influence of Economic Pressure and Financial Management on Parenting Quality in Stunted Children**

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### **Summary**

Stunting is a complex problem that encompasses more than just nutrition and health, it also involves parenting quality and family resource management. This research explores how child and family characteristics, economic stress, and financial management impact the quality of parenting. Using a cross-sectional design that included 68 mothers with stunted children aged 24-59 months, with data analyzed using SPSS. The findings show moderate levels of economic pressure and financial management, but low parenting quality. The child's age has an effect on parenting quality, but other characteristics along with economic pressure and financial management have no effect on parenting quality.

**Keywords:** Economic pressure, financial management, parenting quality, stunting, toddler



## Effect of Changes in Dietary Fiber on Lipid Profile of Obese Adults in Bogor City

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### Summary

Obesity is a multifaceted health issue influenced by individual behaviors and genetics. This research focused on examining the impact of dietary fiber changes on lipid profiles in obese adults in Indonesia. The study included 138 adults newly diagnosed with obesity in 2014 and 2016, using a cohort study in Bogor City. Data were analyzed using a generalized estimation equation (GEE). Initially, the average dietary fiber intake was 9.6 grams, which increased to 10.8 grams by the end of the study. Although changes in fiber intake had potential effects on lipid profile, these effects were not statistically significant.

**Keywords:** Dietary fiber, dyslipidemia, GEE, obese adults, lipid profile



## Relationship between Body Image, Parental and Peer Influence with Nutritional Status of Adolescents in Rural Areas of Sigi Regency

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### Summary

The nutritional status of adolescents is affected by various factors. This study aimed to analyse the relationship of body image, parental influence, and peer influence on adolescents' nutritional status. This study used a Cross-sectional design. A total of 51 students in Sigi Junior High School aged 14-16 years were involved as research subjects. Body image was associated with adolescents' nutritional status ( $p < 0.05$ ), but the influence of parents and peers was not associated with adolescents' nutritional status ( $p > 0.05$ ).

**Keywords:** Body image, parental influence, peer influence, nutritional status



## **The Relationship between Parenting Patterns and Socio-economic with Feeding Difficulties in Toddler**

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### **Summary**

Feeding toddlers is one of the factors determining nutritional status. The basic of feeding rules consist of schedule, environment and procedures. One of the factors causing the success of feeding is parenting patterns and socio-economic. Parenting patterns mean in terms of implementation of feeding rules and socio-economic conditions which consist of knowledge, income and education. The methods used were quantitative analysis. The result showed there is a relationship between parenting patterns and knowledge with feeding difficulties in toddlers ( $p=0.003$ )/( $p=0.001$ ). The results indicate that parenting patterns and knowledge about feeding rules are closely related to the feeding difficulties in children.

**Keywords:** Feeding difficulties, feeding rules, parenting patterns, socio-economic, toddlers



## **Physical Activity and Milk Consumption were Associated with Nutritional Status of School-age Children at Primary School in Kaliorang, East Kutai**

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### **Summary**

Physical activity and milk consumption are factors that can affect nutritional status. This study aimed to analyse the relationship between physical activity and milk consumption with nutritional status of school-age children at State Elementary School 004 in Kaliorang. This study used a cross-sectional design. A total 49 primary school-age children were selected as research subjects using the purposive sampling method. The data were analysed using the Spearman Rank test. Physical activity ( $p=0.000$ ), frequency of milk consumption ( $p=0.018$ ) and the amount of milk consumption ( $p=0.004$ ) had significant correlation with the nutritional status of school-age children.

**Keywords:** Physical activity, milk consumption, nutritional status, primary school, school-age children





## **The Effect of e-Health-Based Nutrition Education for Improving Hedonic Hunger, Dietary Energy Density, and Body Mass Index in Overweight and Obese Adult Women**

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### **Summary**

Lifestyle change interventions through improved eating behavior and physical activity have proven to be effective in addressing obesity. This study aims to analyze the effect of e-health-based nutrition education on improving hedonic hunger, dietary energy density, and Body Mass Index (BMI) in overweight and obese adult women. This study employed a quasi-experimental design involving 92 overweight and obese adult women (intervention 45, control 47). The differential test result for all outcome variables showed significant improvements in the intervention group across all measurement variables compared to the control group ( $p < 0.01$ ).

**Keywords:** Dietary energy density, hedonic hunger, nutrition education, obese, overweight



## **Mindful Eating Practices, Diet Quality and Nutritional Status of Institut Pertanian Bogor (IPB) University Students**

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### **Summary**

Mindful eating helps overcome unhealthy eating. This study examines how mindful eating affects IPB University students' diets and nutrition. Diet quality, nutritional status, and mindful eating behaviors were examined using the Indonesian Healthy Eating Index (I-HEI), percent body fat, and Mindful Eating Questionnaire. This cross-sectional study included 88 IPB University students. The data was collected using structured questionnaire interviews. The average I-HEI score of the individuals was  $60.5 \pm 9.0$ , indicating need for improvement. The majority of participants had normal nutritional status. This study found no correlation between mindful eating and IPB University students' diet quality and nutritional status ( $p > 0.05$ ).

**Keywords:** Diet quality, I-HEI, mindful eating, nutritional status



## **Mother's Knowledge and Parenting Practices for Stunted and Non-Stunted Children under Three in Bogor City**

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### **Summary**

This study analyzed mothers' knowledge about nutrition, health, and care, and parenting practices among families with children under three, classified as stunted or not in West Bogor District with a total sample of 200 children. Results showed there were no significant differences in child and family characteristics. However, the non-stunted group had relatively fewer siblings, more complete immunization status, and better maternal knowledge about nutrition. The study found that the mother's knowledge significantly correlated with the mother's and father's education, which implies that nutritional improvement might be supported by parental education.

**Keywords:** Health and nutrition, knowledge, parenting practice, stunting, toddler



## Maternal Parenting Efficacy, Mother-child Attachment, Home Parenting Environment, and Child Development: Analysis on Stunted and Non-Stunted Children in Bogor City

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### Summary

This study examined child and family characteristics in relation to stunting among children in Bogor city. Descriptive statistics, Mann-Whitney U tests, and Pearson correlation analyses were used to analyze the data. Comparative analyses found significant differences in the mean number of siblings (non-stunted: 1.2, stunted: 1.6,  $p < 0.05$ ), parental responsiveness (non-stunted: 77.5, stunted: 71.6,  $p < 0.05$ ), Bina Keluarga Balita (BKB) scores (non-stunted: 82.6, stunted: 77.1,  $p < 0.05$ ), and gross motor skills (non-stunted: 88.2, stunted: 80.9,  $p < 0.05$ ) between stunted and non-stunted children. Discussion highlights the importance of family dynamics and parental engagement in child development. Implications suggest targeted interventions in parenting practices for mitigating stunting effects.

**Keywords:** Child wellbeing, developmental milestones, home parenting environment, nutritional status, parenting practices



## Early Marriage: Early Motherhood and Its Linkage on Family Food Security

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### Summary

Early marriage is common in Bogor Regency, West Java, Indonesia, due to factors such as low parental education and poor family economic status, which increases the risk of food insecurity. This study analysed the relationship between early marriage and family food security among children under five in Leuwiliang. Using a cross-sectional design with 106 families, it found no association between age at marriage and food security, but younger maternal age at first birth was associated with higher family food insecurity. All subjects with an earlier marriage also had their first child before the age of 19.

**Keywords:** Children under five, early marriage, food security, malnutrition, stunting



## **Residential and Socio-economic Difference in Protein Intake among Children Aged 6-35 Months in Indonesia: The 2014 Individual Food Consumption Survey**

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### **Summary**

This study aimed to investigate protein consumption variations among children aged 6-35 months in Indonesia, considering factors such as age groups, socioeconomic status (SES), and residential. We analyzed data from the 2014 Individual Food Consumption Survey (SKMI), which included 3,449 children. Our findings revealed that protein intake increased with SES and age in both urban and rural, ranging from 14.9 to 42.5 g/d in urban areas and 12.6 to 40.3 g/d in rural areas. However, younger children aged 6-11 months had protein consumption below the recommended daily allowance (RDA). The primary sources of protein were cereals, offal, fish, and meat.

**Keywords:** Proportion below RDA, protein consumption, protein sources, socioeconomic disparities, residential disparities



## Vegetable Consumption in Seven Big Cities in Indonesia

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### Summary

Consuming vegetables is essential for ensuring optimal health and decreasing non-communicable diseases. The study objective was to describe vegetable consumption among residents of seven prominent Indonesian cities, namely DKI Jakarta, Depok, Bogor, Tangerang, and Bekasi (Greater Jakarta), Semarang and Surabaya. Data from National Socio-Economic Survey (SUSENAS) 2021 were used and analysed descriptively. Greater Jakarta, Semarang, and Surabaya have a higher vegetable consumption compared to Indonesia, although they show comparable patterns in variety of vegetables consumed. Nutrition education should be provided to increase the diversity and number of vegetables consumed, while also ensuring the availability and accessibility of various vegetables.

**Keywords:** Food access, food pattern, sustainable diet, urban, vegetable intake





## **Office Worker has Better Dietary Habits and Physical Activity when Work-From-Home (WFH) than Work-From-Office (WFO) during Covid-19 Pandemic**

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### **Summary**

The Covid-19 pandemic has led to lifestyle changes. This is cross-sectional study analyses the differences in office workers' dietary habits and physical activity during work-from-home (WFH) and work-from-office (WFO). Data was conducted through an online questionnaire. Breakfast consumption, fruit and vegetable intake, milk consumption, and physical activity were higher during WFH than WFO ( $p < 0.05$ ). Conversely, unhealthy behaviour's such as consuming sweet drinks and fast food increased during WFO. This result indicates that office workers have a healthier lifestyle when working from home than working from the office.

**Keywords:** Covid-19, dietary habits, lifestyle, office workers, physical activity



## Exploring the Relationship Between Family Income, Food Purchasing Power, and Nutritional Adequacy in Babakan Village's Elementary School Children

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### Summary

Family income influences food purchasing power directly and nutritional intake indirectly. This study analyzed the correlation between income, food purchasing power, and protein-energy intake adequacy in school-aged children near the IPB Dramaga Campus. This research used a cross-sectional design, where 39 children were purposively sampled. Data were collected through interviews with self-made questionnaires that have been validated. Most children came from low-income families (64.10%) and had severe deficits in energy and protein adequacy level (41.03% and 46.15%). However, the correlation test showed no significant relationship between income and energy-protein adequacy level ( $p>0.05$ ), but there was a significant relationship between income and purchasing power ( $p<0.05$ ).

**Keywords:** Economics, energy adequacy, income, protein adequacy, purchasing power



## **Effectiveness of Providing Healthy Local Snacks on the Nutritional Status of Pregnant Women with Chronic Energy Deficiency (CED)**

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### **Summary**

This study assessed the impact of providing healthy local snacks on Chronic Energy Deficiency (CED) among pregnant women in Indonesia, where CED is defined by an upper arm circumference of less than 23.5 cm and a BMI below 18.5 kg/m<sup>2</sup>. With a prevalence of 17.3% in Indonesia, the intervention involved 54 pregnant women in Purbalingga, Bogor, and Serang City receiving local snacks for four months. Results showed significant improvements in body weight, BMI, haemoglobin levels, and CED conditions, with  $p < 0.05$ . Adherence to snack consumption also notably increased. The study demonstrated that healthy local snacks are an effective and accessible supplementary nutrition source, enhancing the nutritional status of pregnant women and supporting optimal intake during the first 1000 days of life. Recommendations include developing local food-based nutrition programmes, education on balanced nutrition, regular monitoring, and further research to validate these findings.

**Keywords:** Healthy local snacks, nutritional status of pregnant women, CHRONIC ENERGY DEFICIENCY (CED), pregnancy nutrition, nutrition intervention



## **Household Income and Nutrient Adequacy in Women of Reproductive Age: A Study in Babakan Village, Indonesia**

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### **Summary**

Chronic Energy Deficiency (CED) and anaemia often occur in women of reproductive age and can cause health issues. This study Investigated the relationship between household income and the adequacy of energy, protein, and iron levels in women of reproductive age in Babakan Village. The study used a cross-sectional design with 78 women of reproductive age, collected through purposive sampling. The instruments involved interview questionnaires and 1x24-hour food recall forms. The study results indicate that income and energy also protein adequacy are not significantly correlated, whereas income and iron adequacy are significantly correlated.

**Keywords:** anemia, Chronic Energy Deficiency (CED), household income, nutrient adequacy level, women of reproductive age



# FOOD INNOVATION



## Reduction of Cyanide Concentration in Cassava by Lactic Acid Bacteria Fermentation: A Meta-analysis

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### Summary

This study aimed to investigate the effect of cassava fermentation by lactic acid bacteria (LAB) on cyanide concentration using a meta-analysis method. The effect size (ES) used was in response ratio ( $\ln RR$ ). The results revealed that LAB fermentation reduced the total cyanide concentration with an ES of -0.667 ( $P < 0.001$ ) or equal to an average cyanide reduction of 48.7%. Fermentation of cassava enhanced lactic acid concentration and LAB population with the ES of 2.305 (about 10 fold increase;  $P < 0.001$ ) and 0.757 ( $P < 0.001$ ), respectively. In conclusion, LAB fermentation is an effective processing technique to reduce poisonous cyanide in cassava.

**Keywords:** Cassava, cyanide, fermentation, research synthesis, toxin



## Development of Wader-fish (*Rasbora argyrotaenia*) and Kidney Beans as a Supplementary Food: A Source of Protein and Minerals for Toddlers Aged 12-24 Months

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### Summary

Protein and minerals deficiency can contribute to stunting. Introducing wader-fish, an underutilized-ingredient rich in protein and minerals, for the development of supplementary-food could offer a nutritious option for toddlers. Different formulations of wader-fish and kidney-beans (50:50, 70:30, 90:10) were used to develop a supplementary-food. Pepes-technique, an Indonesian steamed-dish wrapped with banana-leaves, was chosen to preserve nutrients and offer convenient single-serving use. Kidney-beans was selected as protein-complementor. The ratio of 70:30 was chosen as the optimal formula. One serving (125 g) provides 23.3% of energy, 81.35% of protein, 86.80% of calcium, 74.82% of iron, and 102.08% of zinc of the recommendation.

Keywords: Pepes, Stunting, Supplementary food, Underutilised-ingredient, Wader-fish





## **Antioxidant and Nutrient Profile of Instant Powdered Drink Made from Bajakah (*Spatholobus littoralis* Hassk) and Tiwai Onion (*Eleutherine americana* Merr) Extracts**

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### **Summary**

Innovation in making drinks in powder form to make it easier to brew, from local food sources is very important in the development of new functional foods, such as the use of tiwai and bajakah plants. This study aimed to determine the physicochemical characteristics and antioxidants of the instant drinks produced. The ratio of tiwai and bajakah extracts did not significantly affect ash content, solubility, brightness level, and sensory properties. However, it had significant effect on water content, antioxidants, and total flavonoids. The brightness level, measured by L\* value ranged from 49.55-53.39, antioxidant capacity ranged from 67.15-114.54 ppm, while total flavonoid content ranged from 16.30-20.86 mgCE/100g.

**Keywords:** Antioxidant, nutrient, bajakah, instant drink, tiwai onion



## **Survival of the Probiotic *Lactobacillus Plantarum* Encapsulated with Skim Milk and Maltodextrin**

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### **Summary**

Lactic Acid Bacteria probiotic were provide many beneficial physiological effects. Two isolates of *Lactobacillus plantarum* from North-Sumatera river buffalo milk were selected. This in-vitro study evaluated the effect of encapsulated ingredients on probiotic characteristics namely calculating the number of probiotics both with and without storage. The result showed skim milk and maltodextrin significantly affect survival. The survival of skim milk and maltodextrin were 92.19% (8.79 log cfu/gr), and 90.53% (8.61 log cfu/g). The probiotic number at 4oC and room temperature after 30 days were 107 and 105 cfu/gr. The results showed encapsulating were effective in protecting the probiotic.

**Keywords:** Encapsulation, *Lactobacillus plantarum*, maltodextrin, north-sumatera river buffalo milk, skim milk



## Increasing The Dietary Fibre Content of Chicken Sausage using Pigeon Pea (*Cajanus Cajan*) Flour

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### Summary

Pigeon pea is a good source of fiber. This study explored pigeon pea (*Cajanus cajan*) flour (PPF) used in chicken sausages with five formulas (100:0 (control), 75:25, 50:50, 25:75, and 0:100 w/w). Laboratory analysis revealed increased ash (2.37-2.91%), carbohydrate (6.64-33.11%), and dietary fibre (16.95-20.13%), while moisture (46.68-74.28%) and protein (12.36-13.8%) decreased following increasing PPF. PPF did not affect pH but decreased brightness and increased redness. Sensory evaluation indicated no significant difference in colour, taste, texture, aftertaste, and overall acceptability between control and formula 75:25 PPF-chicken, suggesting PPF is a good source of fibre in production sausage without altering its acceptance.

**Keywords:** Chicken sausage, Dietary fibre, Physicochemical characteristics, Pigeon pea flour, Sensory acceptance



## **The Development Cookies from Moringa and Soybean Flour as an Alternative Snack for Adolescent Girls**

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### **Summary**

Snacks which contain iron and protein can become an alternative solution for improving adolescent girls' intake. Moringa and soybeans, local food in Palu containing iron and protein, have the potential to improve the health of adolescent girls. This study aims to formulate cookies using varying ratios of moringa and soybean flour (F1=50%:25%; F2=40%:35%; F3=30%:45%; F4=20%:55%). The results showed that F3 produced the highest iron (11.008mg/100g) and protein content (23.56g/100g). Hedonic test showed that F4 was the most preferred cookies. Thus, it can be recommended as an alternative snack for adolescent girls to fulfill their need of iron and protein.

**Keywords:** Adolescent girls, anemia, cookies, moringa, soybean



## **Kepok Banana Starch (*Musa paradisiaca Formatypica*) and Moringa (*Moringa oleifera*)-based Prebiotic Products as Functional Food for Wistar Strain Female Rats**

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### **Summary**

Kepok banana starch contains high resistant starch (RS) as a potential prebiotic to prevent colon cancer. Moringa leaves contain iron and vitamin C, which helps iron absorption in the body. This study was a true experiment using 32 rats as experimental animals, which were divided into 4 groups (K1 = control; K2 = low dose; K3 = moderate dose; K4= high-dose). The One-Way ANOVA shows a significant difference in pathogens in K2, K3, and K4 from K1 with  $p=0.03$ . Lactic Acid Bacteria (LAB) results show significant differences in K2, K3, and K4 from K1 with  $p=0.03$ . The best treatment was K3 with highest concentration for the lactic acid bacteria with relatively low concentration for pathogenic bacteria.

**Keywords:** Kepok banana starch, moringa leaves, prebiotic, functional food, rats



## **Effectiveness of Catfish Nuggets to Improve Nutritional Status and Prevent Stunting in Toddler**

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### **Summary**

The research aims to study the effectiveness of providing catfish nuggets and their nutritional status. The results of interviews with village heads and toddler mothers showed that 90% of mothers worked outside the home as factory employees, working full time all day, often overtime until late at night, taking care of toddler by grandmothers who can no longer take care of their grandchildren. Children's food consumption isn't managed, don't eat enough. Children are quiet and not fussy, a benchmark for healthy children. Providing nuggets is efficacious in improving the nutritional status and preventing stunting.

**Keywords:** Consumption of catfish nuggets, effectiveness, nutritional status, stunting, toddler



## **Mocaf Flour, Moringa Leaf Flour, and Mackerel Flour Food Bars as Emergency Food Product (EFP) for Autistic Children in Disaster Condition**

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### **Summary**

In disaster conditions, gluten and casein-free food bars can be provided for autistic children. The objective of this study is to determine the best food bar formulation based on chemical and sensory attributes using a completely randomised design (CRD) with two repetitions and three treatments variations of mocaf flour (25g, 27g, and 29g), and mackerel flour (5g, 3g, and 1g), each supplemented with 9g of moringa flour. Results showed significant effects ( $p < 0.005$ ) on moisture, ash, protein content, and all organoleptic parameters. The best formulation was F3, with 250 calories, 5.2 g protein, 34.3 g carbohydrate, and 9.08 g fat per 64 grams.

**Keywords:** Emergency food, food bar, mackerel flour, mocaf flour, moringa leaf flour





## **Snack Bars from Sago Worm Paste (*Rhynchophorus ferrugineus*) as an Alternative Food: Nutrients Content and Sensory Properties**

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### **Summary**

Sago-worms is one of sustainable nutritious food ingredients which needs further development to gain wider utilisation. This research aimed to develop snack bars made from sago-worm paste which further evaluate by proximate analysis and sensory evaluation. There were four ratio formulas of sago worm paste and wheat flour i.e. 0:100 (F0), 25:75 (F1), 50:50 (F2), and 75:25 (F3). The ash, protein, lipid and total energy of snack bars could increase with the addition of sago worm paste, whereas the sensory value of taste and aftertaste decreased. All snack bar treatments were according to United States Department of Agriculture (USDA) standards, and F2 was found to be the best formula.

**Keywords:** Alternative food, nutrients content, sago worm, sensory characteristics, snack bars



## **Local Wisdom-based Instant Cream Soup Products as Functional Emergency Food for Health Crisis and Disaster Condition**

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### **Summary**

Development of functional food with local ingredients of black soybeans and brown rice in the form of cream soup as emergency food with high nutritional content for nutritional preparedness efforts in disaster and health crisis situations. This study aims to determine the acceptability and nutritional value of three types of cream soup (original flavor, mushroom and vegetable onion). There were 236 panelists from 3 provinces (West Java, Yogyakarta and East Java). The best acceptability in terms of color, aroma, texture and taste was the vegetable onion cream soup variant. 1 portion of cream soup can meet daily energy requirements of 21.5%.

**Keywords:** Instant cream soup, black soybean, brown rice, health crisis, disaster



## **Evaluation of Calcium (Ca) and Magnesium (Mg) Content of Sprinkles Produced from Chicken Feet and Mung Bean (*Vigna radiata*)**

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### **Summary**

The utilization of chicken feet and mung beans is limited. Processing them into sprinkles is expected to become a way of utilizing their use. This study aimed to evaluate the calcium and magnesium content of the sprinkles. The content of calcium and magnesium of the formula with variable amounts of chicken feet and mung beans were analyzed by Flame-AAS. The average concentrations of calcium and magnesium varied between 962.10-1227.80 mg/100g and 204.35–283.02 mg/100g, respectively, with no significant differences observed among the four formulas. In addition, the calcium content of F2 meets the "high" nutrient claim as per BPOM regulations.

**Keywords:** Calcium, chicken feet, magnesium, mung beans, sprinkles



## **The Nutritional Content and Physical Characteristics of Sago Starch and Oyster Mushrooms as Potential Functional Food Ingredients**

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### **Summary**

The combination of sago starch and oyster mushrooms in development product like pasta remains limited. Their shelf life can be enhanced by processing them into flour. The preliminary study aimed to determine the nutritional content and physical characteristics of these two foods. The analyses include nutritional content and physical characteristics descriptively. Sago starch contained a significant amount of resistant starch (9.86 g), while oyster mushroom was high in fiber (11.17 g) and phenols (360.8 g) and relatively low in fat (5.81 g). The color test showed that sago starch was lighter in color than oyster mushroom flour. The viscosity of oyster mushroom flour is very low compared to sago starch. Nevertheless, both sago starch and oyster mushrooms offer significant nutritional advantages.

**Keywords:** Sago starch, oyster mushroom, development product, ingredients



## Effect of Cowpea (*Vigna Unguiculata* (L.) Walp) Substitution on Tannin, Protein, and in vitro Protein Digestibility of Sorghum (*Sorghum Bicolor* (L.) Moench) Sprouted Rice

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### Summary

The addition of cowpea is intended to increase the protein content and digestibility of sorghum rice, while the decrease in tannin content is done by the germination process. The purpose of this study was to determine the amount of cowpea substitution that can increase protein content and protein digestibility. The methodology used was experimental. The results showed that cowpea substitution up to 50% could increase tannin content, protein and protein digestibility by 0.45%, 7.52%, and 35.29%, respectively. The germination process can reduce the tannin content by 0.27% and increase the protein content and protein digestibility by 11.79% and 49.55%, respectively.

**Keywords:** Cowpea, digestibility, germination, sorghum rice, tannin



## **Co-fermentation of Lactic Acid Bacteria Producing Beta-Glucosidase during Tempeh Development Impact Tempeh Microbiome and Nutrient Composition**

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### **Summary**

The impact of addition lactic acid bacteria producing  $\beta$ -glucosidase on the nutrient and microbiome composition of tempeh is unknown. By enveloping amplicon 16s rRNA sequencing, we aimed to identify the impact of co-fermentation of lactic acid bacteria producing  $\beta$ -glucosidase on microbiota as well nutrient content of tempeh. Significant difference was found in moisture, protein and ash, but not in fat content. Modified tempeh was enriched with bacterial taxa that was correlated with antioxidant and vitamin production such as *Chryseobacterium*, *Lactiplantibacillus* and *Klebsiella* although has lower bacterial diversity. Overall, co-fermentation with lactic acid bacteria improves the health functional properties of tempeh.

**Keywords:**  $\beta$ -Glucosidase, lactic acid bacteria, metagenomic analysis, tempeh



## Physicochemical and Sensory Characteristics of Yoghurt with Added Mesocarp or Epicarp and Endocarp from Pumpkin (*Cucurbita moschata*)

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### Summary

This study explored the potential of employing underutilized pumpkin by-products i.e. epicarp (peel) and endocarp (fibrous strands) in yoghurt production apart from the pumpkin mesocarp (flesh). A total of six yoghurt formulations were developed by incorporating varying percentages (1%, 3%, and 5%) of mesocarp or by-products (a mixed of epicarp and endocarp). Compared to the control yoghurt, incorporating pumpkin components caused physicochemical changes. The addition of pumpkin by-products could further improve the yoghurt nutritionally, however, the added 3% pumpkin mesocarp was the best formula based on physicochemical and sensory characteristics.

**Keywords:** By-products, physicochemical properties, pumpkin, sensory characteristics, yoghurt





## **Effect of Inulin and Xanthan Gum on the Properties of Sugar-free Green Saba Banana Flour Biscuit**

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### **Summary**

The growing global demand for healthier dietary options has led to increased interest in low glycemic index (GI) foods, including sugar-free foods. In bakery products, sugar plays an important role in providing the final product with desirable colour, taste and texture. Removal of sugar from a bakery product will therefore create challenging technological problems to achieve the expected quality. The use of suitable functional ingredients in the product formulation to substitute the role of sugar is the key to success. In this study, green Saba banana flour (GSBF) was used to produce a sugar-free biscuit. The effect of inulin (0%, 25%, 50%) and xanthan gum (0%, 1%) on the properties of the biscuit was investigated. The physical properties, sensory properties, in vitro digestibility and estimated glycemic index (eGI) of the biscuits were analyzed. In terms of sensory, the sugar-free biscuit containing 50% inulin and 1% xanthan gum was insignificantly different from the sugar-containing biscuit (control). This sample was found to contain higher protein, crude fiber, and dietary fiber but lower in fat, carbohydrates, and calories than control. Results obtained showed that the use of an appropriate level of inulin and xanthan gum was essential to enhance the dough handling and improve the physical characteristics and texture of the biscuit. The nutritional quality and in vitro digestibility of the biscuit with the highest sensorial acceptance was significantly improved as compared to the sugar-containing counterpart. The inclusion of inulin and xanthan gum exhibited a significant positive effect on the quality of sugar-free biscuit made with GSBF.

**Keywords:** Green banana flour, sugar-free biscuit, glycemic index, inulin, starch digestibility



## Preliminary Study on the Effects of Nixtamalization on Nutrition and Anti-Nutrition Properties of Red Sorghum (*Sorghum bicolor* L.)

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### Summary

One of the limitations of red sorghum as a food ingredient is its anti-nutrition. The objective of this study is to assess the effect of nixtamalization on the nutrition and anti-nutrition content of red sorghum. This study used a completely randomized design consisting of two factors: the variation of Ca(OH)<sub>2</sub> concentration and processing time. It found that nixtamalization of the C2Tc samples, which refers to 1% Ca(OH)<sub>2</sub> and 30-minute processing time, have the highest the protein content (14,34%) and the lowest phytate content (3,28%) significantly. Thus, it is the best nixtamalization condition to improve nutrition and reduce anti-nutrition content.

**Keywords:** Anti-nutrition, phytate, proximate, sorghum nixtamalization, tannin



## **Gluten-free Instant Cup Noodles Based on Mocaf Flour**

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### **Summary**

This study aims to develop gluten-free instant cup noodles using local ingredients, esp. mocaf (modified cassava flour). Rice flour and sago flour were added in varying compositions to achieve the optimal formula. Five noodle formulas were created and tested for their physical properties and sensory properties. The most favorable formula (i.e. Mo4) was then analyzed for its nutritional content. The selected gluten-free instant cup noodles were found to contain 6.15% water, 2.65% ash, 14.7% total fat, 74.60% carbohydrate, 526 kcal total energy, 0.95% total sugar, 0.06% trans-fat, and 4.12% dietary fiber, thus, qualifying them as a good source of fiber.

**Keywords:** Dietary fiber, gluten-free, instant cup noodle, mocaf, nutritional content



## **Optimizing the Sensory Profile of 'Daygurt': A Functional Blend of Dadih and Yoghurt Using Response Surface Methodology**

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### **Summary**

Response Surface Methodology (RSM) was used to optimise the formulation of daygurt functional drink, a combination product of dadih and yoghurt based on cow's milk. The independent variables were the percentage of dadih, yoghurt and skimmed milk. The optimised responses were sensory profile, viscosity, pH and protein content. Statistical analysis showed that there were significant effects of variables on aroma, and texture. Maximum optimization in the formulation of 1% dadih, 4.89% yoghurt and 9.1% skimmed milk. The experimental values from response were found to align with the predicted values with a 95% Confidence Index (CI), affirming its suitability.

**Keywords:** Dadih, daygurt, response surface methodology, yoghurt



## **Physical and Organoleptic Characteristics of Meltique Beef Steak Injected with Virgin Coconut Oil Emulsion, a Protein Source Food to Prevent Stunting**

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### **Summary**

An important way to reduce stunting is by ensuring adequate protein intake for toddlers. Beef as a protein source has thicker muscle fibers, making it difficult for children to consume. One innovation that can be developed to obtain tender-textured beef is by injecting plant-based oil, resulting a meltique beef. The aim of this study was to investigate the physical and organoleptic characteristics of meltique beef with VCO emulsion injection as a food source of animal protein. The design of this research using a Complete Random Design (RAL). Meltique beef injected with VCO emulsion in this study managed to get the same quality of physical characteristic and sensory as wagyu beef and canola oil emulsion. Therefore, VCO emulsion-injected meltique beef can be a protein source that is preferred and easily consumed by toddlers because their soft texture with affordable prices.

**Keywords:** Meltique beef, virgin coconut oil, organoleptic tests, physical characteristics



## **Physicochemical, Nutritional Content and Organoleptic of Meltique Beef Steak Injected with Different Concentrations of Coconut Oil (*Cocos nucifera* L.)**

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### **Summary**

The demand for affordable high quality beef has driven innovation in meltique beef, injected with vegetable or animal fats with aims of forming a marbling. Generally, meltique is injected with canola oil or wagyu fat, however these fats can pose health problems and increase costs. There is a need alternative fats derived from local oils Indonesia, that are more affordable, such as coconut oil. This research marks the first investigation into modifications aimed to enhancing understanding of meltique. The result indicated that meltique with higher emultions (K2) exhibited good TBARS, antioxidant, texture and was favored by the panelists as Wagyu.

**Keywords:** Beef, coconut oil, injection, meltique beef



## A Comparison of the Nutritional Content between Fillet and Whole Grasshopper (*Valanga nigricornis*)

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### Summary

Grasshoppers have potential to be an alternative protein source because high in nutrient and environmentally friendly. Grasshoppers can be used either as a fillet or whole. The research stages consisted of grasshopper preparation, proximate, and mineral analysis. The whole grasshoppers have higher protein ( $81,8 \pm 0,9\%$ db) and carbohydrate ( $10,9 \pm 1,1\%$ db) than the fillet. The mineral content of whole grasshoppers, namely Ca, Fe, Zn were  $14.39 \pm 0.06$ ;  $5.43 \pm 0.11$ ;  $1.76 \pm 0.03$  mg/100g respectively, and higher than filets due to the ability of chitin that contained in the exoskeleton to bind minerals. It can be concluded that whole grasshoppers have a higher nutritional content than filets.

**Keywords:** Chitin, fillet grasshopper, mineral, protein, whole grasshopper





## **Nutritional Powder Made from *Spirulina* sp. and Petek Fish (*Leiognethus splendens*) for Pregnant Women to Prevent Stunting in Their Babies**

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### **Summary**

Stunting is a nutritional problem in Indonesia that remains unresolved. Pregnant women with nutrient deficiencies are at risk of giving birth to babies with low birth weight, low immune resistance, premature births, and including stunting. This study evaluates a nutritional sprinkle powder made from *Spirulina* sp. and petek fish as an alternative to source of the nutrients for pregnant women. The nutritional content analysis of the selected formula F2 includes moisture 6.39%wb, ash 14.1%db, fat 14.44%db, protein 50.33%db, carbohydrates 21.12%db, energy 415.81 kcal, calcium 1200.1 mg, phosphorus 1294.84 mg, iron 18.05 mg, and zinc 0.26 mg. This indicates that nutritional sprinkle powder as potential formula to be given to the pregnant women as an effort to prevent stunting.

**Keywords:** Minerals, petek fish, pregnant women, spirulina sp, stunting



## **Feeling of Fullness Following Intake of High-fiber Purple Sweet Potato (*Ipomoea batatas*) and Kidney Bean (*Phaseolus vulgaris*) Extrudate in Obese Subjects**

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### **Summary**

Obesity may be caused by excess calorie intake. High-satiety index food may help obese people suppress their hunger so that excessive calorie intake does not occur. This study aimed to compare the satiety level of purple sweet potato-kidney bean extrudate with other staple foods. The research design is a crossover study with 16 obese subjects. Purple sweet potato-kidney bean extrudate prolonged satiety by 31 minutes compared to white bread, by 34 minutes compared to ready-to-eat cereal, and by 89 minutes compared to white rice. Based on the Pearson correlation test, high BMI values will increase hunger ( $p=0.015$ ) and prospective consumption ( $p=0.015$ ).

**Keywords:** Obesity, purple sweet potato, satiety index, satiety score, staple food



## **Optimization of Ready-to-drink Chrysanthemum Flower Tea Formulation Based on Bioactive Compounds and Sensory Properties**

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### **Summary**

The purpose of this experiment was to find out the optimal formulation for producing ready-to-drink chrysanthemum flower tea using Response Surface Methodology-Box Behnken Design (RSM-BBD). The best formulation based on the highest content of total phenolic, total flavonoid, anthocyanin content, antioxidant activity and sensory acceptance was 2 g chrysanthemum flower powder brewed in water at 90 °C with the addition of sugar at concentration of 14,281%. This formula had a total phenolic 535.752 mg GAE/g, total flavonoid 49.909 mg QE/g, anthocyanin content 5.929 mg/L with acceptable and preferred sensory properties of taste, aroma, and color.

**Keywords:** Anthocyanin, Antioxidant, Chrysanthemum Flower, Ready-to-Drink Functional Tea, Sensory Properties



## Fortified with Moringa Leaf Powder

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### Summary

The diverse benefits of *Moringa oleifera* has excellent potential for applications in the food sector. This study evaluates the acceptance and nutritive value of breads fortified with Moringa leaf powder. Five bread samples were prepared with a 0-20% incorporation rate of the Moringa leaf powder. These were made with ratios of moringa leaf powder to wheat flour; 0:100, 5:95, 10:90, 15:85 and 20:80. A panel of ten untrained judges rated the organoleptic properties and overall acceptability of the breads. The water content, protein, fat, fibre, and ash content were determined using NIR spectroscopy. The results indicate that Moringa leaf powder increased the ash (2.00-2.55%), fat (5.30-9.99%), and crude fibre (2.90-7.80%) contents ( $p < 0.05$ ) of the samples. The moisture content however decreased with increased fortification level (10.22% - 14.00%). Breads made with 5% Moringa leaf powder showed better acceptability with no significant difference from the control (100% wheat flour). Additionally, this 5% substitution of wheat flour with Moringa leaf showed significantly improved protein and mineral content of bread.

**Keywords:** *Moringa oleifera*, moringa leaf powder, fortification, bread, nutritive value



PD120FI\_ Nutritional Composition and Organoleptic Quality of Instant Local Black Rice (Cempo Ireng) with Moderate Glycemic Index. **A. D. Nurhayati, A. Nirbaya<sup>1</sup>, C. P. Nusa, S. Soekopitojo, A. L. Kurniawan, D. D. Handoko, A. Hapsari, A. F. Sepbrina, D. O. W. Prastiwi, D. A. Puspitasari, N. Athaya, M. Y. A. Badwani, D. A. Araminta**

## **Nutritional Composition and Organoleptic Quality of Instant Local Black Rice (Cempo Ireng) with Moderate Glycemic Index**

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### **Summary**

This research aims to develop instant rice from local black rice variety, Cempo Ireng, that is safe for diabetes mellitus. Instant black rice was made through the process of soaking, washing, cooking, freezing, thawing, and drying. There were 3 formula including (1) soaking in 5% sodium citrate at room temperature, (2) soaking in 5% sodium citrate at 50°C, (3) soaking in 7% sodium citrate at 50°C. Instant rice was then tested for its nutritional content and hedonic quality. The best formula was then tested for its glycemic index. Instant black rice has a moderate glycemic index of 60.

**Keywords:** Glycemic index, hedonic test, instant local black rice, nutritional profile, sodium citrate



## **Knowledge Drives Food Choices: Meltique Meat Purchase Decisions in Urban Indonesian Households**

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### **Summary**

A new food innovation has made it possible to produce affordable Wagyu-like beef, known as Meltique meat, by injecting it with vegetable oil. Despite its potential, urban consumers have low awareness of Meltique due to a lack of information. This cross-sectional study used a questionnaire of 260 urban households in Jabodetabek and found that less than 50% were aware of Meltique meat, indicating a significant awareness gap. This lack of awareness has a direct impact on purchasing decisions, as higher levels of knowledge correlate with an increased likelihood of purchasing Meltique meat.

**Keywords:** Food innovation, meltique meat, knowledge, purchase decision, wagyu-like



## Meltique Meat: Urban Household Consumer Behaviour and Perceptions

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### Summary

The research examines consumer behavior and perceptions of Meltique Meat, a Wagyu-like product, in Jabodetabek, Indonesia. Carried out in Jabodetabek, one of Indonesia's urban areas, this research involved 200 household consumers and was conducted using online platforms. Findings indicate a preference for supermarket purchases, primarily frozen Saikoro (diced tenderloin), for home and restaurant steak cooking. Purchases are typically monthly or quarterly, averaging 200-500 grams. Consumer perceptions are mixed, with concerns about accessibility, halal status, processing difficulties, and perceived quality and authenticity. The study highlights the need for improved marketing strategies and product innovation to meet consumer preferences and address concerns.

**Keywords:** Consumer behavior, household, meltique meat, perception, urban area





## **The Effect of Retort Process on Quality of Traditional Meat Products During Storage: Physical and Sensory Aspects**

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### **Summary**

"Oseng Mercon" is a traditional Indonesian beef product from Java with a short shelf life of 1-2 days. This study examines the effects of the retort process on its physical and sensory qualities using an experimental descriptive method. Four treatments were tested: plastic jar without sterilization, aluminum foil without sterilization, aluminum foil with retort, and aluminum foil with a pressure cooker. Results showed a continuous decline in all parameters from day 0 to day 14. The best treatment was the retort method with aluminum foil packaging, followed by the pressure cooker method with aluminum foil packaging.

**Keywords:** Physical properties, retort, sensory properties, sterilized, traditional food



## **Development of Plant-based Milk from Pigeon Peas and White Rice for Vegetarians**

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### **Summary**

With the growing number of consumers adopting vegetarian diets, there is an increasing demand for vegetarian products. Plant-based products need to consider a complementary protein concept to ensure their protein quality. This study aimed to develop vegetarian milk from pigeon peas and white rice. The results not only showed that the more pigeon peas used, the lower the carbohydrate content, the less viscous, and the lighter the color of the samples, but also highlighted the nutritional implications of the study. It demonstrated the potential of pigeon peas in developing beverage products for vegetarians, thereby addressing their nutritional.

**Keywords:** Milk, Pigeon peas, plant-based protein, vegetarians, white rice



## Fiber Source Taro-Based Egg Roll Cookies Extends the Feeling of Fullness

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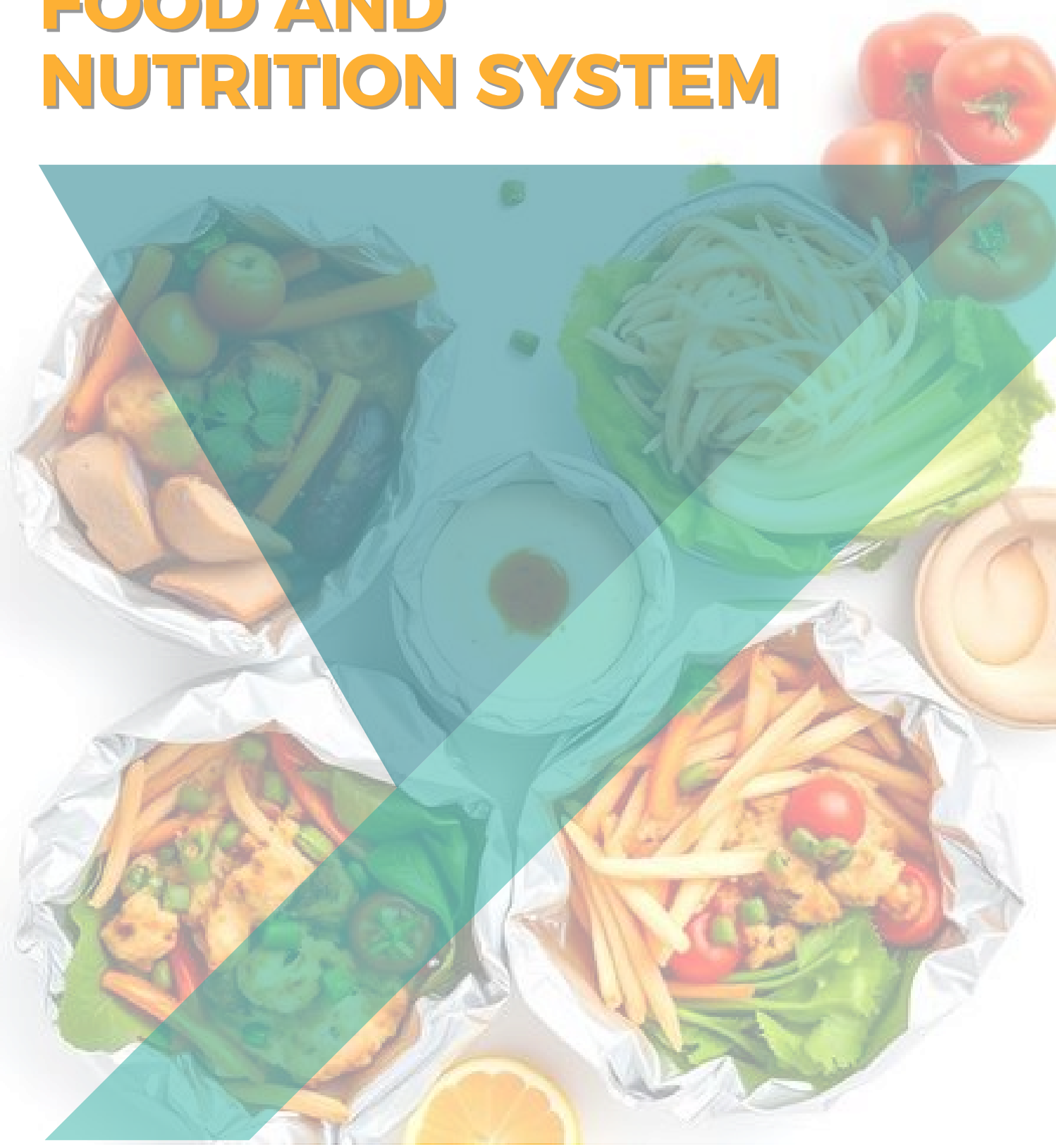
### Summary

Satiety index (SI) could be an important indicator used to prevent overnutrition. This study aims to determine the SI of 4 different formulas of taro-based egg roll made from wheat flour, taro flour, and mocaf (F0=100:0:0. F1=0:40:60, F2=0:60:40, F3=0:100:0). The dietary fiber content from the highest to lowest were F3, F1, F2, and F0. The food was given isocalorically and SI was measured using visual analogue scale. The SI from the highest to lowest were F3 (131.2), F1 (121.3), F2 (119.4), and F0 (103.9). The result indicates that food with higher fiber produces higher SI.

**Keywords:** Dietary fiber, isocaloric, satiation, satiety index, visual analogue scale



# FOOD AND NUTRITION SYSTEM



## Consumers and Producers' Preferences for Design of Sugar, Salt, and Fat Content Information and Health Messages on Processed and Ready-to-serve Food

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### Summary

Many risk factors, including sugar, salt, and fat (SSF) consumption, influence non-communicable diseases (NCDs). This study provided information on consumers' and food producers' preferences for designing SSF information and health messages on processed and ready-to-serve foods in Indonesia. The data was obtained using a structured questionnaire and focus group discussion (FGD). The results indicated that consumers and producers of processed and ready-to-serve foods had different preferences for designing SSF content information and health messages, thus requiring rigorous discussion with all stakeholders to agree on the most suitable design.

**Keywords:** Food label, health messages, nutrition facts label, processed food, ready-to-serve food



## Implementation of Sustainable Healthy Diet in Urban Household Consumption

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### Summary

This study examines the application of sustainable healthy eating patterns in urban households in terms of health, socioeconomic and environmental aspects. The methodology used was cross sectional, data collection was conducted in November 2023 - January 2024. The results showed that consumption diversity was quite good with an average score of 69.9 (>42), but only <20% had normal energy consumption levels and <50% had normal protein consumption levels. The proportion of food expenditure of the population is >60% (70.5%) of total income, while the food waste produced is 319.2 grams / day equivalent to 79.8 g / cap / day, cereals and vegetables as the highest type of food waste. Thus, a sustainable healthy diet in urban households cannot be achieved.

**Keywords:** Food waste, healthy diets, household consumption, sustainability, urban household



## Indonesian Consumers and Food Producers' Preferences for Sentences Style for Health Messages on Sugar, Salt, and Fat on Processed Food and Ready-to-serve Food

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### Summary

Excessive sugar, salt, and fat (SSF) intake are risk factors for non-communicable diseases (NCDs). This research provides information on the preferences of consumers and producers in Indonesia on the sentence style of health messages on the labels of processed and ready-to-serve foods. Data was obtained using a structured questionnaire and focus group discussion. The results showed that household units were preferred for measurement units. Meanwhile, a shorter sentence was preferred than the in the current guideline. Intensive discussions are needed involving all parties to agree on the most suitable health message on SSF content to reduce the risk of NCDs.

**Keywords:** Consumers, food labels, food purchasing behaviour, health messages, sugar, salt, and fat





## **Restaurant Food Waste Management Strategy in Asia Using the Restaurant Food Waste Map (RFWM) Approach**

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### **Summary**

Food waste is a global issue due to its serious environmental, economic, and social impacts. This research is a narrative review collected information regarding restaurant food waste management using the Restaurant Food Waste Map (RFWM) approach. The main actors in food waste at each phase are managers, chefs, kitchen staff, waiters, and customers. Most types of food waste produced are avoidable. Factors that influence food waste include management of food supplies, serving style, and customer behaviours. Management strategies that can be implemented include improving food supply management, using smaller plates, and various interventions to increase customer awareness of food waste.

**Keywords:** Food waste, literature review, management strategies, restaurant, restaurant food waste map



## **Designing Stunting Prevention Strategies for Coastal Households in Bengkulu Province**

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### **Summary**

The prevalence of stunting according to Indonesian Health Survey (SKI) 2023, the prevalence of stunting in Indonesia was 21.5% and Bengkulu Province was below the Indonesian average, namely having a prevalence of 20.2%. The design of stunting prevention strategies in coastal households is strengthened by collaborative public action partnerships involving multi factors, multi sectors and multi actors. Choosing the coastal areas of Bengkulu province for targeted stunting reduction efforts is justified by the need to support vulnerable populations, address economic disparities, ensure sustainable impacts, and maintain the gains achieved in reducing stunting prevalence.

**Keywords:** Coastal, design, prevention, strategy, stunting



## **Patient Satisfaction and Food Waste: A Public Hospital Study**

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### **Summary**

Good quality meals provided by food services have a positive impact on patient satisfaction and food waste. A cross-sectional study involved 93 subjects who were observed for 10 consecutive days. The average factor score of satisfaction for all aspect has been assessed and received well by patients (4.3 to 4.9). The highest food waste is found at breakfast (25.2%) and vegetables (30.5%). The study's findings suggest no statistically significant correlation between food waste and satisfaction with hospital dining services. Several aspects of the food services, particularly the food quality, need to be enhanced to encourage patients to consume hospital food.

**Keywords:** Patient, food service, food waste, level of satisfaction, hospital



## Household Food Insecurity in Rural and Urban West Java: The Need for Coping Strategies

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### Summary

To meet dietary demands and avoid nutritional issues, households experiencing food insecurity employ coping strategies. This study evaluated the degree of food insecurity and coping mechanisms used by households in rural and urban West Java. Using pretested questionnaires, this cross-sectional study collected data from 300 households in rural Cianjur and urban Sukabumi in June 2022. In both places, most households experience mild food insecurity. Nonetheless, borrowing food and reverting to cheap, unpalatable foods were more common coping mechanisms in rural than in urban households. This could imply that distinct food security initiatives are required in the two regions.

**Keywords:** Coping mechanisms, food restriction, food security, food-insecure households, poverty



## **A Survey of Sodium Content in Processed Food in Bengkulu City Based on Food Labels**

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### **Summary**

Sodium intake is a public health concern linked to hypertension and cardiovascular diseases. This study examined the sodium content in processed foods in Bengkulu city using a cross-sectional approach. Sodium content in 12 food categories (n=500) was converted to mg/100 grams from food labels. The average content ranged from 23 to 4,718 mg/100g, with condiments/seasonings highest at 4,718 mg/100g, followed by cereal products (1,021 mg/100g), fats/oils (910 mg/100g), fishery products (743 mg/100g), and meat products (712 mg/100g). These results highlighted the high sodium content in certain processed foods, suggesting they should be consumed wisely according to dietary recommendations.

**Keywords:** Food label, hypertension, processed foods, packaged foods, sodium

