

Professor Dato' Dr Azhar Mat Easa, the nutrastrategist.

Dr Azhar was born on 13th April 1969 in Sg Bakap, Penang, Malaysia. He obtained his first degree of BSc. (Hons) in Food Sciences, from The University of Nottingham, England, in July 1992. He then pursued his studies to a higher level. He obtained his Ph. D (Food Sciences) from the same University in September 1996. His thesis title was "Factors affecting Maillard induced gelation of the protein-sugar system".



From 18th October 1996 to 30th December 2003, Dr Azhar served as a University lecturer before being promoted to Associate Professor on 31st December 2003 and Professor on 30th September 2009.

He held administrative posts for 18 years. These posts include Program Chairman (Food Technology Program, 2001-2002), Deputy Dean (Academic and Student Development) 2003 to 2007, and briefly in 2009, Deputy Dean (Research and Postgraduates studies) 2010-2014, and for one year in 2019. He served as Dean for the same school for five years (2014-2018).

His current job functions include lecturing, supervising students in research, conducting research (mainly in the design & development of functional food and protein function enhancement), consulting in functional food and protein functionalities, refereeing and publishing scientific papers, evaluating grant proposals, examining thesis and writing scientific reports/articles.

He promoted the understanding of integrated quality system development of ASEAN agro-based food industries. Past activities include sitting in the Malaysian Ministry of Health committee for Functional Food (Codex Coordinating Committee on Functional Food Regulation for ASIA). He also sat in the Penang State Government committee for Science and Technology awareness program.

Subjects taught by Dr Azhar include Introduction to Food Science and Technology, Food Commodity, Food Processing and Preservation, Biochemistry, Nutrition, Thinking Skills, Quality Management of Food, Functional Food, and Persuasive Oral Presentation.

Dr Azhar is also involved actively in public services. Since 1997 he has been the consultant/science advisor to various consultancy projects with Food and Nutrition companies dealing with food supplements and functional foods/beverages. He has been an International Speaker on multiple topics: Nutrition and Functional Food Science, Research needs of Small and Medium enterprises of ASEAN, Halal Practice and many more. From 1997 to 2010, he has delivered scientific/educational talks to more than 20,000 people on The Science of Functional Foods and subjects related to quality systems in the ASEAN region (Malaysia, Thailand, Indonesia and Brunei). He has been active in helping government agencies with up to date knowledge of Food Science and continuing education; these agencies include The Ministry of Health and The Ministry of Defense. He was also appointed as a Governing Board Member of an international certification body dealing with quality management system certification.



Dr Azhar serves as a program advisory committee for the Ministry of Plantation Industries and Commodities, grant evaluator for the Ministry of Higher Education, and visiting scholar for an international university. From 2014 to 2021, he has served as a Food Science Program examiner for various food science programs of public and private universities in Malaysia.

Azhar's achievements in research have been featured in various publications and the media. Initially, his research interest has been on protein functionality (enhancement of protein functions by the use of sugar-protein interactions and cross-linking agents) and then on the design & development of functional foods or 'almost-illegal products'/ingredients (adding value to foods by converting them to functional or health-enhancing products). With the university's emphasis on sustainability, he has redirected his research theme towards "*Sustainability-Led-Innovative-Manufacturing*", or *SLIM*. This has led to a commercialization of the research product called "Slimmee".

As of January 2022, he has successfully graduated 9 PhD and 7 MSc graduates as the main supervisor.

Dr Azhar also runs online schools on Introduction to Food Science and Technology (<https://azhar-s-school-nutrastrategist.thinkific.com/courses/FoodScienceSchoolOnline>), Food Quality Management (<https://azhar-s-school-nutrastrategist.thinkific.com/courses/IMK316-food-quality-and-management>), Functional Food (<https://azhar-s-school-nutrastrategist.thinkific.com/courses/FunctionalFoodSchoolOnline>) and Nutrition Basics for Weight Watchers (<https://www.openlearning.com/courses/nutrition-basics-for-weight-watchers>).

Selected Research activities

Influence of Polymer Phase-Structure Function Proteins Complex on Extraction Behavior of Biotechnological Products in Novel Tunable Aqueous Polymer-Phase Impregnated Resins Technology.

Duration: November 2nd, 2015 – October 31st, 2017 (2 years)

Type: FRGS, Role: Co-researcher



A novel coconut water-based hydrogel hydration strategy for recovery and during prolonged exercise in the heat

Duration: January 1st, 2015 – December 31st, 2017 (3 years)

Type: Sports grant, Role: Co-researcher

The use of various Hydrocolloids to enhance structural integrity, texture and sensory properties of yellow noodles

Duration: December 31st, 2014 – December 31st, 2017 (3 years)

Type: Research University Grant for Individual (RUI)
Role: Principal researcher





Studies on the physicochemical and microbiological properties of coconut water during storage

Duration: December 1st, 2014 –

September 30th, 2015 (10 months)

Type: Industrial External grant from Tetra Pak Singapore

Role: Principal researcher

Investigation on the effect of tea polyphenol extracts to digestion properties

Duration: December 1st, 2013 – November 30th, 2015 (2 years)

Type: FRGS, Role: Co-researcher



Studies on the physicochemical changes of coconut water during pre-UHT treatment.

Duration: December 1st, 2013 – March 31st, 2014 (7 months)

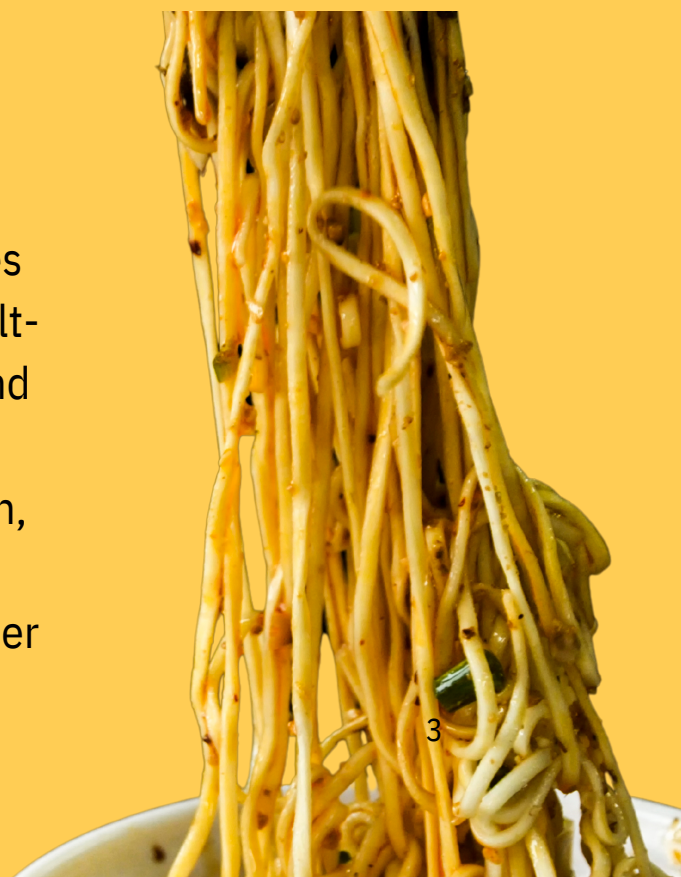
Type: Industrial External grant from Tetra Pak Singapore

Role: Principal researcher

Feasibility of salt-coating on noodles using amylose starch technology: Salt-release profiles, physicochemical and sensory evaluation

Duration: July 1st, 2013 – June 30th, 2016 (3 years)

Type: ERGS, Role: Principal researcher



Studies on the "fate" of sodium metabisulfite
in UHT treated coconut water

Duration: July 1st, 2013 – March 31st, 2014
(9 months)

Type: Industrial External grant from Tetra Pak
Singapore

Role: Principal researcher

Shelf Life and Vitamin C Evaluation of
Coconut Water.

Duration: November 1st, 2012 – May
31st, 2013 (7 months)

Type: Industrial External grant from Tetra
Pak Singapore

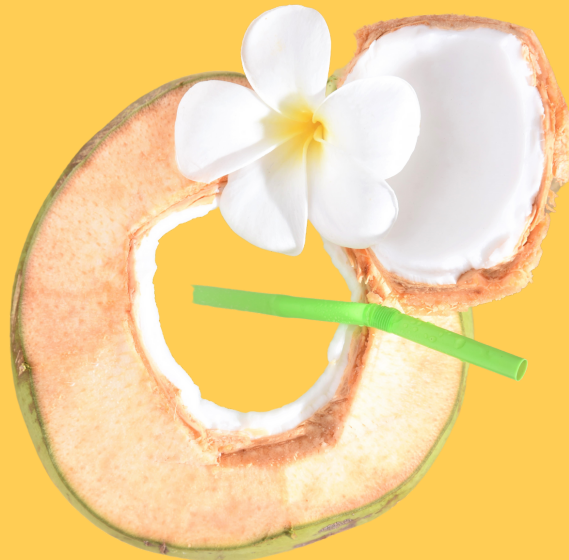
Role: Principal researcher

The Science of Young (Tender) and Mature
Coconut Water.

Duration: Jan 1st, 2012 – August 31st,
2013 (8 months)

Type: External grant from Tetra Pak
Singapore

Role: Co-researcher



Cultured haruan for functional food:
from sustainable aquaculture practices
to novel food processing.

Duration: June 1st, 2011 – May 31st,
2013 (3 years)

Type: Research University Grant for
Team (RUT)

Role: Principal researcher

Development of *Cosmos caudatus* (ulam raja)
enriched beef burger.

Duration: March 15th, 2011 – December 31st,
2012 (19 months)

Type: Research University Grant for Individual
(RUI)

Role: Principal researcher

Assessing the use of ribose-induced Maillard reaction as species identification and freshness indices of selected animal products.

Duration: November 1st, 2008 – June 30th, 2011 (32 months)

Type: eSciencefund, Role: Principal researcher

Release profiles of capsaicin from various edible film strips.

Duration: October 15th, 2007 – November 30th, 2010 (3 years)

Type: FRGS, Role: Principal researcher



Interactions of soya protein, transglutaminase (Tgase) and ribose in a composite model system.

Duration: December 1st, 2006 – November 30th, 2009 (3 years)

Type: eSciencefund

Role: Principal researcher

Patent granted.

Noodle Composition and a Process For Producing Thereof, Inventors: LI LING YUN and AZHAR BIN MAT EASA, Application number: PI 2013000472, Filing date : 14/2/2013

Selected Journal Publications

Nik Suhaimi Mat Hassan, Md Sohrab Hossain, Venugopal A/l Balakrishnan, Mark Harris Zuknik, Muliadi Mustaner, Azhar Mat Easa, Adel Al-gheethi, Ahmad Naim Ahmad Yahaya, 2021, Influence of Fresh Palm Fruit Sterilization in the Production of Carotenoid-Rich Virgin Palm Oil, Foods, 10(11), 2838.

Siti Rashima Binti Romli, Azhar Mat Easa, Maizura Binti Murad, 2021, Influence of post-harvest physiology on sensory perception, physical properties, and chemical compositions of Moris pineapples (Ananas comosus L.), Journal of Food Science, 86 (9), 4159-4171.

Mohammad Alrosan, Tan Thuan Chew, Azhar Mat Easa, Sana Gammoh, Muhammad H. Alu'Datt, 2021, Effects of Fermentation on the Quality, Structure, and Nonnutritive Contents of Lentil (Lens culinaris) Proteins, Journal of Food Quality, volume 2021, article ID 5556450.

Mohammad Alrosan, Tan Thuan Chew, Azhar Mat Easa, Sana Gammoh, Muhammad H. Alu'Datt, 2021, Mechanism of the structural interaction between whey and lentil proteins in the unique creation of a protein structure, Journal of Food Science, 86(12), 5282-5294.

Tan Thuan Chew, Mohammad Alrosan, Azhar Mat Easa, Sana Gammoh, Stan Kubow, Muhammad H. Alu'Datt, 2021, Mechanisms of molecular and structural interactions between lentil and quinoa proteins in aqueous solutions induced by pH-recycling, International Journal of Food Science & Technology, doi.org/10.1111/ijfs.15422

Tan Thuan Chew, Azhar Mat Easa, 2021, The evolution of physicochemical and microbiological properties of green and mature coconut water (*Cocos nucifera*) under different storage conditions, Journal of Food Measurement and Characterization. 15, 3523-3530.

Mohammad Alrosan, Tan Thuan Chew, Azhar Mat Easa, Sana Gammoh, Muhammad H. Alu'Datt, 2021, Molecular forces governing protein-protein interaction: Structure-function relationship of complexes protein in the food industry, Critical Reviews in Food Science and Nutrition, doi: 10.1080/10408398.2021.1871589

Seow Eng Keng, Tan Thuan Chew, Azhar Mat Easa, 2021, Role of honey diastase on textural, thermal, microstructural, chemical, and sensory properties of different dodols, LWT - Food science and technology, 148, 111715.

Avan Maghazechi, Abdorreza Mohammadi Nafchi, Tan Thuan Chew, Seow Eng Keng, Azhar Mat Easa, 2021, Rheological characterization of coconut cream emulsion using steady-state shear and time-dependent modeling, Journal of food engineering, 306, 110642.

Moses Ojukwu, Chigozie Ofoedu, Seow Eng Keng, Azhar Bin Mat Easa, 2021, Optimization of soy protein isolate, microbial transglutaminase and glucono- δ -lactone in gluten-free rice noodles, J Sci Food Agric, 101(9), 3732-3741.

Eng-keng Seow, Vikneswaran Muthu, Ahmad Munir Che Muhamed, Ooi Cheong Hwa, Rabindarjeet Singh, Azhar Bin Mat Easa, Tan Thuan Chew, 2021, Influence of low-level gelling agents on the dissolution and in-vitro nutrient release study of coconut water-based hydrogel, Journal of Food Science and Technology, doi.org/10.1007/s13197-021-05045-0

Manroshan, Singh, Azhar Mat Easa, Baharin Azahari* (2020) Effect of Maillard reaction in ammonia preserved natural rubber latex using reducing sugars, Journal of Rubber Research (2020) 23:365–374

Lam Xue Mei, Abdorreza* Mohammadi Nafchi, Farzaneh Ghasemipour, Azhar Mat Easa, Shima Jafarzadeh, A.A.Al-Hassan (2020) Characterization of pH-sensitive sago starch films enriched with anthocyanin-rich torch ginger extract, International Journal of Biological Macromolecules, 164 (1). 4603-4612.

Lubowa, M., Yeoh, S.-Y., Varastegan, B. and Easa, A.M. (2021), Effect of pre-gelatinised high-amylose maize starch combined with Ca²⁺-induced setting of alginate on the physicochemical and sensory properties of rice flour noodles. Int. J. Food Sci. Technol., 56: 1021-1029.

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