

## REFERENCES

- Aarti, C., Khusro, A., Vargese, R., Arasu, M.V., Agastian, P., Al-Dhabi, N.A., Ilavenil, S., & Choi, K.C. (2017). In Vitro Studies on Probiotic and Antioxidant Properties of *Lactobacillus brevis* Strain LAP2 Isolated from Hentak, A Fermented Fish Product of North-East India. *LWT-Food Science and Technology*, 86, 438-446. <https://doi.org/10.1016/j.lwt.2017.07.055>
- Abbasiliasi, S., Ramanan, R.N., Tengku Ibrahim, T.A., Mustafa, S., Mohamad, R., Mohd Daud, H.H., & Ariff, A.B. (2011). Effect of Medium Composition and Culture Condition on the Production of Bacteriocin-Like Inhibitory Substances (BLIS) by *Lactobacillus paracasei* LA07, a Strain Isolated from Budu. *Biotechnology & Biotechnological Equipment*, 25(4), 2652-2657. <https://doi.org/10.5504/BBEQ.2011.0101>
- Abdel Nour, A. M. & Pfaffl, M. W. (2020). *How to Apply the MIQE Guidelines – A Visual, Interactive and Practical qPCR Guide!* ISBN-9783000488061.
- Abid, Y., Casillo, A., Gharsallah, H., Joulak, I., Lanzetta, R., Corsaro, M.M., Attia, H., & Azabou. (2018). Production and Structural Characterization of Exopolysaccharides from Newly Isolated Probiotic Lactic Acid Bacteria. *International Journal of Biological Macromolecules*, 108, 719-728. <https://doi.org/10.1016/j.ijbiomac.2017.10.155>
- Abriouel, H., del Carmen Casado Munoz, M., Lerma, L.L., Montoro, B.P., Bockelmann, W., Pichner, R., Kabisch, J., Cho, G.-S., Franz, C.M.A.P., Galves, A., & Benomar, N. (2015). New Insights in Antibiotic Resistance of *Lactobacillus* Species from Fermented Foods. *Food Research International*, 78, 465–481. <https://doi.org/10.1016/j.foodres.2015.09.016>.
- Abushelaibi, A., Al-Mahadin, S., El-Tarabily, K., Shah, N.P., Ayyash, M. (2017). Characterization of Potential Probiotic Lactic Acid Bacteria Isolated from Camel Milk. *LWT - Food Science and Technology*, 79, 316-325. <http://dx.doi.org/10.1016/j.lwt.2017.01.041>
- Achinewhu, S.C., & Oboh, C.A. (2002) Chemical, Microbiological, and Sensory Properties of Fermented Fish Products from *Sardinella* sp. in Nigeria, *Journal of Aquatic Food Product Technology*, 11(2), 53-59, [https://doi.org/10.1300/J030v11n02\\_05](https://doi.org/10.1300/J030v11n02_05)
- Adesulu-Dahunsi, A.T., Sanni, A.I., & Jeyaram, K. (2017). Rapid Differentiation Among *Lactobacillus*, *Pedococcus* and *Weissella* Species from Some Nigerian Indigenous Fermented Foods. *LWT-Food Science and Technology*, 77, 39-44. <https://doi.org/10.1016/j.lwt.2016.11.007>
- Agaliya, P.A., & Jeevaratnam, K. (2012). Screening of *Lactobacillus plantarum* Isolated from Fermented Idli Batter for Probiotic Properties. *African Journal of Biotechnology*, 11(65), 12856-12864. <https://doi.org/10.5897/AJB12.1825>

- Aghemwenhio, I.S., Timilehin, A.A., & Alpheus, G.A. (2017). Susceptibility of Beta-Haemolytic *Escherichia coli* to Commonly Used Antibiotics in Selected Hospitals in Delta State, Southern Nigeria. *Archives of Clinical Microbiology*, 8(2). <https://doi.org/10.4172/1989-8436.100036>
- Ahmad, A., Yap, W.B., Kofli, N.T., & Ghazali, A.R. (2018). Probiotic Potentials of *Lactobacillus plantarum* Isolated from Fermented Durian (Tempoyak), a Malaysian Traditional Condiment. *Food Science & Nutrition*, 6, 1370-1377. <https://doi.org/10.1002/fsn3.672>
- Ahmed, M.D., Hameed, I.H., Abd-Ali, M.Q. (2017). Prospective and Retrospective Study of the Acute Heart Attack Cases in Marjan Hospital-Hillah City-Iraq. *Research Journal of Pharmacy and Technology*, 10(10). <http://dx.doi.org/10.5958/0974-360X.2017.00606.0>
- Ahmed, S., Dora, K.C., Sarkar, S., Chowdhury, S., & Ganguly, S. (2013). Quality Analysis of Shidal - a Traditional Fermented Fish Product of Assam, North-East India. *Indian Journal of Fisheries*, 60(1), 117-123.
- Ajifolokun, O.M., Basson, A.K., Osunsanmi, F.O., & Zharare, G.E. (2018). Effects of Drying Methods on Quality Attributes of Shrimps. *Journal of Food Processing & Technology*, 10. doi: 10.4172/2157-7110.1000772
- Alizadeh Behbahani, B., Noshad, M., & Falah, F. (2019). Inhibition of *Escherichia coli* Adhesion to Human Intestinal Caco-2 Cells by Probiotic Candidate *Lactobacillus plantarum* Strain L15. *Microbial Pathogenesis*, 136, 103677. <https://doi.org/10.1016/j.micpath.2019.103677>
- Allain, T., Chaouch, S., Thomas, M., Travers, M.A., Vallet, I., Langella, P., Grellier, P., Polack, B., Florent, I., & Bermudez-Humaran, L.G. (2018). Bile Salt Hydrolase Activities: A Novel Target to Screen Anti-*Giardia* Lactobacilli? *Frontiers in Microbiology*, 9, 89. <https://doi.org/10.3389/fmicb.2018.00089>
- Altmann, S. W., Davis, H. R., Jr, Yao, X., Laverty, M., Compton, D. S., Zhu, L. J., Crona, J. H., Caplen, M. A., Hoos, L. M., Tetzloff, G., Priestley, T., Burnett, D. A., Strader, C. D., & Graziano, M. P. (2002). The Identification of Intestinal Scavenger Receptor Class B, Type I (SR-BI) by Expression Cloning and Its Role in Cholesterol Absorption. *Biochimica et biophysica acta*, 1580(1), 77-93. [https://doi.org/10.1016/s1388-1981\(01\)00190-1](https://doi.org/10.1016/s1388-1981(01)00190-1).
- Alu'datt, M.H., Rababah, T., Sakandar, H.A., Imran, M., Neveen, M., Mohammad Noor, A., Nizar, M., Stan, K., Carole, T., Abdel, R.A.T., & Wafa, A. (2018). Fermented Food-Derived Bioactive Compounds with Anticarcinogenic Properties: Fermented Royal Jelly as a Novel Source for Compounds with Health Benefits. In Akhtar, M., Swamy, M. (Eds) *Anticancer plants: Properties and Application*. Springer, Singapore. [https://doi.org/10.1007/978-981-10-8548-2\\_7](https://doi.org/10.1007/978-981-10-8548-2_7)

- Ammor, M.S., Florez, A.B., & Mayo, B. (2007). Antibiotic Resistance in Non-Enterococcal Lactic Acid Bacteria and Bifidobacteria. *Food microbiology*, 24, 559-570. <https://doi.org/10.1016/j.fm.2006.11.001>
- Angmo, K., Kumari, A., Savitri, Bhalla, T.C. (2016). Probiotic Characterization of Lactic Acid Bacteria Isolated from Fermented Foods and Beverage of Ladakh. *LWT-Food Science and Technology*, 66, 428-435. <http://dx.doi.org/10.1016/j.lwt.2015.10.057>
- AOAC (Association of Official Analytical Chemists). (2005). Official Methods of Analysis. 18th Ed. Washington D.C., Washington.
- Ardestani, S.K., Tafvizi, F., & Ebrahimi, M.T. (2019). Heat-Killed Probiotic Bacteria Induce Apoptosis of HT-29 Human Colon Adenocarcinoma Cell Line via the Regulation of Bax/Bcl2 and Caspases Pathway. *Human and Experimental Toxicology*. <https://doi.org/10.1177/0960327119851255>
- Argyri, A.A., Zoumpopoulou, G., Karatzas, K.A.G., Tsakalidou, E., Nychas, G.J.E., Panagou, E.Z., Tassou, C.C. (2013). Selection of Potential Probiotic Lactic Acid Bacteria from Fermented Olives by In Vitro Tests. *Food Microbiology*, 33, 289-291. <http://dx.doi.org/10.1016/j.fm.2012.10.005>
- Ashayerizadeh, O., Dastar, B., Samadi, F., Khomeiri, M., Yamchi, A., & Zerehdaran. (2017). Study on the Chemical and Microbial Composition and Probiotic Characteristics of Dominant Lactic Acid Bacteria in Fermented Poultry Slaughterhouse Waste. *Waste management*, 65, 178-185. <http://dx.doi.org/10.1016/j.wasman.2017.04.017>
- Azad, M.A.K., Sarker, M., Li, T., & Yin, J. (2018). Probiotic Species in the Modulation of Gut Microbiota: An Overview. *Biomed Research International*, Article ID 9478630, 1-8. <https://doi.org/10.1155/2018/9478630>
- Azrin, N.A.R., Yuzine, E., Ina-Salwany, M.Y., Suzana, R., Masduki, F., & Karim, M. (2017). Characterization of Potential Probiotics from Blue Swimming Crab *Portunus pelagicus* and Its Antagonistic Activity Against *Vibrio harveyi*. *International Journal of Biosciences*, 11(4), 292-303. <http://dx.doi.org/10.12692/ijb/11.4.292-303>
- Badi, S.A., Motahhary, A., Bahramali, G., Masoumi, M., Khalili, S.F.S., Ebrahimzadeh, N., Nouri, P., Rahimi, A., Masotti, A., Moshiri, A., & Siadat, S.D. (2020). The Regulation of Niemann-Pick C1-Like 1 (NPC1L1) Gene Expression in Opposite Direction by *Bacteroides* spp. and Related Outer Membrane Vesicles in Caco-2 Cell Line. *Journal of Diabetes & Metabolic disorders*, 19, 415-422. <https://doi.org/10.1007/s40200-020-00522-3>
- Balouiri, M., Sadiki, M., & Ibsouda, S.K. (2016). Methods for In Vitro Evaluating Antimicrobial Activity: A Review. *Journal of Pharmaceutical Analysis*, 6, 71-79. <http://dx.doi.org/10.1016/j.jpha.2015.11.005>

- Beddows, C.G., Ardeshir, A.G., & Daud, W.J. (1979). Biochemical Changes Occurring During the Manufacture of *Budu*. *J. Sci. Food Agric.*, 30, 1097-1103.
- Begley, M., Hill, C., & Gahan, C.G.M. (2006). Bile Salt Hydrolase Activity in Probiotics. *Applied and Environmental Microbiology*, 72(3), 1729-1738. <https://doi.org/10.1128/AEM.72.3.1729-1738.2006>
- Behnsen, J., Deriu, E., Sassone-Corsi, M., Raffatellu, M. (2013). Probiotics: Properties, Examples, and Specific Applications. *Cold Spring Harb Perspect Medicine*, 3(3), a010074. <https://doi.org/10.1101/cshperspect.a010074>.
- Bell, V., Ferrao, J., & Fernandes, T. (2017). Nutritional Guidelines and Fermented Food Frameworks. *Foods*, 6(8), 65. <https://doi.org/10.3390/foods6080065>
- Benítez-Cabello, A., Torres-Maravilla, E., Bermúdez-Humarán, L., Langella, P., Martín, R., Jiménez-Díaz, R., & Arroyo-López, F.N. (2020). Probiotic Properties of *Lactobacillus* Strains Isolated from Table Olive Biofilms. *Probiotics and Antimicrobial Proteins*, 12, 1071-1082. <https://doi.org/10.1007/s12602-019-09604-y>
- Bezkorovainy, A. (2001). Probiotics: Determinants of Survival and Growth in the Gut. *The American Journal of clinical Nutrition*, 73(2), 399s-405s. <https://doi.org/10.1093/ajcn/73.2.399s>
- Bhat, B., & Bajaj, B.K. (2020). Multifarious Cholesterol Lowering Potential of Lactic Acid Bacteria Equipped With Desired Probiotic Functional Attributes. *3 Biotech*, 10(200). <https://doi.org/10.1007/s13205-020-02183-8>
- Bhat, B., & Bajaj, BK. (2019). Hypocholesterolemic Potential of Probiotics: Concept and Mechanistic Insights. *Indian Journal of Experimental Biology*, 57, 73-85.
- Bhat, R. (2016). Impact of Ultraviolet Radiation Treatments on the Quality of Freshly Prepared Tomato (*Solanum lycopersicum*) Juice. *Food Chemistry*, 213, 635-640. <https://doi.org/10.1016/j.foodchem.2016.06.096>
- Bin Masalam, M.S., Bahieldin, A., Alharbi, M.G., Al-Masaudi, S., Al-Jaouni, S.K., Harakeh, S.M., & Al-Hindi, R.R. (2018). Isolation, Molecular Characterization and Probiotic Potential of Lactic Acid Bacteria in Saudi Raw and Fermented Milk. *Evidence-Based Complementary and Alternative Medicine*, 2018, 7970463. <https://doi.org/10.1155/2018/7970463>
- Çadirci, B.H., & Çitak, S. (2005). A Comparison of Two Methods Used for Measuring Antagonistic Activity of Lactic Acid Bacteria. *Pakistan Journal of Nutrition*, 4 (4), 237-241. <https://doi.org/10.3923/pjn.2005.237.241>
- Cai, T., Wu, H., Qin, J., Qiao, J., Yang, Y., Wu, Y., Qiao, D., Xu, H., & Cao, Y. (2019). In Vitro Evaluation by PCA and AHP of Potential Antidiabetic Properties of Lactic Acid Bacteria Isolated From Traditional Fermented Food. *LWT - Food Science and Technology*, 115, 108455. <https://doi.org/10.1016/j.lwt.2019.108455>

- Castorena-Alba, M.M., Vasquez-Rodriguez, J.A., Lomeli, M.L.C., & Gonzalez-Martinez, B.E. (2018). Cholesterol Assimilation, Acid and Bile Survival of Probiotic Bacteria Isolated from Food and Reference Strains. *CyTA-Journal of Food*, 16(1), 36-41. <https://doi.org/10.1080/19476337.2017.1335347>
- Chen, Y.P., Hsu, C.A., Hung, W.T., & Chen, M.J. (2016). Effects of *Lactobacillus paracasei* 01 Fermented Milk Beverage on Protection of Intestinal Epithelial Cell *In Vitro*. *Journal of the Science of Food and Agriculture*, 96, 2154-2160. <https://doi.org/10.1002/jsfa.7331>
- Chiang, Y.W., Chye, F.W., & Mohd Ismail, A. (2006). Microbial Diversity and Proximate Composition of *Tapai*, A Sabah's Fermented Beverage. *Malaysian Journal of Microbiology*, 2(1), 1-6.
- Chiu, T.H., Chen, T.R., Hwang, W.Z., & Tsen, H.Y. (2005). Sequencing of an Internal Transcribed Spacer Region of 16S–23S rRNA Gene and Designing of PCR Primers for the Detection of *Salmonella* spp. in Food. *International Journal of Food Microbiology*, 97, 259-265. <https://doi.org/10.1016/j.ijfoodmicro.2004.04.005>
- Choi, A.R., Patra, J.K., Kim, W.J., & Kang, S.K. (2018). Antagonistic Activities and Probiotic Potential of Lactic Acid Bacteria Derived from a Plant-Based Fermented Food. *Frontiers in Microbiology*, 9, 1963. <https://doi.org/10.3389/fmicb.2018.01963>
- Choi, S.Y., Lew, L.C., Yeo, S.K., Parvathy, S.N., & Liong, M.T. (2015). Probiotics and the BSH-Related Cholesterol Lowering Mechanism: A Jekyll and Hyde Scenario. *Critical Reviews in Biotechnology*, 35(3), 392-401. <https://doi.org/10.3109/07388551.2014.889077>
- Chopade, L.R., Paradeshi, J.S., Amrutkar, K.P., & Chaudhari, B.L. (2019). Finding Out Potent Probiotic Cultures from Ayurvedic Formulation *Takrarishta* Through In-Vitro Probiotic Characterization and Principal Component Analysis. *LWT - Food Science and Technology*, 100, 205-212. <https://doi.org/10.1016/j.lwt.2018.10.061>
- Chuah, L.O., Foo, H.L., Loh, T.C., Mohammed Alitheen, N.B., Yeap, S.K., Abdul Mutalib, N.E., Abdul Rahim, R., & Yusoff, K. (2019). Postbiotic Metabolites Produced by *Lactobacillus plantarum* Strains Exert Selective Cytotoxicity Effects on Cancer Cells. *BMC Complementary Alternative Medicine*, 19(114). <https://doi.org/10.1186/s12906-019-2528-2>
- Chuon, M.R., Shiimoto, M., Koyanagi, T., Sasaki, T., Michihata, T., Chan, S., Mao, S., & Enomoto, T. (2014). Microbial and chemical properties of Cambodian traditional fermented fish products. *Journal of the Science of Food and Agriculture*, 94(6), 1124-31. <https://doi.org/10.1002/jsfa.6379>
- Cifarelli, V., & Abumrad, N.A. (2018). Intestinal CD36 and Other Key Proteins of Lipid Utilization: Role in Absorption and Gut Homeostasis. *Comprehensive Physiology*, 82(2), 493-507. <https://doi.org/10.1002/cphy.c170026>

- Cissé, H., Kagambega, B., Sawadogo, A., Tankoano, A., Sangare, G., Traore, Y., Quoba, I.I.L., & Savadogo, A. (2019). Molecular Characterization of *Bacillus*, Lactic Acid Bacteria and Yeast as Potential Probiotic Isolated from Fermented Food. *Scientific African*, 6, e00175. <https://doi.org/10.1016/j.sciaf.2019.e00175>
- Cohn, J.S., Kamili, A., Wat, E., Chung, R.W.S., & Tandy, S. (2010). Dietary Phospholipids and Intestinal Cholesterol Absorption. *Nutrients*, 2(2), 116-127. <https://doi.org/10.3390/nu2020116>
- Collado, M.C., Meriluoto, J., & Salminen, S. (2008). Adhesion and Aggregation Properties of Probiotic and Pathogen Strains. *Eur Food Res Technol*, 226, 1065–1073. <https://doi.org/10.1007/s00217-007-0632-x>
- Coman, M.M., Verdenelli, M.C., Cecchini, C., Silvi, S., Orpianesi, C., Boyko, N., & Cresci, A. (2014). In Vitro Evaluation of Antimicrobial Activity of *Lactobacillus rhamnosus* IMC 501, *Lactobacillus paracasei* IMC 502 and SYN BIO Against Pathogens. *Journal of Applied Microbiology*, 117, 518-527. <https://doi.org/10.1111/jam.12544>
- Corcoran, B.M., Stanton, C., Fitzgerald, G.F., & Ross, R.P. (2005). Survival of Probiotic Lactobacilli in Acidic Environments is Enhanced in the Presence of Metabolizable Sugars. *Applied and Environmental Microbiology*, 71, 3060-3067.
- Damodharan, K., Palaniyandi, S.A., Seung, H.Y & Joo, W.S (2016). Functional Probiotics Characterization and In-Vivo Cholesterol-Lowering Activity of *Lactobacillus Helveticus* Isolated from Fermented Cow Milk. *Journal of Microbiology and Biotechnology*, 26(10), 1675-1686. <http://dx.doi.org/10.4014/jmb.1603.03005>
- Dang, H.T., Park, H.K., Myung, S.C., & Kim, W. (2012). Development of a Novel PCR Assay Based on the 16S–23S rRNA Internal Transcribed Spacer Region for the Detection of *Lactococcus garvieae*. *Journal of Fish Diseases*, 35, 481-487. <https://doi.org/10.1111/j.1365-2761.2012.01382.x>
- Daroonpant, R., Uchino, M., Tsujii, Y., Kazami, M., Oka, D., Tanasupawat, S. (2016). Chemical and Physical Properties of Thai Traditional Shrimp Paste (*Ka-pi*). *Journal of Applied Pharmaceutical Science*, 6(5), 058-062. <https://doi.org/10.7324/JAPS.2016.60509>
- De Melo Pereira, G.V., de Oliveira Coelho, B., Junior, A.I.M., Thomaz-Soccol, V., & Soccol, C.R. (2018). How to select a probiotic? A review and Update of Methods and Criteria. *Biotechnology Advances*. <https://doi.org/10.1016/j.biotechadv.2018.09.003>
- Dehkohne, A., Jafari, P., & Fahimi, H. (2019). Effects of Probiotic *Lactobacillus paracasei* TD3 on Moderation of Cholesterol Biosynthesis Pathway in Rats. *Iranian Journal of Basic Medical Sciences*, 22, 1004-1009. doi: 10.22038/ijbms.2019.33933.8073

- Department of Statistics Malaysia. (2020). Statistics on Causes of Death, Malaysia, 2020. Retrieved from [https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=401&bul\\_id=QTU5T0dKQ1g4MHYxd3ZpMzhEMzdRdz09&menu\\_id=L0pheU43NWJwRWVSZklWdzQ4TlhUUT0](https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=401&bul_id=QTU5T0dKQ1g4MHYxd3ZpMzhEMzdRdz09&menu_id=L0pheU43NWJwRWVSZklWdzQ4TlhUUT0)
- Desjardins, P., & Conklin, D. (2010). NanoDrop Microvolume Quantitation of Nucleic Acids. *Journal of Visualized Experiments*, 45, e2565. <https://doi.org/10.3791/2565>
- Divya, J.B., Varsha, K.K., & Nampoothiri, K.M. (2012). Newly Isolated Lactic Acid Bacteria with Probiotic Features for Potential Application in Food Industry. *Appl Biochem Biotechnol*, 167, 1314–1324. <https://doi.org/10.1007/s12010-012-9561-7>
- Diyana-Nadhirah, K.P., & Ina-Salwany, M.Y. (2016). Molecular Characterization of 16S rRNA and Internal Transcribed Spacer (ITS) Regions of *Aeromonas* spp. Isolated from Cultured Freshwater Fishes in Malaysia. *International Journal of Current Microbiology and Applied Sciences*, 5(9), 431-440. <http://dx.doi.org/10.20546/ijcmas.2016.509.046>
- Elsalem, L., Jum'ah, A.A., Alfaqih, M.A., & Aloudat, O. (2020). The Bacterial Microbiota of Gastrointestinal Cancers: Role in Cancer Pathogenesis and Therapeutic Perspectives. *Clinical and Experimental Gastroenterology*, 2020(13), 151-185. <https://doi.org/10.2147/CEG.S243337>
- Emmawati, A., Jenie, B.S.L., Nuraida, L., & Syah, D. (2016). Aggregation and Adhesion Abilities to Enterocyte-Like HCT-116 Cells of Probiotic Candidates *Lactobacillus plantarum* Strains Isolated from “Mandai”, Indonesian Fermented Food Against Enteropathogens. *International Food Research Journal*, 23(5), 2234-2240.
- Erkmen, O., & Bozoglu, T.F. (2016). Basic principles of food fermentation. In O. Erkmen & T. F. Bozoglu (Eds.), *Food Microbiology: Principles into practise* (1st ed). John Wiley & Sons, LTD. <https://doi.org/10.1002/9781119237860.ref1>
- Faithong, N., Benjakul, S., Phatcharat, S., & Binsan, W. (2010). Chemical Composition and Antioxidative Activity of Thai Traditional Fermented Shrimp and Krill Products. *Food Chemistry*, 119, 133-140. <https://doi.org/10.1016/j.foodchem.2009.06.056>
- Fallingborg, J., Christensen, L.A., Ingeman-Nielsen, M., Jacobsen, B.A., Abildgaard, K., Rasmussen, H.H., & Rasmussen, S.N. (1990). Measurement of Gastrointestinal pH and regional transit times in normal children. *Journal of Pediatric Gastroenterology and Nutrition*, 11(2), 211-4.
- FAO/WHO. (2002). *Guidelines for the Evaluation of Probiotics in Food*. Food and Agriculture Organization of the United Nations/World Health Organization, London, Ontario.

- Felsberg, J., Jelinkova, M., Kubizniakova, P., & Matoulkova, D. (2015). Development of a PCR Assay Based on the 16S-23S rDNA Internal Transcribed Spacer for Identification of Strictly Anaerobic Bacterium *Zymophilus*. *Anaerobe*, 33, 85-89.
- Felsenstein, J. (1981). Evolutionary Trees from DNA Sequences: A Maximum Likelihood Approach. *Journal of Molecular Evolution*, 17, 368-376.
- Fijan, S. (2014). Microorganisms with Claimed Probiotic Properties: An Overview of Recent Literature. *International Journal of Environmental Research and Public Health*, 11, 4745-4767. <https://doi.org/10.3390/ijerph110504745>
- Fonseca, H.C., Melo, D.S., Ramos, C.L., Dias, D.R., & Schwan, R.F (2020). Probiotic Properties of Lactobacilli and Their Ability to Inhibit the Adhesion of Enteropathogenic Bacteria to Caco-2 and HT-29 Cells. *Probiotics and Antimicrobial Proteins*, <https://doi.org/10.1007/s12602-020-09659-2>
- Forgue-Lafitte, M.E., Coudray, A.M., Breant, B., & Mester, J. (1989). Proliferation of the Human Colon Carcinoma Cell Line HT29: Autocrine Growth and Deregulated Expression of the c -myc Oncogene. *Cancer Research*, 49, 6566-6571.
- Gao, Y., & Li, D. (2018). Screening of Lactic Acid Bacteria with Cholesterol-Lowering and Triglyceride-Lowering Activity In Vitro and Evaluation of Probiotic Function. *Annals of Microbiology*, 68, 537-545. <https://doi.org/10.1007/s13213-018-1360-0>
- Gao, Y., Liu, Y., Sun, M., Zhang, H., Mu, G., & Tuo, Y. (2020). Physiological Function Analysis of *Lactobacillus plantarum* Y44 Based on Genotypic and Phenotypic Characteristics. *Journal of Dairy Science*, 103(7), 5916-5930. <https://doi.org/10.3168/jds.2019-18047>
- Gasbarrini, G., Bonvicini, F., & Gramenzi, A. (2016). Probiotics History. *Journal of Clinical Gastroenterology*. 50 Suppl 2, *Proceedings from the 8th Probiotics, Prebiotics & New Foods for Microbiota and Human Health meeting held in Rome, Italy on September 13-15, 2015*, S116-S119. <https://doi.org/10.1097/MCG.0000000000000697>
- Gassem, M.A. (2019). Microbiological and Chemical Quality of A Traditional Salted-Fermented Fish (Hout-Kasef) Product of Jazan Region, Saudi Arabia. *Saudi Journal of Biological Sciences*, 26, 137-140. <http://dx.doi.org/10.1016/j.sjbs.2017.04.003>
- Geng, W., & Lin, J. (2016). Bacterial Bile Salt Hydrolase: An Intestinal Microbiome Target for Enhanced Animal Health. *Animal Health Research Reviews*, 17(2), 148-158. <https://doi.org/10.1017/S1466252316000153>
- Gharbi, Y., Fhoula, I., Ruas-Madiedo, P., Afef, N., Boudabous, A., Gueimonde, M., & Ouzari, H.I. (2019). In-Vitro Characterization of Potentially Probiotic *Lactobacillus* Strains Isolated from Human Microbiota: Interaction with Pathogenic Bacteria and the Enteric Cell Line HT29. *Ann Microbiol*, 69, 61-72. <https://doi.org/10.1007/s13213-018-1396-1>

- Ghazali, A.R., Rajab, N.F., Wen, L.W., Rahmani, A.S., Abdullah, R., Ramli, N.M., Kamarulzaman, F., Harun, Z., & Hasiah, A.H. (2011). Evaluation of the Biochemical Profile and Biological Activity of Budu (A Local Fermented Fish Product) Extracts on HepG2 Hepatoblastoma Cells. *Australian Journal of Basic and Applied Sciences*, 5(12), 2606-2612.
- Goldstein, J.L. & Brown, M.S. (2015). A century of cholesterol and coronaries: from plaques to genes to statins. *Cell*. 161 (1), 161-172.
- Gomes, A.C., Bueno, A.A., de Souza, R.G.M., & Mota, J.M. (2014). Gut Microbiota, Probiotics and Diabetes. *Nutrition Journal*, 13(60). <https://doi.org/10.1186/1475-2891-13-60>
- Gonzalez-Vazquez, R., Azaola-Espinosa, A., Mayorga-Reyes, L., Reyes-Nava, L.A., Shah, N.P., & Rivera-Espinoza, Y. (2015). Isolation, Identification and Partial Characterization of a *Lactobacillus casei* Strain with Bile Salt Hydrolase Activity from Pulque. *Probiotics & Antimicro. Prot*, 7, 242-248. <https://doi.org/10.1007/s12602-015-9202-x>
- Gorenjak, M., Gradisnik, L., Trapecar, M., Pistello, M., Kozmus, C.P., Skorjanc, D., Skok, P., Langerhole, T., & Cencic, A. (2014). Improvement of Lipid Profile by Probiotic/Protective Cultures: Study in A Non-Carcinogenic Small Intestinal Cell Model. *New Microbiologica*, 37, 51-64.
- Goswami, G., Bora, S.S., Parveen, A., Boro, R.C., & Barooah, M. (2017). Identification and Functional Properties of Dominant Lactic Acid Bacteria Isolated from *Kahudi*, A Traditional Rapeseed Fermented Food Product of Assam, India. *Journal of Ethnic Foods*, 4, 187-197. <http://dx.doi.org/10.1016/j.jef.2017.08.008>
- Grundy, S.M. (2016). Advances in Treatment of Dyslipidaemia. *Nature Reviews Cardiology*, 13, 74-75. <https://doi.org/10.1038/nrcardio.2015.208>
- Guan, N., & Liu, L. (2020). Microbial Response to Acid Stress: Mechanisms and Applications. *Applied Microbiology and Biotechnology*, 104, 51-65. <https://doi.org/10.1007/s00253-019-10226-1>
- Guan, X., Xu, Q., & Zheng, Y., Qian, L., & Lin, B. (2017). Screening and Characterization of Lactic Acid Bacterial Strains That Produce Fermented Milk and Reduce Cholesterol Levels. *Brazilian Journal of Microbiology*, 48, 730-739. <http://dx.doi.org/10.1016/j.bjm.2017.02.011>
- Guo, C., Zhang, L., Li, J., Zhang, Y., Xue, C., Yi, H., Du, M., & Han, X. (2012). Screening of Bile Salt Hydrolase-Active Lactic Acid Bacteria for Potential Cholesterol-Lowering Probiotic Use. *Advanced Materials Research*, 345, 139-146. <https://doi.org/10.4028/www.scientific.net/AMR.345.139>

- Guo, Z. Liu, X. M., Zhang, Q. X., Shen, Z., Tian, F. W., Zhang, H., Sun, Z. H., Zhang, H. P. & Chen, W. (2011). Influence of Consumption of Probiotics on the Plasma Lipid Profile: A Meta-Analysis of Randomised Controlled Trials. *Nutrition, Metabolism & Cardiovascular Diseases*, 21, 844-850.
- Gupta, A., & Tiwari, S.K. (2014). Probiotic Potential of *Lactobacillus plantarum* LD1 Isolated from Batter of Dosa, a South Indian Fermented Food. *Probiotics & Antimicro. Prot.* <https://doi.org/10.1007/s12602-014-9158-2>
- Hagita, S., Rogers, M.A., Pham, T., Wen, J.R., Mlynarchik, A.K., Aikawa, M., & Aikawa, E. (2018). Transcriptional Control of Intestinal Cholesterol Absorption, Adipose Energy Expenditure and Lipid Handling by Sortilin. *Scientific reports*, 8, 9006. <https://doi.org/10.1038/s41598-018-27416-y>
- Haitham, A. R. (2017). Characterisation of Probiotic Lactic Acid Bacteria Isolated from Malaysian Fermented Shrimp Pastes (Doctoral Thesis). Universiti Sains Islam Malaysia.
- Haitham, A.R., Zaiton, H., Norrakiah, A.S., & Huda-Faujan, N. (2017). Assessment of Potential Probiotic Properties Lactic Acid Bacteria from Shrimp Paste or Belacan. *International Journal of Advances in Science Engineering and Technology*, 5(1), 90-98.
- Hajar, S., & Hamid, T.H.T.A. (2013). Isolation of Lactic Acid Bacteria Strain *Staphylococcus piscifermentans* from Malaysian Traditional Fermented Shrimp Cincaluk. *International Food Research Journal*, 20(1), 125-129.
- Hajeb, P., & Jinap, S. (2012). Fermented Shrimp Products as Source of Umami in Southeast Asia. *Journal of Nutrition & Food Sciences*, S10:006. <https://doi.10.4172/2155-9600.S10-006>
- Halder, D., Mandal, M., Chatterjee, S.S., Pal, N.K., & Mandal, S. (2017). Indigenous Probiotic *Lactobacillus* Isolates Presenting Antibiotic like Activity against Human Pathogenic Bacteria. *Biomedicines*, 5, 31. <https://doi.org/10.3390/biomedicines5020031>
- Han, Q., Kong, B., Chen, Q., Sun, F., & Zhang, H. (2017). *In Vitro* Comparison of Probiotic Properties of Lactic Acid Bacteria Isolated from Harbin Dry Sausages and Selected Probiotics. *Journal of Functional Foods*, 32, 391-400. <http://dx.doi.org/10.1016/j.jff.2017.03.020>
- Hasan, M.N., Sultan, M.Z., & Mar-E-Um, M. (2014). Significance of Fermented Food in Nutrition and Food Science. *Journal of Scientific Research*, 6(2), 373-386. <http://dx.doi.org/10.3329/jsr.v6i2.16530>
- Hemarajata, P., & Versalovic, J. (2013). Effects of Probiotics on Gut Microbiota: Mechanisms of Intestinal Immunomodulation and Neuromodulation. *Therapeutic Advances in Gastroenterology*, 6(1), 39-51. <https://doi.org/10.1177%2F1756283X12459294>

- Herbel, S.R., Vahjen, W., Wieler, L.H., & Guenther, S. (2013). Timely Approaches to Identify Probiotic Species of the Genus *Lactobacillus*. *Gut pathogens*, 5(27).
- Hojjati, M., Behabehani, B.A., & Falah, F. (2020). Aggregation, Adherence, Anti-Adhesion and Antagonistic Activity Properties Relating to Surface Charge of Probiotic *Lactobacillus brevis* gp104 Against *Staphylococcus aureus*. *Microbial Pathogenesis*, 14, 104420. <https://doi.org/10.1016/j.micpath.2020.104420>
- Homayoni Rad, A., Vaghef Mehrabany, E., Alipoor, B., & Vaghef Mehrabany, L. (2014). The Comparison of Food and Supplement as Probiotic Delivery Vehicles, *Critical Reviews in Food Science and Nutrition*, 56(6), 896-909. <https://doi.org/10.1080/10408398.2012.733894>
- Hu, M., Yang, F., Huang, Y., You, X., Liu, D., Sun, S., & Sui, S.F. (2021). Structural Insights Into the Mechanism of Human NPC1L1-Mediated Cholesterol Uptake. *Science Advance*, 7, eabg3188.
- Huang, C.H., Ho, C.Y., Chen, C.T., Hsu, H.F., & Lin, Y.H. (2019). Probiotic BSH Activity and Anti-Obesity Potential of *Lactobacillus plantarum* Strain TCI378 Isolated from Korean Kimchi. *Preventive Nutrition and Food Science*, 24(4), 434-441. <https://doi.org/10.3746/pnf.2019.24.4.434>
- Huang, C.H., Li, S.W., Huang, L., & Watanabe, K. (2018). Identification and Classification for the *Lactobacillus casei* Group. *Frontiers in Microbiology*, 9, 1974. <https://doi.org/10.3389/fmicb.2018.01974>
- Huang, Y., & Zheng, Y. (2010). The Probiotic *Lactobacillus acidophilus* Reduces Cholesterol Absorption Through the Down-Regulation of Niemann-Pick C1-like 1 in Caco-2 cells. *British Journal of Nutrition*, 103, 473-478. <https://doi.org/10.1017/S0007114509991991>
- Huang, Y., Wang, J., Quan, G., Wang, X., Yang, L., & Zhong, L. (2014). *Lactobacillus acidophilus* ATCC 4356 Prevents Atherosclerosis Via Inhibition of Intestinal Cholesterol Absorption in Apolipoprotein E-Knockout Mice. *Applied and environmental microbiology*, 80(24), 7496–7504. <https://doi.org/10.1128/AEM.02926-14>
- Huang, Y., Wu, F., Wang, X., Sui, Y., Yang, L., & Wang, J. (2013). Characterization of *Lactobacillus plantarum* Lp27 Isolated from Tibetan Kefir Grains: A Potential Probiotic Bacterium With Cholesterol-Lowering Effects. *Journal of Dairy Science*, 96, 2816-2825. <http://dx.doi.org/10.3168/jds.2012-6371>
- Huda, N. (2012). Malaysian Fermented Fish Products. In Hui Y. H (Ed.), *Handbook of Animal-Based Fermented Foods and Beverage Technology* (pp.709-716), Taylor and Francis (CRC Press). <http://dx.doi.org/10.1201/b12084-46>
- Hui, Y.H., Meunier-Goddik, L., Hansen, Å.S., Josephsen, J., Nip, W.K., Stanfield, P.S. & Toldra, F. (2004). *Handbook of Food and Beverage Fermentation Technology*. Marcel Dekker, Inc., New York.

- Hwanhlem N., Buradaleng S., Wattanachant S., Benjakul S., Tani A., Maneerat S. (2011). Isolation and Screening of Lactic Acid Bacteria from Thai Traditional Fermented Fish (Plasom) and Production of Plasom from Selected Strains. *Food Control*, 22, 401-407.
- Ida Muryany, Hing, H.L., Ina Salwany., Ghazali, A.R., Mohd Zamri, S., & Nor Fadilah, R. (2018). Adhesion Ability and Cytotoxic Evaluation of Lactobacillus Strains Isolated from Malaysian Fermented Fish (Pekasam) on HT-29 and Ccd-18Co Intestinal Cells. *Sains Malaysiana*. 47(10), 2391-2399. <http://dx.doi.org/10.17576/jsm-2018-4710-15>
- Ida Muryany, M.Y., Ina Salwany, M.Y., Ghazali, A.R., Hing, H.L., & Nor Fadilah, R. (2017). Identification and Characterization of the Lactic Acid Bacteria Isolated from Malaysian Fermented Fish (Pekasam). *International Food Research Journal*, 24(2), 868-875.
- Ina-Salwany, M.Y., Hishammuddin, H., Zulperi, Z., Salema, M., Karim, M., & Natrah, F.M.I. (2015). Elucidating the Probiotic Potential of Malaysian *Paenibacillus pabuli* Against *Vibrio alginolyticus* in *Artemia* Culture. *Asian Journal of Agricultural Research*, 9 (5): 223-236. <https://doi.org/10.3923/ajar.2015.223.236>
- Jacobsen, C.N., Nielsen, V.R., Hayford, A.E., Moller, P.L., Michaelsen, K.F., Paerregaard, A., Sandstorm, B., Tvede, M., & Jakobsen. (1999). Screening of Probiotic Activities of Forty-Seven Strains of *Lactobacillus* spp. by *In Vitro* Techniques and Evaluation of the Colonization Ability of Five Selected Strains in Humans. *Applied and Environmental Microbiology*, 65(11), 4949-4956.
- Janda, J.M., & Abbott, S.L. (2007). 16S rRNA Gene Sequencing for Bacterial Identification in the Diagnostic Laboratory: Pluses, Perils, and Pitfalls. *Journal of Clinical Microbiology*, 45(9), 2761–2764. <https://doi.org/10.1128/JCM.01228-07>
- Jeong, S.M., Kim, Kyuwoong., Kim, S.M., Ilee, G., Park, S.Y, Kim, Y.Y., Son, J.S., Yun, J.M., & Park, S.M. (2018). Effect of Change in Total Cholesterol Levels on Cardiovascular Disease Among Young Adults. *Journal of American Heart Association.*, 7(12), e008819. DOI: 10.1161/JAHA.118.008819
- Jinap, S., Ilya-Nur, A.R., Tang, S.C., Hajeb, P., Shahrim., Khairunnisak, M. (2010). Sensory Attributes of Dishes Containing Shrimp Paste with Different Concentrations of Glutamate and 5'-Nucleotides. *Appetite*, 55(2), 238-244. <https://doi.org/10.1016/j.appet.2010.06.007>
- Jose, N.M., Bunt, C.R., & Hussain, M.A. (2015). Implications of Antibiotic Resistance in Probiotics. *Food Reviews International*, 31(1), 52-62. <https://doi.org/10.1080/87559129.2014.961075>
- Kahouli, I., Malhotra, M., Alaouijamali, M., Prakash, S. (2015). In-Vitro Characterization of the Anti-Cancer Activity of the Probiotic Bacterium *Lactobacillus Fermentum* NCIMB 5221 and Potential Against Colorectal Cancer. *J. Cancer Sci. Ther*, 7(7).

- Kaprasob, R., Kerdchoechuen, O., Laohakunjit, N., Thumthanaruk, B., & Shetty, K. (2018). Changes in Physico-Chemical, Astringency, Volatile Compounds and Antioxidant Activity of Fresh and Concentrated Cashew Apple Juice Fermented with *Lactobacillus plantarum*. *Journal of Food Science and Technology*, 55, 3979-3990. <https://doi.org/10.1007/s13197-018-3323-7>
- Kaushik, J.K., Kumar, A., Duary, R.K., Mohanty, A.K., Grover, S., Batish, V.K. (2009). Functional and Probiotic Attributes of an Indigenous Isolate of *Lactobacillus plantarum*. *PLoS ONE*, 4(12), e8099,
- Kelly, R.B. (2010). Diet and Exercise in the Management of Hyperlipidemia. *American Family Physician*, 81(9), 1097-1101.
- Kerry, R.G., Patra, J.K., Gouda, S., Park, Y., Shin, H.S., & Das, G (2018). Benefaction of Probiotics for Human Health: A Review. *Journal of Food and Drug Analysis*, 26(3), 927-939. <https://doi.org/10.1016/j.jfda.2018.01.002>
- Khairina, R., Fitriah, Y., Satrio, H., & Rahmi, N. (2016). Physical, Chemical, and Microbiological Properties of “Ronto” a Traditional Fermented Shrimp from South Borneo, Indonesia. *Aquatic Procedia*, 7, 214-220.
- Khalil, E.S., Manap, M.Y., Mustafa, S., Amid, M., Alhelli, A.M., & Aljoubori, A. (2018). Probiotic Characteristics of Exopolysaccharides-Producing *Lactobacillus* Isolated from Some Traditional Malaysian Fermented Foods. *CyTA - Journal of Food*, 16(1), 287-298. <https://doi.org/10.1080/19476337.2017.1401007>
- Kim, K.P., Rhee, C.H., & Park, H.D. (2002). Degradation of Cholesterol by *Bacillus subtilis* SFF34 Isolated from Korean Traditional Fermented Flatfish. *Letters in Applied Microbiology*, 35, 468-472.
- Kim, Y.B., Choi, Y.S., Ku, S.K., Jang, D.J., Ibrahim, H.H., & Moon, K.B. (2014). Comparison of Quality Characteristics Between Belacan from Brunei Darussalam and Korean shrimp paste. *Journal of Ethnic Foods*, 1, 19-23.
- Kimoto, H., Ohmomo, S., & Okamoto, T. (2002). Cholesterol Removal from Media by Lactococci. *Journal of Dairy Science*, 85, 3182-3188.
- Kobayashi, T., Kajiwara, M., Wahyuni, M., Kitakado, T., Hamada-Sato, N., Imada, C., & Watanabe, E. (2003). Isolation and Characterization of Halophilic Lactic Acid Bacteria Isolated from “Terasi” Shrimp Paste: A Traditional Fermented Seafood Product in Indonesia. *Journal of General and Applied Microbiology*, 49, 279-286.
- Koesoemawardani, D., & Hidayati, S., & Subeki. (2018). Amino acid and Fatty Acid Compositions of Rusip from Fermented Anchovy Fish (*Stolephorus* sp). *IOP Conference Series: Materials Science and Engineering*, 344, 012005. <https://doi.org/10.1088/1757-899X/344/1/012005>

- Koo, O.K., Lee, S.J., Chung, K.R., Jang, D.J., Yang, H.J., & Kwon, D.Y. (2016). Korean Traditional Fermented Fish Products: *Jeotgal*. *Journal of Ethnic Foods*, 3, 107-116. <http://dx.doi.org/10.1016/j.jef.2016.06.004>
- Kopermsub, P., & Yunchalard, S. (2010). Identification of Lactic Acid Bacteria Associated With the Production of *Plaa-som*, A Traditional Fermented Fish Product of Thailand. *International Journal of Food Microbiology*, 138, 200-204. <https://doi.org/10.1016/j.ijfoodmicro.2010.01.024>
- Kosoglou, T., Statkevich, P., Johnson-Levonas, A.O., Paolini, J.F., Bergman, A.J., & Alton, K.B. (2005). Ezetimibe: A Review of its Metabolism, Pharmacokinetics and Drug Interactions. *Clinical Pharmacokinetics*, 44(5), 467-94. <https://doi.org/10.2165/00003088-200544050-00002>
- Kruit, J.K., Groen, A.K., Berkel, T.J.V., & Kuipers, F. (2006). Emerging Roles of the Intestine in Control of Cholesterol Metabolism. *World Journal of Gastroenterology*, 12(40), 6429-6439. <http://www.wjgnet.com/1007-9327/12/6429.asp>
- Kumar, A., & Kumar, D. (2015). Characterization of *Lactobacillus* Isolated from Dairy Samples for Probiotic Properties. *Anaerobe*, 33, 117-123. <http://dx.doi.org/10.1016/j.anaerobe.2015.03.004>
- Kumar, M., Nagpal, R., Kumar, R., Hemalatha, R., Verma, V., Kumar, Ashok., Chakraborty., Singh, Birbal., Marotta, F., Jain, Shalini., & Yadav, H. (2012). Cholesterol-Lowering Probiotics as Potential Biotherapeutics for Metabolic Diseases. *Journal of Diabetes Research*, 1-14. DOI:10.1155/2012/902917
- Kumar, S., Stecher, G., Li, M., Knyaz, C. & Tamura, K. (2018). MEGA X: Molecular Evolutionary Genetics Analysis Across Computing Platforms. *Molecular Biology and Evolution*, 35 (6), 1547-1549. doi: 10.1093/molbev/msy096.
- Lajius, L. (2014). Bosou - Makanan Tradisi Masyarakat Dusun Sabah. *Utusan KAMPUS*, 1.
- Lakra, A.K., Domdi, L., Hanjon, G., Mohd Tilwani, Y., Arul, V. (2020). Some Probiotic Potential of *Weissella confusa* MD1 and *Weissella cibaria* MD2 Isolated From Fermented Batter. *LWT - Food Science and Technology*, 125, 109261. <https://doi.org/10.1016/j.lwt.2020.109261>
- Lane, D. J. (1991). 16S/23S rRNA sequencing. In E. Stackebrandt and M. Goodfellow (ed.), *Nucleic acid techniques in bacterial systematics* (pp. 115-175). John Wiley & Sons, New York.
- Le, B., & Yang, S.H. (2018). Probiotic Potential of Novel *Lactobacillus* Strains Isolated from Salted-Fermented Shrimp as Antagonists for *Vibrio parahaemolyticus*<sup>§</sup>. *Journal of Microbiology*, 56(2), 138–144. DOI 10.1007/s12275-018-7407-x

- Le, B., & Yang, S.H. (2019a). Identification of a Novel Potential Probiotic *Lactobacillus plantarum* FB003 Isolated from Salted-Fermented Shrimp and its Effect on Cholesterol Absorption by Regulation of NPC1L1 and PPAR $\alpha$ . *Probiotics and Antimicrobial Proteins*, 11, 785-793. <https://doi.org/10.1007/s12602-018-9469-9>
- Le, B., & Yang, S.H. (2019b). Effect of Potential Probiotic *Leuconostoc mesenteroides* FB111 in Prevention of Cholesterol Absorption by Modulating NPC1L1/PPAR $\alpha$ /SREBP-2 Pathways in Epithelial Caco-2 Cells. *International Microbiology*, 22, 279-287. <https://doi.org/10.1007/s10123-018-00047-z>
- Lee, C-H. (1997). Lactic Acid Fermented Foods and Their Benefits in Asia. *Food Control*, 8, 259-269.
- Lee, H-W., Choi, Y-J., Hwang, I. M., Hong, S. W. & Lee, M-A. (2016). Relationship Between Chemical Characteristics and Bacterial Community of a Korean Salted-Fermented Anchovy Sauce, *Myeolchi-Aekjeot*. *LWT – Food Science and Technology*, 73, 251-258.
- Lee, K.W., Park, J.Y., Sa, H.D., Jeong, J.H., Jin, D.E., Heo, H.J., & Kim, J.H. (2014). Probiotic Properties of *Pediococcus* Strains Isolated from Jeotgals, Salted and Fermented Korean Sea-food. *Anaerobe*, 28, 199-206. <http://dx.doi.org/10.1016/j.anaerobe.2014.06.013>
- Lee, Y., Cho, Y., Kim, E., Kim, H.J., & Kim, H.Y. (2018). Identification of Lactic Acid Bacteria in Galchi- and Myeolchi-Jeotgal by 16S rRNA Gene Sequencing, MALDI-TOF Mass Spectrometry, and PCR-DGGE. *J. Microbiol. Biotechnol.*, 28(7), 1112-1121. <https://doi.org/10.4014/jmb.1803.03034>
- Leroy, F., & De Vuyst, L. (2004). Lactic Acid Bacteria as Functional Starter Cultures for the Food Fermentation Industry. *Trends in Food Science & Technology*, 15(2), 67-78. <https://doi.org/10.1016/j.tifs.2003.09.004>
- Lew, C.L., Choi, S.B., Khoo, B.Y., Sreenivsan, S., Ong, K.L., & Liang, M.T (2018). *Lactobacillus plantarum* DR7 Reduces Cholesterol via Phosphorylation of AMPK That Down-regulated the mRNA Expression of HMG-CoA Reductase. *Korean Journal for Food Science of Animal Resources*, 38(2), 350-361. <https://doi.org/10.5851/kosfa.2018.38.2.350>
- Li, L.H., Dutkiewicz, E.P., Huang, Y.C., Zhou, H.B., & Hsu, C.C. (2019a). Analytical Methods for Cholesterol Quantification. *Journal of Food and Drug Analysis*, 27, 375-386. <https://doi.org/10.1016/j.jfda.2018.09.001>
- Li, Q., Liu, X., Dong, M., Zhou, J., & Wang, Y. (2015). Aggregation and Adhesion Abilities of 18 Lactic Acid Bacteria Strains Isolated from Traditional Fermented Food. *International Journal of Agricultural Policy and Research*, 3(2), 84-92. <http://dx.doi.org/10.15739/IJAPR.030>

- Li, R., Liu, Y., Shi, J., Yu, Y., Lu, H., Yu, L., Liu, Y., & Zhang, F. (2019b). Diosgenin Regulates Cholesterol Metabolism in Hypercholesterolemic Rats by Inhibiting NPC1L1 and Enhancing ABCG5 and ABCG8. *BBA-Molecular and Cell Biology of Lipids* 1864, 1124-1133.
- Liang, X., Lv, Y., Zhang, Z., Yi, H., Liu, T., Li, R., Yu, Z., & Zhang, L. (2020). Study on Intestinal Survival and Cholesterol Metabolism of Probiotics. *LWT - Food Science and Technology*, 124, 109132. <https://doi.org/10.1016/j.lwt.2020.109132>
- Liasi, S.A., Azmi, T.I., Hassan, M.D., Shuhaimi, M., Rosfarizan, M., & Ariff, A.B. (2009). Antimicrobial Activity and Antibiotic Sensitivity of Three Isolates of Lactic Acid Bacteria from Fermented Fish Product, Budu. *Malaysian Journal of Microbiology*, 5(1), 33-37.
- Liguori, A.P., Warrington, S.D., Ginther, J.L., Pearson, T., Bowers, J., Glass, M.B., Mayo, M., Wuthiekanun, V., Engelthaler, D., Peacock, S.J., Currie, B.J., Wagner, D.M., Keim, P., & Tuanyok, A. (2011). Diversity of 16S-23S rDNA Internal Transcribed Spacer (ITS) Reveals Phylogenetic Relationships in *Burkholderia pseudomallei* and Its Near-Neighbors. *PLoS ONE*, 6(12), e29323. <https://doi.org/10.1371/journal.pone.0029323>
- Lim, F.T., Lim, S.M., & Ramasamy, K. (2017). *Pediococcus acidilactici* LAB4 and *Lactobacillus plantarum* LAB12 Assimilate Cholesterol and Modulate ABCA1, CD36, NPC1L1 and SCARB1 *in vitro*. *Beneficial Microbe*, 8(1), 97-109. <https://doi.org/10.3920/BM2016.0048>
- Lindgren, S.E., & Dobrogosz, W.J. (1990). Antagonistic Activities of Lactic Acid Bacteria in Food and Feed Fermentations. *FEMS Microbiology Reviews*, 87, 149-164.
- Lino, M., Farr, S., Baker, C., Fuller, M., Trigatti, B., & Adeli, K. (2015). Intestinal Scavenger Receptor Class B Type I as a Novel Regulator of Chylomicron Production in Healthy and Diet-Induced Obese States. *American journal of physiology. Gastrointestinal and liver physiology*, 309(5), G350-G359. <https://doi.org/10.1152/ajpgi.00086.2015>.
- Liong, M.T., & Shah, N.P. (2005a). Acid and Bile Tolerance and Cholesterol Removal Ability of Lactobacilli Strains. *Journal of Dairy Science*, 88(1), 55-66.
- Liong, M.T., & Shah, N.P. (2005b). Bile Salt Deconjugation Ability, Bile Salt Hydrolase Activity and Cholesterol Co-Precipitation Ability of Lactobacilli Strains. *International Dairy Journal*, 15, 391-398. <https://doi.org/10.1016/j.idairyj.2004.08.007>
- Liu, D-M., Guo, J., Zeng, X-A., Sun, D-W., Brennan, C. S., Zhou, Q-X. & Zhou, J-S. (2017). The Probiotic Role of *Lactobacillus plantarum* in Reducing Risks Associated with Cardiovascular Disease. *International Journal of Food Science + Technology*, 52, 127-136.

- Liu, H., Huang, L., & Pei, X. (2021). Effects of Sorghum Rice and Black Rice on Genes Associated with Cholesterol Metabolism in Hypercholesterolemic Mice Liver and Intestine. *Food Science & Nutrition*, 9, 217-229. <https://doi.org/10.1002/fsn3.1986>
- Liu, H., Yang, C., Jing, Y., Li, Z., Zhong, W., & Li, G. (2013). Ability of Lactic Acid Bacteria Isolated from Mink to Remove Cholesterol: In Vitro and In Vivo Studies. *The Canadian Journal of Microbiology*, 59, 563-569. <https://doi.org/10.1139/cjm-2013-0200>
- Lo Sasso, G., Bovenga, F., Murzilli, S., Salvatore, L., Di Tullio, G., Martelli, N., D'orazio, A., Rainaldi, S., Vacca, M., Mangia, A., Palasciano, G., & Moschetta, A. (2013). Liver X Receptors Inhibit Proliferation of Human Colorectal Cancer Cells and Growth of Intestinal Tumors in Mice. *Gastroenterology*, 144, 1497-1507. <http://dx.doi.org/10.1053/j.gastro.2013.02.005>
- Lo Sasso, G., Murzilli, S., Salvatore, L., D'Errico, I., Petruzzelli, M., Conca, P., Jiang, Z. Y., Calabresi, L., Parini, P., & Moschetta, A. (2010). Intestinal Specific LXR Activation Stimulates Reverse Cholesterol Transport and Protects From Atherosclerosis. *Cell metabolism*, 12(2), 187–193.
- Lusis, A.J. (2000). Atherosclerosis. *Nature*, 407(6801), 233-241. <https://doi.org/10.1038/35025203>
- Ma, C., Zhang, S., Lu, J., Zhang, C., Pang, X., & Lv, J. (2019). Screening for Cholesterol-Lowering Probiotics from Lactic Acid Bacteria Isolated from Corn Silage Based on Three Hypothesized Pathways. *International Journal of Molecular Sciences*, 20, 2073. <https://doi.org/10.3390/ijms20092073>
- Majeed, M., Majeed, S., Nagabhushanam, K., Arumugam, S., Beede, K., & Ali, F. (2019). Evaluation of the In Vitro Cholesterol-Lowering Activity of the Probiotic Strain *Bacillus coagulans* MTCC 5856. *International Journal of Food Science and Technology*, 54, 212-220. <https://doi.org/10.1111/ijfs.13926>
- Majumdar, R.K., Roy, D., Bejjanki, S., & Bhaskar, N. (2016). Chemical and Microbial Properties of *Shidal*, a Traditional Fermented Fish of Northeast India. *Journal of Food Science and Technology*, 53(1), 401-410. <https://doi.org/10.1007/s13197-015-1944-7>
- Malaysia Acute Coronary Care Performance Report 2016. (2017). Malaysian Healthcare Performance Unit, Ministry of Health Malaysia, Kuala Lumpur.
- Malaysian Food Act 1983 (Act 281) and Regulation. (1985). Kuala Lumpur. International Law Book Services.
- Mallappa, R.H., Singh, D.K., Rokhana, N., Pradhan, D., Batish, V.K., & Grover, S. (2019). Screening and Selection of Probiotic Lactobacillus Strains of Indian Gut Origin Based on Assessment of Desired Probiotic Attributes Combined with Principal Component and Heatmap Analysis. *LWT – Food Science and Technology*. <https://doi.org/10.1016/j.lwt.2019.02.002>.

- Man, S.M., Kaakoush, N.O., Octavia, S., & Mitchell, H. (2010). The Internal Transcribed Spacer Region, a New Tool for Use in Species Differentiation and Delineation of Systematic Relationships within the *Campylobacter* Genus. *Applied and Environmental Microbiology*, 76(10), 3071–3081. <https://doi.org/10.1128/AEM.02551-09>
- Management of Dyslipidaemia. (2017). Clinical Practice Guidelines, 5th Ed., Ministry of Health Malaysia, Putrajaya.
- Maqsood, S., Hasan, F., Masud, T., Sammi, S., & Naqvi, S.M.S. (2013). *In vitro* Pre-Selection Criteria for Probiotic *Lactobacillus acidophilus* TS1 Isolated from Fermented Milk Product, Dahi. *Malaysian Journal of Microbiology*, 9(4), 326-330.
- Marco, M.L., Heeney, D., Binda, S., Cifelli, C.J., Cotter, P.D., Foligne, B., Ganzle, M., Kort, R., Pasin, G., Pihlanto, A., Smid, E.J., & Hutkins, R. (2017). Health Benefits of Fermented Foods: Microbiota and Beyond. *Current Opinion in Biotechnology*, 44, 94-102. <http://dx.doi.org/10.1016/j.copbio.2016.11.010>
- Martínez-Álvarez, O., Lopez-Caballero, M.E., Gomez-Guillen, M.E., & Montero, P. (2017). Fermented Seafood Products and Health. *Fermented Foods in Health and Disease Prevention*, 177-202. <https://doi.org/10.1016/B978-0-12-802309-9.00009-1>
- Martínez-Maqueda, D., Miralles, B., & Recio, I. (2015). HT29 Cell Line. *The Impact of Food Bio-Actives on Gut Health*, 113-124. [https://doi.org/10.1007/978-3-319-16104-4\\_11](https://doi.org/10.1007/978-3-319-16104-4_11)
- Mathara, J.M., Schillinger, U., Guigas, C., Franz, C., Kutima, P.M., Mbugua, S.M., Shin, H.K., & Holzapfel, W.H. (2008). Functional Characteristics of *Lactobacillus* spp. from Traditional Maasai Fermented Milk Products in Kenya. *International Journal of Food Microbiology*, 126, 57-64. <https://doi.org/10.1016/j.ijfoodmicro.2008.04.027>
- Mathur, S., & Singh, R. (2005). Antibiotic Resistance in Food Lactic Acid Bacteria—A Review. *International Journal of Food Microbiology*, 105, 281-295. <https://doi.org/10.1016/j.ijfoodmicro.2005.03.008>
- Maurer, J.M., Schellekens, R.C.A., van Rieke, H.M., Wanke, C., Lordanov, V., Stellaard, F., Wutzke, K.D., Dijkstra, G., van der Zee, M., Woerdenbag, H.J., Frijlink, H.W., Kosterink, J.G.W. (2015). Gastrointestinal pH and Transit Time Profiling in Healthy Volunteers Using the IntelliCap System Confirms Ileo-Colonic Release of ColoPulse Tablets. *PLoS ONE*, 10(7), e0129076. <https://doi.org/10.1371/journal.pone.0129076>
- Melgar-Lalanne, G., Rivera-Espinoza, Y., Mendez, A.I.R., & Hernandez-Sanchez, H. (2013). In Vitro Evaluation of the Probiotic Potential of Halotolerant Lactobacilli Isolated from a Ripened Tropical Mexican Cheese. *Probiotics & Antimicrobial Proteins*, 5, 239-251. <https://doi.org/10.1007/s12602-013-9144-0>

- Merritt, M.E., & Donaldson, J.R. (2009). Effect of Bile Salts on the DNA and Membrane Integrity of Enteric Bacteria. *Journal of Medical Microbiology*, 58, 1533-1541. <https://doi.org/10.1099/jmm.0.014092-0>
- Michael, D.R., Davies, T.S., Moss, J.W.E., Calvente, D.L., Ramji, D.P., Marchesi, J.R., Pechlivanis, A., Plummer, S.F. & Hughes, T.R. (2017). The anti-cholesterolaemic effect of a consortium of probiotics: An acute study in C57BL/6J mice. *Sci Rep.* 7 (1), 2883.
- Michael, D.R., Moss, J.W.E., Lama Calvente, D., Garaiova, L., Plummer, S.F., & Ramji, D.P. (2016). *Lactobacillus plantarum* CUL66 Can Impact Cholesterol Homeostasis in Caco-2 enterocytes. *Beneficial Microbes*, 7(3), 443-451.
- Miremadi, F., Ayyash, M., Sherkat, F., & Stojanovska, L. (2014). Cholesterol Reduction Mechanisms and Fatty Acid Composition of Cellular Membranes of Probiotic Lactobacilli and Bifidobacteria. *Journal of Functional Foods*, 9, 295-305. <http://dx.doi.org/10.1016/j.jff.2014.05.002>
- Mohamed, H.N., & Mustafa, S. (2021). Fermented Fish Products: A Review on the Manufacturing Process, Technological Aspect, Sensory, Nutritional Qualities and Metabolite Profiles. *International Journal of Synergy in Engineering and Technology*, 2(1), 16-35. <https://tatiuc.edu.my/ijset/index.php/ijset/article/view/94>
- Mohd Khairi, I.N., Huda, N., Wan Abdullah, W.N., & Al-Karkhi, A.F.M. (2014). Protein Quality of Fish Fermented Product: Budu and Rusip. *Asia Pacific Journal of Sustainable Agriculture Food and Energy*, 2(2), 17-22.
- Monteagudo-Mera, A., Rastall, R.A., Gibson, G.R., Charalampopoulos, D., & Chatzifragkou, A. (2019). Adhesion Mechanisms Mediated by Probiotics and Prebiotics and Their Potential Impact on Human Health. *Applied Microbiology and Biotechnology*, 103, 6463–6472.
- Montoro, B.P., Benomar, N., Lerma, L.L., Gutierrez, S.C., Galves, A., & Abriouel, H. (2016). Fermented Aloreña Table Olives as a Source of Potential Probiotic *Lactobacillus pentosus* Strains. *Frontiers in Microbiology*, 7, 1583. <https://doi.org/10.3389/fmicb.2016.01583>
- Mosmann, T. (1983). Rapid Colorimetric Assay for Cellular Growth and Survival: Application to Proliferation and Cytotoxicity Assays. *Journal of Immunological Method*, 65, 55-63.
- Motarjemi, Y. (2002). Impact of Small Scale Fermentation Technology on Food Safety in Developing Countries. *International Journal of Food Microbiology*, 75, 213-229.
- Mueda, R.T. (2015). Physico-Chemical and Color Characteristics of Salt-Fermented Fish Sauce from Anchovy *Stolephorus commersonii*. *AAFL Bioflux*, 8(4), 565-572.

- Mulaw, G., Tessema, T.S., Muleta, D., & Tesfaye, A. (2019). *In Vitro* Evaluation of Probiotic Properties of Lactic Acid Bacteria Isolated from Some Traditionally Fermented Ethiopian Food Products. *International Journal of Microbiology*, 7179514. <https://doi.org/10.1155/2019/7179514>
- Nakano, T., Inoue, I., & Murakoshi, T. (2019). A Newly Integrated Model for Intestinal Cholesterol Absorption and Efflux Reappraises How Plant Sterol Intake Reduces Circulating Cholesterol Levels. *Nutrients*, 11, 310. <https://doi.org/10.3390/nu11020310>
- Nami, Y., Bakhshayesh, R.V., Jalaly, H.M., Lofti, H., Eslami, S., & Hejazi, M.A. (2019). Probiotic Properties of *Enterococcus* Isolated from Artisanal Dairy Products. *Frontiers in Microbiology*, 10, 300. <https://doi.org/10.3389/fmicb.2019.00300>
- Nassir, F., Wilson, B., Han, X., Gross, R. W., & Abumrad, N. A. (2007). CD36 is Important for Fatty Acid and Cholesterol Uptake by the Proximal But Not Distal Intestine. *The Journal of Biological Chemistry*, 282(27), 19493–19501. <https://doi.org/10.1074/jbc.M703330200>
- Nawaz, M., Wang, J., Zhou, A., Ma, C., Wu, X., Moore, J.E., Millar, B.C., & Xu, J. (2011). Characterization and Transfer of Antibiotic Resistance in Lactic Acid Bacteria from Fermented Food Products. *Current Microbiology*, 62, 1081-1089. <https://doi.org/10.1007/s00284-010-9856-2>
- NCBI. (2023). *BLAST Now Offers Taxonomic Views of the Output*. Retrieved from <https://www.ncbi.nlm.nih.gov/Web/Newsltr/Spring00/blast.html>
- Ng, S.Y., Koon, S.S., Padam, B.S., & Chye, F.Y. (2015). Evaluation of Probiotic Potential of Lactic Acid Bacteria Isolated from Traditional Malaysian Fermented *Bambangan (Mangifera pajang)*. *CyTA-Journal of Food*, 13(4), 563-572. <https://doi.org/10.1080/19476337.2015.1020342>
- Nikolic, M., Jovicic, B., Kojic, M., & Topisirovic, L. (2010). Surface Properties of *Lactobacillus* and *Leuconostoc* Isolates from Homemade Cheeses Showing Auto-Aggregation Ability. *European Food Research Technology*, 231, 925-931. <https://doi.org/10.1007/s00217-010-1344-1>
- Nofiani, R., Elminah, E., & Ardiningsih, P. (2019). Chemical and Microbiological Properties of Buduk, a Commercial Fish Sauce from West Kalimantan. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 22(3), 601-608.
- Nozari, S., Faridvand, Y., Etesami, A., Beiki, M.A.K., Mazrakhondi, S.A.M., & Abdolalizadeh, J. (2019). Potential Anticancer Effects of Cell Wall Protein Fractions from *Lactobacillus paracasei* on Human Intestinal Caco-2 Cell Line. *Letters in Applied Microbiology*, 69, 148-154. <https://doi.org/10.1111/lam.13198>

- O'Morain, V.L., & Ramji., D.P. (2020). The Potential of Probiotics in the Prevention and Treatment of Atherosclerosis. *Molecular Nutrition Food Research*, 64, 1900797. <https://doi.org/10.1002/mnfr.201900797>
- Orlando, A., Refolo, M.G., Messa, C., Amati, L., Lavermicocca, P., Guerra, V., & Russo, F. (2012). Antiproliferative and Proapoptotic Effects of Viable or Heat-Killed *Lactobacillus paracasei* IMPC2.1 and *Lactobacillus rhamnosus* GG in HGC-27 Gastric and DLD-1 Colon Cell Lines. *Nutrition and Cancer*, 64(7), 1103-1111. <http://dx.doi.org/10.1080/01635581.2012.717676>
- Osman, O.A., Sulieman, A.M.E., Elkhalfifa, E.A., & Mustafa, W.A. (2012). Chemical and Microbiological Characteristics of Fermented Fish Product, Fassiekh. *Food and Public Health*, 2(6), 213-218. <https://doi.org/10.5923/j.fph.20120206.05>
- Ouwehand, A.C., & Salminen, S. (2003). *In Vitro* Adhesion Assays for Probiotics and Their *In Vivo* Relevance: A Review. *Microbiology Ecology in Health and Disease*, 15(4), 175-184. <https://doi.org/10.1080/08910600310019886>
- Pang, J., Poulter, E.B., Bell, D.A., Bates, T.R., Jefferson, V.L., Hillis, G.S., Schultz, C.J. & Watts, G.F. (2015). Frequency of familial hypercholesterolemia in patients with early-onset coronary artery disease admitted to a coronary care unit. *J Clin Lipidol*. 9 (5), 703-8.
- Panghal, A., Janghu, S., Virkar, K., Gat, Y., Kumar, V., & Chhikara, N. (2018). Potential Non-Dairy Probiotic Products – A Healthy Approach. *Food Bioscience*, 21, 80-89. <https://doi.org/10.1016/j.fbio.2017.12.003>
- Papadimitrou, K., Zoumpopoulou, G., Foligne, B., Alexandraki, V., Kazou, M., Pot, B., & Tsakalidou, E. (2015). Discovering Probiotic Microorganisms: *In Vitro*, *In Vivo*, Genetic and Omics Approaches. *Frontiers in Microbiology*, <https://doi.org/10.3389/fmicb.2015.00058>
- Park, S., Kang, J., Choi, S., Park, H., Hwang, E., Kang, Y. G., Kim, A. R., Holzapfel, W., & Ji, Y. (2018). Cholesterol-Lowering Effect of *Lactobacillus rhamnosus* BFE5264 and its Influence on the Gut Microbiome and Propionate Level in a Murine Model. *PLoS one*, 13(8), e0203150. <https://doi.org/10.1371/journal.pone.0203150>
- Pavlovic, N., Stankov, K., & Mikov, M. (2012). Probiotics—Interactions with Bile Acids and Impact on Cholesterol Metabolism. *Applied Biochemistry and Biotechnology*, 168, 1880-1895. <https://doi.org/10.1007/s12010-012-9904-4>
- Perak, A.M., Ning, H., de Ferranti, S.D., Gooding, H.C., Wilkins, J.T. & Lloyd-Jones, D.M. (2016). Long-Term Risk of Atherosclerotic Cardiovascular Disease in US Adults With the Familial Hypercholesterolemia Phenotype. *Circulation*. 134 (1), 9-19.
- Perera, O.D.A.N., Weerahewa, H.L.D., & Vidanagamage, S. (2017). Role and Current Trends of Developing Fruit, Vegetable and Cereal based Probiotic Foods: A review. *International Journal of Fermented Foods*, 6(2), 85-93.

- Pfaffl, M.W. (2001). A New Mathematical Model for Relative Quantification in Real-Time RT-PCR. *Nucleic Acids Research*, 29(9), e45. <https://doi.org/10.1093/nar/29.9.e45>
- Piemontese, A. (2015). Nutraceutical Approach to the Modulation of Cholesterol Metabolism: in Vitro and in Vivo Studies (Doctoral Thesis). Università di Parma. Dipartimento di Farmacia.
- Pinto, A., Barbosa, J., Albano, H., Isidro, J., & Teixeira, P. (2020). Screening of Bacteriocinogenic Lactic Acid Bacteria and Their Characterization as Potential Probiotics. *Microorganisms*, 8, 393. <https://doi.org/10.3390/microorganisms8030393>
- Pongsetkul, J., Benjakul, S., Sampavapol, P., Osako, K., & Faithong, N. (2014). Chemical Composition and Physical Properties of Salted Shrimp Paste (*Kapi*) Produced in Thailand. *International Aquatic Research*, 6, 155-166. <https://doi.org/10.1007/s40071-014-0076-4>
- Putra, T.F., Suprato, H., Tjahjaningsih, W., & Pramoto, H. (2018). The Antagonistic Activity of Lactic Acid Bacteria Isolated from *Peda*, an Indonesian Traditional Fermented Fish. *IOP Conf. Series: Earth and Environmental Science*, 137, 012060. <https://doi.org/10.1088/1755-1315/137/1/012060>
- Rafieian-Kopaei, M., Setorki, M., Doudi, M., Baradaran, A., & Nasri, H. (2014). Atherosclerosis: Process, Indicators, Risk Factors and New Hopes. *International Journal of Preventive Medicine*, 5(8), 927-946.
- Rahimifard, N., Moghni, M., & Naseri, M. (2016). Evaluation and Comparison of Three Antimicrobial Activity Methods Using *Bifidobacteria bifidum* and *Bifidobacteria infantis* as Probiotic Bacteria Against *Salmonella enterica* serotype Enteritidis. *Journal of Bacteriology & Mycology*, 2(3), 61-64. <https://doi.org/10.15406/jbmoa.2016.02.00024>
- Rahman, M.S. (2007). *Handbook of Food Preservation* (2nd ed). CRC Press.
- Rapsang, G.F., & Joshi, S.R. (2013). Molecular and Probiotic Functional Characterization of Lactobacillus Spp. Associated with Traditionally Fermented Fish, Tungtap of Meghalaya in Northeast India. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*, 85, 923-933. <https://doi.org/10.1007/s40011-013-0234-2>
- Rezac, S., Kok, C.R., Heermann, M., & Hutkins, R. (2018). Fermented Foods as a Dietary Source of Live Organisms. *Frontiers in Microbiology*. <https://doi.org/10.3389/fmicb.2018.01785>

- Romero-Luna, H.E., Peredo-Lovillo, A., Hernandez-Mendoza, A., Hernandez-Sanchez, H., Cauich-Sanchez, P.I., Ribas-Aparicio, R.M., & Davila-Ortiz, G. (2020). Probiotic Potential of *Lactobacillus paracasei* CT12 Isolated from Water Kefir Grains (Tibicos). *Current Microbiology*. <https://doi.org/10.1007/s00284-020-02016-0>
- Ruiz, L., Margolles, A., & Sanchez, B. (2013). Bile Resistance Mechanisms in *Lactobacillus* and *Bifidobacterium*. *Frontiers in Microbiology*, 4, 396. <https://doi.org/10.3389/fmicb.2013.00396>
- Sabatine, M.S. (2019). PCSK9 Inhibitors: Clinical Evidence and Implementation. *Nature Reviews Cardiology*, 16, 155-165. <https://doi.org/10.1038/s41569-018-0107-8>
- Sagdic, O., Ozturk, I., Yapar, N., & Yetim, H. (2014). Diversity and Probiotic Potentials of Lactic Acid Bacteria Isolated from Gilaburu, A Traditional Turkish Fermented European Cranberrybush (*Viburnum opulus* L.) Fruit Drink. *Food Research International*, 64, 537-545. <https://doi.org/10.1016/j.foodres.2014.07.045>
- Sahadeva, R.P.K., Leong, S.F., Chua, K.H., Tan, C.H., Chan, H.Y., Tong, E.V., Wong, S.Y.W., & Chan, H.K. (2011). Survival of Commercial Probiotic Strains to pH and Bile. *International Food Research Journal*, 18(4), 1515-1522.
- Sakandar, H.A., Kubow, S., & Sadiq, F.A. (2019). Isolation and *In-Vitro* Probiotic Characterization of Fructophilic Lactic Acid Bacteria from Chinese Fruits and Flowers. *LWT - Food Science and Technology*. <https://doi.org/10.1016/j.lwt.2019.01.038>
- Satish Kumar, R., Kanmani, P., Yuvaraj, N., Paari, K.A., Pattukumar, V., & Arul, V. (2011). *Lactobacillus plantarum* AS1 Binds to Cultured Human Intestinal Cell Line HT-29 and Inhibits Cell Attachment by Enterovirulent Bacterium *Vibrio parahaemolyticus*. *Letters in Applied Microbiology*, 53, 481-487. <https://doi.org/10.1111/j.1472-765X.2011.03136.x>
- Sedláčková, P., Horackova, S., Shi, T., Košova, M., & Plockova, M. (2015). Two Different Methods for Screening of Bile Salt Hydrolase Activity in *Lactobacillus* Strains. *Czech Journal of Food Sciences*, 33(1), 13-18. <https://doi.org/10.17221/299/2014-CJFS>
- Shaikh, S., Fatima, J., Shakil, S., Rizvi, S.M.D., & Kamal, M.A. (2015). Antibiotic Resistance and Extended Spectrum Beta-Lactamases: Types, Epidemiology and Treatment. *Saudi Journal of Biological Sciences*, 22, 90-101. <http://dx.doi.org/10.1016/j.sjbs.2014.08.002>
- Sharif, R., Ghazali, A. R., Rajab, N. F., Haron, H. & Osman. F. (2008). Toxicological Evaluation of Some Malaysian Locally Processed Raw Food Products. *Food and Chemical Toxicology*, 46, 368–374.

- Sharma, P., Tomar, S. K., Sangwan, V., Goswami, P. & Singh, R. (2016). Antibiotic Resistance of *Lactobacillus* sp. Isolated from Commercial Probiotic Preparations. *Journal of Food Safety*, 36, 38-51.
- Shehata, M.G., El Sahn, M.A., El Sohaimy, S.A., & Youssef, M.M. (2019). In Vitro Assessment of Hypocholesterolemic Activity of *Lactococcus lactis* subsp. *lactis*. *Bulletin of the National Research Centre*, 43(60). <https://doi.org/10.1186/s42269-019-0090-1>
- Shehata, M.G., El Sohaimy, S.A., El-Sahn, M.A. & Youssef, M.M. (2016). Screening of Isolated Potential Probiotic Lactic Acid Bacteria for Cholesterol Lowering Property and Bile Salt Hydrolase Activity. *Annals of Agricultural Sciences*, 61 (1), 65-75.
- Shen, W.J., Azhar, S., & Kraemer, F.B. (2018). SR-B1: A Unique Multifunctional Receptor for Cholesterol Influx and Efflux. *Annual Review of Physiology*, 80, 95-116. <https://doi.org/10.1146/annurev-physiol-021317-121550>
- Shiriskar, D.A., Khedkar, G.D., & Sudhakara, N.S. (2010). Preparation of Boiled and Dried Products from Anchovies (*Stolephorus* sp.) and Studies on Quality Changes During Storage. *Journal of Food Processing and Preservation* 34, 73–86. <https://doi.org/10.1111/j.1745-4549.2008.00280.x>
- Shokryazdan, P., Sieo, C.C., Kalavathy, R., Liang, J.B., Alitheen, N.B., Jahromi, M.F., & Ho, Y.W. (2014). Probiotic Potential of *Lactobacillus* Strains with Antimicrobial Activity against Some Human Pathogenic Strains. *BioMed Research International*, 2014, 927268. <http://dx.doi.org/10.1155/2014/927268>
- Sidira, M., Santarmaki, V., Kiourtzidis, M., Argyri, A.A., Papadopoulou, O.S., Chorianopoulos, N., Tassou, C., Kaloutsas, S., Galanis, A. & Kourkoutas, Y. (2017). Evaluation of Immobilized *Lactobacillus plantarum* 2035 on Whey Protein as Adjunct Probiotic Culture in Yoghurt Production. *LWT – Food Science and Technology*, 75, 137-146.
- Sim, K.Y., Chye, F.Y., & Anton, A. (2012). Probiotic Potential and Antimicrobial Activities of Micro-organisms Isolated from an Indigenous Fish Sauce. *Borneo Science*, 31, 57-63.
- Sim, K.Y., Chye, F.Y., & Anton, A. (2015). Chemical Composition and Microbial Dynamics of *Budu* Fermentation, A Traditional Malaysian Fish Sauce. *Acta Alimentaria*, 44 (2), 185–194 <https://doi.org/10.1556/AAlim.2014.0003>
- Singh, V., Mani, I., & Chaudhary, D.K. (2012). Molecular Assessment of 16S-23S rDNA Internal Transcribed Spacer Length Polymorphism of *Aeromonas hydrophila*. *Advances in Microbiology*, 2, 72-78. <http://dx.doi.org/10.4236/aim.2012.22009>

- Singhal, K., Joshi, H., & Chaudhary, B. (2011). Influence of Initial Concentrations of Cholesterol on the Uptake of Cholesterol by the Standard Lactobacillus Strains and Lactobacillus Isolates. *IJPI's Journal of Biotechnology and Biotherapeutics*, 1(4), 2–6.
- Singhal, N., Singh, N.S., Mohanty, S., Kumar, M., & Viridi, J.S. (2021). Rhizospheric *Lactobacillus plantarum* (*Lactiplantibacillus plantarum*) Strains Exhibit Bile Salt Hydrolysis, Hypocholesterolemic and Probiotic Capabilities In Vitro. *Scientific reports*, 11, 15288. <https://doi.org/10.1038/s41598-021-94776-3>
- Sirtori, C.R. (2014). The Pharmacology of Statin. *Pharmacological research*, 88, 3-11. <https://doi.org/10.1016/j.phrs.2014.03.002>
- Siti Mahirah, Y., Rabeta, M.S., & Antora, R.A. (2018). Effects of Different Drying Methods on the Proximate Composition and Antioxidant Activities of *Ocimum basilicum* Leaves. *Food Research*, 2(5), 421-428. [https://doi.org/10.26656/fr.2017.2\(5\).083](https://doi.org/10.26656/fr.2017.2(5).083)
- Skov, M., Tonnesen, C.K., Hansen, G.H., & Daniel, E.M. (2011). Dietary Cholesterol Induces Trafficking of Intestinal Niemann-Pick Type C1 Like 1 From the Brush Border to Endosomes. *American Journal of Physiology Gastrointestinal and Liver Physiology*, 300, 33–40. <https://doi.org/10.1152/ajpgi.00344.2010>
- Solieri, L., Bianchi, A., Mottolose, G., Lemmetti, F. & Giudici, P. (2014). Tailoring the Probiotic Potential of Non-Starter *Lactobacillus* Strains from Ripened Parmigiano Reggiano Cheese by In Vitro Screening and Principal Component Analysis. *Food Microbiology*, 38, 240-249
- Solomon, E.P., Berg, L.R. & Martin, D.W. (2011). *Biology*, 9<sup>th</sup> edition. Cengage Learning.
- Song, M., Yun, B., Moon, J.H., Park, D.J., Lim, K., & Oh, S. (2015). Characterization of Selected *Lactobacillus* Strains for Use as Probiotics. *Korean Journal for Food Science of Animal Resources*, 35(4), 551-556. <https://doi.org/10.5851/kosfa.2015.35.4.551>
- Song, Y.L., Kato, N., Liu, C.X., Matsumiya, Y., Kato, H., & Watanabe, K. (2000). Rapid Identification of 11 Human Intestinal *Lactobacillus* Species by Multiplex PCR Assays Using Group- and Species-Specific Primers Derived from the 16S-23S rRNA Intergenic Spacer Region and its Flanking 23S rRNA. *FEMS Microbiology*, 187, 167-173.
- Stieger, B. (2003). Biliary Cholesterol Secretion: More Lessons From Plants? *Journal of Hepatology*, 38, 843-846. [https://doi.org/10.1016/S0168-8278\(03\)00194-6](https://doi.org/10.1016/S0168-8278(03)00194-6)
- Sulin, C., How, C.B., Mohd Jamil, A.A., Yih, C.S., Meleh, H.U., Lung, L.T.T. (2019). Characterisation of the Probiotic Qualities Exhibited by Lactobacilli Strains Isolated from the Anogenital Tract. *Malaysian Journal of Medicine and Health Sciences*, 15(1), 37-45.

- Takiishi, T., Fenero, C.I.M., & Camara, N.O.S. (2017). Intestinal Barrier and Gut Microbiota: Shaping Our Immune Responses Throughout Life. *Tissue barriers*, 5(4), e1373208. <https://doi.org/10.1080/21688370.2017.1373208>
- Tamang, J.P., Watanabe, K. & Holzapfel W.H. (2016). Review: Diversity of Microorganisms in Global Fermented Foods and Beverages. *Front Microbiol.*, 24 (7), 377.
- Tan, W.C., Lim, S.J., & Wan Mustapha, W.A. (2017). Pencirian Bakteria Asid Laktik dan Sebatian Aroma Ikan Pekasam (Characterisation of Lactic Acid Bacteria and Aromatic Compounds in Fermented Fish Pekasam). *Sains Malaysiana*, 46(3), 439-448. <http://dx.doi.org/10.17576/jsm-2017-4603-11>
- Tanaka, Y., & Kamisako, T. (2021). Regulation of the Expression of Cholesterol Transporters by Lipid-Lowering Drugs Ezetimibe and Pemafibrate in Rat Liver and Intestine. *Biochimica et biophysica acta. Molecular basis of disease*, 1867(11), 166215. <https://doi.org/10.1016/j.bbadis.2021.166215>
- Tareb, R., Bernardeau, M., Gueguen, M., & Vernoux, J.P. (2013). *In vitro* Characterization of Aggregation and Adhesion Properties of Viable and Heat-Killed Forms of Two Probiotic *Lactobacillus* Strains and Interaction with foodborne Zoonotic Bacteria, Especially *Campylobacter jejuni*. *Journal of Medical Microbiology*, 62, 637-649. <https://doi.org/10.1099/jmm.0.049965-0>
- Taylor, B.C., Lejzerowicz, F., Poirel, M., Shaffer, J.P., Jiang, L., Aksenov, A, Litwin, N., Humphrey, G., Martino, C., Miller-Montgomery, S., Dorrestein, P.C., Veiga, P., Song, S.J., McDonald, D., Derrien, M., & Knight, R. (2020). Consumption of Fermented Foods Is Associated with Systematic Differences in the Gut Microbiome and Metabolome. *American Society for Microbiology*, 5(2), e00901-19. <https://doi.org/10.1128/mSystems.00901-19>
- Tee, E.S., Noor, M.I., Azudin, M.N., and Idris, K. (1997). *Nutrient Composition of Malaysian Foods*, 4th edition. Kuala Lumpur: Institute for Medical Research.
- Tharmaraj, N., & Shah, N.P. (2009). Antimicrobial Effects of Probiotics Against Selected Pathogenic and Spoilage Bacteria in Cheese-Based Dips. *International Food Research Journal* 16, 261-276.
- Thomson, A.B.R., Doring, K., Keelan, M., & Armstrong, G. (1997). Nutrient Uptake Into Undifferentiated and Differentiated HT-29 Cells in Culture. *Canadian Journal of Physiology and Pharmacology*, 75, 351-356.
- Thursby, E., & Juge, N. (2017). Introduction to the Human Gut Microbiota. *Biochemical Journal*, 474, 1823-1836. <https://doi.org/10.1042/bcj20160510>
- Tian, L., Liu, R., Zhou, Z., Xu, X., Feng, S., Kushmaro, A., Marks, R. S., Wang, D., & Sun, Q. (2022). Probiotic Characteristics of *Lactiplantibacillus Plantarum* N-1 and Its Cholesterol-Lowering Effect in Hypercholesterolemic Rats. *Probiotics and antimicrobial proteins*, 14(2), 337-348.

- Todorov, S.D., Stojanovski, S., Iliev, I., Moncheva, P., Nero, L.A., & Ivanova, I.V. (2017). Technology and Safety Assessment for Lactic Acid Bacteria Isolated from Traditional Bulgarian Fermented Meat Product “Lukanka”. *Brazilian Journal of Microbiology*, 48, 576-586. <https://doi.org/10.1016/j.bjm.2017.02.005>
- Tokajian, S., Issa, N., Salloum, T., Ibrahim, J., & Farah, M. (2016). 16S-23S rRNA Gene Intergenic Spacer Region Variability Helps Resolve Closely Related Sphingomonads. *Frontiers in Microbiology*, 7, 149. <https://doi.org/10.3389/fmicb.2016.00149>
- Tomaro-Duchesneau, C., Saha, S., Malhotra, M., Jones, M.L., Rodes, L., & Prakash, S. (2015). *Lactobacillus fermentum* NCIMB 5221 and NCIMB 2797 as cholesterol-lowering probiotic biotherapeutics: *in vitro* analysis. *Beneficial Microbes*, 6(6), 861-869. <https://doi.org/10.3920/BM2015.0021>
- Touret, T., Oliveira, M., & Semedo-Lemsaddek, T. (2018). Putative Probiotic Lactic Acid Bacteria Isolated from Sauerkraut Fermentations. *PLoS ONE*, 13(9), e0203501. <https://doi.org/10.1371/journal.pone.0203501>
- Trapani, L., & Segatto, M., & Valentina, P. (2012). Regulation and Dereglulation of Cholesterol Homeostasis: The Liver as a Metabolic “Power Station”. *World Journal of Hepatology*, 4(6), 184-190. <https://doi.org/10.4254/wjh.v4.i6.184>
- Trentman, T.L., Avey, S.G., & Ramakrishna, H. (2017). Current and Emerging Treatments for Hypercholesterolemia: A Focus on Statins and Proprotein Convertase Subtilisin/Kexin Type 9 Inhibitors for Perioperative Clinicians. *Journal of Anaesthesiology Clinical Pharmacology*, 32(4), 440-5.
- Tripathi, M.K., & Giri, S.K. (2014). Probiotic Functional Foods: Survival Of Probiotics During Processing and Storage. *Journal of Functional Foods*, 9, 225-241. <http://dx.doi.org/10.1016/j.jff.2014.04.030>
- Tsai, C.C., Lin, P.P., Hsieh, Y.M., Zhang, Z.Y., Wu, H.C., & Huang, C.C. (2014). Cholesterol-Lowering Potentials of Lactic Acid Bacteria Based on Bile-Salt Hydrolase Activity and Effect of Potent Strains on Cholesterol Metabolism *In Vitro* and *In Vivo*. *The Scientific World Journal*, 2014, 690752. <http://dx.doi.org/10.1155/2014/690752>
- Ulug, E., & Nergiz-Unal, R. (2021). Dietary Fatty Acids and CD36-Mediated Cholesterol Homeostasis: Potential Mechanisms. *Nutrition Research Reviews*, 34(1), 64-77. <https://doi.org/10.1017/S0954422420000128>
- Valdes, A.M., Walter, J., Segal, E., & Spector, T.D. (2018). Role of the Gut Microbiota in Nutrition and Health. *BMJ*, 361, K2179. <https://doi.org/10.1136/bmj.k2179>
- Vesterlund, S., Salminen, K., & Salminen, S. (2012). Water Activity in Dry Foods Containing Live Probiotic Bacteria Should be Carefully Considered: A Case Study with *Lactobacillus rhamnosus* GG in Flaxseed. *International journal of food microbiology*, 157(2), 319–321. <https://doi.org/10.1016/j.ijfoodmicro.2012.05.016>

- Vesterlund, S., Vankerckhoven, V., Saxelin, M., Goossens, H., Salminen, S., & Ouwehand, A.C. (2007). Safety Assessment of *Lactobacillus* strains: Presence of Putative Risk Factors in Faecal, Blood and Probiotic Isolates. *International Journal of Food Microbiology*, 116, 325-331. <https://doi.org/10.1016/j.ijfoodmicro.2007.02.002>
- Vijayakumar, P.P., & Adedeji, A. (2017). Measuring the pH of Food Products. *Cooperative Extension Service*, 246.
- Vinderola, C.G., & Reinheimer, J.A. (2003). Lactic Acid Starter and Probiotic Bacteria: A Comparative “In Vitro” Study of Probiotic Characteristics and Biological Barrier Resistance. *Food Research International*, 36, 895-904. [https://doi.org/10.1016/S0963-9969\(03\)00098-X](https://doi.org/10.1016/S0963-9969(03)00098-X).
- Wa, Y., Yin, B., He, Y., Xi, W., Huang, Y., Wang, C., Guo, F., & Gu, R. (2019). Effects of Single Probiotic- and Combined Probiotic-Fermented Milk on Lipid Metabolism in Hyperlipidemic Rats. *Frontiers in Microbiology*. <https://doi.org/10.3389/fmicb.2019.01312>
- Wang, B., & Tontonoz, P. (2018). Liver X Receptors in Lipid Signalling and Membrane Homeostasis. *Nat Rev Endocrinol*, 14(8), 452-463. <https://doi.org/10.1038/s41574-018-0037-x>.
- Wang, L., Guo, M. J., Gao, Q., Yang, J. F., Yang, L., Pang, X. L., & Jiang, X. J. (2018). The effects of probiotics on total cholesterol: A meta-analysis of randomized controlled trials. *Medicine*, 97(5), e9679.
- Wang, L.Q., Meng, X.C., Zhang, B.R., Wang, Y., & Shang, Y.L. (2010). Influence of Cell Surface Properties on Adhesion Ability of Bifidobacteria. *World J Microbiol Biotechnol*, 26, 1999–2007. <https://doi.org/10.1007/s11274-010-0384-9>.
- Wang, S.C., Chang, C.K., Chan, S.C., Shieh, J.S., Chiu, C.K., & Duh, P.D. (2014). Effects of Lactic Acid Bacteria Isolated from Fermented Mustard on Lowering Cholesterol. *Asian Pacific Journal of Tropical Biomedicine*, 4(7), 523-528. <https://doi.org/10.12980/APJTB.4.201414B54>
- Wang, W., Yan, Z., Hu, J., Shen, W.J., Azhar, S., Kraemer, F.B. (2020). Scavenger Receptor Class B, Type 1 Facilitates Cellular Fatty Acid Uptake. *Molecular and Cell Biology of Lipids*, 1865(2), 158554. <https://doi.org/10.1016/j.bbalip.2019.158554>
- Wieërs, G., Belkhir, L., Enaud, R., Leclercq., de Foy, J.M.P., Dequenne, I., Timary, P.D., & Cani, P.D. (2020). How Probiotics Affect the Microbiota. *Frontiers in Cellular and Infection Microbiology*, 9(454). <https://doi.org/10.3389/fcimb.2019.00454>

- World Health Organization. (2020a). *Cardiovascular diseases, diabetes and cancer cost nearly RM 9 billion productivity losses annually to Malaysian economy*. Retrieved from <https://www.who.int/malaysia/news/detail/08-09-2020-cardiovascular-diseases-diabetes-and-cancer-cost-nearly-rm-9-billion-productivity-losses-annually-to-malaysian-economy>
- World Health Organization. (2020b). *The top 10 causes of death*. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death>
- World Health Organization. (2021). *Cardiovascular diseases (CVDs)*. Retrieved from [https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))
- Xiong, Z.Q., Wang, Q.H., Kong, L.H., Song, X., Wang, G.Q., Xia, Y.J., Zhang, H., Sun, Y., & Ai, L.Z. (2017). Short Communication: Improving the Activity of Bile Salt Hydrolases in *Lactobacillus casei* Based on In Silico Molecular Docking and Heterologous Expression. *Journal of Dairy Science*, 100, 975-980. <https://doi.org/10.3168/jds.2016-11720>
- Yamanashi, Y., Kurauchi, T.T.R., Tanaka, Y., Komine, T., & Suzuki, H. (2017). Transporters for the Intestinal Absorption of Cholesterol, Vitamin E, and Vitamin K. *Journal of Atherosclerosis and Thrombosis*, 24(4), 347-359. <https://doi.org/10.5551/jat.rv16007>
- Yang, D., Lyu, W., Hu, Z., Gao, J., Zheng, Z., Wang, W., Firman, J., & Ren, D. (2021). Probiotic Effects of *Lactobacillus fermentum* ZJUIDS06 and *Lactobacillus plantarum* ZY08 on Hypercholesteremic Golden Hamsters. *Frontiers in nutrition*, 8, 705763. <https://doi.org/10.3389/fnut.2021.705763>
- Yang, E., Fan, L., Yan, J., Jiang, Y., Doucette, C., Fillmore, S., & Walker, B. (2018). Influence of Culture Media, pH and Temperature on Growth and Bacteriocin Production of Bacteriocinogenic Lactic Acid Bacteria. *AMB Express*, 8(10). <https://doi.org/10.1186/s13568-018-0536-0>.
- Yap, C.K., Cheng, W.H., Ali, M.H., Nulit, R., Peng, S.H.T., Ismail, M.S., Leow, C.S., & Yap, C.W. (2019). Health Risk Assessment of Heavy Metals in Shrimp *Acetes* sp. and Cincalok Collected in 2007 from Pantai Klebang, Peninsular Malaysia. *Journal of Toxicology and Risk Assessment*, 5(028). <https://doi.org/10.23937/2572-4061.1510028>
- Yasiri, A., Vannaxay, E., Kiatmontri, J., & Seubsasana, S. (2018). Isolation and Determination of Bile Salt Hydrolase-Producing Lactic Acid Bacteria from Fermented Spider Plant. *Journal of Pure and Applied Microbiology*, 12(3), 1055-1060.
- Yong, C.C., Khoo, B.Y., Sasidharan, S., Piyawattanametha, W., Kim, S.H., Khemthongcharoen, N., Chuah, L.O., Ang, M.Y., Liang, M.T. (2015). Activity of Crude and Fractionated Extracts by Lactic Acid Bacteria (LAB) Isolated from Local Dairy, Meat, and Fermented Products Against *Staphylococcus aureus*. *Annals of Microbiology*, 65, 1037-1047. <https://doi.org/10.1007/s13213-014-0949-1>.

- Yu, X.H., Qian, K., Jiang, N., Zheng, X.L., Cayalbyab, F.S., & Tang, C.K. (2014). ABCG5/ABCG8 in Cholesterol Excretion and Atherosclerosis. *Clinica Chimica Acta*, 428, 82-88. <https://doi.org/10.1016/j.cca.2013.11.010>
- Yu, X.H., Zhang, D.W., Zheng, X.L., & Tang, C.K. (2019). Cholesterol Transport System: An Integrated Cholesterol Transport Model Involved in Atherosclerosis. *Progress in Lipid Research*, 73, 65-91. <https://doi.org/10.1016/j.plipres.2018.12.002>
- Yu, Z., Zhang, X., Li, S., Li, C., Li, D., & Yang, Z. (2013). Evaluation of Probiotic Properties of *Lactobacillus plantarum* Strains Isolated from Chinese Sauerkraut. *World J Microbiol Biotechnol*, 29, 489-498. <https://doi.org/10.1007/s11274-012-1202-3>.
- Yuliana, N., Koesoemawardani, D., Susilawaty, Kurniati, Y. (2018). Lactic Acid Bacteria During Fish Fermentation (Rusip). *MOJ Food Processing & Technology*, 6(2), 211-216. <https://doi.org/10.15406/mojfpt.2018.06.00167>
- Zago, M., Fornasari, M.E., Carminati, D., Burns, P., Suarez, V., Vinderola, G., Reinheimer, J., & Giraffa, G. (2011). Characterization and Probiotic Potential of *Lactobacillus plantarum* Strains Isolated from Cheeses. *Food Microbiology*, 28, 1033-1040. <http://dx.doi.org/10.1016/j.fm.2011.02.009>
- Zakaria, Z., Mohd Salleh, M., & Abdul Rashid, N.A. (2015). Screening and Identification of Fibrinolytic Bacteria from Malaysian Fermented Seafood Products. *Journal of Applied Pharmaceutical Science*, 5(10), 022-031. DOI: 10.7324/JAPS.2015.501005
- Zareian, M., Ebrahimpour, A., Abu Bakar, F., Mohamed, A.B.S., Forghani, B., Ab-Kadir, M.S., & Saari, N. (2012). A Glutamic Acid-Producing Lactic Acid Bacteria Isolated from Malaysian Fermented Foods. *International Journal of Molecular Sciences*, 13, 5482-5497. doi:10.3390/ijms13055482.
- Zhang, B., Wang, Y., Tan, Z., Li, Z., Jiao, Z., & Huang, Q. (2016). Screening of Probiotic Activities of Lactobacilli Strains Isolated from Traditional Tibetan Qula, A Raw Yak Milk Cheese. *Asian Australas. J. Anim. Sci.*, 29(10), 1490-1499 <http://dx.doi.org/10.5713/ajas.15.0849>
- Zhao, L., Li, Y., Ding, Q., Li, Y., Chen, Y., & Ruan, X.Z. (2021). CD36 Senses Dietary Lipids and Regulates Lipids Homeostasis in the Intestine. *Frontiers in Physiology*, 12, 669279. <https://doi.org/10.3389/fphys.2021.669279>
- Zhao, L., Varghese, Z., Moorhead, J. F., Chen, Y., & Ruan, X. Z. (2018). CD36 and Lipid Metabolism in the Evolution of Atherosclerosis. *British medical bulletin*, 126(1), 101-112. <https://doi.org/10.1093/bmb/ldy006>.

Zheng, J., Wittouck, S., Salvetti, E., Franz, C.M.P., Harris, H.M.B., Mattarelli, P., O'Toole, P.W., Pot, B., Vandamme, P., Walter, J., Watanabe, K., Wuyts, S., Felis, G.E., Ganzle, M.G., & Lebeer, S. (2020). A Taxonomic Note on the genus *Lactobacillus*: Description of 23 Novel Genera, Emended Description of the Genus *Lactobacillus Beijerinck* 1901, and Union of *Lactobacillaceae* and *Leuconostocaceae*. *International Journal of Systematic and Evolutionary Microbiology*, 70, 2782-2858. <https://doi.org/10.1099/ijsem.0.004107>

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