References

Aijuka, M., & Buys, E. M. (2019). Persistence of foodborne diarrheagenic Escherichia coli in the agricultural and food production environment: Implications for food safety and public health. *Food Microbiology*, *82*. https://doi.org/10.1016/j.fm.2019.03.018

Ajekiigbe, V. O., Ogieuhi, I. J., Anthony, C. S., Bakare, I. S., Anyacho, S., Ogunleke, P. O., Fatokun, D. I., Akinmeji, O., Ruth, O. T., Olaore, A. K., Amusa, O., & Agbo, C. E. (2025). Consumer behavior and its role in E. coli outbreaks: the impact of fast-food preparation practices and hygiene awareness. *Tropical Medicine and Health*, *53*(1). https://doi.org/10.1186/s41182-025-00710-y

Aladhadh, M. (2023). A Review of Modern Methods for the Detection of Foodborne Pathogens. *Microorganisms, 11*(5), 1111. https://doi.org/10.3390/microorganisms11051111

Ali, S., & Alsayeqh, A. F. (2022). Review of major meat-borne zoonotic bacterial pathogens. *Frontiers in Public Health, 10*. https://doi.org/10.3389/fpubh.2022.1045599

Arlinta, D. (2025, October). Free nutritious meals operate without legal backing, increasing the risk of food poisoning. Kompas.id. https://www.kompas.id/artikel/en-program-mbg-berjalan-tanpa-payung-hukum-risiko-keracunan-makanan-semakin-besar

Bastos, M. do C. de F., Coutinho, B. G., & Coelho, M. L. V. (2010). Lysostaphin: A Staphylococcal Bacteriolysin with Potential Clinical Applications. *Pharmaceuticals*, *3*(4), 1139–1161. https://doi.org/10.3390/ph3041139

Bera, A., Herbert, S., Jakob, A., Vollmer, W., & Götz, F. (2004). Why are pathogenic staphylococci so lysozyme resistant? The peptidoglycan O-acetyltransferase OatA is the major determinant for lysozyme resistance of Staphylococcus aureus. *Molecular Microbiology*, *55*(3), 778–787. https://doi.org/10.1111/j.1365-2958.2004.04446.x

Bintsis, T. (2017). Foodborne Pathogens. AIMS Microbiology, 3(3), 529–563. https://doi.org/10.3934/microbiol.2017.3.529

Cancino-Padilla, N., Fellenberg, M. A., Franco, W., Ibáñez, R. A., & Vargas-Bello-Pérez, E. (2017). Foodborne bacteria in dairy products: Detection by molecular techniques. Ciencia E Investigación Agraria, 44(3), 215–229. https://doi.org/10.7764/rcia.v44i3.1811

Choi, S. E., & Lee, K. J. (2023). Ethnic differences in attitudes, beliefs, and patterns of meat consumption among American young women meat eaters. *Nutrition Research and Practice*, *17*(1), 73. https://doi.org/10.4162/nrp.2023.17.1.73

Cierzniak, A., Małodobra-Mazur, M., & Tokarski, M. (2025). A new approach for the detection of genetic alterations utilizing modified loop-mediated isothermal amplification reaction (LAMP). Scientific Reports, 15(1). https://doi.org/10.1038/s41598-025-93086-2

Cisneros, L., Baillo, A. A., Ploper, D., Valacco, M. P., Moreno, S., Saavedra, L., Minahk, C., Fusco, V., Yantorno, O., & Fadda, S. (2025). Physiological, microscopic and proteomic performance of Escherichia coli O157:H7 biofilms challenged with antagonistic lactic acid bacteria as a bio-decontamination tool for the food industry. *International Journal of Food Microbiology*, *435*, 111173. https://doi.org/10.1016/j.ijfoodmicro.2025.111173

Connolly, G., Clark, C. M., Campbell, R. E., Byers, A. W., Reed, J. B., & Campbell, W. W. (2022). Poultry Consumption and Human Health: How Much Is Really Known? A Systematically Searched Scoping Review and Research Perspective. *Advances in Nutrition, 13*(6), 2115–2124. https://doi.org/10.1093/advances/nmac074

Faraj, R., Ramadan, H., Bentum, K. E., Alkaraghulli, B., & Abebe, W. (2025). Antimicrobial Resistance, Virulence Gene Profiling, and Spa Typing of Staphylococcus aureus Isolated from Retail Chicken Meat in Alabama, USA. *Pathogens, 14*(2), 107. https://doi.org/10.3390/pathogens14020107

Foo, P. C., Najian, A. B. N., Muhamad, N. A., Ahamad, M., Mohamed, M., Yean, C. Y., & Lim, B. H. (2020). Loop-mediated isothermal amplification (LAMP) reaction as viable PCR substitute for diagnostic applications: a comparative analysis study of LAMP, conventional PCR, nested PCR (nPCR) and real-time PCR (qPCR) based on Entamoeba histolytica DNA derived from faecal sample. BMC *Biotechnology, 20*(1). https://doi.org/10.1186/s12896-020-00629-8

Fuller, C. A., Pellino, C. A., Flagler, M. J., Strasser, J. E., & Weiss, A. A. (2011). Shiga Toxin Subtypes Display Dramatic Differences in Potency. Infection and Immunity, 79(3), 1329–1337. https://doi.org/10.1128/IAI.01182-10

Geng, T., & Mathies, R. A. (2015). Minimizing inhibition of PCR-STR typing using digital agarose droplet microfluidics. *Forensic Science International: Genetics*, *14*, 203–209. https://doi.org/10.1016/j.fsigen.2014.10.007

Gunn, N. J., Zelmer, A. R., Kidd, S. P., Solomon, L. B., Carda-Diéguez, M., Mira, A., Yang, D., & Atkins, G. J. (2025). Chronic Staphylococcus aureus infection of osteocytes promotes an intracellular viable-but-non-culturable phenotype. https://doi.org/10.1101/2024.12.17.629047

Hamad, G., Amer, A., Kirrella, G., Mehany, T., Elfayoumy, R. A., Elsabagh, R., Elghazaly, E. M., Esatbeyoglu, T., Taha, A., & Zeitoun, A. (2023). Evaluation of the Prevalence of Staphylococcus aureus in Chicken Fillets and Its Bio-Control Using Different Seaweed Extracts. *Foods, 12*(1), 20. https://doi.org/10.3390/foods12010020

Hansen, T. A., Bartels, M. D., Høgh, S. V., Dons, L. E., Pedersen, M., Jensen, T. G., Kemp, M., Skov, M. N., Gumpert, H., Worning, P., & Westh, H. (2017). Whole Genome Sequencing of Danish Staphylococcus argenteus Reveals a Genetically Diverse Collection with Clear Separation from Staphylococcus aureus. Frontiers in Microbiology, 8. https://doi.org/10.3389/fmicb.2017.01512

Hussain, A., Abbas, Q., Nadeem, M., Nazar, A., Athar, A., & Rahman, H. U. U. (2026). Meat-Borne Bacterial Pathogen Detection: Conventional, Molecular and Emerging AI-Based Strategies. Diagnostics, 16(9), 1360. https://doi.org/10.3390/diagnostics16091360

Ibraheim, H. K., Fayez, R. A., Jasim, A. S., & Gharban, H. A. J. (2023). Role of nuc gene in Staphylococcus aureus to phagocytic activity in different cattle infections. Open Veterinary Journal, 13(8), 1021–1021. https://doi.org/10.5455/ovj.2023.v13.i8.8

Kaveh, S., Hashemi, S. M. B., Abedi, E., Amiri, M. J., & Conte, F. L. (2023). Bio-Preservation of Meat and Fermented Meat Products by Lactic Acid Bacteria Strains and Their Antibacterial Metabolites. Sustainability, 15(13), 10154. https://doi.org/10.3390/su151310154

Khehra, N., Padda, I. S., & Swift, C. J. (2023, March 6). Polymerase Chain Reaction (PCR). PubMed; StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK589663/

Kundu, S., Varshney, R., & Sulabh, S. (2024). Exploration of Isothermal Nucleic Acid Amplification Techniques in the Biomedical Field. *Gene and Genome Editing,* 100032–100032. https://doi.org/10.1016/j.ggedit.2024.100032

Law, J. W.-F., Ab Mutalib, N.-S., Chan, K.-G., & Lee, L.-H. (2015). Rapid methods for the detection of foodborne bacterial pathogens: Principles, applications, advantages and limitations. *Frontiers in Microbiology, 5*(770). https://doi.org/10.3389/fmicb.2014.00770

Lee, D. J., Mai, J., & Huang, T. J. (2018). Microfluidic approaches for cell-based molecular diagnosis. Biomicrofluidics, 12(5), 051501. https://doi.org/10.1063/1.5030891

Lesiani, B. R., Abror, Y. K., Merdekawati, F., & Djuminar, A. (2023). Analysis of Purity and Concentration Escherichia coli DNA by Boiling Method Isolation with Addition of Proteinase-K and RNase. *Indonesian Journal of Medical Laboratory Science and Technology*, *5*(2), 160–171. https://doi.org/10.33086/ijmlst.v5i2.4773

Liu, Y., Cao, Y., Wang, T., Dong, Q., Li, J., & Niu, C. (2019). Detection of 12 Common Food-Borne Bacterial Pathogens by TaqMan Real-Time PCR Using a Single Set of Reaction Conditions. Frontiers in Microbiology, 10. https://doi.org/10.3389/fmicb.2019.00222

Liu, J., Yang, L., Kjellerup, B. V., & Xu, Z. (2023). Viable but nonculturable (VBNC) state, an underestimated and controversial microbial survival strategy. *Trends in Microbiology, 31*(10), 1013–1023. https://doi.org/10.1016/j.tim.2023.04.009

Loubamba, L., Diallo, A. A., Musabyemariya, B., Moyen, R., Sylla, K. S. B., & Alambédji, R. B. (2023). Virulence genes (stx1/stx2/aea) and O serogroups of Escherichia coli strains isolated from the

slaughtered cattle and ground meat sold in retail markets in Dakar, Senegal. *The Microbe*, *1*, 100024. https://doi.org/10.1016/j.microb.2023.100024

Ma, L., Ge, W., Sun, Y., Liu, Y., Xiong, D., Yuan, L., Yang, Z., & Jiao, X. (2026). Bacterial diversity and microbiological risk analysis for the ready-to-eat meat products in China. Food Science and Human Wellness, 15(5), 9250489. https://doi.org/10.26599/fshw.2025.9250489

Mather, A. E., Gilmour, M. W., Reid, S. W. J., & French, N. P. (2024). Foodborne bacterial pathogens: genome-based approaches for enduring and emerging threats in a complex and changing world. Nature Reviews Microbiology, 1–13. https://doi.org/10.1038/s41579-024-01051-z

Ma, Y., Chen, J., Fong, K., Nadya, S., Allen, K., Laing, C., Ziebell, K., Topp, E., Carroll, L. M., Wiedmann, M., Delaquis, P., & Wang, S. (2021). Antibiotic Resistance in Shiga Toxigenic Escherichia coli Isolates from Surface Waters and Sediments in a Mixed Use Urban Agricultural Landscape. *Antibiotics*, *10*(3), 237. https://doi.org/10.3390/antibiotics10030237

Mathew, F., & Goyal, A. (2024, August 11). Ethanol. PubMed; StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK556147/

Naveed, M., Sajjad, A., Ali, A., Chan, M. W. H., & Wang, F. (2025). Antibacterial and Antibiofilm Properties of Lysozyme Extracted from Catostylus perezi, an Invaluable Jellyfish Bloom. *The Microbe*, *7*, 100365. https://doi.org/10.1016/j.microb.2025.100365

Necidova, L., Bogdanovicova, K., Harustiakova, D., & Bartova, K. (2016). Short communication: Pasteurization as a means of inactivating staphylococcal enterotoxins A, B, and C in milk. *Journal of Dairy Science, 99*(11), 8638–8643. https://doi.org/10.3168/jds.2016-11252

Necidová, L., Bursová, Š., Haruštiaková, D., Bogdanovičová, K., & Lačanin, I. (2019). Effect of heat treatment on activity of staphylococcal enterotoxins of type A, B, and C in milk. *Journal of Dairy Science, 102*(5), 3924–3932. https://doi.org/10.3168/jds.2018-15255

Necidová, L., Bursová, Š., Haruštiaková, D., Bogdanovičová, K., & Lačanin, I. (2019). Effect of heat treatment on activity of staphylococcal enterotoxins of type A, B, and C in milk. *Journal of Dairy Science*, *102*(5), 3924–3932. https://doi.org/10.3168/jds.2018-15255

Nzelu, C. O., Kato, H., & Peters, N. C. (2019). Loop-mediated isothermal amplification (LAMP): An advanced molecular point-of-care technique for the detection of Leishmania infection. PLoS Neglected Tropical Diseases, 13(11). https://doi.org/10.1371/journal.pntd.0007698

Oliveira, B. B., Veigas, B., & Baptista, P. V. (2021). Isothermal Amplification of Nucleic Acids: The Race for the Next "Gold Standard." *Frontiers in Sensors, 2*. https://doi.org/10.3389/fsens.2021.752600

Onyeaka, H. N., & Nwabor, O. F. (2022). Microbial food contamination and foodborne diseases. *Elsevier EBooks*, 19–37. https://doi.org/10.1016/b978-0-323-85700-0.00002-2

Pérez-Boto, D., D'Arrigo, M., García-Lafuente, A., Bravo, D., Pérez-Baltar, A., Gaya, P., Medina, M., & Arqués, J. L. (2023). Staphylococcus aureus in the Processing Environment of Cured Meat Products. Foods, 12(11), 2161–2161. https://doi.org/10.3390/foods12112161

Phan, A., Mijar, S., Harvey, C., & Biswas, D. (2025). Staphylococcus aureus in Foodborne Diseases and Alternative Intervention Strategies to Overcome Antibiotic Resistance by Using Natural Antimicrobials. *Microorganisms, 13*(8), 1732–1732. https://doi.org/10.3390/microorganisms13081732

Ponti, G., Maccaferri, M., Manfredini, M., Kaleci, S., Mandrioli, M., Pellacani, G., Ozben, T., Depenni, R., Bianchi, G., Pirola, G. M., & Tomasi, A. (2018). The value of fluorimetry (Qubit) and spectrophotometry (NanoDrop) in the quantification of cell-free DNA (cfDNA) in malignant melanoma and prostate cancer patients. *Clinica Chimica Acta*, *479*, 14–19. https://doi.org/10.1016/j.cca.2018.01.007

Pushkaran, A. C., Nataraj, N., Nair, N., Götz, F., Biswas, R., & Mohan, C. G. (2015). Understanding the Structure–Function Relationship of Lysozyme Resistance inStaphylococcus aureusby Peptidoglycan O-Acetylation Using Molecular Docking, Dynamics, and Lysis Assay. *Journal of Chemical Information and Modeling*, *55*(4), 760–770. https://doi.org/10.1021/ci500734k

Putri, S. A. (2022). Administrative Enforcement of Food Safety Regulation in Indonesia: Loopholes and Recommendations. LAW REFORM, 18(2), 282–297. https://doi.org/10.14710/lr.v18i2.47415

Qin, J., Wilson, K. A., Sarkar, S., Heras, B., O'Mara, M. L., & Totsika, M. (2022). Conserved FimH mutations in the global Escherichia coli ST131 multi-drug resistant lineage weaken interdomain interactions and alter adhesin function. *Computational and Structural Biotechnology Journal*, *20*, 4532–4541. https://doi.org/10.1016/j.csbj.2022.08.040

Sahal, U. (2025). *MBG di Bogor Diduga Mengandung E. Coli dan Salmonella, Pakar UM Surabaya Ungkap Bahayanya Bagi Tubuh Manusia - Universitas Muhammadiyah Surabaya (UMSurabaya)*. UMSURA. https://www.um-surabaya.ac.id/article/mbg-di-bogor-diduga-mengandung-e-coli-dan-salmonella-pakar-um-surabaya-ungkap-bahayanya-bagi-tubuh-manusia

Sajali, N., Wong, S. C., Hanapi, U. K., Jamaluddin, S. A. B., Tasrip, N. A., & Desa, M. N. M. (2018). The Challenges of DNA Extraction in Different Assorted Food Matrices: a Review. Journal of Food Science, 83(10), 2409–2414. https://doi.org/10.1111/1750-3841.14338

Salvador, R. T., Vidlund, J., & Okafor, C. C. (2025). Evaluating milk quality indicators in the era of antimicrobial stewardship: A study of tennessee dairy farms (2011–2023). *PLOS One*, *20*(12), e0338386. https://doi.org/10.1371/journal.pone.0338386

Sanosi, M. O., Ali, Alhaj. S. M., Sabah, A., & Ragda, M. (2025). *Bacterial Contamination and Hygienic Practices of Red Meat in Retail Shops in Shendi City, Sudan*. https://doi.org/10.21203/rs.3.rs-7542113/v1

Schlundt, J. (2017). Food Safety. *International Encyclopedia of Public Health*, 153–159. https://doi.org/10.1016/b978-0-12-803678-5.00161-2

Strzelecki, P., Karczewska, M., Szalewska-Pałasz, A., & Nowicki, D. (2025). Phytochemicals Controlling Enterohemorrhagic Escherichia coli (EHEC) Virulence—Current Knowledge of Their Mechanisms of Action. *International Journal of Molecular Sciences*, *26*(1), 381. https://doi.org/10.3390/ijms26010381

Sutejo, S. V. H., Amarantini, C., & Budiarso, T. Y. (2017). Molecular detection of Staphylococcus aureus resistant to temperature in milk and its products. https://doi.org/10.1063/1.5012731

Tomat, D., Balagué, C., Casabonne, C., Verdini, R., & Quiberoni, A. (2016). Resistance of foodborne pathogen coliphages to additives applied in food manufacture. LWT - Food Science and Technology, 67, 50–54. https://doi.org/10.1016/j.lwt.2015.11.031

Tong, S. Y. C., Schaumburg, F., Ellington, M. J., Corander, J., Pichon, B., Leendertz, F., Bentley, S. D., Parkhill, J., Holt, D. C., Peters, G., & Giffard, P. M. (2015). Novel staphylococcal species that form part of a Staphylococcus aureus-related complex: the non-pigmented Staphylococcus argenteus sp. nov. and the non-human primate-associated Staphylococcus schweitzeri sp. nov. International Journal of Systematic and Evolutionary Microbiology, 65(Pt_1), 15–22. https://doi.org/10.1099/ijs.0.062752-0

Tran, K. Q., Pham, V. H., Vo, C. M., Pham, Q. M., & Nguyen, P. M. (2024). Comparison of Real-time Polymerase Chain Reaction and Culture for Targeting Pathogens in Pediatric Severe Community-Acquired Pneumonia. Turkish Archives of Pediatrics, 59(4), 383–389. https://doi.org/10.5152/turkarchpediatr.2024.24005

Valentino, M., Cahyadi, S. N., Andini, P., Ferdian, M., Widjaja, T., Fachrudin, B. R., Nabila, A. H., Wandira, S. P., Saputri, S. M., Azzahra, K. S., Kusumaningrum, A. A., Shabrina, C. L. N., & Nurjannah, R. P. (2023). Comparative test of effectiveness of alcohol mixture-based and chlorhexidine mixture-based hand-sanitizers on Escherichia coli and Shigella Sonnei. Journal of Research in Pharmacy and Pharmaceutical Sciences, 2(1), 17–28. https://doi.org/10.33533/jrpps.v2i1.7013

Warsewicz, H., Rejman, K., Laskowski, W., & Czeczotko, M. (2019). Milk and Dairy Products and Their Nutritional Contribution to the Average Polish Diet. Nutrients, 11(8), 1771. https://doi.org/10.3390/nu11081771

Werner, R. K. (2016). Escherichia coli O157:H7 (Enterohemorrhagic E. coli). *Ciottone's Disaster Medicine*, 746–749. https://doi.org/10.1016/b978-0-323-28665-7.00139-4

Wong, Y.-P. ., Othman, S., Lau, Y.-L. ., Radu, S., & Chee, H.-Y. . (2018). Loop-mediated isothermal amplification (LAMP): a versatile technique for detection of micro-organisms. *Journal of Applied Microbiology, 124*(3), 626–643. https://doi.org/10.1111/jam.13647

World Health Organization. (2024). Foodborne Diseases Estimates. Www.who.int. https://www.who.int/data/gho/data/themes/who-estimates-of-the-global-burden-of-foodborne-diseases

Yang, N., Zhang, H., Han, X., Liu, Z., & Lu, Y. (2024). Advancements and applications of loop-mediated isothermal amplification technology: a comprehensive overview. *Frontiers in Microbiology, 15*. https://doi.org/10.3389/fmicb.2024.1406632

Yang, X., Scheffler, B. E., & Weston, L. A. (2006). Recent developments in primer design for DNA polymorphism and mRNA profiling in higher plants. Plant Methods, 2(1), 4. https://doi.org/10.1186/1746-4811-2-4

Yang, Y., Yang, R., Luo, C., Wang, X., & Ma, F. (2026). Loop-Mediated Isothermal Amplification (LAMP): Current Progress and Future Directions in Rapid Nucleic Acid Detection. Sensors and Actuators Reports, 100440–100440. https://doi.org/10.1016/j.snr.2026.100440

Yuliza, M., Carolina, E., Lucia, V., Veiga, M., & Cirone, C. (2024). Staphylococcal Enterotoxins: Description and Importance in Food. *Pathogens, 13*(8), 676–676. https://doi.org/10.3390/pathogens13080676

Zeaki, N., Johler, S., Skandamis, P. N., & Schelin, J. (2019). The Role of Regulatory Mechanisms and Environmental Parameters in Staphylococcal Food Poisoning and Resulting Challenges to Risk Assessment. *Frontiers in Microbiology, 10*. https://doi.org/10.3389/fmicb.2019.01307