

DAFTAR PUSTAKA

- Aishwarya, S. S., Selvarajan, E., Iyappan, S., & Rajnish, K. N. (2019). Recombinant L-asparaginase II from *Lactobacillus casei* subsp. *casei* ATCC 393 and Its Anticancer Activity. *Indian Journal of Microbiology*, 59(3), 313–320. <https://doi.org/10.1007/s12088-019-00806-0>
- Allodji, R. S., Tucker, M. A., Hawkins, M. M., Le Deley, M., Veres, C., Weathers, R., Howell, R., Winter, D., Haddy, N., Rubino, C., Diallo, I., Little, M. P., Morton, L. M., & de Vathaire, F. (2021). Role of radiotherapy and chemotherapy in the risk of leukemia after childhood cancer: An international pooled analysis. *International Journal of Cancer*, 148(9), 2079–2089. <https://doi.org/10.1002/ijc.33361>
- Ameen, F., Alshehri, W. A., Al-Enazi, N. M., & Almansob, A. (2020). L-asparaginase activity analysis, *ansZ* gene identification and anticancer activity of a new *Bacillus subtilis* isolated from sponges of the Red Sea. *Bioscience, Biotechnology, and Biochemistry*, 84(12), 2576–2584. <https://doi.org/10.1080/09168451.2020.1807310>
- Artemyev, V., Gubaeva, A., Paremskaia, A. I., Dzhioeva, A. A., Deviatkin, A., Feoktistova, S. G., Mityaeva, O., & Volchkov, P. Y. (2024). Synthetic Promoters in Gene Therapy: Design Approaches, Features and Applications. In *Cells* (Vol. 13, Number 23). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/cells13231963>
- Bae, B., Feklistov, A., Lass-Napiorkowska, A., Landick, R., & Darst, S. A. (2015). Structure of a bacterial RNA polymerase holoenzyme open promoter complex. *ELife*, 4. <https://doi.org/10.7554/eLife.08504>
- Baral, A., Gorkhali, R., Basnet, A., Koirala, S., Hitesh, B. ;, Bhattarai, K., & Kumar Bhattarai, H. (n.d.). *Selection of the Optimal L-asparaginase II Against Acute Lymphoblastic Leukemia: An In Silico Approach*. <https://doi.org/10.1101/2020.10.13.337097v1>
- Baruchel, A., Bourquin, J.-P., Crispino, J., Cuartero, S., Hasle, H., Hitzler, J., Klusmann, J.-H., Izraeli, S., Lane, A. A., Malinge, S., Rabin, K. R., Roberts, I., Ryeom, S., Tasian, S. K., & Wagenblast, E. (2023). Down syndrome and leukemia: from basic mechanisms to clinical advances. *Haematologica*, 108(10), 2570–2581. <https://doi.org/10.3324/haematol.2023.283225>
- Bernaumat, F., Frelet-Barrand, A., Pochon, N., Dementin, S., Hivin, P., Boutigny, S., Rioux, J.-B., Salvi, D., Seigneurin-Berny, D., Richaud, P., Joyard, J., Pignol, D., Sabaty, M., Desnos, T., Pebay-Peyroula, E., Darrouzet, E., Vernet, T., & Rolland, N.

- (2011). Heterologous Expression of Membrane Proteins: Choosing the Appropriate Host. *PLoS ONE*, 6(12), e29191. <https://doi.org/10.1371/journal.pone.0029191>
- Chen, F., & Huang, G. (2019). Extraction, derivatization and antioxidant activity of bitter gourd polysaccharide. *International Journal of Biological Macromolecules*, 141, 14–20. <https://doi.org/10.1016/j.ijbiomac.2019.08.239>
- Chiu, M., Taurino, G., Bianchi, M. G., Kilberg, M. S., & Bussolati, O. (2020). Asparagine Synthetase in Cancer: Beyond Acute Lymphoblastic Leukemia. *Frontiers in Oncology*, 9. <https://doi.org/10.3389/fonc.2019.01480>
- Clark, D. P., Pazdernik, N. J., & McGehee, M. R. (2019). Manipulation of Nucleic Acids. In *Molecular Biology* (pp. 132–166). Elsevier. <https://doi.org/10.1016/B978-0-12-813288-3.00005-7>
- da Cunha, M. C., dos Santos Aguilar, J. G., de Melo, R. R., Nagamatsu, S. T., Ali, F., de Castro, R. J. S., & Sato, H. H. (2019). Fungal L-asparaginase: Strategies for production and food applications. *Food Research International*, 126, 108658. <https://doi.org/10.1016/j.foodres.2019.108658>
- Deal, C., De Wannemaeker, L., & De Mey, M. (2024). Towards a rational approach to promoter engineering: understanding the complexity of transcription initiation in prokaryotes. *FEMS Microbiology Reviews*, 48(2). <https://doi.org/10.1093/femsre/fuae004>
- Ding, F., Deng, L., Xiong, J., Cheng, Z., & Xu, J. (2025). Analysis of global trends in acute lymphoblastic leukemia in children aged 0–5 years from 1990 to 2021. *Frontiers in Pediatrics*, 13. <https://doi.org/10.3389/fped.2025.1542649>
- Egler, R. A., Ahuja, S. P., & Matloub, Y. (2016). L-asparaginase in the treatment of patients with acute lymphoblastic leukemia. *Journal of Pharmacology and Pharmacotherapeutics*, 7(2), 62–71. <https://doi.org/10.4103/0976-500X.184769>
- El-Nagga, N. E.-A., El-Ewasy, S. M., & El-Shweihy, N. M. (2014). Microbial L-asparaginase as a Potential Therapeutic Agent for the Treatment of Acute Lymphoblastic Leukemia: The Pros and Cons. *International Journal of Pharmacology*, 10(4), 182–199. <https://doi.org/10.3923/ijp.2014.182.199>
- Fatihah, R., Suliansyah, I., Tjong, D. H., Syukriani, L., Yunita, R., Trivano, R., Azizah, N., & Jamsari, J. (2021). Genome of *Serratia plymuthica* UBCF_13, Insight into diverse unique traits. *F1000Research*, 10, 826. <https://doi.org/10.12688/f1000research.54402.1>

- Firat Duzenli, O., & Okay, S. (2020). Promoter engineering for the recombinant protein production in prokaryotic systems. *AIMS Bioengineering*, 7(2), 62–81. <https://doi.org/10.3934/bioeng.2020007>
- Fisher, D. I., Mayr, L. M., & Roth, R. G. (2016). Expression Systems. In *Encyclopedia of Cell Biology* (pp. 54–65). Elsevier. <https://doi.org/10.1016/B978-0-12-394447-4.10009-4>
- Garniasih, D., Susanah, S., Sribudiani, Y., & Hilmanto, D. (2022). The incidence and mortality of childhood acute lymphoblastic leukemia in Indonesia: A systematic review and meta-analysis. *PLOS ONE*, 17(6), e0269706. <https://doi.org/10.1371/journal.pone.0269706>
- Ghasemi, M., Turnbull, T., Sebastian, S., & Kempson, I. (2021). The mtt assay: Utility, limitations, pitfalls, and interpretation in bulk and single-cell analysis. *International Journal of Molecular Sciences*, 22(23). <https://doi.org/10.3390/ijms222312827>
- Hunger, S. P., & Mullighan, C. G. (2015). Acute Lymphoblastic Leukemia in Children. *New England Journal of Medicine*, 373(16), 1541–1552. <https://doi.org/10.1056/NEJMra1400972>
- Iacobucci, I., & Mullighan, C. G. (2017). Genetic Basis of Acute Lymphoblastic Leukemia. *Journal of Clinical Oncology*, 35(9), 975–983. <https://doi.org/10.1200/JCO.2016.70.7836>
- İncir, İ., & Kaplan, Ö. (2024). Escherichia coli as a versatile cell factory: Advances and challenges in recombinant protein production. *Protein Expression and Purification*, 219, 106463. <https://doi.org/10.1016/j.pep.2024.106463>
- Juluri, K. R., Siu, C., & Cassaday, R. D. (2022). Asparaginase in the Treatment of Acute Lymphoblastic Leukemia in Adults: Current Evidence and Place in Therapy. *Blood and Lymphatic Cancer: Targets and Therapy*, Volume 12, 55–79. <https://doi.org/10.2147/BLCTT.S342052>
- Kwon, E., Devkota, S. R., Pathak, D., Dahal, P., & Kim, D. Y. (2019). Structural analysis of the recognition of the -35 promoter element by SigW from Bacillus subtilis. *PLOS ONE*, 14(8), e0221666. <https://doi.org/10.1371/journal.pone.0221666>
- Li, L., Li, H., Tian, Q., Ge, B., Xu, X., Chi, Y., Zhao, H., Liu, Y., Jia, N., Zhou, T., Zhu, Y., & Zhou, Y. (2022). Expression and purification of soluble recombinant β -lactamases using Escherichia coli as expression host and pET-28a as cloning vector. *Microbial Cell Factories*, 21(1), 244. <https://doi.org/10.1186/s12934-022-01972-5>
- Li, L., Liu, X., Wei, K., Lu, Y., & Jiang, W. (2019). Synthetic biology approaches for chromosomal integration of genes and pathways in industrial microbial systems.

- Lin, H., Zuo, Y., & Azhagiya Singam, E. R. (2023). Editorial: Computational analysis of promoters in prokaryotic genomes. *Frontiers in Microbiology*, 14. <https://doi.org/10.3389/fmicb.2023.1242139>
- Ma, L., Yu, H., Zhu, Y., Xu, K., Zhao, A., Ding, L., Gao, H., & Zhang, M. (2023). Isolation and proteomic profiling of urinary exosomes from patients with colorectal cancer. *Proteome Science*, 21(1). <https://doi.org/10.1186/s12953-023-00203-y>
- Ma, X., Ma, L., & Huo, Y.-X. (2020). Harnessing the hierarchy of transcriptional regulation: engineering of the gene expression network for efficient production. In *Systems and Synthetic Metabolic Engineering* (pp. 107–124). Elsevier. <https://doi.org/10.1016/B978-0-12-821753-5.00005-8>
- Mahajan, R. V., Saran, S., Kameswaran, K., Kumar, V., & Saxena, R. K. (2012). Efficient production of L-asparaginase from *Bacillus licheniformis* with low-glutaminase activity: Optimization, scale up and acrylamide degradation studies. *Bioresource Technology*, 125, 11–16. <https://doi.org/10.1016/j.biortech.2012.08.086>
- Malard, F., & Mohty, M. (2020). Acute lymphoblastic leukaemia. In *The Lancet* (Vol. 395, Number 10230, pp. 1146–1162). Lancet Publishing Group. [https://doi.org/10.1016/S0140-6736\(19\)33018-1](https://doi.org/10.1016/S0140-6736(19)33018-1)
- Mohseni, M., Uludag, H., & Brandwein, J. M. (2018). Advances in biology of acute lymphoblastic leukemia (ALL) and therapeutic implications. *American Journal of Blood Research*, 8(4), 29–56.
- Pagliaro, L., Chen, S.-J., Herranz, D., Mecucci, C., Harrison, C. J., Mullighan, C. G., Zhang, M., Chen, Z., Boissel, N., Winter, S. S., & Roti, G. (2024). Acute lymphoblastic leukaemia. *Nature Reviews Disease Primers*, 10(1), 41. <https://doi.org/10.1038/s41572-024-00525-x>
- Potapov, V., Ong, J. L., Kucera, R. B., Langhorst, B. W., Bilotti, K., Pryor, J. M., Cantor, E. J., Canton, B., Knight, T. F., Evans, T. C., & Lohman, G. J. S. (2018). Comprehensive Profiling of Four Base Overhang Ligation Fidelity by T4 DNA Ligase and Application to DNA Assembly. *ACS Synthetic Biology*, 7(11), 2665–2674. <https://doi.org/10.1021/acssynbio.8b00333>
- Pourhossein, M., & Korbekandi, H. (2014). Cloning, expression, purification and characterisation of *Erwinia carotovora* L-asparaginase in *Escherichia coli*. *Advanced Biomedical Research*, 3(1), 82. <https://doi.org/10.4103/2277-9175.127995>

- Prashar, A., Siddiqui, F., & Singh, A. K. (2012). Synthetic and green vegetable isothiocyanates target red blood leukemia cancers. In *Fitoterapia* (Vol. 83, Number 2, pp. 255–265). <https://doi.org/10.1016/j.fitote.2011.11.012>
- Puspitasari, O., & Wuryanti, W. (2010). Isolasi Enzim L-asparaginase dari Rimpang Temulawak (*Curcuma xanthorrhiza* Roxb.) dan Uji Potensi terhadap Kultur Sel Leukemia Tipe K562. *Jurnal Kimia Sains Dan Aplikasi*, 13(2), 61–65. <https://doi.org/10.14710/jksa.13.2.61-65>
- Rosano, G. L., & Ceccarelli, E. A. (2014). Recombinant protein expression in *Escherichia coli*: advances and challenges. *Frontiers in Microbiology*, 5. <https://doi.org/10.3389/fmicb.2014.00172>
- Ruff, E., Record, M., & Artsimovitch, I. (2015). Initial Events in Bacterial Transcription Initiation. *Biomolecules*, 5(2), 1035–1062. <https://doi.org/10.3390/biom5021035>
- Shafqat, I., Shahzad, S., Yasmin, A., Chaudhry, M. T., Ahmed, S., Javed, A., Afzal, I., & Bibi, M. (2023). Characterization and applications of glutaminase free L-asparaginase from indigenous *Bacillus halotolerans* ASN9. *PLOS ONE*, 18(11), e0288620. <https://doi.org/10.1371/journal.pone.0288620>
- Sharafi, Z., Barati, M., Khoshayand, M. R., & Adrangi, S. (2017). Screening for Type II L-asparaginases: Lessons from the Genus *Halomonas*. *Iranian Journal of Pharmaceutical Research : IJPR*, 16(4), 1565–1573.
- Tanabe, M., Ishino, Y., & Nishida, H. (2015). From Structure-Function Analyses to Protein Engineering for Practical Applications of DNA Ligase. *Archaea*, 2015, 1–20. <https://doi.org/10.1155/2015/267570>
- Tayara, H., Tahir, M., & Chong, K. T. (2020). Identification of prokaryotic promoters and their strength by integrating heterogeneous features. *Genomics*, 112(2), 1396–1403. <https://doi.org/10.1016/j.ygeno.2019.08.009>
- Terwilliger, T., & Abdul-Hay, M. (2017). Acute lymphoblastic leukemia: a comprehensive review and 2017 update. *Blood Cancer Journal*, 7(6), e577–e577. <https://doi.org/10.1038/bcj.2017.53>
- Tong, W. H., & Rizzari, C. (2023). Back to the future: the amazing journey of the therapeutic anti-leukemia enzyme asparaginase & Erwinia chrysanthemi. *Haematologica*, 108(10), 2606–2615. <https://doi.org/10.3324/haematol.2022.282324>
- Tripathi, N. K., & Shrivastava, A. (2019). Recent Developments in Bioprocessing of Recombinant Proteins: Expression Hosts and Process Development. *Frontiers in Bioengineering and Biotechnology*, 7. <https://doi.org/10.3389/fbioe.2019.00420>

- Tsegaye, K., Tsehai, B. A., & Getie, B. (2024). Desirable L-asparaginases for treating cancer and current research trends. *Frontiers in Microbiology*, 15. <https://doi.org/10.3389/fmicb.2024.1269282>
- Tüzmen, Ş., Baskın, Y., Feyda Nursal, A., Eraslan, S., Esemeyen, Y., Çalıbaşı, G., Banu Demir, A., Abbasoğlu, D., & Hızal, C. (2018). Techniques for Nucleic Acid Engineering. In *Omics Technologies and Bio-Engineering* (pp. 247–315). Elsevier. <https://doi.org/10.1016/B978-0-12-804659-3.00014-2>
- van den Boogaard, W. M. C., Komninos, D. S. J., & Vermeij, W. P. (2022). Chemotherapy Side-Effects: Not All DNA Damage Is Equal. *Cancers*, 14(3), 627. <https://doi.org/10.3390/cancers14030627>
- van der Sluis, I. M., Vrooman, L. M., Pieters, R., Baruchel, A., Escherich, G., Goulden, N., Mondelaers, V., de Toledo, J. S., Rizzari, C., Silverman, L. B., & Whitlock, J. A. (2016). Consensus expert recommendations for identification and management of asparaginase hypersensitivity and silent inactivation. *Haematologica*, 101(3), 279–285. <https://doi.org/10.3324/haematol.2015.137380>
- van Holde, K. E., & Zlatanova, J. (2018). Recombinant DNA: The Next Revolution. In *The Evolution of Molecular Biology* (pp. 149–163). Elsevier. <https://doi.org/10.1016/B978-0-12-812917-3.00014-0>
- Van Trimpt, M., Peeters, E., De Visser, Y., Schalk, A. M., Mondelaers, V., De Moerloose, B., Lavie, A., Lammens, T., Goossens, S., & Van Vlierberghe, P. (2022). Novel Insights on the Use of L-asparaginase as an Efficient and Safe Anti-Cancer Therapy. *Cancers*, 14(4), 902. <https://doi.org/10.3390/cancers14040902>
- Zerbini, F. M., Silva, F. N. da, Urquiza, G. P. C., & Basso, M. F. (2014). Transgenic Plants. In *Biotechnology and Plant Breeding* (pp. 179–199). Elsevier. <https://doi.org/10.1016/B978-0-12-418672-9.00008-8>

