

## DAFTAR PUSTAKA

- Adrian, Lubis, M. F., Syahputra, R. A., Astyka, R., Sumaiyah, S., Yudha Harahap, M. A., & Aini, Z. (2024). The Potential Effect of Aporphine Alkaloids From *Nelumbo Nucifera Gaertn.* As Anti-Breast Cancer Based On Network Pharmacology And Molecular Docking. *International Journal of Applied Pharmaceutics*, 280–287. <https://doi.org/10.22159/ijap.2024v16i1.49171>
- Afendi, F., Okada, T., Yamazaki, M., Hirai-Morita, A., Nakamura, Y., Nakamura, K., Ikeda, S., Takahashi, H., Amin, A., Darusman, L., Saito, K., & Kanaya, S. (2011). KNApSAC Family Databases: Integrated Metabolite-Plant Species Databases for Multifaceted Plant Research. *Plant & cell physiology*, 53, e1. <https://doi.org/10.1093/pcp/pcr165>
- Al Barashdi, M. A., Ali, A., McMullin, M. F., & Mills, K. (2021). Protein tyrosine phosphatase receptor type C (PTPRC or CD45). *Journal of Clinical Pathology*, 74(9), 548–552. <https://doi.org/10.1136/jclinpath-2020-206927>
- Alam, M. S., Sultana, A., Reza, M. S., Amanullah, M., Kabir, S. R., & Mollah, M. N. H. (2022). Integrated bioinformatics and statistical approaches to explore molecular biomarkers for breast cancer diagnosis, prognosis and therapies. *PLoS ONE*, 17(5 5). <https://doi.org/10.1371/journal.pone.0268967>
- Ali, Z., & Hermawan, A. (2022). Bioinformatics Analysis Uncovers the Importance of RTK-RAS-PI3K/Akt Regulation by Borneol in Overcoming Breast Cancer Resistance to Tamoxifen. *Indonesian Journal of Pharmacy*, 33(1). <https://doi.org/10.22146/ijp.2346>
- Allison, K. H. (2021). Prognostic and predictive parameters in breast pathology: a pathologist's primer. *Modern Pathology*, 34, 94–106. <https://doi.org/10.1038/s41379-020-00704-7>
- Al-Othman, N., Alhendi, A., Ishaisha, M., Barahmeh, M., Alqaraleh, M., & Al-Momany, B. Z. (2020). Role of CD44 in breast cancer. Dalam *Breast Disease* (Vol. 39, Nomor 1, hlm. 1–13). IOS Press. <https://doi.org/10.3233/BD-190409>
- Alshehri, F. F., & Alshehri, Z. S. (2023). Network pharmacology-based screening of active constituents of *Avicennia marina* and their clinical biochemistry related mechanism against breast cancer. *Journal of Biomolecular Structure and Dynamics*, 42(9), 4506–4521. <https://doi.org/10.1080/07391102.2023.2220801>
- Anaya, J. (2016). *OncoLnc: Linking TCGA survival data to mRNAs, miRNAs, and lncRNAs*. <https://doi.org/10.7287/PEERJ.PREPRINTS.1780>
- Anna, A., & Monika, G. (2018). Splicing mutations in human genetic disorders: examples, detection, and confirmation. Dalam *Journal of Applied Genetics* (Vol. 59, Nomor 3, hlm. 253–268). Springer Verlag. <https://doi.org/10.1007/s13353-018-0444-7>

- Arnold, M., Morgan, E., Rungay, H., Mafra, A., Singh, D., Laversanne, M., Vignat, J., Gralow, J. R., Cardoso, F., Siesling, S., & Soerjomataram, I. (2022). Current and future burden of breast cancer: Global statistics for 2020 and 2040. *Breast*, *66*, 15–23. <https://doi.org/10.1016/j.breast.2022.08.010>
- Athar, A., Füllgrabe, A., George, N., Iqbal, H., Huerta, L., Ali, A., Snow, C., Fonseca, N. A., Petryszak, R., Papatheodorou, I., Sarkans, U., & Brazma, A. (2019). ArrayExpress update – from bulk to single-cell expression data. *Nucleic Acids Research*, *47*(D1), D711–D715. <https://doi.org/10.1093/nar/gky964>
- Avtanski, D. B., Nagalingam, A., Bonner, M. Y., Arbiser, J. L., Saxena, N. K., & Sharma, D. (2014). Honokiol inhibits epithelial-mesenchymal transition in breast cancer cells by targeting signal transducer and activator of transcription 3/Zeb1/E-cadherin axis. *Molecular Oncology*, *8*(3), 565–580. <https://doi.org/10.1016/j.molonc.2014.01.004>
- Azzahra, S. N. A., Hanif, N., & Hermawan, A. (2022). MDM2 is a Potential Target Gene of Glycyrrhizic Acid for Circumventing Breast Cancer Resistance to Tamoxifen: Integrative Bioinformatics Analysis. *Asian Pacific Journal of Cancer Prevention*, *23*(7), 2341–2350. <https://doi.org/10.31557/APJCP.2022.23.7.2341>
- Bacanli, M., Anlar, H. G., Başaran, A. A., & Başaran, N. (2017). Fenoliklerin sitotoksikite profillerinin değerlendirilmesi: Farklı hücrelerde farklı zaman aralıklarında nötral kırmızı ve MTT Yöntemlerinin karşılaştırılması. *Turkish Journal of Pharmaceutical Sciences*, *14*(2), 95–107. <https://doi.org/10.4274/tjps.07078>
- Baeissa, H. M., & Pearl, F. M. G. (2019). Identifying the Impact of Inframe Insertions and Deletions on Protein Function in Cancer. *Journal of Computational Biology*, *27*(5), 786–795. <https://doi.org/10.1089/cmb.2018.0192>
- Banik, K., Ranaware, A. M., Deshpande, V., Nalawade, S. P., Padmavathi, G., Bordoloi, D., Sailo, B. L., Shanmugam, M. K., Fan, L., Arfuso, F., Sethi, G., & Kunnumakkara, A. B. (2019). Honokiol for cancer therapeutics: A traditional medicine that can modulate multiple oncogenic targets. *Pharmacological Research*, *144*, 192–209. <https://doi.org/https://doi.org/10.1016/j.phrs.2019.04.004>
- Barnaba, N., & LaRocque, J. R. (2021). Targeting cell cycle regulation via the G2-M checkpoint for synthetic lethality in melanoma. *Cell Cycle*, *20*(11), 1041–1051. <https://doi.org/10.1080/15384101.2021.1922806>
- Basar, Md. A., Hosen, Md. F., Kumar Paul, B., Hasan, Md. R., Shamim, S. M., & Bhuyian, T. (2023). Identification of drug and protein-protein interaction network among stress and depression: A bioinformatics approach. *Informatics in Medicine Unlocked*, *37*, 101174. <https://doi.org/https://doi.org/10.1016/j.imu.2023.101174>

- Basavarajappa, G. M., Rehman, A., Shiroorkar, P. N., Sreeharsha, N., Anwer, Md. K., & Aloufi, B. (2023). Therapeutic effects of *Crataegus monogyna* inhibitors against breast cancer. *Frontiers in Pharmacology*, 14. <https://doi.org/10.3389/fphar.2023.1187079>
- Bento, A. P., Gaulton, A., Hersey, A., Bellis, L. J., Chambers, J., Davies, M., Krüger, F. A., Light, Y., Mak, L., McGlinchey, S., Nowotka, M., Papadatos, G., Santos, R., & Overington, J. P. (2014). The ChEMBL bioactivity database: an update. *Nucleic Acids Research*, 42(D1), D1083–D1090. <https://doi.org/10.1093/nar/gkt1031>
- Bertoli, C., Skotheim, J. M., & De Bruin, R. A. M. (2013). Control of cell cycle transcription during G1 and S phases. Dalam *Nature Reviews Molecular Cell Biology* (Vol. 14, Nomor 8, hlm. 518–528). <https://doi.org/10.1038/nrm3629>
- Bindea, G., Galon, J., & Mlecnik, B. (2013). CluePedia Cytoscape plugin: Pathway insights using integrated experimental and in silico data. *Bioinformatics*, 29(5), 661–663. <https://doi.org/10.1093/bioinformatics/btt019>
- Bindea, G., Mlecnik, B., Hackl, H., Charoentong, P., Tosolini, M., Kirilovsky, A., Fridman, W.-H., Pagès, F., Trajanoski, Z., & Galon, J. (2009). ClueGO: a Cytoscape plug-in to decipher functionally grouped gene ontology and pathway annotation networks. *Bioinformatics*, 25(8), 1091–1093. <https://doi.org/10.1093/bioinformatics/btp101>
- Borunda E.O, Patricia A.N, Lucero E..A, Francisco O.G.V, & Claudia A.R.V. (2022). *Breast Cancer*. Exon Publications.
- Bray, F., Laversanne, M., Sung, H., Ferlay, J., Siegel, R. L., Soerjomataram, I., & Jemal, A. (2021). Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA: A Cancer Journal for Clinicians*, 71(3), 209–249. <https://doi.org/10.3322/caac.21660>
- Brown, P. H., Subbaramaiah, K., Salmon, A. P., Baker, R., Newman, R. A., Yang, P., Zhou, X. K., Bissonnette, R. P., Dannenberg, A. J., & Howe, L. R. (2008). Combination chemoprevention of HER2/neu-induced breast cancer using a cyclooxygenase-2 inhibitor and a retinoid X receptor-selective retinoid. *Cancer Prevention Research*, 1(3), 208–214. <https://doi.org/10.1158/1940-6207.CAPR-08-0021>
- Busch, E. L., Hornick, J. L., Umeton, R., Albayrak, A., Lindeman, N. I., Macconail, L. E., Garcia, E. P., Ducar, M., & Rebbeck, T. R. (2017). Oncotarget 85680 [www.impactjournals.com/oncotarget](http://www.impactjournals.com/oncotarget) Somatic mutations in CDH1 and CTNNB1 in primary carcinomas at 13 anatomic sites. Dalam *Oncotarget* (Vol. 8, Nomor 49). [www.impactjournals.com/oncotarget/](http://www.impactjournals.com/oncotarget/)
- Canfield, K., Li, J., Wilkins, O. M., Morrison, M. M., Ung, M., Wells, W., Williams, C. R., Liby, K. T., Vullhorst, D., Buonanno, A., Hu, H., Schiff, R., Cook, R. S., & Kurokawa, M. (2015). Receptor tyrosine kinase ERBB4

- mediates acquired resistance to ERBB2 inhibitors in breast cancer cells. *Cell Cycle*, 14(4), 648–655. <https://doi.org/10.4161/15384101.2014.994966>
- Cerami, E., Gao, J., Dogrusoz, U., Gross, B. E., Sumer, S. O., Aksoy, B. A., Jacobsen, A., Byrne, C. J., Heuer, M. L., Larsson, E., Antipin, Y., Reva, B., Goldberg, A. P., Sander, C., & Schultz, N. (2012). The cBio Cancer Genomics Portal: An open platform for exploring multidimensional cancer genomics data. *Cancer Discovery*, 2(5), 401–404. <https://doi.org/10.1158/2159-8290.CD-12-0095>
- Chandrashekar, D. S., Bashel, B., Balasubramanya, S. A. H., Creighton, C. J., Ponce-Rodriguez, I., Chakravarthi, B. V. S. K., & Varambally, S. (2017). UALCAN: A Portal for Facilitating Tumor Subgroup Gene Expression and Survival Analyses. *Neoplasia*, 19(8), 649–658. <https://doi.org/https://doi.org/10.1016/j.neo.2017.05.002>
- Chen, G. (2023). Molecular basis of breast cancer with comorbid depression and the mechanistic insights of Xiaoyaosan in treating breast cancer-associated depression. *Medicine (United States)*, 102(38), E35157. <https://doi.org/10.1097/MD.00000000000035157>
- Chen, L., Ren, L. Q., Liu, Z., Liu, X., Tu, H., & Huang, X. Y. (2021). Bio-informatics and in Vitro Experiments Reveal the Mechanism of Schisandrin A Against MDA-MB-231 cells. *Bioengineered*, 12(1), 7678–7693. <https://doi.org/10.1080/21655979.2021.1982307>
- Chen, L., Yang, A., Li, Y., Liu, X., Jiang, W., & Hu, K. (2023). Molecular mechanism of oroxyli semen against triple-negative breast cancer verified by bioinformatics and in vitro experiments. *Medicine (United States)*, 102(37), E34835. <https://doi.org/10.1097/MD.00000000000034835>
- Chen, R., Ma, S., Qiao, H., Su, F., Wang, L., & Guan, Q. L. (2022). Identification of target genes and prognostic evaluation for colorectal cancer using integrated bioinformatics analysis. *All Life*, 15(1), 160–173. <https://doi.org/10.1080/26895293.2022.2026825>
- Chen, X., Ji, Z. L., & Chen, Y. Z. (2002). TTD: Therapeutic Target Database. *Nucleic Acids Research*, 30(1), 412–415. <https://doi.org/10.1093/nar/30.1.412>
- Chen, Y., Tan, Z., Hu, B., Yang, Z., Xu, B., Zhuang, L., & Huang, B. (2015). Selection and validation of reference genes for target gene analysis with quantitative RT-PCR in leaves and roots of bermudagrass under four different abiotic stresses. *Physiologia plantarum*, 155(2), 138–148.
- Chen, Z., Lu, P., Li, M., Zhang, Q., He, T., & Gan, L. (2024). Curcumin suppresses metastasis of triple-negative breast cancer cells by modulating EMT signaling pathways: An integrated study of bioinformatics analysis. *Medicine*, 103, e37264. <https://doi.org/10.1097/MD.00000000000037264>

- Chou, C.-W., Huang, Y.-M., Chang, Y.-J., Huang, C.-Y., & Hung, C.-S. (2021). Identified the novel resistant biomarkers for taxane-based therapy for triple-negative breast cancer. *International Journal of Medical Sciences*, 18(12), 2521–2531. <https://doi.org/10.7150/ijms.59177>
- Chu I, Blackwell K, Chen S, & Slingerland J. (2005). The dual ErbB1/ ErbB2 inhibitor, lapatinib (GW572016), cooperates with tamoxifen to inhibit both cell proliferation- and estrogen dependent gene expression in antiestrogen-resistant breast cancer . *Cancer Res*, 65, 18–25.
- Ciebiera, M., Ali, M., Yang, Q., Arbiser, J. L., & Al-Hendy, A. (2020). ACTIVATION OF SIRTUIN 3 BY NATURAL COMPOUND HONOKIOL INHIBITS HUMAN UTERINE FIBROID PHENOTYPE. *Fertility and Sterility*, 114(3), e234–e235. <https://doi.org/10.1016/j.fertnstert.2020.08.657>
- Clough, E., Barrett, T., Wilhite, S. E., Ledoux, P., Evangelista, C., Kim, I. F., Tomashevsky, M., Marshall, K. A., Phillippy, K. H., Sherman, P. M., Lee, H., Zhang, N., Serova, N., Wagner, L., Zalunin, V., Kochergin, A., & Soboleva, A. (2024). NCBI GEO: archive for gene expression and epigenomics data sets: 23-year update. *Nucleic Acids Research*, 52(D1), D138–D144. <https://doi.org/10.1093/nar/gkad965>
- Coker, E., Mitsopoulos, C., Tym, J., Komianou, A., Kannas, C., Di Micco, P., Fernandez, E., Ozer, B., Antolin, A., Workman, P., & Al-Lazikani, B. (2018). canSAR: update to the cancer translational research and drug discovery knowledgebase. *Nucleic acids research*, 47. <https://doi.org/10.1093/nar/gky1129>
- Consortium, G. O. (2004). The Gene Ontology (GO) database and informatics resource. *Nucleic Acids Research*, 32(suppl\_1), D258–D261. <https://doi.org/10.1093/nar/gkh036>
- Consortium, T. U. (2024). UniProt: the Universal Protein Knowledgebase in 2025. *Nucleic Acids Research*, gkae1010. <https://doi.org/10.1093/nar/gkae1010>
- Contreras-Puentes, N., Alviz-Amador, A., Zabaleta -Guzman, J., Pineda Aleman, R., & Tarón Dunoyer, A. (2024). Identification of Genes Hub Associated with Triple-Negative Breast Cancer and Cannabidiol Analogs Potential Inhibitory Agents: An In-silico Study. *Asian Pacific Journal of Cancer Prevention*, 25(5), 1649–1661. <https://doi.org/10.31557/apjcp.2024.25.5.1649>
- Crowley, L. C., Scott, A. P., Marfell, B. J., Boughaba, J. A., Chojnowski, G., & Waterhouse, N. J. (2016). Measuring Cell Death by Propidium Iodide Uptake and Flow Cytometry. *Cold Spring Harbor protocols*, 7.
- Daina, A., Michielin, O., & Zoete, V. (2017). SwissADME: A free web tool to evaluate pharmacokinetics, drug-likeness and medicinal chemistry friendliness of small molecules. *Scientific Reports*, 7, 42717. <https://doi.org/10.1038/srep42717>

- Daina, A., Michielin, O., & Zoete, V. (2019a). SwissTargetPrediction: updated data and new features for efficient prediction of protein targets of small molecules. *Nucleic Acids Research*, 47(W1), W357–W3664. <https://doi.org/10.1093/nar/gkz382>
- Daina, A., Michielin, O., & Zoete, V. (2019b). SwissTargetPrediction: updated data and new features for efficient prediction of protein targets of small molecules. *Nucleic Acids Research*, 47(W1), W357–W3664. <https://doi.org/10.1093/nar/gkz382>
- Davis, A. P., Grondin, C. J., Johnson, R. J., Sciaky, D., King, B. L., McMorran, R., Wieggers, J., Wieggers, T. C., & Mattingly, C. J. (2017). The Comparative Toxicogenomics Database: Update 2017. *Nucleic Acids Research*, 45(D1), D972–D978. <https://doi.org/10.1093/nar/gkw838>
- De Matteis, A., Nuzzo, F., D’Aiuto, G., Labonia, V., Landi, G., Rossi, E., Mastro, A. A., Botti, G., De Maio, E., & Perrone, F. (2002). Docetaxel plus epidoxorubicin as neoadjuvant treatment in patients with large operable or locally advanced carcinoma of the breast: A single-center, phase II study. *Cancer*, 94(4), 895–901. <https://doi.org/10.1002/cncr.20335>
- Diessner, J., Bruttel, V., Becker, K., Pawlik, M., Stein, R., Häusler, S., Dietl, J., Wischhusen, J., & Hönig, A. (2013). Targeting breast cancer stem cells with HER2-specific antibodies and natural killer cells. Dalam *Am J Cancer Res* (Vol. 3, Nomor 2). [www.ajcr.us/](http://www.ajcr.us/)
- Ding, L., Cao, J., Lin, W., Chen, H., Xiong, X., Ao, H., Yu, M., Lin, J., & Cui, Q. (2020). The roles of cyclin-dependent kinases in cell-cycle progression and therapeutic strategies in human breast cancer. Dalam *International Journal of Molecular Sciences* (Vol. 21, Nomor 6). MDPI AG. <https://doi.org/10.3390/ijms21061960>
- Doncheva, N. T., Morris, J. H., Holze, H., Kirsch, R., Nastou, K. C., Cuesta-Astroz, Y., Rattei, T., Szklarczyk, D., von Mering, C., & Jensen, L. J. (2023). Cytoscape stringApp 2.0: Analysis and Visualization of Heterogeneous Biological Networks. *Journal of Proteome Research*, 22(2), 637–646. <https://doi.org/10.1021/acs.jproteome.2c00651>
- Donehower, L. A., Soussi, T., Korkut, A., Liu, Y., Schultz, A., Cardenas, M., Li, X., Babur, O., Hsu, T. K., Lichtarge, O., Weinstein, J. N., Akbani, R., & Wheeler, D. A. (2019). Integrated Analysis of TP53 Gene and Pathway Alterations in The Cancer Genome Atlas. *Cell Reports*, 28(5), 1370–1384.e5. <https://doi.org/10.1016/j.celrep.2019.07.001>
- Dong, C., Wu, J., Chen, Y., Nie, J., & Chen, C. (2021). Activation of PI3K/AKT/mTOR Pathway Causes Drug Resistance in Breast Cancer. Dalam *Frontiers in Pharmacology* (Vol. 12). Frontiers Media S.A. <https://doi.org/10.3389/fphar.2021.628690>

- Dunkel, M., Günther, S., Ahmed, J., Wittig, B., & Preissner, R. (2008). SuperPred: drug classification and target prediction. *Nucleic acids research*, *36*, W55-9. <https://doi.org/10.1093/nar/gkn307>
- Eichhorn, P. J. A., Gili, M., Scaltriti, M., Serra, V., Guzman, M., Nijkamp, W., Beijersbergen, R. L., Valero, V., Seoane, J., Bernards, R., & Baselga, J. (2008). Phosphatidylinositol 3-kinase hyperactivation results in lapatinib resistance that is reversed by the mTOR/phosphatidylinositol 3-kinase inhibitor NVP-BEZ235. *Cancer Research*, *68*(22), 9221–9230. <https://doi.org/10.1158/0008-5472.CAN-08-1740>
- Endah, E., Wulandari, F., Putri, Y., Jenie, R. I., & Meiyanto, E. (2022). Piperine Increases Pentagamavunon-1 Anti-cancer Activity on 4T1 Breast Cancer Through Mitotic Catastrophe Mechanism and Senescence with Sharing Targeting on Mitotic Regulatory Proteins. *Iranian Journal of Pharmaceutical Research*, *21*(1). <https://doi.org/10.5812/ijpr.123820>
- Espe, S. (2018). MalaCards: The Human Disease Database. *Journal of the Medical Library Association*, *106*. <https://doi.org/10.5195/JMLA.2018.253>
- Eustace, A. J., Conlon, N. T., McDermott, M. S. J., Browne, B. C., O’Leary, P., Holmes, F. A., Espina, V., Liotta, L. A., O’Shaughnessy, J., Gallagher, C., O’Driscoll, L., Rani, S., Madden, S. F., O’Brien, N. A., Ginther, C., Slamon, D., Walsh, N., Gallagher, W. M., Zagozdzon, R., ... Crown, J. (2018). Development of acquired resistance to lapatinib may sensitise HER2-positive breast cancer cells to apoptosis induction by obatoclox and TRAIL. *BMC Cancer*, *18*(1). <https://doi.org/10.1186/s12885-018-4852-1>
- Feng, J., Ren, X., Fu, H., Li, D., Chen, X., Zu, X., Liu, Q., & Wu, M. (2021). LRRC4 mediates the formation of circular RNA CD44 to inhibit GBM cell proliferation. *Molecular Therapy Nucleic Acids*, *26*, 473–487. <https://doi.org/10.1016/j.omtn.2021.08.026>
- Fidler-Benaoudia, M. M., Heer, E., Harper, A., Escandor, N., Sung, H., & McCormack, V. (2020). Global burden and trends in premenopausal and postmenopausal breast cancer: a population-based study. Dalam *Articles Lancet Glob Health* (Vol. 8). [www.thelancet.com/lancetgh](http://www.thelancet.com/lancetgh)
- Formisano, L., Nappi, L., Rosa, R., Marciano, R., D’Amato, C., D’Amato, V., Damiano, V., Raimondo, L., Iommelli, F., Scorziello, A., Troncone, G., Veneziani, B. M., Parsons, S. J., De Placido, S., & Bianco, R. (2014). Epidermal growth factor-receptor activation modulates Src-dependent resistance to lapatinib in breast cancer models. *Breast Cancer Research*, *16*(3). <https://doi.org/10.1186/bcr3650>
- Freeberg, M. A., Fromont, L. A., D’Altri, T., Romero, A. F., Ciges, J. I., Jene, A., Kerry, G., Moldes, M., Ariosa, R., Bahena, S., Barrowdale, D., Barbero, M. C., Fernandez-Orth, D., Garcia-Linares, C., Garcia-Rios, E., Haziza, F.,

- Juhasz, B., Llobet, O. M., Milla, G., ... Rambla, J. (2022). The European Genome-phenome Archive in 2021. *Nucleic Acids Research*, 50(D1), D980–D987. <https://doi.org/10.1093/nar/gkab1059>
- Fujimoto, Y., Morita, T. Y., Ohashi, A., Haeno, H., Hakozaiki, Y., Fujii, M., Kashima, Y., Kobayashi, S. S., & Mukohara, T. (2020). Combination treatment with a PI3K/Akt/mTOR pathway inhibitor overcomes resistance to anti-HER2 therapy in PIK3CA-mutant HER2-positive breast cancer cells. *Scientific Reports*, 10(1). <https://doi.org/10.1038/s41598-020-78646-y>
- Gao, K., Liu, L., Lei, S., Li, Z., Huo, P., Wang, Z., Dong, L., Deng, W., Bu, D., Zeng, X., Li, C., Zhao, Y., Zhang, W., Wang, W., & Wu, Y. (2024). HERB 2.0: an updated database integrating clinical and experimental evidence for traditional Chinese medicine. *Nucleic Acids Research*, gkae1037. <https://doi.org/10.1093/nar/gkae1037>
- Ge, X., Jung, D., & Yao, R. (2019). ShinyGO: a graphical enrichment tool for animals and plants. *Bioinformatics (Oxford, England)*, 36. <https://doi.org/10.1093/bioinformatics/btz931>
- Ge, X., Zhang, D., Song, S., Mi, Y., Shen, Y., Jiang, Q., Liang, Y., Wang, J., & Ye, Q. (2022). USP18 reduces paclitaxol sensitivity of triple-negative breast cancer via autophagy. *Biochemical and Biophysical Research Communications*, 599, 120–126. <https://doi.org/https://doi.org/10.1016/j.bbrc.2022.02.048>
- Ghandi, M., Huang, F. W., Jané-Valbuena, J., Kryukov, G. V., Lo, C. C., McDonald, E. R., Barretina, J., Gelfand, E. T., Bielski, C. M., Li, H., Hu, K., Andreev-Drakhlin, A. Y., Kim, J., Hess, J. M., Haas, B. J., Aguet, F., Weir, B. A., Rothberg, M. V., Paolella, B. R., ... Sellers, W. R. (2019). Next-generation characterization of the Cancer Cell Line Encyclopedia. *Nature*, 569(7757), 503–508. <https://doi.org/10.1038/s41586-019-1186-3>
- 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>
- Goldman, M. J., Craft, B., Hastie, M., Repečka, K., McDade, F., Kamath, A., Banerjee, A., Luo, Y., Rogers, D., Brooks, A. N., Zhu, J., & Haussler, D. (2020). Visualizing and interpreting cancer genomics data via the Xena platform. Dalam *Nature Biotechnology* (Vol. 38, Nomor 6, hlm. 675–678). Nature Research. <https://doi.org/10.1038/s41587-020-0546-8>
- Gong, J., Cai, C., Liu, X., Ku, X., Jiang, H., Gao, D., & Li, H. (2013). ChemMapper: a versatile web server for exploring pharmacology and chemical structure association based on molecular 3D similarity method. *Bioinformatics*, 29(14), 1827–1829. <https://doi.org/10.1093/bioinformatics/btt270>

- Gross, S. M., Mohammadi, F., Sanchez-Aguila, C., Zhan, P. J., Liby, T. A., Dane, M. A., Meyer, A. S., & Heiser, L. M. (2023). Analysis and modeling of cancer drug responses using cell cycle phase-specific rate effects. *Nature Communications*, *14*(1). <https://doi.org/10.1038/s41467-023-39122-z>
- Hamosh, A., Scott, A. F., Amberger, J. S., Bocchini, C. A., & McKusick, V. A. (2005). Online Mendelian Inheritance in Man (OMIM), a knowledgebase of human genes and genetic disorders. *Nucleic Acids Research*, *33*(DATABASE ISS.). <https://doi.org/10.1093/nar/gki033>
- Han, H., Qian, C., Zong, G., Liu, H., Wang, F., Tao, R., Cheng, P., Wei, Z., Zhao, Y., & Lu, Y. (2022). Systemic pharmacological verification of *Salvia miltiorrhiza*-Ginseng Chinese herb pair in inhibiting spontaneous breast cancer metastasis. *Biomedicine & Pharmacotherapy*, *156*, 113897. <https://doi.org/10.1016/j.biopha.2022.113897>
- Hasan, M., Kumar, N., Majeed, A., Ahmad, A., & Mukhtar, S. (2023). Protein-Protein Interaction Network Analysis Using NetworkX. Dalam S. Mukhtar (Ed.), *Protein-Protein Interactions: Methods and Protocols* (hlm. 457–467). Springer US. [https://doi.org/10.1007/978-1-0716-3327-4\\_35](https://doi.org/10.1007/978-1-0716-3327-4_35)
- Heberle, H., Meirelles, V. G., da Silva, F. R., Telles, G. P., & Minghim, R. (2015). InteractiVenn: A web-based tool for the analysis of sets through Venn diagrams. *BMC Bioinformatics*, *16*(1). <https://doi.org/10.1186/s12859-015-0611-3>
- Hermansyah, D., Putra, A., Munir, D., Lelo, A., Amalina, N. D., & Alif, I. (2021). Synergistic Effect of *Curcuma longa* Extract in Combination with *Phyllanthus niruri* Extract in Regulating Annexin A2, Epidermal Growth Factor Receptor, Matrix Metalloproteinases, and Pyruvate Kinase M1/2 Signaling Pathway on Breast Cancer Stem Cell. *Open Access Macedonian Journal of Medical Sciences*, *9*(A), 271–285. <https://doi.org/10.3889/oamjms.2021.5941>
- Hermawan, A., Ikawati, M., Jenie, R. I., Khumaira, A., Putri, H., Nurhayati, I. P., Angraini, S. M., & Muflikhasari, H. A. (2021). Identification of potential therapeutic target of naringenin in breast cancer stem cells inhibition by bioinformatics and in vitro studies. *Saudi Pharmaceutical Journal*, *29*(1), 12–26. <https://doi.org/10.1016/j.jsps.2020.12.002>
- Hermawan, A., Ikawati, M., Khumaira, A., Putri, H., Jenie, R. I., Angraini, S. M., & Muflikhasari, H. A. (2021). Bioinformatics and in vitro studies reveal the importance of p53, PPAR $\gamma$  and notch signaling pathway in inhibition of breast cancer stem cells by hesperetin. *Advanced Pharmaceutical Bulletin*, *11*(2), 351–360. <https://doi.org/10.34172/apb.2021.033>
- Hermawan, A., Ikawati, M., Putri, D. D. P., Fatimah, N., & Prasetio, H. H. (2024). Nobiletin Inhibits Breast Cancer Stem Cell by Regulating the Cell Cycle: A Comprehensive Bioinformatics Analysis and *In*

- Vitro* Experiments. *Nutrition and Cancer*, 76(7), 638–655.  
<https://doi.org/10.1080/01635581.2024.2348217>
- Hermawan, A., Khumaira, A., Ikawati, M., Putri, H., Jenie, R. I., Angraini, S. M., & Muflikhasari, H. A. (2021). Identification of key genes of hesperidin in inhibition of breast cancer stem cells by functional network analysis. *Computational Biology and Chemistry*, 90, 107427.  
<https://doi.org/https://doi.org/10.1016/j.compbiolchem.2020.107427>
- Hermawan, A., & Putri, H. (2019). Targets and molecular mechanisms of a citrus flavonoid, hesperidin, against luminal breast cancer cells: an integrative bioinformatics analysis. *Asian Pacific Journal of Tropical Biomedicine*, 9(12), 531. <https://doi.org/10.4103/2221-1691.271727>
- Hermawan, A., & Putri, H. (2020a). Identification of potential gene associated with berberine in overcoming tamoxifen resistance by functional network analysis. *Journal of Applied Pharmaceutical Science*, 10(7), 9–18.  
<https://doi.org/10.7324/JAPS.2020.10702>
- Hermawan, A., & Putri, H. (2020b). Integrative Bioinformatics Analysis Reveals Potential Target Genes and TNF $\alpha$  Signaling Inhibition by Brazilin in Metastatic Breast Cancer Cells. *Asian Pacific Journal of Cancer Prevention*, 21(9), 2751–2762. <https://doi.org/10.31557/apjcp.2020.21.9.2751>
- Hermawan, A., & Putri, H. (2021). Integrative Bioinformatics Analysis Reveals Possible Target and Mechanism of Ellipticine Against Breast Cancer Stem Cells. *Indonesian Journal of Pharmacy*. <https://doi.org/10.22146/ijp.1126>
- Hermawan, A., Putri, H., Hanif, N., Fatimah, N., & Prasetyo, H. H. (2022). Identification of potential target genes of honokiol in overcoming breast cancer resistance to tamoxifen. *Frontiers in Oncology*, 12. <https://doi.org/10.3389/fonc.2022.1019025>
- Hermawan, A., Putri, H., Hanif, N., & Ikawati, M. (2021). Integrative Bioinformatics Study of Tangeretin Potential Targets for Preventing Metastatic Breast Cancer. *Evidence-Based Complementary and Alternative Medicine*, 2021, 1–15. <https://doi.org/10.1155/2021/2234554>
- Hermawan, A., Putri, H., & Ikawati, M. (2020). Bioinformatic analysis reveals the molecular targets of tangeretin in overcoming the resistance of breast cancer to tamoxifen. *Gene Reports*, 21, 100884. <https://doi.org/https://doi.org/10.1016/j.genrep.2020.100884>
- Hermawan, A., Putri, H., & Utomo, R. (2021). Exploration of targets and molecular mechanisms of cinnamaldehyde in overcoming fulvestrant-resistant breast cancer: a bioinformatics study. *Network Modeling Analysis in Health Informatics and Bioinformatics*, 10. <https://doi.org/10.1007/s13721-021-00303-9>

- Hermawan, A., Putri, H., & Utomo, R. Y. (2020). Comprehensive bioinformatics study reveals targets and molecular mechanism of hesperetin in overcoming breast cancer chemoresistance. *Molecular Diversity*, 24(4), 933–947. <https://doi.org/10.1007/s11030-019-10003-2>
- Hermawan, A., Satria, D., Hasibuan, P. A. Z., Huda, F., Tafrihan, A. S., Fatimah, N., & Putri, D. D. P. (2024). Identification of potential target genes of cardiac glycosides from *Vernonia amygdalina* Delile in HER2+ breast cancer cells. *South African Journal of Botany*, 164, 401–418. <https://doi.org/10.1016/j.sajb.2023.12.002>
- Hermawan, A., Windarsih, A., Putri, D. D. P., & Fatimah, N. (2025a). LC-HRMS-based global metabolomics profiling unravels the distinct metabolic signature of lapatinib-resistant and trastuzumab-resistant HER2+ breast cancer cells. *Journal of Pharmaceutical and Biomedical Analysis*, 253, 116528. <https://doi.org/https://doi.org/10.1016/j.jpba.2024.116528>
- Hermawan, A., Windarsih, A., Putri, D. D. P., & Fatimah, N. (2025b). LC-HRMS-based global metabolomics profiling unravels the distinct metabolic signature of lapatinib-resistant and trastuzumab-resistant HER2+ breast cancer cells. *Journal of Pharmaceutical and Biomedical Analysis*, 253. <https://doi.org/10.1016/j.jpba.2024.116528>
- Hosen, S. M., Junaid, M., Alam, M., Rubayed, M., Dash, R., Akter, R., Sharmin, T., Mouri, N., Moni, M. A., Khatun, M., & Mostafa, D. (2021). GreenMolBD: Nature Derived Bioactive Molecules' Database. *Medicinal Chemistry*, 18. <https://doi.org/10.2174/1573406418666211129103458>
- Huang, B., Wen, G., Li, R., Wu, M., & Zou, Z. (2023). Integrated network pharmacology, bioinformatics, and molecular docking to explore the mechanisms of berberine regulating autophagy in breast cancer. *Medicine*, 102(36), e35070. <https://doi.org/10.1097/md.00000000000035070>
- Huang, P., Zhou, P., Liang, Y., Wu, J., Wu, G., Xu, R., Dai, Y., Guo, Q., Lu, H., & Chen, Q. (2021). Exploring the molecular targets and mechanisms of [10]-Gingerol for treating triple-negative breast cancer using bioinformatics approaches, molecular docking, and in vivo experiments. *Translational Cancer Research*, 10(11), 4680–4693. <https://doi.org/10.21037/tcr-21-1138>
- Ibadurrahman, W., Hanif, N., & Hermawan, A. (2022). Functional network analysis of p85 and PI3K as potential gene targets and mechanism of oleanolic acid in overcoming breast cancer resistance to tamoxifen. *Journal of Genetic Engineering and Biotechnology*, 20, 66. <https://doi.org/10.1186/s43141-022-00341-4>
- Ishikawa, C., Arbiser, J. L., & Mori, N. (2012). Honokiol induces cell cycle arrest and apoptosis via inhibition of survival signals in adult T-cell leukemia. *Biochimica et Biophysica Acta (BBA) - General Subjects*, 1820(7), 879–887. <https://doi.org/https://doi.org/10.1016/j.bbagen.2012.03.009>

- Jalali, M., Zaborowska, J., & Jalali, M. (2017). The Polymerase Chain Reaction: PCR, qPCR, and RT-PCR. Dalam *Basic Science Methods for Clinical Researchers* (hlm. 1–18). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-803077-6.00001-1>
- Jenie, R. I., Handayani, S., Susidarti, R. A., Udin, L. Z., & Meiyanto, E. (2018). The cytotoxic and antimigratory activity of Brazilin-doxorubicin on MCF-7/HER2 cells. *Advanced Pharmaceutical Bulletin*, 8(3), 507–516. <https://doi.org/10.15171/apb.2018.059>
- Jézéquel, P., Gouraud, W., Ben Azzouz, F., Guérin-Charbonnel, C., Juin, P. P., Lasla, H., & Campone, M. (2021). bc-GenExMiner 4.5: new mining module computes breast cancer differential gene expression analyses. *Database*, 2021, baab007. <https://doi.org/10.1093/database/baab007>
- Ji, X., Lu, Y., Tian, H., Meng, X., Wei, M., & Cho, W. C. (2019). Chemoresistance mechanisms of breast cancer and their countermeasures. *Biomedicine & Pharmacotherapy*, 114, 108800. <https://doi.org/10.1016/j.biopha.2019.108800>
- Jia, L., Ling, Y., Li, K., Zhang, L., Wang, Y., & Kang, H. (2021). A 10-Gene Signature for Predicting the Response to Neoadjuvant Trastuzumab Therapy in HER2-Positive Breast Cancer. *Clinical Breast Cancer*, 21(6), e654–e664. <https://doi.org/10.1016/j.clbc.2021.04.010>
- Jovanovic, D., Mitrovic, S., Alic, D., Besic, D., Knezevic, D., Dimitrijevic, J., & Ilic, M. (2023). PROGNOSTIC SIGNIFICANCE OF P21 PROTEIN IN BREAST CANCER. *Experimental and Applied Biomedical Research (EABR)*. <https://doi.org/10.2478/sjecr-2023-0005>
- Jozefczuk, J., & Adjaye, J. (2011). Quantitative real-time PCR-based analysis of gene expression. Dalam *Methods in Enzymology* (Vol. 500, hlm. 99–109). Academic Press Inc. <https://doi.org/10.1016/B978-0-12-385118-5.00006-2>
- Kanehisa, M., Furumichi, M., Sato, Y., Kawashima, M., & Ishiguro-Watanabe, M. (2023). KEGG for taxonomy-based analysis of pathways and genomes. *Nucleic Acids Research*, 51(D1), D587–D592. <https://doi.org/10.1093/nar/gkac963>
- Kanehisa, M., Furumichi, M., Tanabe, M., Sato, Y., & Morishima, K. (2017). KEGG: New perspectives on genomes, pathways, diseases and drugs. *Nucleic Acids Research*, 45(D1), D353–D361. <https://doi.org/10.1093/nar/gkw1092>
- Karabi, Z., Moradian, F., & Kheirabadi, M. (2022). The effect of lactoferrin on ULK1 and ATG13 genes expression in breast cancer cell line MCF7 and bioinformatics studies of protein interaction between lactoferrin and the autophagy initiation complex. *Cell Biochemistry and Biophysics*, 80(4), 795–806. <https://doi.org/10.1007/s12013-022-01097-x>

- Kaushik, G., Ramalingam, S., Subramaniam, D., Rangarajan, P., Protti, P., Rammamoorthy, P., Anant, S., & Mammen, J. M. V. (2012). Honokiol induces cytotoxic and cytostatic effects in malignant melanoma cancer cells. *American Journal of Surgery*, 204(6), 868–873. <https://doi.org/10.1016/j.amjsurg.2012.09.001>
- Keiser, M. J., Roth, B. L., Armbruster, B. N., Ernsberger, P., Irwin, J. J., & Shoichet, B. K. (2007). Relating protein pharmacology by ligand chemistry. *Nature Biotechnology*, 25(2), 197–206. <https://doi.org/10.1038/nbt1284>
- Kementerian Kesehatan Republik Indonesia. (2018). *Pedoman Nasional Pelayanan Kedokteran: Tata Laksana Kanker Payudara*. [https://kemkes.go.id/app\\_asset/file\\_content\\_download/170115800565659c7587dac8.09513662.pdf](https://kemkes.go.id/app_asset/file_content_download/170115800565659c7587dac8.09513662.pdf)
- Khan, S. U., Jan, S., Fatima, K., Wani, A., & Malik, F. (2024). Future Directions and Challenges in Overcoming Drug Resistance in Cancer. Dalam S. U. Khan & F. Malik (Ed.), *Drug Resistance in Cancer: Mechanisms and Strategies* (hlm. 351–372). Springer Nature Singapore. [https://doi.org/10.1007/978-981-97-1666-1\\_12](https://doi.org/10.1007/978-981-97-1666-1_12)
- Kim, M., Park, J., Bouhaddou, M., Kim, K., Rojc, A., Modak, M., Soucheray, M., McGregor, M. J., O’Leary, P., Wolf, D., Stevenson, E., Foo, T. K., Mitchell, D., Herrington, K. A., Muñoz, D. P., Tutuncuoglu, B., Chen, K. H., Zheng, F., Kreisberg, J. F., ... Krogan, N. J. (2021). A protein interaction landscape of breast cancer. *Science*, 374(6563). <https://doi.org/10.1126/science.abf3066>
- Kim, S. (2021). Exploring Chemical Information in PubChem. *Current Protocols*, 1(8). <https://doi.org/10.1002/cpz1.217>
- Knox, C., Wilson, M., Klinger, C. M., Franklin, M., Oler, E., Wilson, A., Pon, A., Cox, J., Chin, N. E. L., Strawbridge, S. A., Garcia-Patino, M., Kruger, R., Sivakumaran, A., Sanford, S., Doshi, R., Khetarpal, N., Fatokun, O., Doucet, D., Zubkowski, A., ... Wishart, D. S. (2024). DrugBank 6.0: the DrugBank Knowledgebase for 2024. *Nucleic Acids Research*, 52(D1), D1265–D1275. <https://doi.org/10.1093/nar/gkad976>
- Kominami, K., Nakabayashi, J., Nagai, T., Tsujimura, Y., Chiba, K., Kimura, H., Miyawaki, A., Sawasaki, T., Yokota, H., Manabe, N., & Sakamaki, K. (2012). The molecular mechanism of apoptosis upon caspase-8 activation: Quantitative experimental validation of a mathematical model. *Biochimica et Biophysica Acta - Molecular Cell Research*, 1823(10), 1825–1840. <https://doi.org/10.1016/j.bbamcr.2012.07.003>
- Komurov, K., Tseng, J., Muller, M., Seviour, E. G., Moss, T. J., Yang, L., Nagrath, D., & Ram, P. T. (2012). The glucose-deprivation network counteracts lapatinib-induced toxicity in resistant ErbB2-positive breast cancer cells.

- Molecular Systems Biology*, 8(1), 596.  
<https://doi.org/https://doi.org/10.1038/msb.2012.25>
- Kong, J., & Lasko, P. (2012). Translational control in cellular and developmental processes. Dalam *Nature Reviews Genetics* (Vol. 13, Nomor 6, hlm. 383–394).  
<https://doi.org/10.1038/nrg3184>
- Kong, X., Liu, C., Zhang, Z., Cheng, M., Mei, Z., Li, X., Liu, P., Diao, L., Ma, Y., Jiang, P., Kong, X., Nie, S., Guo, Y., Wang, Z., Zhang, X., Wang, Y., Tang, L., Guo, S., Liu, Z., & Li, D. (2024). BATMAN-TCM 2.0: an enhanced integrative database for known and predicted interactions between traditional Chinese medicine ingredients and target proteins. *Nucleic Acids Research*, 52(D1), D1110–D1120. <https://doi.org/10.1093/nar/gkad926>
- Kong, Z. L., Tzeng, S. C., & Liu, Y. C. (2005). Cytotoxic neolignans: An SAR study. *Bioorganic and Medicinal Chemistry Letters*, 15(1), 163–166. <https://doi.org/10.1016/j.bmcl.2004.10.011>
- Ku, S.-C., Liu, H.-L., Su, C.-Y., Yeh, I.-J., Yen, M.-C., Anuraga, G., Dang, H., Ta, K., Chiao, C.-C., Xuan, T. M., Prayugo, F. B., Wang, W.-J., & Wang, C.-Y. (2022). Comprehensive analysis of prognostic significance of cadherin (CDH) gene family in breast cancer. Dalam *AGING 2022* (Vol. 14, Nomor 20). [www.aging-us.com](http://www.aging-us.com)
- Lakshmi, S. G., Kamaraj, M., Nithya, T. G., Chidambaranathan, N., Pushpalatha, G. G. L., Santhosh, P., Balavaishnavi, B., & Mahajan, M. (2023). Network pharmacology integrated with molecular docking reveals the anticancer mechanism of *Jasminum sambac* Linn. essential oil against human breast cancer and experimental validation by in vitro and in vivo studies. *Applied Biochemistry and Biotechnology*, 196(1), 350–381. <https://doi.org/10.1007/s12010-023-04481-2>
- Lánczky, A., & Györfy, B. (2021). Web-Based Survival Analysis Tool Tailored for Medical Research (KMplot): Development and Implementation. *Journal of Medical Internet Research*, 23, e27633. <https://doi.org/10.2196/27633>
- Lawal, B., Wu, A. T. H., Chen, C.-H., T.A, G., & Wu, S.-Y. (2023). Identification of INFG/STAT1/NOTCH3 as  $\gamma$ -Mangostin's potential targets for overcoming doxorubicin resistance and reducing cancer-associated fibroblasts in triple-negative breast cancer. *Biomedicine & Pharmacotherapy*, 163, 114800. <https://doi.org/https://doi.org/10.1016/j.biopha.2023.114800>
- Leary, A., Evans, A., Johnston, S. R. D., A'Hern, R., Bliss, J. M., Sahoo, R., Detre, S., Haynes, B. P., Hills, M., Harper-Wynne, C., Bundred, N., Coombes, G., Smith, I., & Dowsett, M. (2015). Antiproliferative Effect of Lapatinib in HER2-Positive and HER2-Negative/HER3-High Breast Cancer: Results of the Presurgical Randomized MAPLE Trial (CRUK E/06/039). *Clinical Cancer*

- Research*, 21(13), 2932–2940. <https://doi.org/10.1158/1078-0432.CCR-14-1428>
- Lee, I. H., Im, E., Lee, H. J., Sim, D. Y., Lee, J. H., Jung, J. H., Park, J. E., Shim, B. S., & Kim, S. H. (2021). Apoptotic and antihepatofibrotic effect of honokiol via activation of GSK3 $\beta$  and suppression of Wnt/ $\beta$ -catenin pathway in hepatic stellate cells. *Phytotherapy Research*, 35(1), 452–462. <https://doi.org/10.1002/ptr.6824>
- Lee, J. H., Kim, J., Kim, H. S., & Kang, Y. J. (2023). Unraveling Connective Tissue Growth Factor as a Therapeutic Target and Assessing Kahweol as a Potential Drug Candidate in Triple-Negative Breast Cancer Treatment. *International Journal of Molecular Sciences*, 24(22). <https://doi.org/10.3390/ijms242216307>
- Lei, S., Zheng, R., Zhang, S., Wang, S., Chen, R., Sun, K., Zeng, H., Zhou, J., & Wei, W. (2021). Global patterns of breast cancer incidence and mortality: A population-based cancer registry data analysis from 2000 to 2020. *Cancer Communications*, 41(11), 1183–1194. <https://doi.org/10.1002/cac2.12207>
- Lestari, I. A., Putra, I. M. R., Fatimah, N., Ujiantari, N. S. O., Putri, D. D. P., & Hermawan, A. (2024). Characterization of Potential Target Genes of Borneol in Increasing Trastuzumab Sensitivity in HER2+ Trastuzumab-Resistant Breast Cancer: Bioinformatics and In Vitro Studies. *Asian Pacific Journal of Cancer Prevention*, 25(5), 1623–1634. <https://doi.org/10.31557/APJCP.2024.25.5.1623>
- Li, B., Shen, W., Peng, H., Li, Y., Chen, F., Zheng, L., Xu, J., & Jia, L. (2019). Fibronectin 1 promotes melanoma proliferation and metastasis by inhibiting apoptosis and regulating EMT. *OncoTargets and Therapy*, 12, 3207–3221. <https://doi.org/10.2147/OTT.S195703>
- Li, D., Fan, H., Dong, J., Sun, C., Su, Y., Liu, J., & Gu, Y. (2021). Based on BATMAN-TCM to Explore the Molecular Mechanism of Xihuang Pill Regulating Immune Function to Treat Breast Precancerous Lesions. *Breast Cancer: Targets and Therapy*, 13, 725–742. <https://doi.org/10.2147/BCTT.S339607>
- Li, F., Shi, Y., Yang, X., Luo, Z., Zhang, G., Yu, K., Li, F., Chen, L., Zhao, Y., Xie, Y., Wu, Y., Yang, J., Zhou, X., & Liu, S. (2022). Anhydroicaritin Inhibits EMT in Breast Cancer by Enhancing GPX1 Expression: A Research Based on Sequencing Technologies and Bioinformatics Analysis. *Frontiers in Cell and Developmental Biology*, 9. <https://www.frontiersin.org/journals/cell-and-developmental-biology/articles/10.3389/fcell.2021.764481>
- Li, G., Ma, J., Yin, J., Guo, F., Xi, K., Yang, P., Cai, X., Jia, Q., Li, L., Liu, Y., & Zhu, Y. (2022). Identification of Reference Genes for Reverse Transcription-Quantitative PCR Analysis of Ginger Under Abiotic Stress and for Postharvest

- Biology Studies. *Frontiers in Plant Science*, 13.  
<https://doi.org/10.3389/fpls.2022.893495>
- Li, H., Tang, X., Sun, Z., Qu, Z., & Zou, X. (2024). Integrating bioinformatics and experimental models to investigate the mechanism of the chelidonine-induced mitotic catastrophe via the AKT/FOXO3/FOXM1 axis in breast cancer cells. *Biomolecules and Biomedicine*, 24(3), 560–574.  
<https://doi.org/10.17305/bb.2023.9665>
- Li, P., Wang, W., Wang, S., Cao, G., Pan, T., Huang, Y., Wan, H., Zhang, W., Huang, Y., Jin, H., & Wang, Z. (2023). PTPRC promoted CD8+ T cell mediated tumor immunity and drug sensitivity in breast cancer: based on pan-cancer analysis and artificial intelligence modeling of immunogenic cell death-based drug sensitivity stratification. *Frontiers in Immunology*, 14.  
<https://doi.org/10.3389/fimmu.2023.1145481>
- Li, T., Fan, J., Wang, B., Traugh, N., Chen, Q., Liu, J., Li, B., & Liu, S. (2017). TIMER: A Web Server for Comprehensive Analysis of Tumor-Infiltrating Immune Cells. *Cancer Research*, 77, e108–e110.  
<https://doi.org/10.1158/0008-5472.CAN-17-0307>
- Li, Y., Li, R., Zeng, Z., Li, S., Luo, S., Wu, J., Zhou, C., & Xu, D. (2020). Prediction of the mechanisms of Xiaoi Jiedu Recipe in the treatment of breast cancer: A comprehensive approach study with experimental validation. *Journal of Ethnopharmacology*, 252, 112603. <https://doi.org/10.1016/j.jep.2020.112603>
- Liao, Y., Wang, J., Jaehnig, E. J., Shi, Z., & Zhang, B. (2019). WebGestalt 2019: gene set analysis toolkit with revamped UIs and APIs. *Nucleic Acids Research*, 47(W1), W199–W205. <https://doi.org/10.1093/nar/gkz401>
- Liu, H., Zang, C., Emde, A., Planas-Silva, M. D., Rosche, M., Kühnl, A., Schulz, C. O., Elstner, E., Possinger, K., & Eucker, J. (2008). Anti-tumor effect of honokiol alone and in combination with other anti-cancer agents in breast cancer. *European Journal of Pharmacology*, 591(1–3), 43–51.  
<https://doi.org/10.1016/j.ejphar.2008.06.026>
- Liu, L., Greger, J., Shi, H., Liu, Y., Greshock, J., Annan, R., Halsey, W., Sathe, G. M., Martin, A. M., & Gilmer, T. M. (2009). Novel mechanism of lapatinib resistance in HER2-positive breast tumor cells: Activation of AXL. *Cancer Research*, 69(17), 6871–6878. <https://doi.org/10.1158/0008-5472.CAN-08-4490>
- Liu, S., Hu, X., Fan, X., Jin, R., Yang, W., Geng, Y., & Wu, J. (2020). A Bioinformatics Research on Novel Mechanism of Compound Kushen Injection for Treating Breast Cancer by Network Pharmacology and Molecular Docking Verification. *Evidence-Based Complementary and Alternative Medicine*, 2020(1), 2758640.  
<https://doi.org/https://doi.org/10.1155/2020/2758640>

- Liu, S., Xie, S. M., Liu, W., Gagea, M., Hanker, A. B., Nguyen, N., Singareeka Raghavendra, A., Yang-Kolodji, G., Chu, F., Neelapu, S. S., Marchese, A., Hanash, S., Zimmermann, J., Arteaga, C. L., & Tripathy, D. (2023). Targeting CXCR4 abrogates resistance to trastuzumab by blocking cell cycle progression and synergizes with docetaxel in breast cancer treatment. *Breast Cancer Research*, 25(1). <https://doi.org/10.1186/s13058-023-01665-w>
- Liu, T., Lin, Y., Wen, X., Jorissen, R. N., & Gilson, M. K. (2007). BindingDB: A web-accessible database of experimentally determined protein-ligand binding affinities. *Nucleic Acids Research*, 35(SUPPL. 1). <https://doi.org/10.1093/nar/gkl999>
- Liu, X., Ouyang, S., Yu, B., Liu, Y., Huang, K., Gong, J., Zheng, S., Li, Z., Li, H., & Jiang, H. (2010). PharmMapper server: a web server for potential drug target identification using pharmacophore mapping approach. *Nucleic Acids Research*, 38(suppl\_2), W609–W614. <https://doi.org/10.1093/nar/gkq300>
- Lo Surdo, P., Iannuccelli, M., Contino, S., Castagnoli, L., Licata, L., Cesareni, G., & Perfetto, L. (2022). SIGNOR 3.0, the SIGNaling network open resource 3.0: 2022 update. *Nucleic acids research*, 51. <https://doi.org/10.1093/nar/gkac883>
- Loibl, S., & Gianni, L. (2017). HER2-positive breast cancer. Dalam *The Lancet* (Vol. 389, Nomor 10087, hlm. 2415–2429). Lancet Publishing Group. [https://doi.org/10.1016/S0140-6736\(16\)32417-5](https://doi.org/10.1016/S0140-6736(16)32417-5)
- Long, S., Yuan, C., Wang, Y., Zhang, J., & Li, G. (2019). Network Pharmacology Analysis of *Damnacanthus indicus* C.F.Gaertn in Gene-Phenotype. *Evidence-based Complementary and Alternative Medicine*, 2019. <https://doi.org/10.1155/2019/1368371>
- Lu, Y., Bi, J., Li, F., Wang, G., Zhu, J., Jin, J., & Liu, Y. (2022). Differential Gene Analysis of Trastuzumab in Breast Cancer Based on Network Pharmacology and Medical Images. *Frontiers in Physiology*, 13, 942049. <https://doi.org/10.3389/fphys.2022.942049>
- Luo, J. (2009). Glycogen synthase kinase 3 $\beta$  (GSK3 $\beta$ ) in tumorigenesis and cancer chemotherapy. Dalam *Cancer Letters* (Vol. 273, Nomor 2, hlm. 194–200). Elsevier Ireland Ltd. <https://doi.org/10.1016/j.canlet.2008.05.045>
- Luo, L., Chen, Y., Ma, Q., Huang, Y., Hong, T., Shu, K., & Liu, Z. (2023). Exploring the mechanism of an active ingredient of ginger, dihydrocapsaicin, on triple negative breast cancer based on network pharmacology and in vitro experiments. *Oncology letters*, 25, 195. <https://doi.org/10.3892/ol.2023.13781>
- Lv, C., Wu, X., Wang, X., Su, J., Zeng, H., Zhao, J., Lin, S., Liu, R., Li, H., Li, X., & Zhang, W. (2017). The gene expression profiles in response to 102 traditional Chinese medicine (TCM) components: A general template for research on TCMs. *Scientific Reports*, 7(1). <https://doi.org/10.1038/s41598-017-00535-8>

- Lyu, H., Yang, X. H., Edgerton, S. M., Thor, A. D., Wu, X., He, Z., & Liu, B. (2015). The erbB3-and IGF-1 receptor-initiated signaling pathways exhibit distinct effects on lapatinib sensitivity against trastuzumab-resistant breast cancer cells. *Oncotarget*, 7(3), 2921–2935. [www.impactjournals.com/oncotarget](http://www.impactjournals.com/oncotarget)
- Ma, Y., Peng, Z., Pan, R., Zhu, Z., Meng, X., Hu, H., Qiao, X., Huang, X., & Hou, M. (2021). The bioinformatics analysis of quercetin in octagonal lotus for the screening of breast cancer MYC, CXCL10, CXCL11, and E2F1. *International Journal of Immunopathology and Pharmacology*, 35, 205873842110409. <https://doi.org/10.1177/20587384211040903>
- Manivannan, H. P., Veeraraghavan, V. P., & Francis, A. P. (2023). Identification of molecular targets of Trigonelline for treating breast cancer through network pharmacology and bioinformatics-based prediction. *Molecular Diversity*. <https://doi.org/10.1007/s11030-023-10780-x>
- Mariana Kustiawan, P., Siregar, K. A. A. K., Syaifie, P. H., Zein Muttaqin, F., Ibadillah, D., Miftah Jauhar, M., Djamas, N., Mardliyati, E., & Taufiqu Rochman, N. (2024). Uncovering the anti-breast cancer activity potential of east Kalimantan propolis by In vitro and bioinformatics analysis. *Heliyon*, 10(13). <https://doi.org/10.1016/j.heliyon.2024.e33636>
- McDermott, M., Browne, B. C., Conlon, N. T., O'Brien, N. A., Slamon, D. J., Henry, M., Meleady, P., Clynes, M., Dowling, P., Crown, J., & O'Donovan, N. (2014). PP2A inhibition overcomes acquired resistance to HER2 targeted therapy. *Molecular Cancer*, 13(1). <https://doi.org/10.1186/1476-4598-13-157>
- McDermott, M., Eustace, A. J., Busschots, S., Breen, L., Crown, J., Clynes, M., O'Donovan, N., & Stordal, B. (2014). In vitro development of chemotherapy and targeted therapy drug-resistant cancer cell lines: A practical guide with case studies. *Frontiers in Oncology*, 4 MAR. <https://doi.org/10.3389/fonc.2014.00040>
- Medina, P., & Goodin, S. (2008). Lapatinib: A Dual Inhibitor of Human Epidermal Growth Factor Receptor Tyrosine Kinases. Dalam *Clinical Therapeutics* (Vol. 30, Nomor 8).
- Meng, P., Dalal, H., Chen, Y., Brueffer, C., Gladchuk, S., Alcaide, M., Ehinger, A., & Saal, L. H. (2024). Digital PCR quantification of ultrahigh ERBB2 copy number identifies poor breast cancer survival after trastuzumab. *npj Breast Cancer*, 10(1). <https://doi.org/10.1038/s41523-024-00621-x>
- Meng, Y., Xu, Q., Chen, L., Wang, L., & Hu, X. (2020). The function of SOX2 in breast cancer and relevant signaling pathway. *Pathology Research and Practice*, 216(8). <https://doi.org/10.1016/j.prp.2020.153023>
- Mi, H., Muruganujan, A., Casagrande, J., & Thomas, P. (2013). Large-scale gene function analysis with the PANTHER classification system. *Nature protocols*, 8, 1551–1566. <https://doi.org/10.1038/nprot.2013.092>

- Mikhaevich, E., Sorokin, D., & Scherbakov, A. (2023). Honokiol inhibits the growth of hormone-resistant breast cancer cells: Its promising effect in combination with metformin. *Research in Pharmaceutical Sciences*, 18(5), 580–591. <https://doi.org/10.4103/1735-5362.383712>
- Mirzaei, M., Sheikholeslami, S. A., Jalili, A., Bereimipour, A., Sharbati, S., Kaveh, V., & Salari, S. (2022). Investigating the molecular mechanisms of Tamoxifen on the EMT pathway among patients with breast cancer. *Journal of Medicine and Life*, 15(6), 835–844. <https://doi.org/10.25122/jml-2022-0085>
- Monga, M., & Sausville, E. (2002). Developmental Therapeutics Program at the NCI: Molecular Target and Drug Discovery Process. *Leukemia: official journal of the Leukemia Society of America, Leukemia Research Fund, U.K.*, 16, 520–526. <https://doi.org/10.1038/sj.leu.2402464>
- Montalto, F. I., & De Amicis, F. (2020). Cyclin D1 in cancer: A molecular connection for cell cycle control, adhesion and invasion in tumor and stroma. Dalam *Cells* (Vol. 9, Nomor 12, hlm. 1–15). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/cells9122648>
- Morimoto, M., & Boerkoel, C. F. (2013). The role of nuclear bodies in gene expression and disease. Dalam *Biology* (Vol. 2, Nomor 3, hlm. 976–1033). MDPI AG. <https://doi.org/10.3390/biology2030976>
- Mounir, M., Lucchetta, M., Silva, T. C., Olsen, C., Bontempi, G., Chen, X., Noushmehr, H., Colaprico, A., & Papaleo, E. (2019). New functionalities in the TCGAbiolinks package for the study and integration of cancer data from GDC and GTEx. *PLOS Computational Biology*, 15(3), e1006701-. <https://doi.org/10.1371/journal.pcbi.1006701>
- N, B. (2023). Network pharmacology based investigation on the mechanism of tetrandrine against breast cancer. *Phytomedicine Plus*, 3(1), 100381. <https://doi.org/https://doi.org/10.1016/j.phyplu.2022.100381>
- Nair, R. R., Madiwale, S. V., & Saini, D. K. (2018). Clampdown of inflammation in aging and anticancer therapies by limiting upregulation and activation of GPCR, CXCR4. *npj Aging and Mechanisms of Disease*, 4(1). <https://doi.org/10.1038/s41514-018-0028-0>
- Ndacyayisenga, J., Tolo, F. M., Wamunyokoli, F., & Maina, E. N. (2024). Effects of tea catechin extracts from BB35 and purple (TRFK 306) tea clones on the gene expression of Egfr, App, Bcl2, Dnmt, Casp3, Hif1a, Gadd45b and Psmb5 genes involved in triple negative breast cancer diseases: In silico and in vitro study. *Informatics in Medicine Unlocked*, 46, 101469. <https://doi.org/https://doi.org/10.1016/j.imu.2024.101469>
- Neve, R. M., Chin, K., Fridlyand, J., Yeh, J., Baehner, F. L., Fevr, T., Clark, L., Bayani, N., Coppe, J. P., Tong, F., Speed, T., Spellman, P. T., DeVries, S., Lapuk, A., Wang, N. J., Kuo, W. L., Stilwell, J. L., Pinkel, D., Albertson, D. G., ... Gray, J. W. (2006).

- A collection of breast cancer cell lines for the study of functionally distinct cancer subtypes. *Cancer Cell*, 10(6), 515–527. <https://doi.org/10.1016/j.ccr.2006.10.008>
- Niles, A. L., Moravec, R. A., & Riss, T. L. (2008). Update on in vitro cytotoxicity assays for drug development. *Expert opinion on drug discovery*, 3(6), 655–669.
- Novitasari, D., Muntafiah, L., Sari, N. F., Meiyanto, E., & Hermawan, A. (2021). Ethanolic extract of sappan wood (*Caesalpinia sappan* L.) inhibits MCF-7 and MCF-7/HER2 mammospheres' formation: An in vitro and bioinformatic study. *Indonesian Journal of Biotechnology*, 26(3), 133–141. <https://doi.org/10.22146/ijbiotech.63510>
- Olsson, E., Honeth, G., Bendahl, P. O., Saal, L. H., Gruvberger-Saal, S., Ringnér, M., Vallon-Christersson, J., Jönsson, G., Holm, K., Lövgren, K., Fernö, M., Grabau, D., Borg, Å., & Hegardt, C. (2011). CD44 isoforms are heterogeneously expressed in breast cancer and correlate with tumor subtypes and cancer stem cell markers. *BMC Cancer*, 11. <https://doi.org/10.1186/1471-2407-11-418>
- Oskouei, R. J., Kor, N. M., & Maleki, S. A. (2017). Original Article Data mining and medical world: breast cancers' diagnosis, treatment, prognosis and challenges. Dalam *Am J Cancer Res* (Vol. 7, Nomor 3). [www.ajcr.us/](http://www.ajcr.us/)
- Otsubo, T., Akiyama, Y., Yanagihara, K., & Yuasa, Y. (2008). SOX2 is frequently downregulated in gastric cancers and inhibits cell growth through cell-cycle arrest and apoptosis. *British Journal of Cancer*, 98(4), 824–831. <https://doi.org/10.1038/sj.bjc.6604193>
- Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan-a web and mobile app for systematic reviews. *Systematic Reviews*, 5(1). <https://doi.org/10.1186/s13643-016-0384-4>
- Park, C., Choi, S. H., Jeong, J. W., Han, M. H., Lee, H., Hong, S. H., Kim, G. Y., Moon, S. K., Kim, W. J., & Choi, Y. H. (2020). Honokiol ameliorates oxidative stress-induced DNA damage and apoptosis of c2c12 myoblasts by ROS generation and mitochondrial pathway. *Animal Cells and Systems*, 24(1), 60–68. <https://doi.org/10.1080/19768354.2019.1706634>
- Pellarin, I., Dall'Acqua, A., Favero, A., Segatto, I., Rossi, V., Crestan, N., Karimbayli, J., Belletti, B., & Baldassarre, G. (2025). Cyclin-dependent protein kinases and cell cycle regulation in biology and disease. Dalam *Signal transduction and targeted therapy* (Vol. 10, Nomor 1, hlm. 11). <https://doi.org/10.1038/s41392-024-02080-z>
- Pereira, D., Sandim, V., Fernandes, T. F. B., Almeida, V. H., Rocha, M. R., do Amaral, R. J. F. C., Rossi, M. I. D., Kalume, D. E., & Zingali, R. B. (2022). Proteomic Analysis of HCC-1954 and MCF-7 Cell Lines Highlights Crosstalk between  $\alpha$ v and  $\beta$ 1 Integrins, E-Cadherin and HER-2. *International Journal of Molecular Sciences*, 23(17). <https://doi.org/10.3390/ijms231710194>

- Petrosino, M., Novak, L., Pasquo, A., Chiaraluce, R., Turina, P., Capriotti, E., & Consalvi, V. (2021). Analysis and interpretation of the impact of missense variants in cancer. Dalam *International Journal of Molecular Sciences* (Vol. 22, Nomor 11). MDPI. <https://doi.org/10.3390/ijms22115416>
- Piñero, J., Ramírez-Angueta, J. M., Saüch-Pitarch, J., Ronzano, F., Centeno, E., Sanz, F., & Furlong, L. I. (2020). The DisGeNET knowledge platform for disease genomics: 2019 update. *Nucleic Acids Research*, 48(D1), D845–D855. <https://doi.org/10.1093/nar/gkz1021>
- Piva, M., Domenici, G., Iriando, O., Rábano, M., Simões, B. M., Comaills, V., Barredo, I., López-Ruiz, J. A., Zabalza, I., Kypta, R., & Vivanco, M. D. M. (2014). Sox2 promotes tamoxifen resistance in breast cancer cells. *EMBO Molecular Medicine*, 6(1), 66–79. <https://doi.org/10.1002/emmm.201303411>
- Pluta, P., Smolewski, P., Pluta, A., Cebula-Obrzut, B., Wierzbowska, A., Nejc, D., Robak, T., Kordek, R., Gottwald, L., Piekarski, J., & Jeziorski, A. (2011). Significance of Bax expression in breast cancer patients. *Polski Przegląd Chirurgiczny/ Polish Journal of Surgery*, 83(10), 549–553. <https://doi.org/10.2478/v10035-011-0087-4>
- Poustforoosh, A., Faramarz, S., Negahdaripour, M., Tüzün, B., & Hashemipour, H. (2023). Tracing the pathways and mechanisms involved in the anti-breast cancer activity of glycyrrhizin using bioinformatics tools and computational methods. *Journal of Biomolecular Structure and Dynamics*, 42(2), 819–833. <https://doi.org/10.1080/07391102.2023.2196347>
- Prasad, R., & Katiyar, S. K. (2016). Honokiol, an active compound of Magnolia plant, inhibits growth, and progression of cancers of different organs. Dalam *Advances in Experimental Medicine and Biology* (Vol. 928, hlm. 245–265). Springer New York LLC. [https://doi.org/10.1007/978-3-319-41334-1\\_11](https://doi.org/10.1007/978-3-319-41334-1_11)
- Putra, I. M. R. (2023). *The Potential of Honokiol in Increasing Trastuzumab Sensitivity In Her2+ Trastuzumab-Resistant Breast Cancer*. Universitas Gadjah Mada.
- Putra, I. M. R., Lestari, I. A., Fatimah, N., Hanif, N., Ujiantari, N. S. O., Putri, D. D. P., & Hermawan, A. (2024). Bioinformatics and In Vitro Study Reveal ER $\alpha$  as The Potential Target Gene of Honokiol to Enhance Trastuzumab Sensitivity in HER2+ Trastuzumab-Resistant Breast Cancer Cells. *Computational Biology and Chemistry*, 111, 108084. <https://doi.org/https://doi.org/10.1016/j.compbiolchem.2024.108084>
- Qian, P., Mu, X. T., Su, B., Gao, L., & Zhang, D. F. (2020). Identification of the anti-breast cancer targets of triterpenoids in Liquidambaris Fructus and the hints for its traditional applications. *BMC Complementary Medicine and Therapies*, 20(1). <https://doi.org/10.1186/s12906-020-03143-8>

- Qiao, Z., Xing, Y., Zhang, Q., Tang, Y., Feng, R., & Pang, W. (2022). Tamoxifen resistance-related ceRNA network for breast cancer. *Frontiers in Cell and Developmental Biology*, *10*. <https://doi.org/10.3389/fcell.2022.1023079>
- Rahayu, P., I Gede IS, Suryani, Arie S, Achmad R, I Gede MD, Muh. Nurtanzis Sutoyo, Isnandar Slamet, Sitti Harlina, & I Made Dendi Maysanjaya. (2024). *BUKU AJAR DATA MINING*. PT. Sonpedia Publishing Indonesia. <https://www.researchgate.net/publication/377415198>
- Rich, J. T., Neely, J. G., Paniello, R. C., Voelker, C. C. J., Nussenbaum, B., & Wang, E. W. (2010). A practical guide to understanding Kaplan-Meier curves. *Otolaryngology - Head and Neck Surgery*, *143*(3), 331–336. <https://doi.org/10.1016/j.otohns.2010.05.007>
- Rivas, M. A., Pirinen, M., Conrad, D. F., Lek, M., Tsang, E. K., Karczewski, K. J., Maller, J. B., Kukurba, K. R., DeLuca, D. S., Fromer, M., Ferreira, P. G., Smith, K. S., Zhang, R., Zhao, F., Banks, E., Poplin, R., Ruderfer, D. M., Purcell, S. M., Tukiainen, T., ... MacArthur, D. G. (2015). Effect of predicted protein-truncating genetic variants on the human transcriptome. *Science*, *348*(6235), 666–669. <https://doi.org/10.1126/science.1261877>
- Roberto Cesar, M. O., German, L. B., Paola Patricia, A. C., Eugenia, A. R., Elisa Clementina, O. M., Jose, C. O., Marlon Alberto, P. M., Fabio Enrique, M. P., & Margarita, R. V. (2020). Method Based on Data Mining Techniques for Breast Cancer Recurrence Analysis. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, *12145 LNCS*, 584–596. [https://doi.org/10.1007/978-3-030-53956-6\\_54](https://doi.org/10.1007/978-3-030-53956-6_54)
- Roncaglia, P., Martone, M. E., Hill, D. P., Berardini, T. Z., Foulger, R. E., Imam, F. T., Drabkin, H., Mungall, C. J., & Lomax, J. (2013). The Gene Ontology (GO) Cellular Component Ontology: Integration with SAO (Subcellular Anatomy Ontology) and other recent developments. *Journal of Biomedical Semantics*, *4*(1). <https://doi.org/10.1186/2041-1480-4-20>
- Rouillard, A., Gundersen, G., Fernández, N., Wang, Z., Monteiro, C., McDermott, M., & Ma'ayan, A. (2016). The harmonizome: a collection of processed datasets gathered to serve and mine knowledge about genes and proteins. *Database*, *2016*, baw100. <https://doi.org/10.1093/database/baw100>
- Roy, V., & Perez, E. A. (2009). Beyond Trastuzumab: Small Molecule Tyrosine Kinase Inhibitors in HER-2–Positive Breast Cancer. *The Oncologist*, *14*(11), 1061–1069. <https://doi.org/10.1634/theoncologist.2009-0142>
- R.P., V. A., Mohanraj, K., Sahoo, A., & Samal, A. (2023). IMPPAT 2.0: An Enhanced and Expanded Phytochemical Atlas of Indian Medicinal Plants. *ACS Omega*, *8*. <https://doi.org/10.1021/acsomega.3c00156>

- Rusnak, D., & Gilmer, T. M. (2011). The discovery of lapatinib (GW572016). Dalam *Molecular Cancer Therapeutics* (Vol. 10, Nomor 11, hlm. 2019). <https://doi.org/10.1158/1535-7163.MCT-11-0697>
- Safari-Alighiarloo, N., Taghizadeh, M., Rezaei-Tavirani, M., Goliaei, B., & Peyvandi, A. A. (2014). Protein-protein interaction networks (PPI) and complex diseases. Dalam *Gastroenterol Hepatol Bed Bench* (Vol. 7, Nomor 1).
- Sanguhl, K., Berlin, D. S., Altman, R. B., & Klein, T. E. (2008). PharmGKB: Understanding the effects of individual genetic variants. Dalam *Drug Metabolism Reviews* (Vol. 40, Nomor 4, hlm. 539–551). <https://doi.org/10.1080/03602530802413338>
- Sengupta, S., Nagalingam, A., Muniraj, N., Bonner, M. Y., Mistriotis, P., Afthinos, A., Kuppusamy, P., Lanoue, D., Cho, S., Korangath, P., Shriver, M., Begum, A., Merino, V. F., Huang, C.-Y., Arbiser, J. L., Matsui, W., Györfy, B., Konstantopoulos, K., Sukumar, S., ... Sharma, D. (2017). Activation of tumor suppressor LKB1 by honokiol abrogates cancer stem-like phenotype in breast cancer via inhibition of oncogenic Stat3. *Oncogene*, 36(41), 5709–5721. <https://doi.org/10.1038/onc.2017.164>
- Shehat, M. G., & Tigno-Aranjuez, J. (2019). Flow Cytometric Measurement Of ROS Production In Macrophages In Response To FcγR Cross-linking. *Journal of visualized experiments : JoVE*.
- Sheng, J., Cheng, J., Chu, W., Dong, M., & Jiang, K. (2024). Network pharmacology and experimental validation to reveal the pharmacological mechanisms of Qizhu prescription for treating breast cancer. *Journal of Traditional Chinese Medical Sciences*, 11(3), 303–315. <https://doi.org/https://doi.org/10.1016/j.jtcms.2024.06.006>
- Sherman, B. T., Hao, M., Qiu, J., Jiao, X., Baseler, M. W., Lane, H. C., Imamichi, T., & Chang, W. (2022). DAVID: a web server for functional enrichment analysis and functional annotation of gene lists (2021 update). *Nucleic Acids Research*, 50(W1), W216–W221. <https://doi.org/10.1093/nar/gkac194>
- Sheybatzadeh, K., Moshtaghi, S. A. A., Shahanipour, K., & Golab, F. (2024). Integrative Bioinformatics Analysis Reveals Potential Target Genes and PTEN Signaling in Breast Cancer and Effect of Zingiber officinale (Ginger) and Allium sativum (Garlic) extract on It. *Asian Pacific Journal of Cancer Prevention*, 25(3), 893–908. <https://doi.org/10.31557/apjcp.2024.25.3.893>
- Shi, H., Zhang, W., Zhi, Q., & Jiang, M. (2016). Lapatinib resistance in HER2+ cancers: latest findings and new concepts on molecular mechanisms. Dalam *Tumor Biology* (Vol. 37, Nomor 12, hlm. 15411–15431). Springer Science and Business Media B.V. <https://doi.org/10.1007/s13277-016-5467-2>

- Skolastika, S., Hanif, N., Ikawati, M., & Hermawan, A. (2022). Comprehensive Computational Analysis of Honokiol Targets for Cell Cycle Inhibition and Immunotherapy in Metastatic Breast Cancer Stem Cells. *Evidence-based Complementary and Alternative Medicine*, 2022. <https://doi.org/10.1155/2022/4172531>
- Smith, A. E., Ferraro, E., Safonov, A., Morales, C. B., Lahuerta, E. J. A., Li, Q., Kulick, A., Ross, D., Solit, D. B., de Stanchina, E., Reis-Filho, J., Rosen, N., Arribas, J., Razavi, P., & Chandarlapaty, S. (2021). HER2 + breast cancers evade anti-HER2 therapy via a switch in driver pathway. *Nature Communications*, 12(1). <https://doi.org/10.1038/s41467-021-27093-y>
- Spector, N. L., Xia, W., Burris, H., Hurwitz, H., Dees, E. C., Dowlati, A., O'Neil, B., Overmoyer, B., Marcom, P. K., Blackwell, K. L., Smith, D. A., Koch, K. M., Stead, A., Mangum, S., Ellis, M. J., Liu, L., Man, A. K., Bremer, T. M., Harris, J., & Bacus, S. (2005). Study of the biologic effects of lapatinib, a reversible inhibitor of ErbB1 and ErbB2 tyrosine kinases, on tumor growth and survival pathways in patients with advanced malignancies. *Journal of Clinical Oncology*, 23(11), 2502–2512. <https://doi.org/10.1200/JCO.2005.12.157>
- Srinivasan, M., Gangurde, A., Chandane, A. Y., Tagalpallewar, A., Pawar, A., & Baheti, A. M. (2024). Integrating network pharmacology and *in silico* analysis deciphers Withaferin-A's anti-breast cancer potential via hedgehog pathway and target network interplay. *Briefings in Bioinformatics*, 25(2). <https://doi.org/10.1093/bib/bbae032>
- Stelzer, G., Rosen, N., Plaschkes, I., Zimmerman, S., Twik, M., Fishilevich, S., Stein, T. I., Nudel, R., Lieder, I., Mazor, Y., Kaplan, S., Dahary, D., Warshawsky, D., Guan-Golan, Y., Kohn, A., Rappaport, N., Safran, M., & Lancet, D. (2016). The GeneCards Suite: From Gene Data Mining to Disease Genome Sequence Analyses. *Current Protocols in Bioinformatics*, 54(1), 1.30.1-1.30.33. <https://doi.org/https://doi.org/10.1002/cpbi.5>
- Subramanian, A., Tamayo, P., Mootha, V. K., Mukherjee, S., Ebert, B. L., Gillette, M. A., Paulovich, A., Pomeroy, S. L., Golub, T. R., Lander, E. S., & Mesirov, J. P. (2005). Gene set enrichment analysis: A knowledge-based approach for interpreting genome-wide expression profiles. *Proceedings of the National Academy of Sciences*, 102(43), 15545–15550. <https://doi.org/10.1073/pnas.0506580102>
- Sun, M., Lv, F., Qin, C., Du, D., Li, W., & Liu, S. (2024). The Potential Mechanism of Liujunzi Decoction in the Treatment of Breast Cancer based on Network Pharmacology and Molecular Docking Technology. *Current Pharmaceutical Design*, 30(9), 702–726. <https://doi.org/10.2174/0113816128289900240219104854>

- Suneetha, L., Marsakatla, P., Suneetha, R. S., & Suneetha, S. (2018). Bioinformatics as a Tool to Identify Infectious Disease Pathogen Peptide Sequences as Targets for Antibody Engineering. Dalam *Antibody Engineering*. InTech. <https://doi.org/10.5772/intechopen.71011>
- Szklarczyk, D., Kirsch, R., Koutrouli, M., Nastou, K., Mehryary, F., Hachilif, R., Gable, A. L., Fang, T., Doncheva, N. T., Pyysalo, S., Bork, P., Jensen, L. J., & von Mering, C. (2023). The STRING database in 2023: protein–protein association networks and functional enrichment analyses for any sequenced genome of interest. *Nucleic Acids Research*, *51*(D1), D638–D646. <https://doi.org/10.1093/nar/gkac1000>
- Szklarczyk, D., Santos, A., Von Mering, C., Jensen, L. J., Bork, P., & Kuhn, M. (2016). STITCH 5: Augmenting protein-chemical interaction networks with tissue and affinity data. *Nucleic Acids Research*, *44*(D1), D380–D384. <https://doi.org/10.1093/nar/gkv1277>
- Tang, D., Chen, M., Huang, X., Zhang, G., Zeng, L., Zhang, G., Wu, S., & Wang, Y. (2023). SRplot: A free online platform for data visualization and graphing. *PLOS ONE*, *18*, e0294236. <https://doi.org/10.1371/journal.pone.0294236>
- Tang, Z., Kang, B., Li, C., Chen, T., & Zhang, Z. (2019). GEPIA2: an enhanced web server for large-scale expression profiling and interactive analysis. *Nucleic Acids Research*, *47*(W1), W556–W560. <https://doi.org/10.1093/nar/gkz430>
- Telford, W. G. (2018). Multiparametric analysis of apoptosis by flow cytometry. Dalam *Methods in Molecular Biology* (Vol. 1678, hlm. 167–202). Humana Press Inc. [https://doi.org/10.1007/978-1-4939-7346-0\\_10](https://doi.org/10.1007/978-1-4939-7346-0_10)
- Thu, K. L., Soria-Bretones, I., Mak, T. W., & Cescon, D. W. (2018). Targeting the cell cycle in breast cancer: towards the next phase. Dalam *Cell Cycle* (Vol. 17, Nomor 15, hlm. 1871–1885). Taylor and Francis Inc. <https://doi.org/10.1080/15384101.2018.1502567>
- Tian, Z., Yang, Y., Wu, H., Chen, Y., Jia, H., Zhu, L., He, R., Jin, Y., Zhou, B., Ge, C., Sun, Y., & Yang, Y. (2022). The Nrf2 inhibitor brusatol synergistically enhances the cytotoxic effect of lapatinib in HER2-positive cancers. *Heliyon*, *8*(8), e10410. <https://doi.org/https://doi.org/10.1016/j.heliyon.2022.e10410>
- Tolosa, L., Donato, M. T., & Gómez-Lechón, M. J. (2015). General cytotoxicity assessment by means of the MTT assay. Dalam *Methods in Molecular Biology* (Vol. 1250, hlm. 333–348). Humana Press Inc. [https://doi.org/10.1007/978-1-4939-2074-7\\_26](https://doi.org/10.1007/978-1-4939-2074-7_26)
- Turabelidze, A., Guo, S., & Dipietro, L. A. (2010). Importance of housekeeping gene selection for accurate reverse transcription-quantitative polymerase chain reaction in a wound healing model. *Wound Repair and Regeneration*, *18*(5), 460–466. <https://doi.org/10.1111/j.1524-475X.2010.00611.x>

- Unberath, P., Mahlmeister, L., Reimer, N., Busch, H., Boerries, M., & Christoph, J. (2022). Searching of Clinical Trials Made Easier in cBioPortal Using Patients' Genetic and Clinical Profiles. *Applied Clinical Informatics*, *13*(2), 363–369. <https://doi.org/10.1055/s-0042-1743560>
- Vijay, G. V., Zhao, N., Den Hollander, P., Toneff, M. J., Joseph, R., Pietila, M., Taube, J. H., Sarkar, T. R., Ramirez-Pena, E., Werden, S. J., Shariati, M., Gao, R., Sobieski, M., Stephan, C. C., Sphyris, N., Miura, N., Davies, P., Chang, J. T., Soundararajan, R., ... Mani, S. A. (2019). GSK3 $\beta$  regulates epithelial-mesenchymal transition and cancer stem cell properties in triple-negative breast cancer. *Breast Cancer Research*, *21*(1). <https://doi.org/10.1186/s13058-019-1125-0>
- Wang, D., & DuBois, R. N. (2004). Cyclooxygenase-2: A Potential Target in Breast Cancer. *Seminars in Oncology*, *31*(1 SUPPL. 3), 64–73. <https://doi.org/10.1053/j.seminoncol.2004.01.008>
- Wang, F., Yuan, C., Liu, B., Yang, Y.-F., & Wu, H.-Z. (2022). Syringin exerts anti-breast cancer effects through PI3K-AKT and EGFR-RAS-RAF pathways. *Journal of Translational Medicine*, *20*(1). <https://doi.org/10.1186/s12967-022-03504-6>
- Wang, H., Zhang, J., Li, H., Yu, H., Chen, S., Liu, S., Zhang, C., & He, Y. (2022). FN1 is a prognostic biomarker and correlated with immune infiltrates in gastric cancers. *Frontiers in Oncology*, *12*. <https://doi.org/10.3389/fonc.2022.918719>
- Wang, T., Chen, S., Wang, Y., Zhang, Y., Song, X., Bi, Z., Liu, M., Niu, Q., Liu, J., Feng, P., Sun, X., Peng, B., Zhang, C., Chen, K., Li, M., Fei, C., & Yan, L. K. (2025). From In Silico to In Vitro: A Comprehensive Guide to Validating Bioinformatics Findings. *arXiv preprint arXiv:2502.03478*. <http://arxiv.org/abs/2502.03478>
- Wang, W. die, Shang, Y., Li, Y., & Chen, S. zhen. (2019). Honokiol inhibits breast cancer cell metastasis by blocking EMT through modulation of Snail/Slug protein translation. *Acta Pharmacologica Sinica*, *40*(9), 1219–1227. <https://doi.org/10.1038/s41401-019-0240-x>
- Wang, X., Wang, L., Yu, Q., Liu, Z., Li, C., Wang, F., & Yu, Z. (2021). The Effectiveness of Lapatinib in HER2-Positive Metastatic Breast Cancer Patients Pretreated With Multiline Anti-HER2 Treatment: A Retrospective Study in China. *Technology in Cancer Research and Treatment*, *20*. <https://doi.org/10.1177/15330338211037812>
- Wang, Z., Liang, L., Yin, Z., & Lin, J. (2016). Improving chemical similarity ensemble approach in target prediction. *Journal of Cheminformatics*, *8*. <https://doi.org/10.1186/s13321-016-0130-x>
- Warde-Farley, D., Donaldson, S. L., Comes, O., Zuberi, K., Badrawi, R., Chao, P., Franz, M., Grouios, C., Kazi, F., Lopes, C. T., Maitland, A., Mostafavi, S.,

- Montejo, J., Shao, Q., Wright, G., Bader, G. D., & Morris, Q. (2010). The GeneMANIA prediction server: biological network integration for gene prioritization and predicting gene function. *Nucleic Acids Research*, 38(Web Server issue), W214-20. <https://doi.org/10.1093/nar/gkq537>
- Wei, S., Zhang, Y., Ma, X., Yao, Y., Zhou, Q., Zhang, W., Zhou, C., & Zhuang, J. (2023). MAT as a promising therapeutic strategy against triple-negative breast cancer via inhibiting PI3K/AKT pathway. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-39655-9>
- Wibowo, M. A., Nugroho, E. P., & Hermawan, A. (2021). Genomic Understanding Reveals the Important Role of FGFR2 as Paeoniflorin Target for Circumventing Breast Cancer Resistance to Tamoxifen. *Asian Pacific Journal of Cancer Prevention*, 22(12), 3949–3958. <https://doi.org/10.31557/APJCP.2021.22.12.3949>
- Wishart, D. S., Knox, C., Guo, A. C., Cheng, D., Shrivastava, S., Tzur, D., Gautam, B., & Hassanali, M. (2008). DrugBank: a knowledgebase for drugs, drug actions and drug targets. *Nucleic Acids Research*, 36(suppl\_1), D901–D906. <https://doi.org/10.1093/nar/gkm958>
- Wolf I, O’Kelly J, Wakimoto N, Nguyen A, Amblard F, Karlan B.Y, Arbisser J.L, & Koeffler H.P. (2007). Honokiol, a natural biphenyl, inhibits in vitro and in vivo growth of breast cancer through induction of apoptosis and cell cycle arrest. *International Journal of Oncology*, 30, 1529–1537.
- Wu, Y., Zhang, F., Yang, K., Fang, S., Bu, D., Li, H., Sun, L., Hu, H., Gao, K., Wang, W., Zhou, X., Zhao, Y., & Chen, J. (2019). SymMap: an integrative database of traditional Chinese medicine enhanced by symptom mapping. *Nucleic Acids Research*, 47(D1), D1110–D1117. <https://doi.org/10.1093/nar/gky1021>
- Xia, W., Mason, A. S., Xiao, Y., Liu, Z., Yang, Y., Lei, X., Wu, X., Ma, Z., & Peng, M. (2014). Analysis of multiple transcriptomes of the African oil palm (*Elaeis guineensis*) to identify reference genes for RT-qPCR. *Journal of Biotechnology*, 184, 63–73. <https://doi.org/https://doi.org/10.1016/j.jbiotec.2014.05.008>
- Xiao, Y., Ma, M., Li, Y., & Xiao, Y. (2023). Polygenic Regulation by Flos Daturae in the Treatment of Breast Cancer: A Study based on Network Pharmacology and Bioinformatics. *Letters in Drug Design & Discovery*, 20(6), 649–661. <https://doi.org/10.2174/1570180820666230214104234>
- Xie, Z., Bailey, A., Kuleshov, M. V., Clarke, D. J. B., Evangelista, J. E., Jenkins, S. L., Lachmann, A., Wojciechowicz, M. L., Kropiwnicki, E., Jagodnik, K. M., Jeon, M., & Ma’ayan, A. (2021). Gene Set Knowledge Discovery with Enrichr. *Current Protocols*, 1(3), e90. <https://doi.org/https://doi.org/10.1002/cpz1.90>

- Xu, C., Sun, L., Wang, H., Sun, J., Feng, Y., Wang, X., & Song, Z. (2024). Identifying the mechanism of polysaccharopeptide against breast cancer based on network pharmacology and experimental verification. *BMC Cancer*, 24(1). <https://doi.org/10.1186/s12885-024-12494-1>
- Yan, D., Zheng, G., Wang, C., Chen, Z., Mao, T., Gao, J., Yan, Y., Chen, X., Ji, X., Yu, J., Mo, S., Wen, H., Han, W., Zhou, M., Wang, Y., Wang, J., Tang, K., & Cao, Z. (2022). HIT 2.0: an enhanced platform for Herbal Ingredients' Targets. *Nucleic Acids Research*, 50(D1), D1238–D1243. <https://doi.org/10.1093/nar/gkab1011>
- Yan, Y., Xu, J., & Mao, G. (2020). Honokiol suppression of human epidermal growth factor receptor 2 (HER2)-positive gastric cancer cell biological activity and its mechanism. *Medical Science Monitor*, 26. <https://doi.org/10.12659/MSM.923962>
- Yang, B., Wang, N., Wang, S., Li, X., Zheng, Y., Li, M., Song, J., Zhang, F., Mei, W., Lin, Y., & Wang, Z. (2019). Network-pharmacology-based identification of caveolin-1 as a key target of *Oldenlandia diffusa* to suppress breast cancer metastasis. *Biomedicine & Pharmacotherapy*, 112, 108607. <https://doi.org/10.1016/j.biopha.2019.108607>
- Yang, Q., Yang, G., Wu, Y., Zhang, L., Song, Z., & Yang, D. (2024). Bioinformatics analysis and validation of genes related to paclitaxel's anti-breast cancer effect through immunogenic cell death. *Heliyon*, 10(7). <https://doi.org/10.1016/j.heliyon.2024.e28409>
- Yang, S.-E., Hsieh, M.-T., Tsai, T.-H., & Hsu, S.-L. (2002). Down-modulation of Bcl-XL, release of cytochrome c and sequential activation of caspases during honokiol-induced apoptosis in human squamous lung cancer CH27 cells. *Biochemical Pharmacology*, 63.
- Yao, Z.-J., Dong, J., Che, Y.-J., Zhu, M.-F., Wen, M., Wang, N.-N., Wang, S., Lu, A.-P., & Cao, D.-S. (2016). TargetNet: a web service for predicting potential drug–target interaction profiling via multi-target SAR models. *Journal of Computer-Aided Molecular Design*, 30(5), 413–424. <https://doi.org/10.1007/s10822-016-9915-2>
- Ye, Y., Zhang, B., Liang, Q., Wang, D., Bai, F., Li, Y., Wei, L., Li, L., Huang, H., & Tang, Y. (2022). Exploring the pharmacological mechanism of compound kushen injection in the treatment of breast cancer using in vitro experiments: Coupling network pharmacology with GEO database. *Frontiers in Oncology*, 12, 946758. <https://doi.org/10.3389/fonc.2022.946758>
- Yi, X., Qi, M., Huang, M., Zhou, S., & Xiong, J. (2022). Honokiol Inhibits HIF-1 $\alpha$ -Mediated Glycolysis to Halt Breast Cancer Growth. *Frontiers in Pharmacology*, 13. <https://doi.org/10.3389/fphar.2022.796763>

- Y.-I. Xie, C. Tang, J.-P. Qin, H.-Q. Gu, Z.-W. Wang, & Q. Liu. (2023). Molecular docking technology and network pharmacology based on Rhapontici Radix-Cremastrae Pseudobulbus drug pair in treating breast cancer. *Eur Rev Med Pharmacol Sci*, 27(21), 10204–10212.
- Yu, G., Wang, L.-G., Yan, G.-R., & He, Q.-Y. (2015). DOSE: an R/Bioconductor package for disease ontology semantic and enrichment analysis. *Bioinformatics*, 31(4), 608–609. <https://doi.org/10.1093/bioinformatics/btu684>
- Yu, H., Hu, K., Zhang, T., & Ren, H. (2020). Identification of target genes related to sulfasalazine in triple-negative breast cancer through network pharmacology. *Medical Science Monitor*, 26. <https://doi.org/10.12659/MSM.926550>
- Zdrazil, B., Felix, E., Hunter, F., Manners, E. J., Blackshaw, J., Corbett, S., de Veij, M., Ioannidis, H., Lopez, D. M., Mosquera, J. F., Magarinos, M. P., Bosc, N., Arcila, R., Kizilören, T., Gaulton, A., Bento, A. P., Adasme, M. F., Monecke, P., Landrum, G. A., & Leach, A. R. (2023). The ChEMBL Database in 2023: a drug discovery platform spanning multiple bioactivity data types and time periods. *Nucleic Acids Research*. <https://doi.org/10.1093/nar/gkad1004>
- Zeng, C., Lin, M., Jin, Y., & Zhang, J. (2022). Identification of Key Genes Associated with Brain Metastasis from Breast Cancer: A Bioinformatics Analysis. *Medical Science Monitor*, 28. <https://doi.org/10.12659/msm.935071>
- Zhang, L., Yang, K., Wang, M., Zeng, L., Sun, E., Zhang, F., Cao, Z., Zhang, X.-X., Zhang, H., & Guo, Z. (2020). Exploring the Mechanism of Cremastra Appendiculata (SUANPANQI) against Breast Cancer by Network Pharmacology and Molecular Docking. *Computational Biology and Chemistry*, 94, 107396. <https://doi.org/10.1016/j.compbiolchem.2020.107396>
- Zhang, Y., Li, X., Shi, Y., Chen, T., Xu, Z., Wang, P., Yu, M., Chen, W., Li, B., Jing, Z., Jiang, H., Fu, L., Gao, W., Jiang, Y., Du, X., Gong, Z., Zhu, W., Yang, H., & Xu, H. (2023). ETCM v2.0: An update with comprehensive resource and rich annotations for traditional Chinese medicine. *Acta Pharmaceutica Sinica B*, 13(6), 2559–2571. <https://doi.org/https://doi.org/10.1016/j.apsb.2023.03.012>
- Zhang, Y., Ma, X., Li, H., Zhuang, J., Feng, F., Liu, L., Liu, C., & Sun, C. (2021). Identifying the Effect of Ursolic Acid Against Triple-Negative Breast Cancer: Coupling Network Pharmacology With Experiments Verification. *Frontiers in Pharmacology*, 12. <https://doi.org/10.3389/fphar.2021.685773>
- Zhang, Z., Zhang, Z., Song, J., Wu, W., Chen, Y., Li, J., Wang, Y., & Zhao, P. (2023). Prognostic model construction and target identification of Si-Wu-Tang against breast cancer. *Heliyon*, 9(10), e20709. <https://doi.org/10.1016/j.heliyon.2023.e20709>

- Zhao, M., Fu, L., Xu, P., Wang, T., & Li, P. (2023). Network Pharmacology and Experimental Validation to Explore the Effect and Mechanism of Kanglaite Injection Against Triple-Negative Breast Cancer. *Drug Design, Development and Therapy*, 17(null), 901–917. <https://doi.org/10.2147/DDDT.S397969>
- Zheng, L., Jiang, H., Li, R., Song, L., Chen, R., & Dong, H. (2022). The Pharmacological Mechanisms of Xiaochaihutang in Treating Breast Cancer Based on Network Pharmacology. *Contrast Media & Molecular Imaging*, 2022(1). <https://doi.org/10.1155/2022/3900636>
- Zhou, Y., Zhou, B., Pache, L., Chang, M., Khodabakhshi, A. H., Tanaseichuk, O., Benner, C., & Chanda, S. K. (2019). Metascape provides a biologist-oriented resource for the analysis of systems-level datasets. *Nature Communications*, 10(1), 1523. <https://doi.org/10.1038/s41467-019-09234-6>
- Zhu, F., & Xu, D. (2024). Predicting gene signature in breast cancer patients with multiple machine learning models. *Discover Oncology*, 15(1), 516. <https://doi.org/10.1007/s12672-024-01386-2>
- Zhu, J., & Thompson, C. B. (2019). Metabolic regulation of cell growth and proliferation. Dalam *Nature Reviews Molecular Cell Biology* (Vol. 20, Nomor 7, hlm. 436–450). Nature Publishing Group. <https://doi.org/10.1038/s41580-019-0123-5>
- Zhuo, Z., Zhang, D., Lu, W., Wu, X., Cui, Y., Zhang, W., & Zhang, M. (2024). Reversal of tamoxifen resistance by artemisinin in ER+ breast cancer: bioinformatics analysis and experimental validation. *Oncology Research*, 32(6), 1093–1107. <https://doi.org/10.32604/or.2024.047257>