

DAFTAR PUSTAKA

- Abdel-aal, S. M., Young, J. C., Rabalski, I. 2006. Anthocyanin Composition in Black, Blue, Pink, Purple, and Red Cereal Grains. *Journal Agriculture Food Chemistry*, 54(13): 4696-46704.
- Afiansyah, A. G., Mardianto, R., & Salmasfattah, N. 2024. Studi *In Silico* Glibenclamide sebagai Kandidat Obat Antikanker pada Inhibitor Map2k1 dengan Metode *Reverse Docking*. *Jurnal Riset Kesehatan Poltekkes Depkes Bandung*, 16(1): 99-107.
- Aghahosseini, F., Bayat, M., Sadeghian, Z., Gheidari, D., & Safari, F. 2024. Synthesis, Molecular Docking Study, MD Simulation, ADMET, and Drug Likeness of New Thiazolo[3,2-a]pyridine-6,8-dicarbonitrile Derivatives as Potential Anti-diabetic Agents. *PLoS One*, 19(9)
- Aljufri, A. Q. 2024. Review Artikel: Pengaruh Terapi Statin terhadap Risiko Atherosclerotic Cardiovascular Disease (ASCVD). *Media Farmasi Indonesia*, 18(1): 55-62.
- Amin, S., Aliansyah, L. A., Adlina, S., & Prasetyo, N. 2024. *Pencarian Kandidat Obat Baru sebagai Inhibitor Main Protease SARS-CoV-2 dari Senyawa Aktif Tanaman Andrographis Paniculata: Studi In-Silico*. Penerbit Litnus, Jakarta.
- Amrulloh, L. S. W. F., Harmastuti, N., Prasetyo, A., & Herowati, R. 2023. Analysis of Molecular Docking and Dynamics Simulation of Mahogany (*Swietenia macrophylla King*) Compounds Against the PLpro Enzyme SARSCOV-2. *Jurnal Farmasi dan Ilmu Kefarmasian Indonesia*, 10(3): 347-359.
- Araki, R., Yada, A., Ueda, H., Tominaga, K., & Isoda, H. 2021. Differences in the Effects of Anthocyanin Supplementation on Glucose and lipid Metabolism According to the Structure of the Main Anthocyanin: A Meta-analysis of Randomized Controlled Trials. *Nutrients*, 13(6): 1-21.
- Arief, I. & Hairunnisa. 2022. Profil ADME dari Entitas Molekul Baru yang disetujui oleh FDA Tahun 2021: Suatu Kajian *In Silico*. *Jambura Journal of Chemistry*, 4(2): 1-11.
- Arifin, S. N., Pratiwi, D., & Setiawan, A. A. 2017. Studi *In Silico* Senyawa Flavonoid dari Ekstrak Kacang Panjang (*Vigna sinensis L.*) sebagai Penumbuh Rambut dengan Reseptor Androgen. *Jurnal Farmagazine*, 4(2): 31-37.
- Arthyr, D. E. 2023. Theoretical Modelling and Molecular Docking Simulation Evaluating 3-aryl-5-(alkyl-thio)-1 H-1,2,4-triazoles Derivatives as Potent Anti-tubercular Agents Against MTB CYP121 Receptor. *Informatics in Medicine Unlocked*, 41(1): 1-14.
- Arwansyah, Laksmi, A., Tony, I. S. 2014. Simulasi *Docking* Senyawa Kurkumin dan Analognya sebagai Inhibitor Reseptor Androgen pada Kanker Prostat. *Current Biochemistry*, 1(1): 11-19.
- Aryana, I. G. P. M., Santoso, B., Febriani, A., & Wangiyana, I. W. 2020. *Padi Beras Hitam*. Penerbit LPPM Unram Press, Mataram.

- Attique, S. A., Hassan, M., Usman, M., Atif, R. M., Mahboob, S., Al-Ghanim, K. A., Bilal, M., & Nawaz, M. Z. 2019. A Molecular Docking Approach to Evaluate the Pharmacological Properties of Natural and Synthetic Treatment Candidates for Use against Hypertension. *International Journal of Environmental Research and Public Health*, 16(6): 923.
- Ayvaz, H., Cabaroglu, T., Akyildiz, A., Pala, C. U., Temizkan, R., Ağçam, E., Ayvaz, Z., Durazzo, A., Lucarini, M., Direito, R., & Diaconeasa, Z. 2023. Anthocyanins: Metabolic Digestion, Bioavailability, Therapeutic Effects, Current Pharmaceutical/Industrial Use, and Innovation Potential. *Antioxidants*, 12(1): 1-39.
- Azman, M., Sabri, Akmal, A., Qonita, K. M., Faiz, A. H., & Khuriah. 2022. Intestinal Absorption Study: Challenges and Absorption Enhancement Strategies in Improving Oral Drug Delivery. *Pharmaceuticals*, 15(1): 1-24.
- Baig, S. A., Asif, M., Irfani, T. M., Hussain, A., Cheema, A. M., Malik, A., Kamal M. A., & Rasool, M. 2015. The Association of Nutritional Profile and Prognosis of Degenerative Diseases Associated with Carbohydrate and Lipid Metabolism at High Altitude of District Ziarat, Pakistan. *Saudi Journal of Biological Sciences*, 22(1): 50-55.
- Banerjee, P., Kemmler, E., Dunkel, M., & Preissner, R. 2024. ProTox 3.0: a Webserver for the Prediction of Toxicity of Chemicals. *Nucleic Acids Research*, 52(1): 513-520.
- Barrowclough, R. A. 2015. The Effect of Berry Consumption on Cancer Risk. *Journal of Nutritional Health & Food Engineering*, 2(1): 1-9.
- Bickerton, G. R., Paolini, G. V., Besnard, J., Muresan, S., & Hopkins, A. L. 2012. Quantifying the Chemical Beauty of Drugs. *Nature Chemistry*, 4(2): 90-8.
- Bijker, L. E., Uyttebroeck, S., Hauser, B., Vandenplas, Y., & Huysentruyt, K. 2021. Variants in DGAT1 Causing Enteropathy: a Report and Review of the Literature. *Belgian Journal of Paediatrics*, 23(4): 275-279.
- Bone, A. R., & Usiono. 2023. Systematic Literature Review: Efek Samping Obat pada Kesehatan Tubuh. *Jurnal Pendidikan Tambusai*, 7(3): 31030-31034.
- Botham, K. M., & Mayes, P. A. 2012. Harper Biochemistry. EGC, Jakarta.
- BPOM RI. 2014. Peraturan Kepala Badan Pengawasan Obat dan Makanan Republik Indonesia tentang Pedoman Uji Toksisitas Nonklinis Secara *In Vivo*. Badan Pengawas Obat dan Makanan Republik Indonesia, Jakarta.
- Chen, J., Majumdar, T., Amer, A., & Meyers, C. 2015. Pharmacokinetics, Pharmacodynamics, Safety, and Tolerability of Pradigastat, a novel Diacylglycerol Acyltransferase 1 Inhibitor in Overweight or Obese, but Otherwise Healthy Human Subjects. *The Journal of Clinical Pharmacology*, 55(9): 1031-1041.
- Cheng, F., Li, W., Zhou, Y., Jie, S., Wu, Z., Liu, G., Lee, P., & Tang, Y. 2012. admetSAR: A Comprehensive Source and Free Tool for Assessment of Chemical ADMET Properties. *Journal of Chemical Information and Modeling*, 52(1): 3099-3105.

- Chitraju, C., Mejhert, N., Haas, J. T., Diaz-Ramirez, L. G., Grueter, C. A., Imbriglio, J. E., Pinto, S., Koliwad, S. K., Walther, T. C., & Farese, R. V. Jr. Triglyceride Synthesis by DGAT1 Protects Adipocytes from Lipid-Induced ER Stress during Lipolysis. *Cell Metabolism*, 26(2):407-418
- Cremonini, E., Daveri, E., Iglesias, D. E., Kang, J., Wang, Z., Gray, R., Mastaloudis, A., Kay, C. D., Hester, S. N., Wood, S. M., Fraga, C. G., & Oteiza, P. I. 2022. A Randomized Placebo-Controlled Cross-over Study on the Effects of Anthocyanins on Inflammatory and Metabolic Responses to a High-fat Meal in Healthy Subjects. *Redox Biology*, 51(1): 1-12.
- Faqiha, A. F., Indrawijaya, Y. Y. A., Suryadinata, A., Amiruddin, M., & Mutiah, R. 2022. Potensi Senyawa Nitazoxanide dan Arbidol sebagai Antivirus SARS-CoV-2 terhadap Reseptor NSP5 (7BQY dan 2GZ7) dan ACE2 (3D0G dan 1R4L). *Journal of Food and Pharmaceutical Sciences*, 10(1): 570-83.
- Fauziyah, N., & Fitriani, N. 2020. *Makanan Fungsional Tape Ketan Hitam Efektif Menurunkan Kolesterol LDL*. Politeknik Kesehatan Kemenkes Bandung, Bandung.
- Fortuna, T. A., Wahyumi, A. S., & Putri, N. T. 2022. The Relationship Between The Level of Knowledge and Perception of The Use of Traditional Medicine in The People of Klaten City in 2022. *Jurnal Farmasi Sains dan Praktis*, 9(2): 160-167.
- Foufelle, F., & Ferré, P. 2013. *Mechanism of Storage and Synthesis of Fatty Acids and Triglycerides in White Adipocytes*. Physiology and Physiopathology of Adipose Tissue. Springer, Paris.
- Galli, G., Ruiz-Somacarrera, M., González del Palacio, L., Melcón-Fernández, E., González-Pérez, R., García-Estrada, C., Martínez-Valladares, M., & Balaña-Fouce, R. 2025. High-Throughput Screening of Five Compound Libraries for Anthelmintic Activity and Toxicity Leads to the Discovery of Two Flavonoid Compounds. *International Journal of Molecular Sciences*, 26(4): 1-18.
- GBIF (*Global Biodiversity Information Facility*). 2025. Classification of *Oryza sativa*. <https://www.gbif.org/species/2703459>. 21 April 2024.
- Glory, L., Kawengian, S., & Mayulu, N. 2016. Perubahan Kadar Kolesterol Total dan Trigliserida pada Kelinci New Zealand White yang Diberi Ekstrak Beras Hitam (*Oryza sativa L.*). *eBiomedik*, 4(1): 1-6.
- Gunawan, A., Harahap, R. S., Listyarini, K., & Sumantri, C. 2018. Identifikasi Keragaman Gen DGAT1 Serta Asosiasinya Terhadap Karakteristik Karkas dan Sifat Perlemakan Domba. *Jurnal Ilmu dan Teknologi Peternakan Tropis*, 6(2): 259-266.
- Gohlke, H., & Klebe, G. Approaches to the Description and Prediction of the Binding Affinity of Small-molecule Ligands to Macromolecular Receptors. *Angewandte Chemie International Edition*, 41(15): 2645-2676.

- Hakiki, A., Andika, & Rahmawati. 2024. Studi Molecular Docking dan Prediksi ADMET Senyawa Turunan Kurkumin Sebagai Inhibitor Kasein Kinase 2- α . *Jurnal Ilmu Kefarmasian*, 5(2): 195-212.
- Hanas, D. F., Kriswiyanti, E., & Junitha, I. K. 2017. Karakter Morfologi Beras sebagai Pembeda Varietas Padi. *Indonesian Journal of Legal and Forensic Sciences*, 7(1): 23-28.
- Hariono, M., & Rollando. 2016. Molecular Docking of Compounds from *Chaetomium* sp. Against Human Estrogen Receptor Alpha in searching Anti Breast Cancer. *Jurnal Farmasi Sains dan Komunitas*, 13(1): 35-43.
- Hoffart, E., Ghebreghiorghis, L., Nussler, A. K., Thasler, W. E., Weiss, T. S., Schwab, M., & Burck, O. 2012. Effects of Atorvastatin Metabolites on Induction of Drug-Metabolizing Enzymes and Membrane Transporters through Human Pregnane X Receptor. *British Journal of Pharmacology*, 165(5): 1595-1608.
- Hou, T., Wang, J., Zhang, W., & Xu, X. 2007. ADME Evaluation in Drug Discovery: Prediction of Oral Absorption by Correlation and Classification. *Journal of Chemical Information and Modeling*, 47(1): 208-18.
- Howard, B. V., Ruotolo, G., & Robbins, D. C. 2003. Obesity and Dyslipidemia. *Journal of Clinical Lipidology*, 32(4):855-867.
- Ibrahim, N. 'I., Fairus, S., Zulfarina, M. S., & Naina, M. I. 2020. The Efficacy of Squalene in Cardiovascular Disease Risk-A Systematic Review. *Nutrients*, 12(2): 414-420.
- Ikhtira, A. D., Rohman, F., Lestrai, S. R. 2023. Evaluasi Senyawa Bioaktif *Nasturtium Montanum* Wall. sebagai Kandidat Agen Antipiretik terhadap Reseptor Prostaglandin Sintase 2 (Ptgs2) secara *In Silico*. *Berita Biologi*, 22(3): 323-334.
- Ito, V. C., & Lacerda, L. G. 2019. *Black Rice (Oryza sativa L.): a Review of Its Historical Aspects, Chemical Composition, Nutritional and Functional Properties, and Applications and Processing Technologies: Food Chemistry*. Elsevier, Norwich.
- Ivanović, V., Rančić, M., Arsic, B., & Pavlović, A. 2020. Lipinski's Rule of Five, Famous Extensions and Famous Exceptions. *Chemia Naissensis*, 3(1):. 171-181.
- Jang, H. H., Hwang, I. G., & Lee, Y. M. 2023. Effects of Anthocyanin inSupplementation on Blood Lipid Levels: a Systematic Review and Meta-analysis. *Frontiers in Nutrition*, 10(1): 1-14.
- Jim, E. L. 2013. Metabolisme Lipoprotein. *Jurnal Biomedik (JBM)*, 5(3): 149-156.
- Kalita, J., D. Chetia, D., & Rudrapal, M. 2019. Molecular Docking, Drug-likeness Studies and ADMET Prediction of quinoline Imines for Antimalarial Activity. *Journal of Medicinal Chemistry and Drug Design*, 2(1): 1-7.
- Karanchi, H., Muppidi, V., & Wyne, K. 2023. *Hypertriglyceridemia*. StatPearls Publishing. Treasure Island.

- Karnjanawipagul, P. W., Nittayanuntawech, P., Rojsanga, & Suntornsuk, L. 2010. Analysis of β -Carotene in Carrot by Spectrophotometry. *Journal of Pharmaceutical Science*, 37(1): 8-16.
- Karwiti, W., Fitriana, E., Mustopa, R., & Siregar, S. 2022. Deteksi Dini dan Peningkatan Pengetahuan Masyarakat tentang Kolesterol di Wilayah Kerja Puskesmas Depati VII Kabupaten Kerinci. *Jurnal Abdikemas*, 4(2): 82-88.
- Kementerian Kesehatan Republik Indonesia. 2019. *Profil Penyakit Tidak Menular Tahun 2019*. Kemenkes, Jakarta.
- Khasanah, N. A. H., & Setiyawati, M. 2021. Hubungan Durasi Tidur dengan Kadar Trigliserida Supir Bus di Pangkalan Bun Kalimantan Tengah. *Jurnal Bina Cipta Husada*, 17(2): 122-131.
- Khoo, H. E., Azlan, A., Tang, S. T., & Lim, S. M. 2017. Anthocyanidins and Anthocyanins: Colored Pigments as Food, Pharmaceutical Ingredients, and the Potential Health Benefits. *Food and Nutrition Research*, 61(1):1-20.
- Kim, G. R., Jung, E. S., Lee, S., Lim, S. H., Ha, S. H., & Lee, C. H. 2014. Combined Mass Spectrometry Based Metabolite Profiling of Different Pigmented Rice (*Oryza sativa* L.) Seeds and Correlation with Antioxidant Activities. *Molecules*, 19(10): 15673-15686.
- Kurczab, R. 2017. The Evaluation of QM/MM-Driven Molecular Docking Combined with MM/GBSA Calculations as a Halogen-bond Scoring Strategy. *Acta Crystallographica Section B: Structural Science, Crystal Engineering and Material*, 73(1): 188-194.
- Latifa, N., Nurhidajah, & Yusuf, M. 2019. Stabilitas Antosianin dan Aktivitas Antioksidan Tepung Beras Hitam Berdasarkan Jenis Kemasan dan Lama Penyimpanan. *Jurnal Pangan dan Gizi*, 9(2): 83-95.
- Larouchea, M., Watts, G. F., Ballantyned, C., & Gaude, D. 2025. An Overview of Persistent Chylomicronemia: Much More Than Meets the Eye. *Current Opinion in Endocrinology, Diabetes, and Obesity*, 32(2): 75-88.
- Lestario, L. N., Muninggar, J. & Pudjihastuti, S. 2019. Anthocyanin and Recent Development as Functional Food. *IOP Conference Series: Materials Science and Engineering*, 509(1): 1-10.
- Lins, L., & Brasseur, R. 1995. The Hydrophobic Effect in Protein Folding. *Faseb Journal*, 9(7): 535-540.
- Listyani, T. A., Herowati, R., Djalil, A. D. 2018. View of Molecular Docking Analysis of Derivate Phthalimide Compounds as Non-Nucleosida HIV-1 Reverse Transcriptase Inhibitor. *Jurnal Farmasi Indonesia*, 15(1): 123-134.
- Mansbach, C. M., & Gorelick, F. 2007. Development and Physiological Regulation of Intestinal Lipid Absorption: Dietary Lipid Absorption, Complex Lipid Synthesis, and the Intracellular Packaging and Secretion of Chylomicrons. *AJP Gastrointestinal and Liver Physiology*, 293(4): 645-650.
- Marzuki, S. 2012. Pemeriksaan Trigliserida tanpa Puasa. *Jurnal Summit Volume*, 7(1): 1-4.
- Masula, A. F., Puspitasari, D., Supriatin, E., Ummah, K., Rokhmatin, D., Mubarrok, M. M., Hariza, A. T., Isnawati, & Purnama, E. R. 2018. *Docking Molekuler*

- Senyawa Metabolit Sekunder *Lantana camara* sebagai Antiinflamasi terhadap Enzim COX-1. *Jurnal Biota*, 4(2): 79-83.
- McCoy, T., & Frank, D. 2021. Understanding Pesticide Toxicity. *Virginia Cooperative Extension*, 1(1): 1-4.
- Meng, X. Y., Zhang, H. X., Mezei, M., & Cui, M. 2011. Molecular Docking: A Powerful Approach for Structure-Based Drug Discovery. *Current Computer-Aided Drug Design*, 7(2): 146-57.
- Meyers, C. D., Tremblay, K., Amer, A., Chen, J., Jiang, L., & Gaudet, D. 2015. Effect of the DGAT1 Inhibitor Pradigastat on Triglyceride and apoB48 Levels in Patients with Familial Chylomicronemia Syndrome. *Lipids Health and Disease*, 14(8): 1-9.
- Miller, M., Stone, N. J., Ballantyne, C., Bittner, V., Criqui, M. H., Ginsberg, H. N., Goldberg, A. C., Howard, W. J., Jacobson, M. S., Kris-Etherton, P. M., Lennie, T. A., Levi, M., Mazzone, T., & Pennathur, S. 2011. Triglycerides and Cardiovascular Disease: a Scientific Statement from the American Heart Association. *Circulation*, 123(20): 2292-2333.
- Morak-Młodawska, B., Jeleń, M., Martula, E., & Korlacki, R. 2023. Study of Lipophilicity and ADME Properties of 1,9-Diazaphenothiazines with Anticancer Action. *International Journal of Molecular Sciences*, 24(8): 1-11.
- Musfiroh, I., Sigalingging, O. S., Suhandi, C., Ikram N. K. K., Megantara, S., & Muchtaridi. 2023. In Silico Study of Flavonoid Compounds Against ACE-2 Receptors as Anticovid-19. *International Journal of Applied Pharmaceutics*, 15(4): 225-230.
- Muttaqin, F. Z. 2019. Studi *Molecular Docking*, *Molecular Dynamic*, dan Prediksi Toksisitas Senyawa Turunan Alkaloid Naftiridin sebagai Inhibitor Protein Kasein Kinase 2-A pada Kanker Leukemia. *Pharmacoscript*, 2(2): 131-151.
- Naik, R., Obiang-Obounou, B. W., Kim, M., Choi, Y., Lee, H. S., & Lee, K. 2014. Therapeutic Strategies for Metabolic Diseases: Small-molecule Diacylglycerol Acyltransferase (DGAT) Inhibitors. *ChemMedChem*, 9(11): 2410-2424.
- Ningrat, A. W. S. 2022. *Docking* Molekuler Senyawa Brazilein Herba *Caesalpinia Sappanis Lignum* pada *Mycobacterium Tuberculosis Inha* sebagai Antituberkulosis. *Indonesian Health Journal (Inhealth)*, 1(1): 29-34.
- Noorizadeh, H., Farmany, A., Noorizadeh, M., & Kohzadi, M. 2013. Prediction of Polar Surface Area of Drug Molecules: A QSPR Approach. *Drug Testing and Analysis*, 5(4): 222-227.
- Nuryati. 2017. *Rekam Medis dan Informasi Kesehatan (RMIK): Farmakologi*. Kementerian Kesehatan Republik Indonesia, Jakarta.
- Pallarés, N., Barba, F. J., Berrada, H., Tolosa, J., & Ferrer, E. 2020. Pulsed Electric Fields (PEF) to Mitigate Emerging Mycotoxins in Juices and Smoothies. *Applied Sciences*, 10(19): 1-13.

- Petit, J., Meurice, N., Kaiser, C., & Maggiora, G. 2012. Softening the Rule of Five- Where to Draw the Line? *Bioorganic and Medicinal Chemistry*, 20(1): 5343-5351.
- Pratama, A. B., Herowati, R., & Ansory, H. M. 2021. Studi *Docking* Molekuler Senyawa dalam Minyak Atsiri Pala (*Myristica fragrans* H.) dan Senyawa Turunan Miristisin terhadap Target Terapi Kanker Kulit. *Majalah Farmaseutik*, 17(2): 233-242.
- Pratiwi, A. P., & Purba, R. P. K. 2020. Potensi Ekstrak Etanol Daun Pelawan (*Tristaniaopsis merguensis* Griff.) sebagai Antikolesterol. *Jurnal Kesehatan Poltekkes Kemenkes RI Pangkalpinang*, 8(2): 127-133.
- Pratoko, D. K. 2012. Molecular Docking Senyawa Fitokimia *Piper longum* (L.) terhadap Reseptor Siklooksigenase-2 (COX-2) sebagai Antiinflamasi. *Chemistry Progress*, 5(1): 31-36.
- Price, G., & Patel, D. A. 2023. *Drug Bioavailability*. StatPearls Publishing, Petersburg.
- Priska, M., Peni, N., Carvallo, L., & Ngapa, Y. D. 2018. Antosianin dan Pemanfaatannya. *Cakra Kimia (Indonesian E-Journal of Applied Chemistry)*, 6(2): 79-97.
- Pundir, C. S., & Narang, J. 2013. Determination of Triglycerides with Special Emphasis on Biosensors: A review. *International Journal of Biological Macromolecules*, 61(1): 379-389.
- Putri, T. Z. A. D., Findrayani, R. P., Isrul, M., & Lolok, N. 2024. Studi *Molecular Docking* Senyawa Kimia dari Herba Putri Malu (*Mimosa pudica*) Terhadap Inhibisi Enzim A-Glukosidase sebagai Antidiabetes Melitus. *Jurnal Pharmacia Mandala Waluya*, 3(4): 225-233.
- Rahma, C., Yuniastuti, A., & Christijanti, W. 2021. Kadar Trigliserida Tikus Hiperkolesterolemia setelah Pemberian Pati Umbi Gembili (*Dioscorea esculenta* L.). *Prosiding Seminar Nasional Biologi*, 9(1): 162-162.
- Rahmat, D., Dudi, & Paryati, S. P. Y. 2017. Pengaruh Keragaman Gen DGAT1 terhadap Kadar Kolesterol dan Trigliserida Darah Domba Padangjajaran. *Jurnal Ilmu Peternakan (JANHUS)*, 2(1): 1-7.
- Ramadhani, A., & Probosari, E. 2014. Perbedaan Kadar Trigliserida sebelum dan setelah Pemberian Sari Bengkuang (*Pachyrrhizus erosus*) pada Wanita. *Journal of Nutrition College*, 3(4): 73-579.
- Rastini, M., Giantari, I. G. A., Adnyani, K., & Laksmiani, N. P. 2019. *Molecular Docking* Aktivitas Antikanker dari Kuersetin terhadap Kanker Payudara Secara *In Silico*. *Jurnal Kimia*. 13(2): 180-184.
- Rawat, S., & Ghate, M. 2022. Benzimidazole-Urea Derivatives as anti-cancer Agents: *In-silico* Study, Synthesis and *In-vitro* Evaluation. *International Journal of Health Sciences*, 6(5): 5187-5217.
- Refsgaard, H. H., Jensen, B. F., Brockhoff, P. B., Padkjaer, S. B., Guldbandt, M., & Christensen, M. S. 2005. In Silico Prediction of Membrane Permeability from Calculated Molecular Parameters. *Journal of Medicinal Chemistry*, 48(3): 805-811.

- Roskoski, R. 2023. Rule of Five Violations Among the FDA-approved small Molecule Protein Kinase Inhibitors. *Pharmacological Research*, 191(1): 1-12.
- Sa'adah, I. R., Supriyanta, & Subejo. 2013. Keragaman Warna Gabah dan Warna Beras Varietas Lokal Padi Beras Hitam (*Oryza sativa* L.) yang Dibudidayakan oleh Petani Kabupaten Sleman, Kantul, dan Magelang. *Vegetalika*, 2(3): 13-20.
- Sachdev, V., Leopold, C., Bauer, R., Patankar, J. V., Iqbal, J., Obrowsky, S., Boverhof, R., Doktorova, M., Scheicher, B., Goeritzer, M., Kolb, D., Turnbull, A. V., Zimmer A., Hoefler, G., Hussain, M. M., Groen, A. K., & Kratky, D. 2016. Novel Role of a Triglyceride-synthesizing Enzyme: DGAT1 at the Crossroad Between Triglyceride and Cholesterol Metabolism. *Biochim Biophys Acta*, 1861(9): 1132-1141.
- Safdar, M., & Ozaslan, M. 2021. The Role of Diglyceride Acyltransferase (DGAT) Genes Polymorphisms on Milk Production in Dairy Goats. *German Journal of Veterinary Research*, 1(1): 15-18.
- Safitri, S., Mappahya, K. A., Nurhikmawati, Wisudawan, & Safitri, A. 2023. Hubungan Faktor Risiko Kejadian Hiperkolesterolemia Pasien Rawat Jalan Jantung Koroner RS Ibnu Sina Makassar. *Jurnal Mahasiswa Kedokteran*, 3(8): 552-562.
- Santoso, A., Putranto, J. N. E., Tedjasukmana, P., Suryawan, R., Rifqi, S., & Kasiman, S. 2013. *Pedoman Tatalaksana Dislipidemia*. Centra Communications, Jakarta.
- Sari, D. R. T., Cairns, J. R. K., Safitri, A., & Fatchiyah, F. 2019. Virtual Prediction of the Delphinidin-3-O-glukosida and Peonidin-3-O-glukosida as Anti-inflammatory of TNF- α Signaling. *Acta Informatica Medica*, 27(3): 152-157.
- Sari, I. W., Junaidin, & Pratiwi, D. 2020. Studi *Molecular Docking* Senyawa Flavonoid Herba Kumis Kucing (*Orthosiphon stamineus*) pada Reseptor β -Glucosidase sebagai Antidiabetes Tipe 2. *Jurnal Farmagazine*, 7(2): 54-60.
- Sen, D. J., Nandi, K., & Saha, D. 2021. Rule of Five: the Five Men Army to Cross the Blood Brain Barrier for Therapeutically Potent. *World Journal of Advance Healthcare Research*, 5(3): 206-211.
- Setiani, L. A. ., Sari, B. L. ., & Muntaza, W. 2023. Prediction of Carcinogenic, Mutagenic, Hepatotoxic, and LD50 Toxicity of Herbs *Euphorbia hirta* and *Camellia sinensis* Leaf Compounds as *In Silico* Antihypertensive Agents. *Jurnal Penelitian Pendidikan IPA*, 9(1): 103-112.
- Shahruzzaman, M. D., Shafiul Hossain, S., Tanvir Ahmed, T., Sumaya F. Kabir, S. F., Islam, M. M., Rahman, A., Islam, S., Sultana, S., & Rahman, M. Md. 2022. *Biological Macromolecules*. Academic Press, Cambridge.
- Shi, Q., Chen, J., Zou, X., & Tang, X. 2022. Intracellular Cholesterol Synthesis and Transport. *Frontiers in Cell and Developmental Biology*, 10(1): 1-11.

- Silva, F. L., Ravi, R., Vangipurapu, J., & Laakso, M. 2022. Metabolite Signature of Simvastatin Treatment Involves Multiple Metabolic Pathways. *Metabolites*, 12(8): 1-11.
- Siregar, F. A., & Makmur, T. 2020. Metabolisme Lipid dalam Tubuh. *Jurnal Inovasi Kesehatan Masyarakat*, 1(2): 60-66.
- Siregar, M. H., Fatmah, & Sartika, R. A. D. Analisis Faktor Utama Kadar Trigliserida Abnormal pada Penduduk Dewasa di Indonesia. *Jurnal Delima Harapan*, 7(2): 118-127.
- Sliwoski, G., Kothiwale, S., Meiler, J., & Lowe, E. W. 2014. Computational Methods in Drug Discovery. *Pharmacological Reviews*, 66(1): 334-395.
- Song, H., Shen, X., Wang, F., Li, Y., & Zheng, X. Black current Anthocyanins Improve Lipid Metabolism and Modulate Gut Microbiota in High-fat Diet-induced Obese Mice. *Molecular Nutrition Food Research*, 65(6): 1-8.
- Speciale, A., Cimino, F., Saija, A., Canali, R., & Virgili, F. 2014. Bioavailability and Molecular Activities of Anthocyanins as Modulators of Endothelial Function. *Genes and Nutrition*, 9(1): 1-19.
- Stielow, M., Witczyńska, A., Kubryń, N., Fijałkowski, Ł., Nowaczyk, J., & Nowaczyk, A. 2023. The Bioavailability of Drugs—The Current State of Knowledge. *Molecules*, 28(1): 1-19.
- Stroes, E. S. G., Patel, S., Bernelot-Moens, S. Zhou, Y., Keefe, D., Wright, M., & Gaudet, D. 2015. The Diacylglycerol Acyltransferase 1 Inhibitor, Pradigastat, Was Well Tolerated in a 52-Week Clinical Trial in FCS Patients. *Journal of Clinical Lipidology*, 9(3):447-450.
- Suatowijaya, Riza, H., & Fajriaty, I. 2019. *Virtual Screening* Struktur Modifikasi Simvastatin terhadap Enzim Hmg-Coa Reduktase Menggunakan Metode *Docking*. *Jurnal Mahasiswa Farmasi Fakultas Kedokteran UNTAN*, 1(1): 1-12.
- Sulastris, S., Riza, H., & Fajriaty, I. 2019. Studi *In Silico* Senyawa Turunan Flavonoid terhadap Enzim HMGC_oA Reduktase. *Journal Farmasi Kalbar*, 4(1): 1-7.
- Suh, M. H., Yoo, S. H., & Lee, H. G. 2005. Antioxidative Activity of Microencapsulated γ -oryzanol on High Cholesterol-fed Rats. *Journal of Agricultural and Food Chemistry*, 11(53): 9747-50.
- Sui, X., Wang, K., Gluchowski, N. L., Elliott, S. D., Liao, M., Walther, T. C., & Farese, R. V. Jr. 2020. Structure and Catalytic Mechanism of a Human Triacylglycerol-synthesis Enzyme. *Nature*, 581(7808): 323-328.
- Sui, X., Wang, K., & Song, K. 2023. Mechanism of Action for Small-molecule Inhibitors of Triacylglycerol Synthesis. *Nature Communication*, 14(1): 1-10.
- Syafrizayanti, Putria, A., Salima, M., Kusnanda, A., dan J. 2023. Simulasi Inhibisi Aktivitas Enzim α -Amilase dan α -Glukosidase oleh Senyawa Bioaktif Mikroalga *Spirulina platensis*. *ALCHEMY: Jurnal Penelitian Kimia*, 19(2): 223-233.

- Syahbanu, F., Giriwono, P. E., Tjandrawinata, R. R., Suhartono, M. T. 2020. Molecular Analysis of a Fibrin-degrading Enzyme from *Bacillus subtilis* K2 Isolated from the Indonesian Soybean-based Fermented Food Moromi. *Molecular Biology Reports*, 47(1): 8553-8563.
- Syaqila, C. N., Pebrilia, J., Restianingsih, T., & Harahap, N. S. 2024. Molecular Docking Senyawa (8)-Shogaol sebagai Obat Antikanker. *Journal Online of Physics*, 9(3): 72-76.
- Tada, H., Takamura, M., & Kawashiri, M. 2020. *Advances in Clinical Chemistry*. Elsevier, Edinburgh.
- Tapan, R. S., & Misra, A. 2011. *Challenges in Delivery of Therapeutic Genomics and Proteomics*. Elsevier, Edinburgh.
- Tegegn, G., Melaku, Y., Eswaramoorthy, R., & Endale Annisa, M. 2022. Pharmacokinetics, Drug-Likeness, Antibacterial and Antioxidant Activity of Secondary Metabolites from the roots Extracts of *Crinum abyssinicum* and *Calotropis procera* and *In Silico* Molecular Docking Study. *International Journal of Secondary Metabolite*, 9(4): 467-492.
- Thilavech, T., Suantawee, T., Chusak, C., Suklaew, P. O., & Adisakwattana, S. 2025. Black Rice (*Oryza sativa* L.) and its Anthocyanins: Mechanisms, Food Applications, and Clinical Insights for Postprandial Glycemic and Lipid Regulation. *Food Production, Processing, and Nutrition*, 7(15): 1-26.
- Trub, A. G., Wagner, G. R., Anderson, K. A., Crown, S. B., Zhang, G. F., Thompson, J. W., Ilkayeva, O. R., Stevens, R. D., Grimsrud, P. A., Kulkarni, R. A., Backos, D. S., Meier, J. L., & Hirschey, M. D. 2022. Statin Therapy Inhibits Fatty Acid Synthase via Dynamic Protein Modifications. *Nature Communications*, 13(2542): 1-14.
- Umar, A., Firdayanti, & Hijerah, N. 2022. Profil Kolesterol Total pada Penderita Penyakit Jantung di Rumah Sakit Umum Daerah Kota Kendari. *Jurnal Analis Kesehatan Kendari*, 5(1): 6-10.
- Vekic, J., Zeljkovic, A., Cicero, A. F. G., Janez, A., Stoian, A. P., Sonmez, A., & Rizzo, M. 2022. Atherosclerosis Development and Progression: The Role of Atherogenic Small Dense LDL. *Medicina*, 58(2): 1-12.
- Viecili, P. R. N., da Silva, B., Hirsch, G. E., Porto, F. G., Parisi, M. M., Castanho, A. R., Wender, M., & Klafke, J. Z. 2017. *Triglycerides Revisited to the Serial: Advances in Clinical Chemistry*. Elsevier, Amsterdam.
- Wadood, A., Ahmed, N., Shah, L., Ahmad, A., Hassan, H., & Shams, S. 2013. In-silico Drug Design: an Approach which Revolutionarised the Drug Discovery Process. *Drug Design and Delivery*, 1(1): 1-14.
- Wahjuningsih, S. B., Fitriani, A., Azkia, M. N., & Rahmadhia, S. N. 2023. *Proantosianidin, Antosianidin, dan Antosianin: Senyawa Bioaktif dalam Bahan Pangan*. Universitas Semarang Press (USM Press), Semarang.
- Wallace, T. C., Slavin, M., & Frankenfeld, C. L. Systematic review of anthocyanins and markers of cardiovascular disease. *Nutrients*, 8(1):1–13.
- Wang, H., Garrutim G., Liu, M., Portincasa, P., & Wang, D. 2017. Cholesterol and Lipoprotein Metabolism and Atherosclerosis: Recent Advances in Reverse Cholesterol Transport. *Annals of Hepatology*, 16(1): 27-42.

- Wang, L., Qian, H., Nian, Y., Han, Y., Ren, Z., Zhang, H., Hu, L., Prasad, B. V. V., Laganowsky, A., Yan, N., & Zhou, M. 2020. Structure and Mechanism of Human Diacylglycerol O-acyltransferase-1. *Nature*, 581(7808): 329-332.
- Wathon, S., Oktarianti, R., & Senjarini, K. 2024. Molecular Docking of Interaction between D7 Protein from the Salivary Gland of *Aedes aegypti* and Leukotriene A4 for Developing Thrombolytic Agent. *BIO Web of Conferences 101*, 1(1): 1-14.
- Watusoke, A. E., Polii, H., & Wowor, P. E. 2016. Gambaran Kadar Lipid Trigliserida pada Pasien Usia Produktif di Puskesmas Bahu Kecamatan Malalayang Kota Manado periode November 2014-Desember 2014. *Jurnal e-Biomedik (eBm)*, 4(2): 1-5.
- Whitaker, J. R. 2003. Enzymes: Functions and Characteristics. *Encyclopedia of Food Sciences and Nutrition*. Academic Press, London.
- Whitney, S. M., 2012. *Clinical Veterinary Advisor*. Elsevier, Norwhich.
- Widiastuti, N. L. G. K. 2019. Pendidikan Sains Terintegrasi Keterkaitan Konsep Ikatan Kimia dengan Berbagai Bidang Ilmu. *Jurnal Kajian Pendidikan Widya Accarya FKIP Universitas Dwijendra*, 10(2): 1-16.
- Wijaya, S., Yonas, S., Hartanti, L., Setiawan, H., & Soegianto, L. 2018. Studi Pendahuluan: Korelasi Aktivitas Antikolesterol dengan Aktivitas Antioksidan Ekstrak Etanol Daun Salam (*Syzygium polyanthum*). *Journal of Pharmacy Science and Practice I*, 5(2): 100-111.
- Wulandari, R. L., Susilowati, S., & Asih, M. 2015. Pengaruh Kombinasi Ekstrak Etanol Daun Sirsak (*Annona muricata* L.) dan Simvastatin terhadap Kadar Kolesterol Total dan *Low Density Lipoprotein* (LDL) Tikus yang Diinduksi Pakan Tinggi Lemak. *Jurnal Ilmu Farmasi dan Farmasi Klinik*, 12(1): 24-32.
- Yani, M. 2015. Mengendalikan Kadar Kolesterol pada Hiperkolestolemia. *Jurnal Olahraga Prestasi*, 11(2): 1-7.
- Yanuar, A., Suhartanto, H., Mun'im, A., Anugraha, B. H., Syahdi, R. R. 2014. Virtual Screening of Indonesian Herbal Database as HIV 1 Protease Inhibitor. *Bioinformation*, 10(2): 52-55.
- Yen, C. L., Stone, S. J., Koliwad, S., Harris, C., & Farese, R. V. Jr. 2008. Thematic Review Series: Glycerolipids. DGAT Enzymes and Triacylglycerol Biosynthesis. *Journal of Lipid Research*, 49(11): 2283-2301.
- Yuan, G., Khalid, Z. Al-Shali, Robert, A. H. 2007. Review: Hypertriglyceridemia: Its Etiology, Effects and Treatment. *Canadian Medical Association Journal*, 176(8): 1113-1120.
- Yue, W., Wu, L., & Han, F. 2019. In Vitro Stimulated Fermentation Evaluation of Effects OF Dry Matters and Anthocyanins in Red Wine on Intestinal Microbiota (Chinese). *Food Science*, 43(11): 121-129.
- Yunta, M. J. R. 2016. Docking and Ligand Binding Affinity: Uses and Pitfalls, *American Journal of Modeling and Optimization*, 4(3): 74-114.
- Zárate, A., Manuel, L., Saucedo, R., Valencia, M., & Basurto, L. 2016. Hypercholesterolemia s a Risk Factor for Cardiovascular Disease: Current Controversial Therapeutic Management. *Archives of Medical Research*, 47(7): 491-495.

- Zhang, M. W., Zhang, R. F., Zhang, F. X., & Liu, R. H. 2010. Phenolic Profiles and Antioxidant Activity of Black Rice Bran of Different Commercially Available Varieties. *Journal of Agricultural and Food Chemistry*, 58(13): 7580-7587.
- Zhang, L., Wang, Y., Cao, Y., Wang, F., & Li, F. 2025. Review: Enhancing the Bioavailability and Stability of Anthocyanins for the Prevention and Treatment of Central Nervous System-Related Diseases. *Foods*, 14(14): 1-30.
- Zimodro, J. M., Rizzo, M., & Gouni-Berthold, I. 2025. Current and Emerging Treatment Options for Hypertriglyceridemia: State-of-the-Art Review. *Pharmaceuticals*, 18(2): 1-21..