

## DAFTAR PUSTAKA

- Afianda, G. D., & Budiati, T. 2025. Uji Efek Sitotoksitas Pada Daun Tanaman Herbal Terhadap Sel Vero: Cytotoxicity Effect Test and Sensory Characteristics of Herbal Plant Leaves on Normal Cells. *JOFE: Journal of Food Engineering*, 4(1): 1-10.
- Aisyah, A. N., Nur, S., Lukitaningsih, E., Rumiati, R., Burhan, A., Adjara, S. M., & Rahim, K. 2020. Efek Sitotoksik Ekstrak dan Fraksi Umbi Paku Atai Merah (*Angiopteris ferox* Copel) Terhadap Sel Kanker Payudara T47D. *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy)(e-Journal)*, 6(2).
- Ammerman, N. C., Beier-Sexton, M., & Azad, A. F. 2008. Growth and maintenance of Vero cell lines. *Current protocols in microbiology*, 11(1): A-4E.
- Atrindo Asia Global. 2020. Kobra Jawa (*Naja sputatrix*). [https://www.aag.co.id/storage/app/media/Kobra%20Jawa\\_Naja%20sputatrix.pdf](https://www.aag.co.id/storage/app/media/Kobra%20Jawa_Naja%20sputatrix.pdf). Diakses tanggal 8 April 2025, jam 18.05 WIB.
- Azzahroh, P. M., Purnomo, F. O., & Halimatushadyah, E. 2024. Uji Aktivitas Antikanker Terhadap Sel Line A549 Pada Green Synthesis Nanopartikel TiO<sub>2</sub> Menggunakan Bayam Berduri Secara In Vitro: Anticancer Activity Test Against A549 Line Cells On Nanopartikel TiO<sub>2</sub> Results Of Green Synthesis Using Prickly Spinach In Vitro. *Binawan Student Journal*, 6(2): 169-173.
- Basumatary, M., Talukdar, A., Sharma, M., Dutta, A., Mukhopadhyay, R., & Doley, R. 2024. Exploring the anticancer potential of Cytotoxin 10 from *Naja kaouthia* venom: Mechanistic insights from breast and lung cancer cell lines. *Chemico-Biological Interactions*, 403: 111254.
- Bedraoui, A., Suntravat, M., El Mejjad, S., Enezari, S., Oukkache, N., Sanchez, E. E., ... & Daouda, T. 2024. Therapeutic potential of snake venom: Toxin distribution and opportunities in deep learning for novel drug discovery. *Medicine in Drug Discovery*, 21: 100175.
- Bittenbinder, M. A., van Thiel, J., Cardoso, F. C., Casewell, N. R., Gutiérrez, J. M., Kool, J., & Vonk, F. J. 2024. Tissue damaging toxins in snake venoms: mechanisms of action, pathophysiology and treatment strategies. *Communications biology*, 7(1): 358.
- Brahma, R. K., Modahl, C. M., & Kini, R. M. 2021. *Three-Finger Toxins*. In Handbook of Venoms and Toxins of Reptiles. CRC Press, pp. 177-194.
- Boie, F. V. 1827. Bemerkungen über Merrem's Versuch eines Systems der Amphibien, 1. Lieferung: Ophidier. *Isis van Oken*, 20: 508-566.
- Bray, F., Laversanne, M., Sung, H., Ferlay, J., Siegel, R. L., Soerjomataram, I., & Jemal, A. 2024. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: a cancer journal for clinicians*, 74(3): 229-263.
- Brglez, V., Lambeau, G., & Petan, T. 2014. Secreted phospholipases A<sub>2</sub> in cancer: diverse mechanisms of action. *Biochimie*, 107: 114-123.
- Buana, I., & Harahap, D. A. 2022. Asbestos, Radon dan Polusi Udara sebagai

- faktor resiko kanker paru pada Perempuan bukan perokok. *AVERROUS: Jurnal Kedokteran dan Kesehatan Malikussaleh*, 8(1): 1-16.
- Campiglio, C. E., Figliuzzi, M., Silvani, S., Tironi, M., Conti, S., Boschetti, F., & Remuzzi, A. 2021. Influence of Culture substrates on morphology and function of pulmonary alveolar cells in vitro. *Biomolecules*, 11(5): 675.
- Chen, K. C., Chiou, Y. L., Kao, P. H., Lin, S. R., & Chang, L. S. 2008. Taiwan cobra cardiotoxins induce apoptotic death of human neuroblastoma SK-N-SH cells mediated by reactive oxygen species generation and mitochondrial depolarization. *Toxicon*, 51(4): 624-634.
- Chong, H. P., Tan, K. Y., & Tan, C. H. 2020. Cytotoxicity of snake venoms and cytotoxins from two Southeast Asian cobras (*Naja sumatrana*, *Naja kaouthia*): Exploration of anticancer potential, selectivity, and cell death mechanism. *Frontiers in Molecular Biosciences*, 7: 583587.
- Cooper, J. R., Abdullatif, M. B., Burnett, E. C., Kempell, K. E., Conforti, F., Tolley, H., ... & Davies, D. E. 2016. Long term culture of the A549 cancer cell line promotes multilamellar body formation and differentiation towards an alveolar type II pneumocyte phenotype. *PloS one*, 11(10): e0164438.
- Correia, A. S., Gärtner, F., & Vale, N. 2021. Drug combination and repurposing for cancer therapy: the example of breast cancer. *Heliyon*, 7(1).
- Dafa, M. H., Yudha, D. S., & Sulistio, A. D. 2023. Preliminary Study on Morphology, Meristics, and Morphometric Variations of Javan Spitting Cobra *N. sputatrix* and Sumatran Spitting Cobra *N. sumatrana*. *Genbinesia Journal of Biology*, 3(1): 31-40.
- Deepakshi, Madaan, V., Sharma, M. Dr., Sharma, K. A. Dr. 2023. Cell Culture media : Review. *International Journal of Medico-Dental Innovations*, 1(1).
- Djakaria, K. M., Munawaroh, A. N., Zakky, Q., Sari, R. M., & Juliandi, B. 2020. Perilaku Mencit (*Mus musculus*) terhadap Feses Ular Kobra Jawa (*Naja sputatrix*). *Jurnal Sumberdaya Hayati*, 6(1): 13-19.
- Dona, R., Sulistyani, N., & Nurani, L. H. 2016. Uji sitotoksitas dan antiproliferatif ekstrak etanol daun leunca (*Solanum nigrum*, L.) terhadap sel raji. *Pharmaciana*, 6(2): 181-190.
- Ebrahim, K., Vatanpour, H., Zare, A., Shirazi, F. H., & Nakhjavani, M. 2016. Anticancer activity a of caspian cobra (*Naja naja oxiana*) snake venom in human cancer cell lines via induction of apoptosis. *Iranian journal of pharmaceutical research: IJPR*, 15(Suppl): 101.
- Eka N. M., Rasmawan, R., Muharini, R., & Sartika, R. P. 2024. Sitotoksitas dan Selektivitas Fraksi Kayu Batang Simpung Air (*Dillenia suffruticosa* (Griff.) Martelli) Terhadap Sel Kanker Payudara. *Al-Kuniyah: Jurnal Biologi*, 17(1): 190-200.
- Erlista, G. P., Ahmed, N., Swasono, R. T., Raharjo, S., & Raharjo, T. J. 2023. Proteome of monocled cobra (*Naja kaouthia*) venom and potent

- anti breast cancer peptide from trypsin hydrolyzate of the venom protein. *Saudi Pharmaceutical Journal*, 31(6): 1115-1124.
- Flieger, J., Flieger, W., Baj, J., & Maciejewski, R. 2021. Antioxidants: Classification, natural sources, activity/capacity measurements, and usefulness for the synthesis of nanoparticles. *Materials*, 14(15): 4135.
- Freuville, L., Matthys, C., Quinton, L., & Gillet, J. P. 2024. Venom-derived peptides for breaking through the glass ceiling of drug development. *Frontiers in Chemistry*, 12: 1465459.
- Fristiohady, A., & Agustina, I. 2020. Review Artikel: Apoptosis Pada Kanker Payudara. *Media Farmasi*, 16(2): 130-140.
- Global Burden Of Cancer. *New Global Cancer Data*. Union for International Cancer Control. 2024. Available from: <https://www.uicc.org/news/globocan-2022-latest-global-cancer-data-shows-rising-incidence-and-stark-inequities>. Diakses tanggal 21 Maret 2025, jam 19.45 WIB.
- Hanahan, D. 2022. Hallmarks of cancer: new dimensions. *Cancer discovery*, 12(1): 31-46.
- Hermawan, A., Meiyanto, E., & Susidarti, R. A. 2010. Hesperidin meningkatkan efek sitotoksik *doxorubicin* pada sel MCF-7. *Majalah Farmasi Indonesia*, 21(1): 8-17.
- Hidayati, P. R., Muharini, R., & Erlina, E. 2025. Total Alkaloids Content, Cytotoxicity, and Selectivity of Ethanol Extract of *Litsea firma* (Blume) Hook. f. *Indonesian Journal of Pure and Applied Chemistry*, 8(1): 36-44.
- Hoang, V.T., Stępniewski, G., Czarnecka, K.H., Kasztelanica, R., Long, V.C., Xuan, K.D., Shao, L., Śmietana, M., & Buczyński, R. 2019. Optical properties of buffers and cell culture media for optofluidic and sensing applications. *Applied Sciences*, 9(6): 1145.
- Jablonska, E., Kubásek, J., Vojtěch, D., Ruml, T., & Lipov, J. 2021. Test conditions can significantly affect the results of in vitro cytotoxicity testing of degradable metallic biomaterials. *Scientific Reports*, 11(1):1-9.
- Jan, R. 2019. Understanding apoptosis and apoptotic pathways targeted cancer therapeutics. *Advanced pharmaceutical bulletin*, 9(2): 205.
- Julian, M., Ambarwati, L., & Mahatma, Y. 2022. Penentuan derajat optimum interpolasi pada metode Lagrange dan metode Newton Gregory dalam mengestimasi kasus pasien sembuh dari Covid-19 di Indonesia. *JMT (Jurnal Matematika dan Terapan)*, 4(1): 11-18.
- Kciuk, M., Gielecińska, A., Mujwar, S., Kołat, D., Kałuzińska-Kołat, Ż., Celik, I., & Kontek, R. 2023. Doxorubicin—an agent with multiple mechanisms of anticancer activity. *Cells*, 12(4): 659.
- Kementerian Kesehatan RI. 2024. Panduan Pelaksanaan Hari Kanker Sedunia 2024.
- Khoerunisa, I., Kusriani, M. D., & Mardiasuri, A. 2021. Diversity of snake rescued from residential areas in Greater Jakarta metropolitan area, Indonesia. *Media Konservasi*, 26(3): 231-238.
- Kini, R. M., & Koh, C. Y. 2020. Snake venom three-finger toxins and their

- potential in drug development targeting cardiovascular diseases. *Biochemical pharmacology*, 181: 114105.
- Kurkute, P., Jadhav, A., & Pandit, S. V. 2023. Anticancer potential and cytotoxic activity of NN-32, a snake venom peptide, against A549, lung cancer cell line. *International Journal of Peptide Research and Therapeutics*, 29(4): 67.
- Lafnounge, A., Lee, S. Y., Heo, J. Y., Gourja, I., Darkaoui, B., Abdelkafi-Koubaa, Z., ... & Oukkache, N. 2021. Anti-cancer effect of Moroccan Cobra *Naja Haje* venom and its fractions against hepatocellular carcinoma in 3D cell culture. *Toxins*, 13(6): 402.
- Li, L., Huang, J., & Lin, Y. 2018. Snake venoms in cancer therapy: past, present and future. *Toxins*, 10(9): 346.
- Marliza, H., & Oktaviani, D. 2021. Uji Sitotoksik Ekstrak Etanol Daun Kemumu (*Colacasia gigantea* Hook. F) dengan Metode Brine Shrimp Lethality Test (BSLT). *Bencoolen Journal Of Pharmacy*, 1(1): 38-45.
- Martin, S., Reutelingsperger, C. P., McGahon, A. J., Rader, J. A., Van Schie, R. C., LaFace, D. M., & Green, D. R. 1995. Early redistribution of plasma membrane phosphatidylserine is a general feature of apoptosis regardless of the initiating stimulus: inhibition by overexpression of Bcl-2 and Abl. *The Journal of experimental medicine*, 182(5): 1545-1556.
- Mishchenko, T., Mitroshina, E., Balalaeva, I., Krysko, O., Vedunova, M., & Krysko, D. V. 2019. An emerging role for nanomaterials in increasing immunogenicity of cancer cell death. *Biochimica et Biophysica Acta (BBA)-Reviews on Cancer*, 1871(1): 99-108.
- Mobaraki, M., Faraji, A., Zare, M., Dolati, P., Ataei, M., & Manshadi, H. D. 2017. Molecular mechanisms of cardiotoxicity: a review on major side-effect of doxorubicin. *Indian J Pharm Sci*, 79(3): 335-44.
- Nida, D. A. 2021. A Review: Sitotoksitas senyawa bromelain pada nanas (*Ananas comosus* L.) Terhadap sel kanker mcf-7. *Jurnal Indonesia Sosial Sains*, 2(3): 464911.
- Nielsen, P. M., Petersen, D., & Dambmann, C. J. J. O. F. S. 2001. Improved method for determining food protein degree of hydrolysis. *Journal of food science*, 66(5): 642-646.
- Nugroho, K. D., & Sucipto, U. 2020. Studi fenomenologi: dampak pengabaian gejala kanker bagi klien dan keluarga. *Jurnal Keperawatan Malang*, 5(1): 5.
- Offor, B. C., & Piater, L. A. 2024. Snake venom toxins: Potential anticancer therapeutics. *Journal of Applied Toxicology*, 44(5): 666-685.
- Petka-Poniatowska, K. 2022. *The principle of the flow cytometry technique and its applicability*. In *Methods in food science and technology*. Part 1, pp. 199–221.
- Puspitasari, C. E., Andanalusia, M., Hawarikatun, B., Annisa, J., & Yasykurah, M. M. 2025. Refleksi pemberian kemoterapi pada pasien kanker payudara di Nusa Tenggara Barat. *Prosiding SAINTEK*, 7: 238-249.
- Rahman, M. A., Sultan, M. T., & Islam, M. R. 2012. Apoptosis and cancer:

- insights molecular mechanisms and treatments. *International Journal of Biomolecules & Biomedicine*, 2(1): 1-16.
- Rahmawati, A. F., Inayati, A., & Dewi, N. R. 2024. Penerapan Pendidikan Kesehatan tentang Manajemen Nutrisi pada Pasien Kanker. *Jurnal Cendikia Muda*, 4(2): 186-193.
- Resiere, D., Mehdaoui, H., & Nevriere, R. 2022. Inflammation and oxidative stress in snakebite envenomation: a brief descriptive review and clinical implications. *Toxins*, 14(11): 802.
- Ribeiro, M. C. M., Salles, T. S., Moreira, M. F., Barbarino, E., do Valle, A. F., & Couto, M. A. P. G. 2022. Antiviral activity of microalgae extracts against Mayaro virus. *Algal Research*, 61: 102577.
- Rifa'i, R. M. 2024. Aktivitas Sitotoksik dan Induksi Apoptosis Venom Kobra Jawa (*Naja sputatrix* Boie, 1827) terhadap Sel Kanker T47D dan HeLa. *Doctoral dissertation*, Universitas Gadjah Mada.
- Rohanova, D., Boccaccini, A. R., Horkavcova, D., Bozdechova, P., Bezdicka, P., & Castoralova, M. 2014. Is non-buffered DMEM solution a suitable medium for in vitro bioactivity tests. *Journal of Materials Chemistry B*, 2(31): 5068–5076.
- Rozali, Z. F., Zaidiyah, Z., & Lubis, Y. M. 2023. Hidrolisis Protein Beras oleh Ekstrak Kasar Enzim Bromelin. *Jurnal Bioleuser*, 7(1).
- Ryamizard, R., Nawangsih, C. N. C., & Margawati, A. 2018. Gambaran penggunaan pengobatan tradisional, komplementer dan alternatif pada pasien kanker yang menjalani radioterapi. *Jurnal kedokteran diponegoro (diponegoro medical journal)*, 7(2): 1568-1584.
- Saginala, K., Barsouk, A., Aluru, J. S., Rawla, P., Padala, S. A., & Barsouk, A. 2020. Epidemiology of bladder cancer. *Medical sciences*, 8(1): 15.
- Sari, D. K., Widayanti, G. A., & Arifah, N. (2025). Aktivitas Apoptosis Sel HeLa oleh Fraksi Aktif Mahoni: Studi Flowcytometry. *Jurnal kesehatan dan pembangunan*, 15(2): 321-328.
- Sari, L. M. 2018. Apoptosis: Mekanisme molekuler kematian sel. *Cakradonya Dental Journal*, 10(2): 65-70.
- Satria, A., Marji, M., & Ratnawati, D. E. 2019. Klasifikasi Jenis Kanker Berdasarkan Struktur Protein Menggunakan Metode *Neighbor Weighted K-Nearest Neighbor* (NWKNN). *Jurnal Pengembangan Teknologi Informasi dan Ilmu Komputer*, 3(4): 3617-3624.
- Senji Laxme, R. R., Attarde, S., Khochare, S., Suranse, V., Martin, G., Casewell, N. R., ... & Sunagar, K. 2021. Biogeographical venom variation in the Indian spectacled cobra (*Naja naja*) underscores the pressing need for pan-India efficacious snakebite therapy. *PLoS neglected tropical diseases*, 15(2): e0009150.
- Setiawati, A., Susidarti, R. A., & Meiyanto, E. 2011. Peningkatan efek sitotoksik *doxorubicin* oleh hesperidin pada sel kanker T47D. *Bionatura*, 13(2).
- Sharma, B., & Kanwar, S. S. 2018. *Phosphatidylserine: A cancer cell targeting biomarker*. In *Seminars in cancer biology*, 52: 17-25.
- Shen, S., Shao, Y., & Li, C. 2023. Different types of cell death and their shift in shaping disease. *Cell death discovery*, 9(1): 284.
- Sirait, P. S., Setyaningsih, I., & Tarman, K. (2019). Aktivitas antikanker ekstrak

- Spirulina yang dikultur pada media walne dan media organik. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 22(1): 50-59.
- Sismami, D. A., Oka, I. B., & Dharmawan, N. S. 2014. Infeksi cacing pada ular kobra (*Naja sputatrix*) di Bali. *Jurnal Veteriner September*, 15(3): 401-405.
- Soraya, D. F., & Yuliasuti, F. 2024. Analisis Efektivitas Biaya Kemoterapi Kanker Payudara di Rumah Sakit Umum Daerah (RSUD) Kota Yogyakarta. *Jurnal Mandala Pharmacon Indonesia*, 10(2): 379-388.
- Sundararajan, R., Salameh, T., Camarillo, I. G., Prabu, R. R., Natarajan, A., & Sankaranarayanan, K. 2014. Irreversible electroporation: a drug-free cancer treatment. *Electroporation-Based Therapies for Cancer*, pp. 219-243.
- Tan, N. H., Wong, K. Y., & Tan, C. H. 2017. Venomics of *Naja sputatrix*, the Javan spitting cobra: A short neurotoxin-driven venom needing improved antivenom neutralization. *Journal of proteomics*, 157: 18-32.
- Tasoulis, T., & Isbister, G. K. 2017. A review and database of snake venom proteomes. *Toxins*, 9(9): 290.
- Thangam, R., Gunasekaran, P., Kaveri, K., Sridevi, G., Sundarraj, S., Paulpandi, M., & Kannan, S. 2012. A novel disintegrin protein from *Naja naja* venom induces cytotoxicity and apoptosis in human cancer cell lines in vitro. *Process Biochemistry*, 47(8): 1243-1249.
- Vicko, S., Ardiansyah, A., & Arifah, T. 2023. Hewan Model Uji In Vivo Antikanker: Review Artikel. *Journal Pharmacy Aisyah*, 2(1): 7-18.
- Wang, S., Hu, Y., Yan, Y., Cheng, Z., & Liu, T. 2018. Sotetsuflavone inhibits proliferation and induces apoptosis of A549 cells through ROS-mediated mitochondrial-dependent pathway. *BMC Complementary and Alternative Medicine*, 18(1): 235.
- Widhiantara, I. G., & Rosiana, I. W. 2015. Perilaku harian ular kobra (*Naja sputatrix* Boie) dalam kandang penangkaran. *VIRGIN: Jurnal Ilmiah Kesehatan Dan Sains*, 1(2).
- Widiyastuti, Y., Sholikhah, I. Y. M., & Haryanti, S. 2019. Efek sitotoksik formula jamu daun sirsak, buah takokak, dan umbi bidara upas terhadap sel kanker payudara MCF-7. *Jurnal Kefarmasian Indonesia*, pp. 140-149.
- Widyanto, R. M., Putri, J. A., Rahmi, Y., Proborini, W. D., & Utomo, B. 2020. Aktivitas Antioksidan dan Sitotoksitas in vitro Ekstrak Metanol Buah Nanas (*Ananas comosus*) pada Sel Kanker Payudara T-47D. *Jurnal Pangan dan Agroindustri*, 8(2): 95-103.
- Wu, M., Ming, W., Tang, Y., Zhou, S., Kong, T., & Dong, W. 2013. The anticancer effect of cytotoxin 1 from *Naja atra* Cantor venom is mediated by a lysosomal cell death pathway involving lysosomal membrane permeabilization and cathepsin B release. *The American journal of Chinese medicine*, 41(03): 643-663.
- Wu, Y., Dong, G., & Sheng, C. 2020. Targeting necroptosis in anticancer therapy: mechanisms and modulators. *Acta Pharmaceutica Sinica B*, 10(9):

- 1601-1618.
- Xia, W., & King, M. W. 2025. Advances in Targeted Delivery of Doxorubicin for Cancer Chemotherapy. *Bioengineering*, 12(4): 430.
- Xiong, S., & Huang, C. 2018. Synergistic strategies of predominant toxins in snake venoms. *Toxicology letters*, 287: 142-154.
- Yarmaliza, Y., & Zakiyuddin, Z. 2019. Pencegahan Dini terhadap Penyakit Tidak Menular (PTM) melalui GERMAS. *Jurnal Pengabdian Masyarakat Multidisiplin*, 2(3): 93-100.
- Zafrial, R. M., & Amalia, R. 2018. Anti kanker dari tanaman herbal. *Farmaka*, 16(1): 15-23.
- Zamaraev, A. V., Kopeina, G. S., Prokhorova, E. A., Zhivotovsky, B., & Lavrik, I. N. 2017. Post-translational modification of caspases: the other side of apoptosis regulation. *Trends in cell biology*, 27(5): 322-33.
- Zeng, L., Hou, J., Ge, C., Li, Y., Gao, J., Zhang, C., ... & Zeng, Z. 2022. Clinical study of anti-snake venom blockade in the treatment of local tissue necrosis caused by Chinese cobra (*Naja atra*) bites. *PLOS Neglected Tropical Diseases*, 16(12): e0010997.
- Zhang, L., Ma, X., & Dong, Y. 2018. Effect of genistein on apoptosis of lung adenocarcinoma A549 cells and expression of apoptosis factors. *J BUON*, 23(3): 641-6.