

DAFTAR PUSTAKA

- Abdullah, S.S. *et al.* (2021) 'Aanalisis Sifat Fisikokimia , Farmakokinetik Dan Toksikologi Pada Pericarpium Pala (*Myristica fragrans*) Secara Artificial Intelligence', 14(2)
- Abriyani, E. *et al.* (2022) 'Skrining Fitokimia Dan Profil KLT Dari Fraksi N-Heksana Dan Etil Asetat Pada Kulit Pithecellobium jiringa (Jack) Prain', *Jurnal Buana Farma*, 2(3), pp. 8–13. Available at: <https://doi.org/10.36805/jbf.v2i3.545>.
- Arwansyah, A., Ambarsari, L. and Sumaryada, T.I. (2014) 'Simulasi *Docking* Senyawa Kurkumin dan Analognya Sebagai Inhibitor Reseptor Androgen pada Kanker Prostat', *Current Biochemistry*, 1(1), pp. 11–19. Available at: <https://doi.org/10.29244/cb.1.1.11-19>.
- Arynta Dharmayanti and Fahimah Martak (2015) 'Sintesis Senyawa Aktif Kompleks Mangan(II) dengan Ligan 2(4-nitrofenil)-4,5-difenil-1H-imidazol', *Jurnal Sains dan Seni ITS*, 4(2), pp. 2337–3520.
- Awang ngah, fatimatul akma. E. izzati zakaria (2017) 'Synthesis of Thiourea Derivatives and Binding Behavior Towards the Mercury Ion', *Malaysian Journal of Analytical Science*, 21(6), pp. 1226–1234. Available at: <https://doi.org/10.17576/mjas-2017-2106-03>.
- Aziz, A., Andrianto, D. and Safithri, M. (2022) 'Penambatan Molekuler Senyawa Bioaktif Daun Wungu (*Graptophyllum Pictum* (L) Griff) sebagai Inhibitor Tirosinase', *Indonesian Journal of Pharmaceutical Science and Technology*, 9(2), p. 94. Available at: <https://doi.org/10.24198/ijpst.v9i2.36219>.
- Azizah, Y.N. *et al.* (2020) 'Synthesis, Characterization and Antioxidant Activity of Kobalt (II)-Hydrazone Complex', *EduChemia (Jurnal Kimia dan Pendidikan)*, 5(2), p. 119. Available at: <https://doi.org/10.30870/educhemia.v5i2.7987>.

- Basuki, S.A. and Melinda, N. (2017) 'Prediksi mekanisme kerja obat terhadap reseptornya secara in silico (studi pada antibiotika sefotaksim)', *Peningkatan Keilmuan Solusi Tantangan Profesi Kesehatan*, 0(0), pp. 89–94. Available at: <http://research-report.umm.ac.id/index.php/research-report/article/view/1367>.
- Birch, C.S. *et al.* (2009) 'A novel role for vitamin B12: Cobalamins are intracellular antioxidants in vitro', *Free Radical Biology and Medicine*, 47(2), pp. 184–188. Available at: <https://doi.org/10.1016/j.freeradbiomed.2009.04.023>.
- Bunaciu, A.A., Hoang, V.D. and Aboul-Enein, H.Y. (2015) 'Applications of FT-IR Spectrophotometry in Cancer Diagnostics', *Critical Reviews in Analytical Chemistry*, 45(2), pp. 156–165. Available at: <https://doi.org/10.1080/10408347.2014.904733>.
- Burley, S.K. *et al.* (2019) 'Protein Data Bank: The single global archive for 3D macromolecular structure data', *Nucleic Acids Research*, 47(D1), pp. D520–D528. Available at: <https://doi.org/10.1093/nar/gky949>.
- Cao, C. *et al.* (2015) 'Amino Acids in Nine Ligand-Prefer Ramachandran Regions', *BioMed Research International*, 2015. Available at: <https://doi.org/10.1155/2015/757495>.
- Chandrasekhar, M. *et al.* (2020) 'In silico and in vitro antioxidant and anticancer activity profiles of urea and thiourea derivatives of 2,3-dihydro-1H-inden-1-amine', *Journal of Receptors and Signal Transduction*, 40(1), pp. 34–41. Available at: <https://doi.org/10.1080/10799893.2019.1710848>.
- Cristiandari, E.M. (2018) 'Uji Efek Ekstrak dan Fraksinasi daun Salung (*Psychotria Viridiflora* Reinw. Ex. Blume) pada Sel Kanker Payudara T47D', *JPP (Jurnal Kesehatan Poltekkes Palembang)*, 13(1), pp. 9–20. Available at: <https://doi.org/10.36086/jpp.v13i1.81>.
- Dachriyanus (2004) Analisis Struktur Senyawa Organik Secara Spektroskopi. Lembaga Pengembangan Teknologi Informasi dan Komunikasi. Andalas

- DasGupta, D., Kaushik, R. and Jayaram, B. (2015) 'From Ramachandran Maps to Tertiary Structures of Proteins', *Journal of Physical Chemistry B*, 119(34), pp. 11136–11145. Available at: <https://doi.org/10.1021/acs.jpccb.5b02999>.
- Dasman, H. (2019) 'Kanker yang Membunuh: Faktor Risiko Lingkungan dan Gaya Hidup Lebih Dominan Ketimbang Genetik', pp. 2–5. Available at: <http://repo.unand.ac.id/21813/>.
- Enih Rosanah (2014) 'Kromatografi Lapis Tipis Metode Sederhana Dalam Analisis Kimia Tumbuhan Berkayu', *Mulawarman University Press*, 5(2), pp. 40–51. Available at: [https://repository.unmul.ac.id/bitstream/handle/123456789/6733/3.Kromatografi lapis tipis metode sederhana dalam analisis kimia tumbuhan berkayu.pdf?sequence=1&isAllowed=y](https://repository.unmul.ac.id/bitstream/handle/123456789/6733/3.Kromatografi%20lapis%20tipis%20metode%20sederhana%20dalam%20analisis%20kimia%20tumbuhan%20berkayu.pdf?sequence=1&isAllowed=y).
- Fitriani, F. (2021) 'Kompleks Besi(II) dengan ligan 3-bpp: review', *Jurnal Kartika Kimia*, 4(1), pp. 21–27. Available at: <https://doi.org/10.26874/jkk.v4i1.74>.
- Hanif, A.U., Lukis, P.A. and Fadlan, A. (2020) 'Pengaruh Minimisasi Energi MMFF94 dengan MarvinSketch dan Open Babel PyRx pada Penambatan Molekular Turunan Oksindola Tersubstitusi', *Alchemy*, 8(2), pp. 33–40. Available at: <https://doi.org/10.18860/al.v8i2.10481>.
- Hardjono, S. (2016) 'Structure Modification and Molecular Modeling of 1-(benzoyloxy)urea Derivatives as Anticancer Drug Candidates', *1st International Conference on Medicine and Health Sciences*, pp. 20–22.
- Harjono, S. et al. (2016) '007Ar', *Faculty of Science and Technology, Universitas Airlangga, Surabaya, Indonesia*, 5. Available at: <https://doi.org/10.2174/15701638136661605251123>.
- Hardjono, S. (2017) 'Prediksi Sifat Farmakokinetik, Toksisitas dan Aktivitas Sitotoksik Turunan N-Benzoil-N'-(4-fluorofenil)tiourea sebagai Calon Obat Antikanker melalui Pemodelan Molekul', *Jurnal Ilmu Kefarmasian Indonesia*, 14(2), pp. 246–255. Available at: <http://jifi.farmasi.univpancasila.ac.id/index.php/jifi/article/view/38>.
- Jamalis, J. et al. (2017) 'Synthesis and Study of Anti-HIV-1 RT Activity of 5-

benzoyl-4-', *Bioorganic Chemistry* [Preprint]. Available at: <https://doi.org/10.1016/j.bioorg.2017.03.013>.

Kallen, J. *et al.* (2007) 'Crystal structure of human estrogen-related receptor α in complex with a synthetic inverse agonist reveals its novel molecular mechanism', *Journal of Biological Chemistry*, 282(32), pp. 23231–23239. Available at: <https://doi.org/10.1074/jbc.M703337200>.

Kesuma, D. *et al.* (2018) 'Uji in silico Aktivitas Sitotoksik dan Toksisitas Senyawa Turunan N-(Benzoil)-N'- feniltiourea Sebagai Calon Obat Antikanker', *JPSCR : Journal of Pharmaceutical Science and Clinical Research*, 3(1), p. 1. Available at: <https://doi.org/10.20961/jpscr.v3i1.16266>.

Kharb, S.(2021). 'General Lab Techniques', *Mind Maps in Clinical Chemistry (PartII)*, 47–56. Available at: <https://doi.org/10.2174/978981499875>

King, A.P. *et al.* (2017) 'Bis(thiosemicarbazone) Complexes of Cobalt(III). Synthesis, Characterization, and Anticancer Potential', *Inorganic Chemistry*, 56(11), pp. 6609–6623. Available at: <https://doi.org/10.1021/acs.inorgchem.7b00710>.

Kumar, A., Singh, P. and Nanda, A. (2020) 'Hot stage microscopy and its applications in pharmaceutical characterization', *Applied Microscopy*, 50(1). Available at: <https://doi.org/10.1186/s42649-020-00032-9>.

Lionta, E. *et al.* (2014) 'Structure-Based Virtual Screening for Drug Discovery: Principles, Applications and Recent Advances', *Current Topics in Medicinal Chemistry*, 14(16), pp. 1923–1938. Available at: <https://doi.org/10.2174/1568026614666140929124445>.

Maya Mardiana, R. (2020) 'Simulasi Dinamika Molekular Senyawa Pyridin Pada Protein 2Xnb Sebagai Antikanker Menggunakan Aplikasi Gromas', *Simulasi Dinamika Molekular Senyawa Pyridin Pada Protein 2Xnb Sebagai Antikanker Menggunakan Aplikasi Gromas*, 6, pp. 274–282.

Mintari, N., Suhartana, S. and Sriatun, S. (2015) 'Pengaruh Variasi Jenis Pelarut pada Rendemen Sintesis Senyawa Kompleks Bis-

Asetilasetonatodiaquonikel(II)', *Jurnal Kimia Sains dan Aplikasi*, 18(1), pp. 29–33. Available at: <https://doi.org/10.14710/jksa.18.1.29-33>.

Munteanu, C.R. and Suntharalingam, K. (2015) 'Advances in cobalt complexes as anticancer agents', *Dalton Transactions*, 44(31), pp. 13796–13808. Available at: <https://doi.org/10.1039/c5dt02101d>.

Nandiyanto, A.B.D., Oktiani, R. and Ragadhita, R. (2019) 'Indonesian Journal of Science & Technology How to Read and Interpret FTIR Spectroscopy of Organic Material', *Indonesian Journal of Science & Technology*, 4(1), pp. 97–118.

Ningsih, A. (2022) 'Jus Wheatgrass (Rumput Gandum) Untuk Mengurangi Efek Kemoterapi', 5, pp. 731–739.

Ningtyas, A.P. and Martak, F. (2016) 'Sintesis dan Uji Toksisitas Kompleks Kobalt(II) dengan Ligan (6E)-(N2)-((E)-2-(6-aminopiridin-2-ilimino)-1,2-difeniletalidin)piridin-2,6- diamina', *Jurnal Sains dan Seni Pomits*, 5(2), pp. 85–89.

Nurani, L.H. (2012) 'Uji sitotoksitas dan antiproliferasi sel kanker payudara T47D dan sel vero biji Nigella sativa , L . (cytotoxicity and antiproliferative test on T47d and vero cell lines of Nigella sativa , L Seed)', *Jurnal Ilmiah Kefarmasian*, 2, pp. 17–29.

Petrescu, A.M., Paunescu, V. and Ilia, G. (2019) 'The antiviral activity and cytotoxicity of 15 natural phenolic compounds with previously demonstrated antifungal activity', *Journal of Environmental Science and Health, Part B*, 0(0), pp. 1–7. Available at: <https://doi.org/10.1080/03601234.2019.1574176>.

Pires, D.E. V, Blundell, T.L. and Ascher, D.B. (2015) 'pkCSM: Predicting Small-Molecule Pharmacokinetic and Toxicity Properties Using Graph-Based Signatures'. Available at: <https://doi.org/10.1021/acs.jmedchem.5b00104>.

Prabhata, W.R. *et al.* (2022) 'Review Artikel: Strategi Pengembangan Senyawa

Thiourea Sebagai Agen Antikanker', *Generics: Journal of Research in Pharmacy*, 2(2), pp. 127–138. Available at: <https://doi.org/10.14710/genres.v2i2.15916>.

Pratama, A.B., Herowati, R. and 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), p. 233. Available at: <https://doi.org/10.22146/farmaseutik.v17i2.59297>.

Prayoga *et al.* (2018) 'Analisis Dinamika Molekul Protein Lysozyme Putih Telur Dengan Model Potensial Lennard-Jones Menggunakan Aplikasi Gromacs', *Jurnal Teori dan Aplikasi Fisika*, 6(2), pp. 239–248. Available at: <https://doi.org/10.23960/jtaf.v6i2.1849>.

Prihatiningtyas, R. *et al.* (2019) 'Establishment of a 3D-structure database for chemical compounds in Indonesian sponges', *Pharmacognosy Journal*, 11(6), pp. 1211–1218. Available at: <https://doi.org/10.5530/pj.2019.11.188>.

Puratchikody, A. *et al.* (2016) '3-D structural interactions and quantitative structural toxicity studies of tyrosine derivatives intended for safe potent inflammation treatment', *Chemistry Central Journal*, 10(1), pp. 1–19. Available at: <https://doi.org/10.1186/s13065-016-0169-9>.

Purwanto, B.T.R.I. (2018) 'Aktivitas Anti Kanker terhadap Sel HeLa (Synthesis and Anti cancer Activity Test against HeLa Cells', *Ilmu Kefarmasian Indonesia*, 16(2), pp. 159–165.

Rena, S.R., Nurhidayah, N. and Rustan, R. (2022) 'Analisis Molecular Docking Senyawa *Garcinia Mangostana* L Sebagai Kandidat Anti SARS-CoV-2', *Jurnal Fisika Unand*, 11(1), pp. 82–88. Available at: <https://doi.org/10.25077/jfu.11.1.82-88.2022>.

Rizvi, S.M., Shazi, S. and Mohd., H. (2013) 'A simple click by click protocol to perform docking ', *EXCLI Journal*, 12, pp. 831–857.

Rollando. (2017). *Pengantar Kimia Medisinal*. Cv. Seribu Bintang. Jawa Timur

- Ruswanto, R. (2015) 'Sintesis Dan Analisis Spektrum Senyawa 3-Benzoil-1-Feniltiourea Serta Uji Interaksinya Pada Reseptor Kanker', *Jurnal Kesehatan Bakti Tunas Husada: Jurnal Ilmu-ilmu Keperawatan, Analisis Kesehatan dan Farmasi*, 12(1), p. 177. Available at: <https://doi.org/10.36465/jkbth.v12i1.77>.
- Ruswanto, R. and Nugraha, A. (2015) 'Sintesis Senyawa 1-(4-Hephtilbenzoil-3-Metiltiourea) Dan Uji Sitotoksitas Terhadap Sel T47D Sebagai Kandidat Antikanker', *Jurnal Kesehatan Bakti Tunas Husada: Jurnal Ilmu-ilmu Keperawatan, Analisis Kesehatan dan Farmasi*, 14(1), p. 145. Available at: <https://doi.org/10.36465/jkbth.v14i1.123>.
- Ruswanto, R. *et al.* (2018) 'Kuersetin, Penghambat Uridin 5-Monofosfat Sintase Sebagai Kandidat Anti-kanker', *ALCHEMY Jurnal Penelitian Kimia*, 14(2), p. 236. Available at: <https://doi.org/10.20961/alchemy.14.2.14396.236-254>.
- Ruswanto, R. *et al.* (2020) 'Synthesis, Characterization and In Silico Study of Fe(III) Complex with N'-(4-Chlorobenzoyl)-Isonicotino-Hydrazide as Anti Tuberculosis Candidate', *Jurnal Kimia Valensi*, 6(1), pp. 70–81. Available at: <https://doi.org/10.15408/jkv.v6i1.11788>.
- Ruswanto *et al.* (2022) *Monograf: Kajian Studi Komputasi Kompleks Logam Platinum (Ii)–Tiourea Sebagai Kandidat Antikanker*.
- Sari, I.W., Junaidin, J. and Pratiwi, D. (2020) 'Studi Molecular Docking Senyawa Flavonoid Herba Kumis Kucing (*Orthosiphon stamineus* B.) Pada Reseptor α -Glukosidase Sebagai Antidiabetes Tipe 2', *Jurnal Farmagazine*, 7(2), p. 54. Available at: <https://doi.org/10.47653/farm.v7i2.194>.
- Silva, T.F.S. *et al.* (2012) 'Cobalt complexes bearing scorpionate ligands: Synthesis, characterization, cytotoxicity and DNA cleavage', *Dalton Transactions*, 41(41), pp. 12888–12897. Available at: <https://doi.org/10.1039/c2dt11577h>.
- Sistesya, D. and Sutanto, H. (2013) 'Sifat Optis Lapisan ZnO:Ag yang Dideposisi di atas Subtrat Kaca Menggunakan Metode Chemical Sollution Deposition (CSD) dsn Aplikasinya pada Degradasi Zat Warna Methylene Blue',

Youngster Physics Journal, 1(4), pp. 71–80.

Suhartati, T. (2017) ‘Dasar-Dasar Spektrofotometri UV-Vis Dan Spektrofotometri Massa Untuk Penentuan Struktur Senyawa Organik’.

Suryani, Y. *et al.* (2018) ‘Insilico docking studies of daidzeion compounds as selective estrogen receptor modulator (SERMS) breast cancer’, *MATEC Web of Conferences*, 197, pp. 1–5. Available at: <https://doi.org/10.1051/mateconf/201819703009>.

Susanti, N.M.P. *et al.* (2019) ‘Molecular Docking Terpinen-4-Ol Sebagai Antiinflamasi Pada Aterosklerosis Secara in Silico’, *Jurnal Kimia*, p. 221. Available at: <https://doi.org/10.24843/jchem.2019.v13.i02.p16>.

Wulandari, L. (2011) *Kromatografi Lapis Tipis, Taman Kampus Presindo*.

Yildiz, Y. (2017) ‘General Aspects of the Cobalt Chemistry’, *Cobalt*, pp. 1–22. Available at: <https://doi.org/10.5772/intechopen.71089>.

Yılmaz, Ü. *et al.* (2019) ‘Synthesis and evaluation of anticancer properties of novel benzimidazole ligand and their cobalt(II) and zinc(II) complexes against cancer cell lines A-2780 and DU-145’, *Inorganica Chimica Acta*, 495(May). Available at: <https://doi.org/10.1016/j.ica.2019.118977>.

Zhang, H.R. *et al.* (2016) ‘Synthesis, characterization and biological evaluation of a cobalt(II) complex with 5-chloro-8-hydroxyquinoline as anticancer agent’, *Applied Organometallic Chemistry*, 30(9), pp. 740–747. Available at: <https://doi.org/10.1002/aoc.3498>.

Zhu, M. *et al.* (2019) ‘Structure and cytotoxicity of zinc (II) and cobalt (II) complexes based on 1,3,5-tris(1-imidazolyl) benzene’, *Applied Organometallic Chemistry*, 33(3), pp. 1–12. Available at: <https://doi.org/10.1002/aoc.4734>.