



REFERENCE

- Acharya, R., Chacko, S., Bose, P., Lapenna, A., and Pattanayak, S. P., 2019, Structure Based Multitargeted Molecular Docking Analysis of Selected Furanocoumarins Against Breast Cancer, *Nature*, 9(15743), 1-13.
- Aldrich, 2019, *Safety Data Sheet Thioxanthone*, www.sigmaaldrich.com.
- Amanatie, A., Jumina, J., Mustofa, M., M, Hanafi, Kadidae, L. O., and I., Sahidin, 2017, Synthesis of 2-Hydroxyxanthone From Xanthone as A Basic Material For New Antimalarial Drugs, *Asian J. Pharm. Clin. Res.*, 10(12), 242-246.
- Anonim, 2015, Situasi Penyakit Kanker, *Buletin Jendela Data dan Informasi Kesehatan*, 1, 1-11.
- Archer, S., Zayed, A.H., Rej, R., and Rugino, T. A., 1983, Analogues of Hycanthone and Lucanthone as Antitumor Agents, *J. Med. Chem.*, 26(9), 1240-1246.
- Brikci-Nigassa, N. M., Nauton, L., Moreau, P., Mongin, O., Duval, R., Picot, L., Thiéry, V., Souab, M., Ruchaud, S., Bach, S., Guevel, R. L., Bentabed-Ababsa, G., Erb, W., Roisnel, T., Dorcet, V., and Mongin, F., 2020, Functionalization of 9-thioxanthone at The 1-Position: From Arylamino Derivatives To [1]Benzo(Thio)pyrano[4,3,2-de]Benzothieno[2,3-b]quinolines of Biological Interest, *Bioorg. Chem.*, 94(1), 1-40.
- Cardoso, J., Silva, J. F., Durães, F., Carvalho, D. T., Gales, L., Pinto, M., Sousa, E., and Pinto, E., 2022, Antifungal Activity of Library of Aminothioxanthenes, *J. Antibiot.*, 11(11), 1-22.
- Chen, C., Chen, T., Lee, C., Shih, L., Lin, C., Hsieh, Y., Ali, A. A. A., and Huang, H., 2019, Synthesis and Evaluation of The New 3-Substituted-4-Chlorothioxanthone Derivatives as Potent Anti-breast Cancer Agents, *Arab. J. Chem.*, 12(8), 3503-3516.
- Durães, F., Silva, P. M. A, Novais, O., Amorim, I., Gales, L., Esteves, C. I., Gueieu, S., Bousbaa, H., Pinto, M., and Sousa, E., 2021, Tetracyclic Thioxanthone Derivatives: Studies on Fluorescence and Antitumor Activity, *Molecules*, 26(3315), 1-13.
- Fatmasari, N., Kurniawan, Y. S. Jumina, J., Anwar, C., Priastomo, Y., Pranowo, H. D., Zulkarnain, A. K., and Sholikhah, E. N., 2022, Synthesis and *In vitro* Assay of Hydroxyxanthenes as Antioxidant And Anticancer Agents, *Nature*, 12(1535), 1-8.
- Ferreira, L.G., Dos Santos, R.N., Oliva, G., and Andricopulo, A.D., 2015, Molecular Docking and Structure-Based Drug Design Strategies, *Molecules*, 20(7), 13384-13421
- Fu, Y., Zhao, J., and Chen, Z., 2018, Insights Into The Molecular Mechanisms of Proteinligand Interactions By Molecular Docking And Molecular Dynamics Simulation: A Case of Oligopeptide Binding Protein, *Comput. Math. Methods Med.*, 2018(1), 1-12.



- Hermawan, F., Jumina, J., and Pranowo, H. D., 2020, Design Thioxanthone Derivatives as Potential Tyrosine Kinase Inhibitor: A Molecule Docking Study, *Rasayan J. Chem*, 13(4), 2626-2632.
- Jumina, J., Rastuti, U., dan Matsjeh, S., 2003, Sintesis 6-Nitro Veratril Alkohol dan 6-Nitro Veratraldoksime dari Vanilin sebagai Senyawa Antara dalam Pembuatan Turunan Antibiotik C-9154, *Indones. J. Chem.*, 3(1), 14-18.
- Kumar, A., Roy, S., Tripathi, S., and Sharma, A., 2016, Molecular Docking Based Virtual Screening of natural as Potential BACE1 Inhibitors: 3D QSAR Pharmacore Mapping and Molecular Dynamics Analysis, *J. Biomol. Struct. Dyn.*, 34(2), 239-249.
- Murthy, S.S. and Bala Narsaiah, T., 2019, Molecular Docking Studies of Phytocompounds With Transcriptional Factors In Hepatocellular Carcinoma, *Rasayan J. Chem.*, 12(4), 2030–2038.
- Mutsuura, K., Sakata, Y., Uchida, K., Hosoya, T., and Yoshida, S., 2020, Synthesis of Thioxanthenes Through Formal C-H Thiolation of Benzoic Acid Esters and Acid-mediated Direct Cyclization, *Chem. Lett.*, 49(7), 753-756.
- Narko, T., Benny, P., Riska, P., Dang, S., dan Faridhatul, K., 2017, Molecular Docking Study of Bulb Of Bawang Dayak (*Eleutherine palmifolia (L) Merr*) Compound as Anti Cervical Cancer, *Jurnal Ilmiah Farmako Bahari*, 8(2), 1-14.
- Palmeira, A., Vasconcelos, M. H., Paiva, A., Fernandes, M. X., Pinto, M., and Sousa, E., 2012, Dual Inhibitors of P-glycoprotein and Tumor Cell Growth: (Re)discovering Thioxanthenes, *Biochem. Pharmacol.*, 83(1), 57-68.
- Pinto, M. M. M., Palmeira, A., Fernandes, C., Resende, D. I. S. P., Sousa, E., Cidade, H., Tiritan, M. E., Correia-da-Silva, M., and Cravo, S., 2021, From Natural Products to New Synthetic Small Molecules: A Journey through the World of Xanthenes, *Molecules*, 26(431), 25-43.
- Pinto, M. M. M., Sousa, M. E., and Nascimento, M. S. J., 2005, Xanthone Derivatives: New Insights in Biological Activities, *Curr. Med. Chem.*, 12(21), 2517-2538.
- 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.
- Ternay, A. L. and Chasar, D. W., 1967, The Borohydride of Thioxanthone Sulfoxide. A Base-Induced Dehydration of Thioxanthene Sulfoxide, *J. Org. Chem.*, 32(12), 3814-3817.
- Wang, T., Wu, M. B., Chen, Z. J., Chen, H., Lin, J. P., and Yang, I. R., 2015, Fragment-based Drug Discovery and Molecular Docking in Drug Design, *Curr. Pharm. Biotechnol.*, 16(1), 11-25.
- Zeynizadeh, B. and Shirini, F., 2003, Mild and Efficient Method For Reduction of Aldehydes and Ketones With NaBH₄ in The Presence of Dowex1-x8, *J. Chem. Research*, 1(6), 334-339.



- Zhao, J. and Larock, R. C., 2006, Synthesis of Xanthenes, Thioxanthenes, and Acridones by the Coupling of Arynes and Substituted Benzoates, *J. Org. Chem.*, 72(2), 583-588.
- Zhao, X., H. Wanqi, Song, D., Lin, R., Huang, H., Huang, J., Wu, B., Huang, Y., and Ye, G., 2020, The Hydrogen Transfer Reaction Between the Substance of Triplet State Thioxanthone and Alkene with sp^3 Hybridization Hydrogen, *J. Mol. Model*, 26(56), 1-8.



DAFTAR PUSTAKA

- Acharya, R., Chacko, S., Bose, P., Lapenna, A., and Pattanayak, S. P., 2019, Structure Based Multitargeted Molecular Docking Analysis of Selected Furanocoumarins Against Breast Cancer, *Nature*, 9(15743), 1-13.
- Aldrich, 2019, *Safety Data Sheet Thioxanthone*, www.sigmaaldrich.com.
- Amanatie, A., Jumina, J., Mustofa, M., M, Hanafi, Kadidae, L. O., and I., Sahidin, 2017, Synthesis of 2-Hydroxyxanthone From Xanthone as A Basic Material For New Antimalarial Drugs, *Asian J. Pharm. Clin. Res.*, 10(12), 242-246.
- Anonim, 2015, Situasi Penyakit Kanker, *Buletin Jendela Data dan Informasi Kesehatan*, 1, 1-11.
- Archer, S., Zayed, A.H., Rej, R., and Rugino, T. A., 1983, Analogues of Hycanthone and Lucanthone as Antitumor Agents, *J. Med. Chem.*, 26(9), 1240-1246.
- Brikci-Nigassa, N. M., Nauton, L., Moreau, P., Mongin, O., Duval, R., Picot, L., Thiéry, V., Souab, M., Ruchaud, S., Bach, S., Guevel, R. L., Bentabed-Ababsa, G., Erb, W., Roisnel, T., Dorcet, V., and Mongin, F., 2020, Functionalization of 9-thioxanthone at The 1-Position: From Arylamino Derivatives To [1]Benzo(Thio)pyrano[4,3,2-de]Benzothieno[2,3-b]quinolines of Biological Interest, *Bioorg. Chem.*, 94(1), 1-40.
- Cardoso, J., Silva, J. F., Durães, F., Carvalho, D. T., Gales, L., Pinto, M., Sousa, E., and Pinto, E., 2022, Antifungal Activity of Library of Aminothioxanthenes, *J. Antibiot.*, 11(11), 1-22.
- Chen, C., Chen, T., Lee, C., Shih, L., Lin, C., Hsieh, Y., Ali, A. A. A., and Huang, H., 2019, Synthesis and Evaluation of The New 3-Substituted-4-Chlorothioxanthone Derivatives as Potent Anti-breast Cancer Agents, *Arab. J. Chem.*, 12(8), 3503-3516.
- Durães, F., Silva, P. M. A, Novais, O., Amorim, I., Gales, L., Esteves, C. I., Gueieu, S., Bousbaa, H., Pinto, M., and Sousa, E., 2021, Tetracyclic Thioxanthone Derivatives: Studies on Fluorescence and Antitumor Activity, *Molecules*, 26(3315), 1-13.
- Fatmasari, N., Kurniawan, Y. S. Jumina, J., Anwar, C., Priastomo, Y., Pranowo, H. D., Zulkarnain, A. K., and Sholikhah, E. N., 2022, Synthesis and *In vitro* Assay of Hydroxyxanthenes as Antioxidant And Anticancer Agents, *Nature*, 12(1535), 1-8.
- Ferreira, L.G., Dos Santos, R.N., Oliva, G., and Andricopulo, A.D., 2015, Molecular Docking and Structure-Based Drug Design Strategies, *Molecules*, 20(7), 13384-13421
- Fu, Y., Zhao, J., and Chen, Z., 2018, Insights Into The Molecular Mechanisms of Proteinligand Interactions By Molecular Docking And Molecular Dynamics Simulation: A Case of Oligopeptide Binding Protein, *Comput. Math. Methods Med.*, 2018(1), 1-12.



- Hermawan, F., Jumina, J., and Pranowo, H. D., 2020, Design Thioxanthone Derivatives as Potential Tyrosine Kinase Inhibitor: A Molecule Docking Study, *Rasayan J. Chem*, 13(4), 2626-2632.
- Jumina, J., Rastuti, U., dan Matsjeh, S., 2003, Sintesis 6-Nitro Veratril Alkohol dan 6-Nitro Veratraldoksime dari Vanilin sebagai Senyawa Antara dalam Pembuatan Turunan Antibiotik C-9154, *Indones. J. Chem.*, 3(1), 14-18.
- Kumar, A., Roy, S., Tripathi, S., and Sharma, A., 2016, Molecular Docking Based Virtual Screening of natural as Potential BACE1 Inhibitors: 3D QSAR Pharmacore Mapping and Molecular Dynamics Analysis, *J. Biomol. Struct. Dyn.*, 34(2), 239-249.
- Murthy, S.S. and Bala Narsaiah, T., 2019, Molecular Docking Studies of Phytocompounds With Transcriptional Factors In Hepatocellular Carcinoma, *Rasayan J. Chem.*, 12(4), 2030–2038.
- Mutsuura, K., Sakata, Y., Uchida, K., Hosoya, T., and Yoshida, S., 2020, Synthesis of Thioxanthenes Through Formal C-H Thiolation of Benzoic Acid Esters and Acid-mediated Direct Cyclization, *Chem. Lett.*, 49(7), 753-756.
- Narko, T., Benny, P., Riska, P., Dang, S., dan Faridhatul, K., 2017, Molecular Docking Study of Bulb Of Bawang Dayak (*Eleutherine palmifolia (L) Merr*) Compound as Anti Cervical Cancer, *Jurnal Ilmiah Farmako Bahari*, 8(2), 1-14.
- Palmeira, A., Vasconcelos, M. H., Paiva, A., Fernandes, M. X., Pinto, M., and Sousa, E., 2012, Dual Inhibitors of P-glycoprotein and Tumor Cell Growth: (Re)discovering Thioxanthenes, *Biochem. Pharmacol.*, 83(1), 57-68.
- Pinto, M. M. M., Palmeira, A., Fernandes, C., Resende, D. I. S. P., Sousa, E., Cidade, H., Tiritan, M. E., Correia-da-Silva, M., and Cravo, S., 2021, From Natural Products to New Synthetic Small Molecules: A Journey through the World of Xanthenes, *Molecules*, 26(431), 25-43.
- Pinto, M. M. M., Sousa, M. E., and Nascimento, M. S. J., 2005, Xanthone Derivatives: New Insights in Biological Activities, *Curr. Med. Chem.*, 12(21), 2517-2538.
- 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.
- Ternay, A. L. and Chasar, D. W., 1967, The Borohydride of Thioxanthone Sulfoxide. A Base-Induced Dehydration of Thioxanthene Sulfoxide, *J. Org. Chem.*, 32(12), 3814-3817.
- Wang, T., Wu, M. B., Chen, Z. J., Chen, H., Lin, J. P., and Yang, I. R., 2015, Fragment-based Drug Discovery and Molecular Docking in Drug Design, *Curr. Pharm. Biotechnol.*, 16(1), 11-25.
- Zeynizadeh, B. and Shirini, F., 2003, Mild and Efficient Method For Reduction of Aldehydes and Ketones With NaBH₄ in The Presence of Dowex1-x8, *J. Chem. Research*, 1(6), 334-339.



- Zhao, J. and Larock, R. C., 2006, Synthesis of Xanthenes, Thioxanthenes, and Acridones by the Coupling of Arynes and Substituted Benzoates, *J. Org. Chem.*, 72(2), 583-588.
- Zhao, X., H. Wanqi, Song, D., Lin, R., Huang, H., Huang, J., Wu, B., Huang, Y., and Ye, G., 2020, The Hydrogen Transfer Reaction Between the Substance of Triplet State Thioxanthone and Alkene with sp^3 Hybridization Hydrogen, *J. Mol. Model*, 26(56), 1-8.