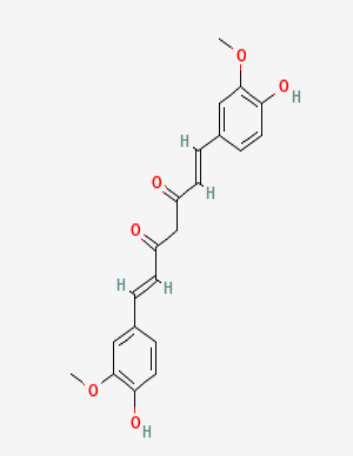
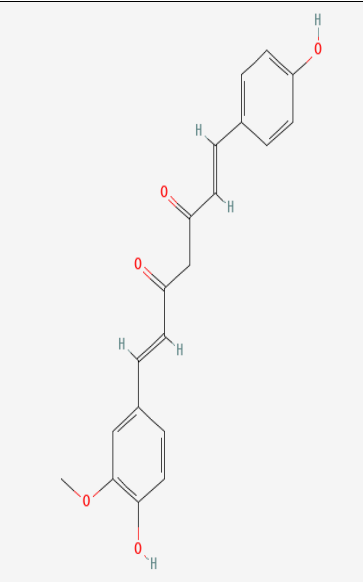
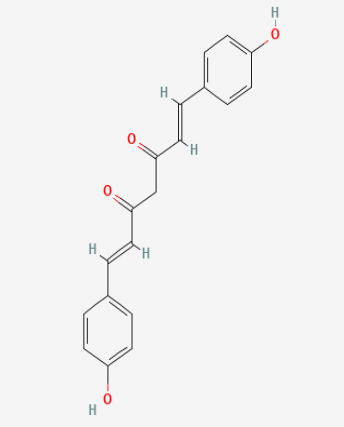
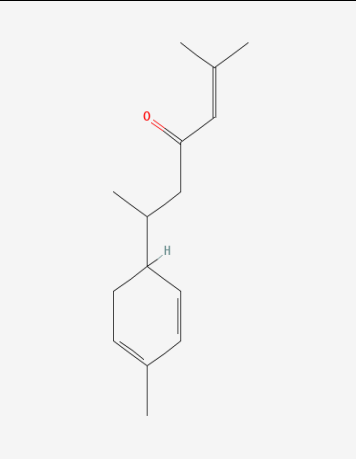

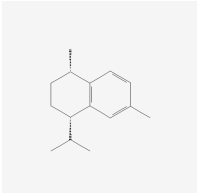

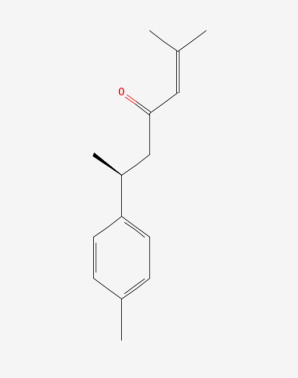
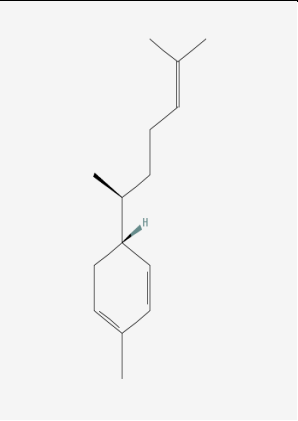
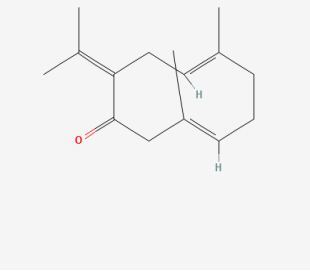



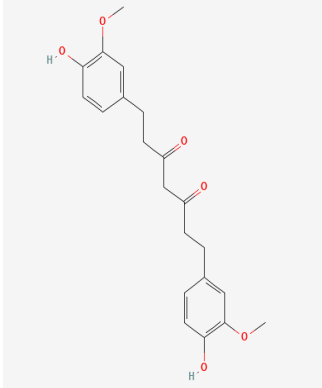
S/N	PHYTOCHEMICAL	STRUCTURE	PLANT PART	REFERENCES(SOURCES)
1	Curcumin	 <p>The chemical structure of Curcumin is shown. It consists of two 4-hydroxy-3-methoxyphenyl rings connected by a heptadiene chain. The chain has two conjugated double bonds in the middle and two carbonyl groups (C=O) adjacent to the rings. The hydroxyl groups are shown in red, and the methoxy groups are shown in grey.</p>	Rhizome of <i>Curcuma longa</i>	<p>Aggarwal, B. B., & Sung, B. (2009). Pharmacological basis for the role of curcumin in chronic diseases: an age-old spice with modern targets. <i>Trends in pharmacological sciences</i>, 30(2), 85–94. https://doi.org/10.1016/j.tips.2008.11.002</p>
2	Demethoxycurcumin	 <p>The chemical structure of Demethoxycurcumin is shown. It is similar to Curcumin, but the methoxy group on the top ring is replaced by a hydroxyl group. The hydroxyl groups are shown in red, and the methoxy group on the bottom ring is shown in grey.</p>	Rhizome	<p>Hatamipour, M., Ramezani, M., Tabassi, S. A. S., Johnston, T. P., & Sahebkar, A. (2019). <i>Journal of cellular physiology</i>, 234(11), 19320–19330. https://doi.org/10.1002/jcp.28626</p>

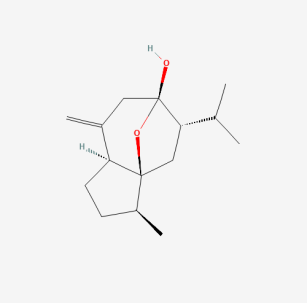
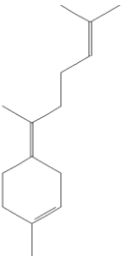
3	Bisdemethoxy curcumin	 <p>The chemical structure of Bisdemethoxy curcumin is shown. It consists of two 4-hydroxybenzaldehyde units connected by a 1,5-diketone chain. The structure is symmetrical, with a central carbon-carbon bond between two carbonyl groups, each of which is further connected to a methine group and a 4-hydroxyphenyl ring.</p>	Rhizome of <i>curcuma longa</i>	<p>Ramezani, M., Hatamipour, M., & Sahebkar, A. (2018). Promising anti-tumor properties of bisdemethoxy curcumin: A naturally occurring curcumin analogue. <i>Journal of cellular physiology</i>, 233(2), 880–887.</p> <p>https://doi.org/10.1002/jcp.25795</p>
4	α-Turmerone	 <p>The chemical structure of α-Turmerone is shown. It features a cyclohexene ring substituted with a 1,5-diketone chain. The chain includes a central carbon-carbon bond between two carbonyl groups, with a methyl group on one of the carbonyl carbons and a 4-methylphenyl ring on the other.</p>	Rhizome of <i>curcuma longa</i>	<p>Shahrajabian, M. H., & Sun, W. (2024). The Golden Spice for Life: Turmeric with the Pharmacological Benefits of Curcuminoids. <i>21(5)</i>, 665–683.</p> <p>https://doi.org/10.2174/1570179420666230607124949</p>

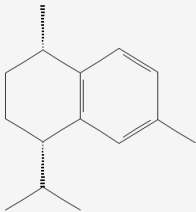
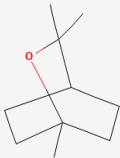
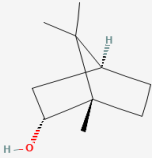
5	Camphene		Essential oil of turmeric plant	<p>D'Auria, M., & Racioppi, R. (2019). Solid phase microextraction and gas chromatography mass spectrometry analysis of <i>Zingiber officinale</i> and <i>Curcuma longa</i>. <i>Natural product research</i>, 33(14), 2125–2127. https://doi.org/10.1080/14786419.2018.1488702</p> 
6	β- Turmerone		Rhizome of turmeric plant	<p>Poudel, D. K., Ojha, P. K., Rokaya, A., Satyal, R., Satyal, P., & Setzer, W. N. (2022). Analysis of Volatile Constituents in <i>Curcuma</i> Species. https://doi.org/10.3390/plants11151932</p>


7	Ar-Turmerone		Rhizome	<p>Cao, W., Chen, X., Xiao, C., Lin, D., Li, Y., Luo, S., Zeng, Z., Sun, B., & Lei, S. (2023). Ar-turmerone inhibits the proliferation and mobility of glioma by downregulating cathepsin B. <i>Aging</i>, 15(18), 9377–9390. https://doi.org/10.18632/aging.204940</p>
8	Zingiberene		Rhizome	<p>Seshadri, V. D., Oyouni, A. A. A., Bawazir, W. M., Alsagaby, S. A., Alsharif, K. F., Albrakati, A., & Al-Amer, O. M. (2022). Zingiberene exerts chemopreventive activity against 7,12-dimethylbenz(a)anthracene-induced breast cancer in Sprague-Dawley rats. <i>Journal of biochemical and molecular toxicology</i>, 36(10), e23146.</p>

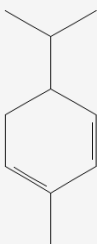

				https://doi.org/10.1002/jbt.23146
9	Germacrone		Rhizome	<p>Riaz, A., Rasul, A., Kanwal, N., Hussain, G., Shah, M. A., Sarfraz, I., Ishfaq, R., Batool, R., Rukhsar, F., & Adem, Ş. (2020). Germacrone: A Potent Secondary Metabolite with Therapeutic Potential in Metabolic Diseases, Cancer and Viral Infections. 27(14), 1079–1090.</p> <p>https://doi.org/10.2174/1389200221999200728144801</p>

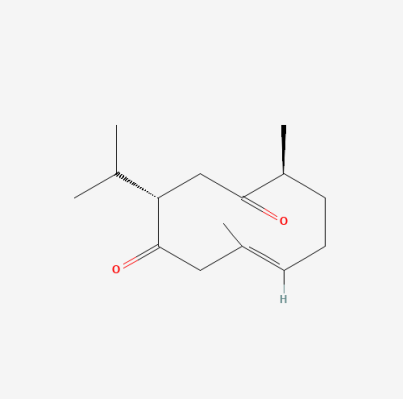
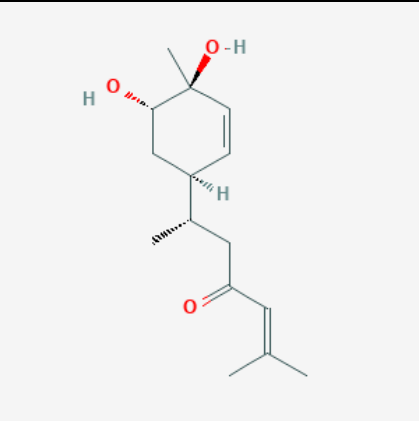
10	Sabinene		Essential oil of turmeric plant	<p>Sharma, S., Gupta, J., Prabhakar, P. K., Gupta, P., Solanki, P., & Rajput, A. (2019). Phytochemical Repurposing of Natural Molecule: Sabinene for Identification of Novel Therapeutic Benefits Using <i>In Silico</i> and <i>In Vitro</i> Approaches. <i>Assay and drug development technologies</i>, 17(8), 339–351.</p> <p>https://doi.org/10.1089/adt.2019.939</p>
11	Tetrahydrocurcumin		Curcuma longa	<p>Lai, C. S., Ho, C. T., & Pan, M. H. (2020). The Cancer Chemopreventive and Therapeutic Potential of Tetrahydrocurcumin. <i>Biomolecules</i>, 10(6), 831.</p> <p>https://doi.org/10.3390/biom10060831</p>

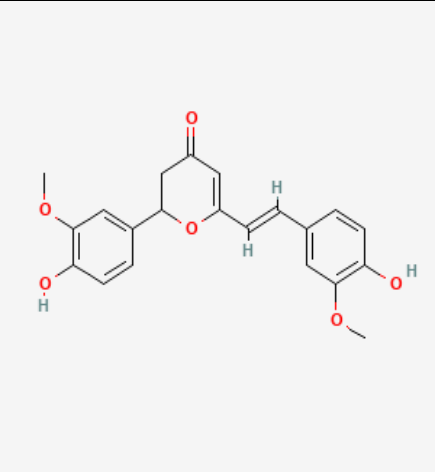
12	Curcumol		Rhizome(roots)	<p>Wei, W., Rasul, A., Sadiqa, A., Sarfraz, I., Hussain, G., Nageen, B., Liu, X., Watanabe, N., Selamoglu, Z., Ali, M., Li, X., & Li, J. (2019). Curcumol: From Plant Roots to Cancer Roots. <i>International journal of biological sciences</i>, 15(8), 1600–1609. https://doi.org/10.7150/ijbs.34716</p>
13	Bisabolene		Curcuma longa	<p>Orellana-Paucar, A. M., Serruys, A. S., Afrikanova, T., Maes, J., De Borggraeve, (2012). Anticonvulsant activity of bisabolene sesquiterpenoids of Curcuma longa in zebrafish and mouse seizure models. <i>Epilepsy & behavior : E&B</i>, 24(1), 14–22. https://doi.org/10.1016/j.yebeh.2012.01.011</p>

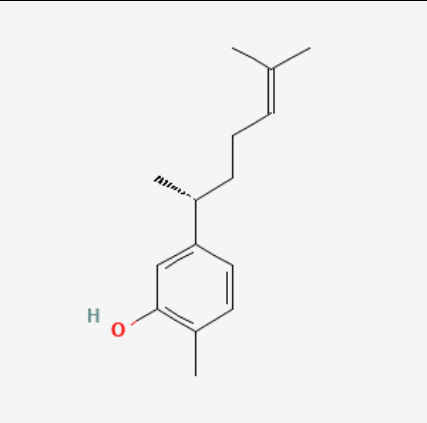
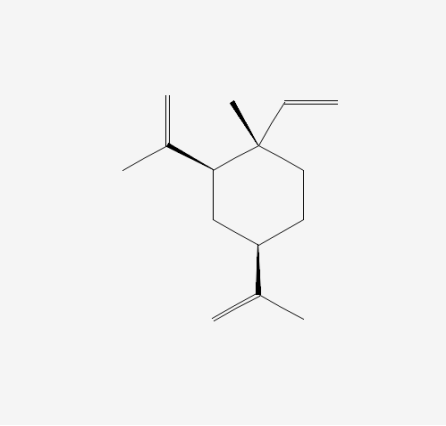
				/10.1016/j.yeb eh.2012.02.020
14	Calamenene		Curcuma longa	Tanaka et al., 2010, phytochemistry
15	Eucalyptol		Essential oil of curcuma longa	Rui, Y., Han, X., Jiang, A., Hu, J., Li, M., Liu, B., Qian, F., & Huang, L. (2022). Eucalyptol prevents bleomycin- induced pulmonary fibrosis and M2 macrophage polarization. <i>European journal of pharmacology</i> , 931, 175184. https://doi.org /1016/j.ejphar. 2022.175184
16	Borneol		Essential oil	Chen, J., Li, L., Su, J., & Chen, T. (2015). Natural borneol enhances bisdemethoxy curcumin- induced cell cycle arrest in

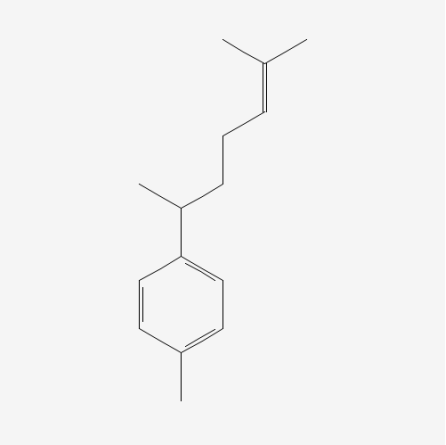
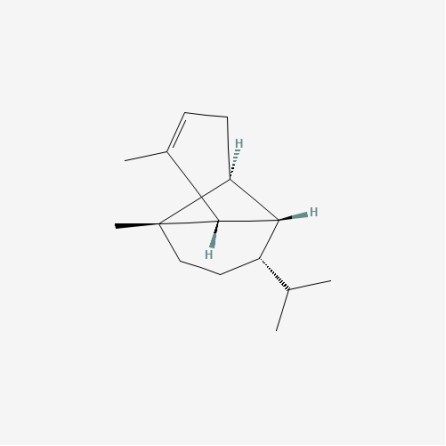
				<p>the G2/M phase through up-regulation of intracellular ROS in HepG2 cells. <i>Food & function</i>, 6(3), 740–748. https://doi.org/10.1039/c4fo00807c</p>
17	Camphor		Plant metabolite (essential oil)	<p>Akram, M., Riaz, M., Noreen, S., Shariati, M. A., Shaheen, G., Akhter, N., Parveen, F., Akhtar, N., Zafar, S., Owais Ghauri, A., Riaz, Z., Khan, F. S., Kausar, S., & Zainab, R. (2020). Therapeutic potential of medicinal plants for the management of scabies. 33(1), e13186. https://doi.org/10.1111/dth.13186</p>

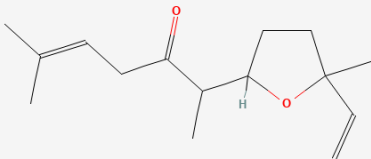
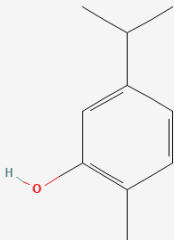
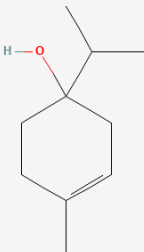
18	α-Phellandrene		Essential oil	<p>Radice, M., Durofil, A., Buzzi, R., Baldini, E., Martínez, A. P., Scalvenzi, L., & Manfredini, S. (2022). Alpha-Phellandrene and Alpha-Phellandrene-Rich Essential Oils (<i>Basel, Switzerland</i>), 12(10), 1602. https://doi.org/10.3390/life12101602</p>
19	Camphene		Essential oil of curcuma longa	<p>D'Auria, M., & Racioppi, R. (2019). Solid phase microextraction and gas chromatography mass spectrometry analysis of <i>Zingiber officinale</i> and <i>Curcuma longa</i>. <i>Natural product research</i>, 33(14), 2125–2127. https://doi.org/10.1080/14786419.2018.1488702</p>

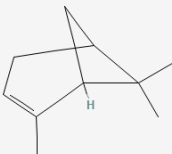
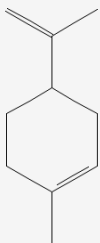
20	Curdione		Rhizome of curcuma longa	<p>Hou, X. L., Hayashi-Nakamura, E., Takatani-Nakase, T., Tanaka, K., Takahashi, K., Komatsu, K., & Takahashi, K. (2011). Curdione Plays an Important Role in the Inhibitory Effect of Curcuma aromatica on CYP3A4 in Caco-2 Cells. <i>Evidence-based complementary and alternative medicine : eCAM</i>, 2011, 913898. https://doi.org/10.1093/ecam/nep229</p>
21	Bisacurone		Rhizome	<p>He, C., Miyazawa, T., Abe, C., Ueno, T., Suzuki, M., Mizukami, M., Kurihara, K., & Toda, M. (2023). Hypolipidemic and Anti-Inflammatory Effects of Curcuma</p>

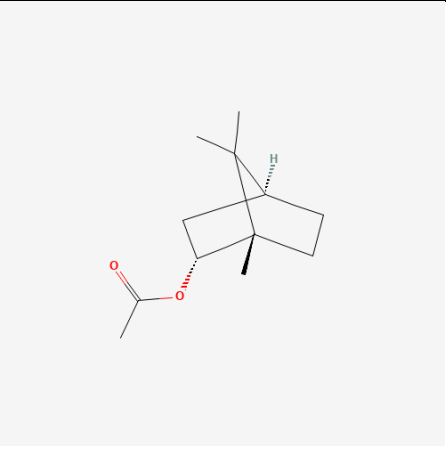
				<p><i>longa</i>-Derived Bisacurone in High-Fat Diet-Fed Mice. <i>International journal of molecular sciences</i>, 24(11), 9366. https://doi.org/10.3390/ijms24119366</p>
23	Cyclocurcumin		Rhizome	<p>Kim, K., Kim, J. J., Jung, Y., Noh, J. Y., Syed, A. S., Kim, C. Y., Lee, M. Y., Lim, K. M., Bae, O. N., & Chung, J. H. (2017). Cyclocurcumin, an Antivasoconstrictive Constituent of <i>Curcuma longa</i> (Turmeric). <i>Journal of natural products</i>, 80(1), 196–200. https://doi.org/10.1021/acs.jnatprod.6b00331</p>

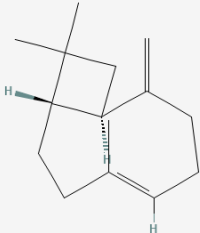
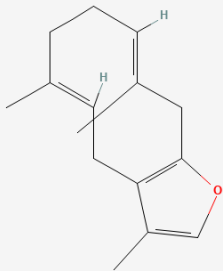
22	Xanthorrhizol		Rhizome of turmeric plant	<p>Simamora, A., Timotius, K. H., Yerer, M. B., Setiawan, H., & Mun'im, A. (2022). Xanthorrhizol, a potential anticancer agent, from <i>Curcuma xanthorrhiza</i> Roxb. <i>Phytomedicine : international journal of phytotherapy and phytopharmacology</i>, 105, 154359. https://doi.org/10.1016/j.phymed.2022.154359</p>
24	Elemene		Rhizome of turmeric plant	<p>Zhang, P., Liu, H., Yu, Y., Peng, S., & Zhu, S. (2024). Role of <i>Curcuma longae</i> Rhizoma in medical applications: research challenges and opportunities. <i>Frontiers in pharmacology</i>, 15, 1430284. https://doi.org/10.3389/fphar.2024.1430284</p>

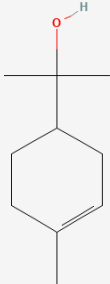
				/10.3389/fphar.2024.1430284
25	α-Curcumene		Rhizome	<p>Shin, Y., & Lee, Y. (2013). Cytotoxic Activity from <i>Curcuma zedoaria</i> Through Mitochondrial Activation on Ovarian Cancer Cells. <i>Toxicological research</i>, 29(4), 257–261.</p> <p>https://doi.org/10.5487/TR.2013.29.4.257</p>
26	α-copaene		Rhizome of <i>curcuma longa</i>	<p>Dosoky, N. S., Satyal, P., & Setzer, W. N. (2019). Variations in the Volatile Compositions of <i>Curcuma</i> Species. <i>Foods (Basel, Switzerland)</i>, 8(2), 53.</p> <p>https://doi.org/10.3390/foods8020053</p>

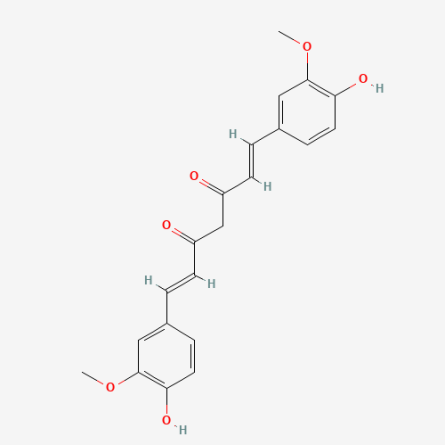
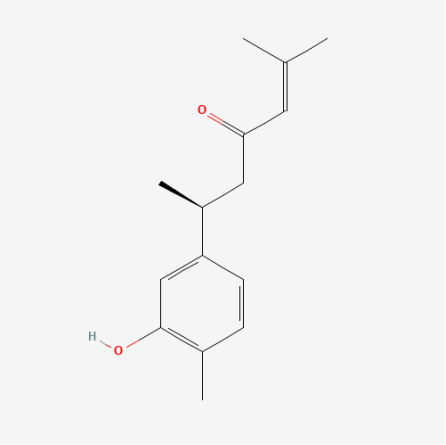
27	Davanone		Rhizome	Xiao, Y., Deng, T., & Wang, D. (2020). <i>Journal of the Balkan Union of Oncology</i> , 25(3), 1607–1613.
28	Carvacrol		Essential oil of turmeric plant	Singh, J., Luqman, S., & Meena, A. (2023). Carvacrol as a Prospective Regulator of Cancer Targets/Signaling Pathways. <i>Current molecular pharmacology</i> , 16(5), 542–558. https://doi.org/10.2174/1874467215666220705142954
29	Terpinene-4-ol		Essential oil of curcuma longa	Cao, Z., Wang, L., Huang, D., Wu, G., Li, X., Yue, Y., Yu, Y., Yu, R., & Fan, Y. (2024). Identification and functional analysis of floral terpene synthase genes in <i>Curcuma alismatifolia</i> .

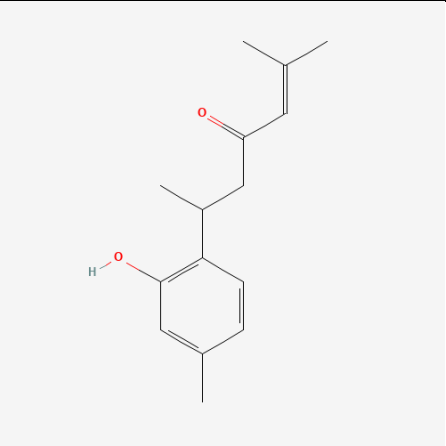
				<p><i>Planta</i>, 260(1), 26. https://doi.org/10.1007/s00425-024-04440-z</p>
30	α-Pinene		Essential oil of curcuma longa	<p>Parveen, Z., Nawaz, S., Siddique, S., & Shahzad, K. (2013). Composition and Antimicrobial Activity of the Essential Oil from Leaves of <i>Curcuma longa</i> L. Kasur Variety. <i>Indian journal of pharmaceutical sciences</i>, 75(1), 117–122. https://doi.org/10.4103/0250-474X.113544</p>
31	Limonene		Plant metabolite	<p>da Silva, C. E. H., Gosmann, G., & de Andrade, S. F. (2021). Limonene and Perillyl Alcohol Derivatives: Synthesis and Anticancer Activity. <i>Mini reviews in medicinal chemistry</i>, 21(14), 1813–</p>

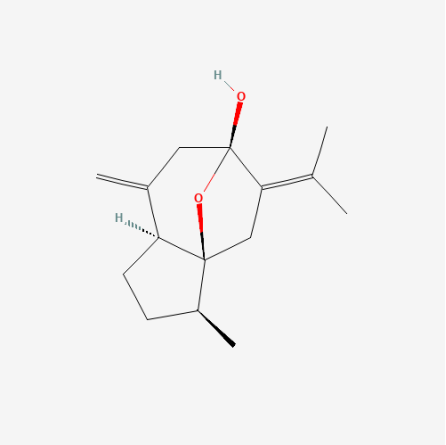
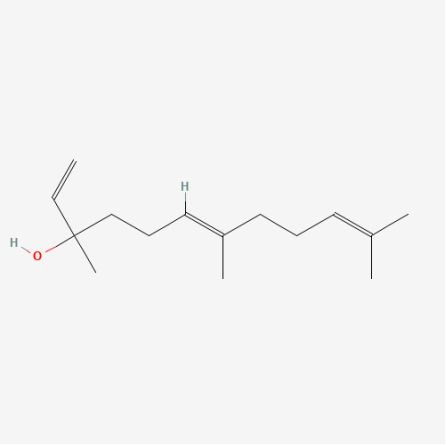
				1829. https://doi.org/10.2174/1389557521666210212150504
32	Bornyl acetate		Essential oil	Ibrahim, N. N. A., Wan Mustapha, W. A., Sofian-Seng, N. S., Lim, S. J., Mohd Razali, N. S., Teh, A. H., Rahman, H. A., & Mediani, A. (2023). A Comprehensive Review with Future Prospects on the Medicinal Properties and Biological Activities of <i>Curcuma caesia</i> Roxb. <i>Evidence-based complementary and alternative medicine : eCAM</i> , 2023, 7006565. https://doi.org/10.1155/2023/7006565

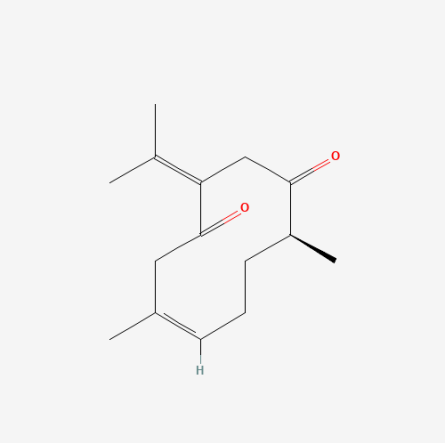
33	Caryophyllene		plant metabolite seen in essential oil	<p>Santos, P. S., Oliveira, T. C., R Júnior, L. M., Figueiras, A., & Nunes, L. C. C. (2018). β-caryophyllene Delivery Systems: Enhancing the Oral Pharmacokinetic and Stability. <i>Current pharmaceutical design</i>, 24(29), 3440–3453.</p> <p>https://doi.org/10.2174/1381612824666180912151412</p>
34	Furanodiene		<i>Curcuma longa</i>	<p>Batool, R., Rasul, A., Hussain, G., Shah, M. A., Nageen, B., Sarfraz, I., Zahoor, M. K., Riaz, A., Ajaz, A., & Adem, Ş. (2021). Furanodiene: A Novel, Potent, and Multitarget Cancer-fighting Terpenoid. <i>Current pharmaceutical design</i>,</p>

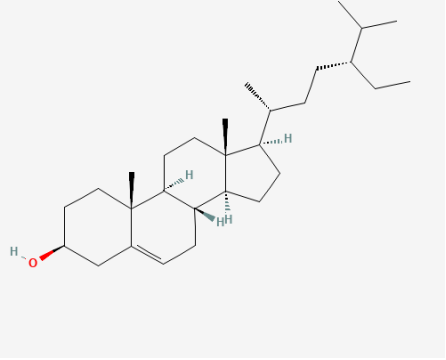
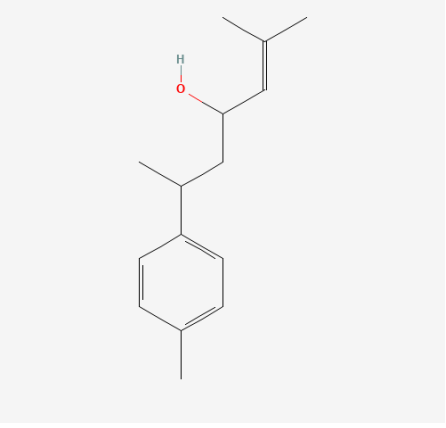
				27(22), 2628–2634. https://doi.org/10.2174/1381612827666210211125304
35	α-Terpineol		Essential oil in Turmeric plant	<p>Negreiros, H. A., de Moura, K. G., Barreto do Nascimento, M. L. L., do Nascimento Rodrigues, D. C., Ferreir, P. M. P., Braz, D. C., de Farias, M. G., de Sousa Corrêa, L., Pereira, A. R. S., Santos, L. K. B., Gonçalves, J. C. R., Mendes, A. N., Carneiro da Silva, F. C., Cavalcant, A. A. C. M., & de Castro E Sousa, J. M. (2021). Alpha-Terpineol as Antitumor Candidate in Pre-Clinical Studies. <i>Anti-cancer agents in medicinal chemistry</i>, 21(15), 2023–2031. https://doi.org/10.2174/1871</p>

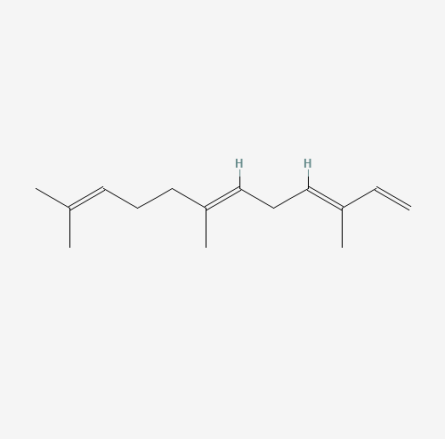
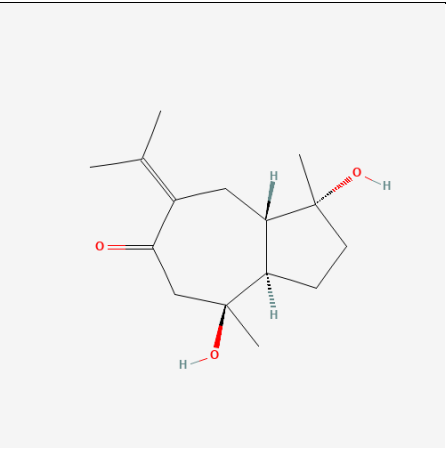
				520621999210 104195820
36	Turmerin		Rhizome(roots) of curcuma longa	<p>Lekshmi, P. C., Arimboor, R., Raghu, K. G., & Menon, A. N. (2012). Turmerin, the antioxidant protein from turmeric (<i>Curcuma longa</i>) exhibits antihyperglycemic effects. <i>Natural product research</i>, 26(17), 1654–1658. https://doi.org/10.1080/14786419.2011.589386</p>
37	Turmeronol A		Plant metabolite	<p>Saji, R., Uchio, R., Fuwa, A., Okuda-Hanafusa, C., Kawasaki, K., Muroyama, K., Murosaki, S., Yamamoto, Y., & Hirose, Y. (2023). Turmeronols (A and B) from <i>Curcuma longa</i> have anti-inflammatory effects in lipopolysaccharide-</p>

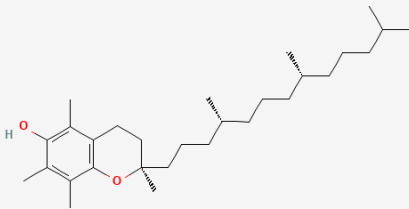
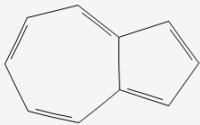
				<p>stimulated BV-2 microglial cells by reducing NF-κB signaling. <i>Bioscience of microbiota, food and health</i>, 42(3), 172–179. https://doi.org/10.12938/bmf.h.2022-071</p>
39	Turmeronol B	 <p>The chemical structure of Turmeronol B is shown. It consists of a benzene ring with a hydroxyl group (-OH) at the 1-position and a prenyl chain at the 2-position. The prenyl chain is a 3-methylbut-3-en-1-yl group, which is attached to the benzene ring via a methylene group. The structure is drawn with a benzene ring, a hydroxyl group, and a prenyl chain.</p>	Turmeric plant	<p>Saji, R., Uchio, R., Fuwa, A., Okuda-Hanafusa, C., Kawasaki, K., Muroyama, K., Murosaki, S., Yamamoto, Y., & Hirose, Y. (2023). Turmeronols (A and B) from <i>Curcuma longa</i> have anti-inflammatory effects in lipopolysaccharide-stimulated BV-2 microglial cells by reducing NF-κB signaling. <i>Bioscience of microbiota, food and health</i>, 42(3), 172–179. https://doi.org/10.12938/bmf.h.2022-071</p>

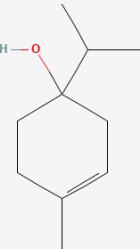
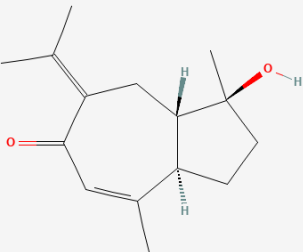
				/10.12938/bmf h.2022-071
40	Isocurcumenol		Plant metaboli te	<p>Lakshmi, S., Padmaja, G., & Remani, P. (2011). Antitumour Effects of Isocurcumenol Isolated from <i>Curcuma zedoaria</i> Rhizomes on Human and Murine Cancer Cells. <i>International journal of medicinal chemistry</i>, 2011, 253962. https://doi.org/10.1155/2011/253962</p>
41	Nerolidol		Plant metaboli te	<p>De Carvalho, R. B. F., De Almeida, A. A. C., Campelo, N. B., Lellis, D. R. O. D., & Nunes, L. C. C. (2018). Nerolidol and its Pharmacologic al Application in Treating Neurodegener ative Diseases: A Review. <i>Recent patents on biotechnology</i>,</p>

				<p>12(3), 158–168. https://doi.org/10.2174/1872208312666171206123805</p>
42	Dehydrocurdione		Rhizome	<p>Ohnishi, M., Urasaki, T., Egusa, K., Kunobu, C., Harada, T., Shinkado, R., Nishi, H., Maehara, S., Kitamura, C., Hata, T., Ohashi, K., Shibuya, H., & Inoue, A. (2018). Curcuma sp.-derived dehydrocurdione induces heme oxygenase-1 through a Michael reaction between its α, β-unsaturated carbonyl and Keap1. <i>Phytotherapy research : PTR</i>, 32(5), 892–897. https://doi.org/10.1002/ptr.6028</p>

44	β-Sitosterol		Rhizome	<p>Babu, S., & Jayaraman, S. (2020). An update on β-sitosterol: A potential herbal nutraceutical for diabetic management. <i>Biomedicine & pharmacotherapy</i> = <i>Biomedecine & pharmacotherapie</i>, 131, 110702. https://doi.org/10.1016/j.biopha.2020.110702</p>
43	Bisacumol		Turmeric plant	<p>Zhang, H., Jiang, H., Zhao, M., Xu, Y., Liang, J., Ye, Y., & Chen, H. (2022). Treatment of Gout with TCM Using Turmeric and Corn Silk: A Concise Review Article and Pharmacology Network Analysis. <i>Evidence-based complementary and alternative</i></p>

				<p><i>medicine : eCAM, 2022, 3143733.</i></p> <p>https://doi.org/10.1155/2022/3143733</p>
45	Farnesene		Rhizome	<p>George, K. W., Alonso-Gutierrez, J., Keasling, J. D., & Lee, T. S. (2015). Isoprenoid drugs, biofuels, and chemicals--artemisinin, farnesene, and beyond. <i>Advances in biochemical engineering/biotechnology</i>, 148, 355–389.</p> <p>https://doi.org/10.1007/10_2014_288</p>
46	Zedoarondiol		Plant metabolite	<p>Chai, H., Qu, H., He, S., Song, L., Yang, Y., Huang, H., & Shi, D. (2022). Zedoarondiol inhibits atherosclerosis by regulating monocyte migration and adhesion via CXCL12/CXCR4 pathway. <i>Pharmacologic</i></p>

				<p>al research, 182, 106328. https://doi.org/10.1016/j.phrs.2022.106328</p>
47	α-Tocopherol		Root	<p>Engin K. N. (2009). Alpha-tocopherol: looking beyond an antioxidant. <i>Molecular vision</i>, 15, 855–860.</p>
48	Azulene		Rhizome	<p>Slon, E., Slon, B., & Kowalczyk, D. (2024). Azulene and Its Derivatives as Potential Compounds in the Therapy of Dermatological and Anticancer Diseases: New Perspectives against the Backdrop of Current Research. <i>Molecules (Basel, Switzerland)</i>, 29(9), 2020. https://doi.org/10.3390/molecules29092020</p>

49	Terpinen-4-ol		Rhizome	<p>Cordeiro, L., Figueiredo, P., Souza, H., Sousa, A., Andrade-Júnior, F., Medeiros, D., Nóbrega, J., Silva, D., Martins, E., Barbosa-Filho, J., & Lima, E. (2020). Terpinen-4-ol as an Antibacterial and Antibiofilm Agent against <i>Staphylococcus aureus</i>. <i>International journal of molecular sciences</i>, 21(12), 4531. https://doi.org/10.3390/ijms21124531</p>
50	Procurcumenol		Rhizome	<p>Chen, J. J., Tsai, T. H., Liao, H. R., Chen, L. C., Kuo, Y. H., Sung, P. J., Chen, C. L., & Wei, C. S. (2016). New Sesquiterpenoids and Anti-Platelet Aggregation Constituents from the</p>

				Rhizomes of Curcuma zedoaria. <i>Molecules</i> (Basel, Switzerland), 21(10), 1385. https://doi.org/10.3390/molecules21101385
--	--	--	--	---