

REFERENCES

- Ajay, G.N., Vijaykumar, M.K. (2015). Comparative pharmacognostic and phytochemical investigation of two *Alpinia* species from Zingiberaceae family. *World J. Pharm. Res.* 4 (5), 1417–1432
- American Cancer Society. (2016). Surgery for Breast Cancer. Retrieved from: <https://www.cancer.org/cancer/breast-cancer/treatment/surgery-for-breast-cancer.html> Accessed March 28, 2018
- American Cancer Society. (2018). Early History of Cancer. Retrieved from: <https://www.cancer.org/cancer/cancer-basics/history-of-cancer/what-is-cancer.html> Accessed March 28, 2018.
- Awang, K., Nurul Azmi, M.N., In Lian Aun, L.I.L., Nazif Aziz, A.N., Ibrahim, H., Hasima Nagoor, N., 2010. The apoptotic effect of 1'S-1'-acetoxychavicol acetate from *Alpinia conchigera* on human cancer Cells. *Molecules* 15 (11), 8048.
- Aziman, N., Abdullah, N., Noor, Z. M., Kamarudin, W. S. S. W., & Zulkifli, K. S. (2014). Phytochemical Profiles and Antimicrobial Activity of Aromatic Malaysian Herb Extracts against Food- Borne Pathogenic and Food Spoilage Microorganisms. *Journal of food science*, 79(4), M583-M592
- Banjerdpongchai, R., Punyati, P., Nakrob, A., Pompimon, W., & Kongtawelert, P. (2011). 4'-Hydroxycinnamaldehyde from *Alpinia galanga* (Linn.) induces human leukemic cell apoptosis via mitochondrial and endoplasmic reticulum stress pathways. *Asian Pacific Journal of Cancer Prevention: APJCP*, 12(3), 593–598.
- Berridge, M. V., Herst, P. M., & Tan, A. S. (2005). Tetrazolium dyes as tools in cell biology: new insights into their cellular reduction. *Biotechnology Annual Review*, 11, 127–152.
- Beth Israel Deaconess Medical Center. (2014). Mechanism of cancer caused by loss of BRCA1, BRCA2 gene function identified. *ScienceDaily*. Retrieved March 26, 2018 from www.sciencedaily.com/releases/2014/04/140428121259.htm
- Block WM., & Muradali D. (2013). Five Things about Breast Cancer in Men. *Canadian Medical Association Journal*, 185(14). DOI:10.1503/cmaj.122056
- Brauchle, E., Thude, S., Brucker, S. Y., & Schenke-Layland, K. (2014). Cell death stages in single apoptotic and necrotic cells monitored by Raman microspectroscopy. *Scientific Reports*, 4, 4698.
- Bray F, Ren JS, Masuyer E, Ferlay J. Estimates of global cancer prevalence for 27 sites in the adult population in 2008. *Int J Cancer*. 2013 Mar 1;132(5):1133-45. doi: 10.1002/ijc.27711. Epub 2012 Jul 26. Accessed March 23, 2018.
- Brown, J. R., & Thornton, J. L. (1957). Percivall Pott (1714-1788) and Chimney Sweepers' Cancer of the Scrotum. *British Journal of Industrial Medicine*, 14(1), 68–70.
- CH Ng., Bhoo Pathy N., Taib NA., The YC., Mun KS., Amiruddin A., Elvina S., Rhodes A., & Yip CH. (2011). Comparison of breast cancer in Indonesia and Malaysia – A clinic-pathological study

- between Dharmais Cancer Centre Jakarta and University Malaya Medical Center, Kuala Lumpur. *Asian Pacific J Cancer Prev*, 12, 2943-2946
- China Pharmacopoeia Committee. (2015). Pharmacopoeia of the People's Republic of China. China Medical Science and Technology Press, Beijing.
- chudiwal ak, jain dp and somani rs (2010) *Alpinia galanga* Willd – an overview on phytopharmacological properties, *Indian J. Nat. Prod. Resour.*, 1: 143–9
- Cobb, L. (2013). Cell Based Assays: the Cell Cycle, Cell Proliferation and Cell Death. *Materials and Methods*, 3. <https://doi.org/10.13070/mm.en.3.172>
- Crowley, L. C., Marfell, B. J., Scott, A. P., & Waterhouse, N. J. (2016). Quantitation of Apoptosis and Necrosis by Annexin V Binding, Propidium Iodide Uptake, and Flow Cytometry. *Cold Spring Harbor Protocols*, 2016(11). <https://doi.org/10.1101/pdb.prot087288>
- Da Silva, L., & Lakhani, SR. (2010). Pathology of Hereditary Breast Cancer. *Modern Pathology*, 23:546-551.
- Darzynkiewicz, Z., Bedner, E., & Smolewski, P. (2001). Flow cytometry in analysis of cell cycle and apoptosis. *Seminars in Hematology*, 38(2), 179–193.
- Davies, OR., & Pellegrini, L. (2007). Interaction with the BRCA2 C-terminus Protects RAD51-DNA Filaments From Disassembly by BRC repeats. *Nat. Struct. Mol. Biol*, 14, 475–483.
- Degterev, A., Huang, Z., Boyce, M., Li, Y., Jagtap, P., Mizushima, N., ... Yuan, J. (2005). Chemical inhibitor of nonapoptotic cell death with therapeutic potential for ischemic brain injury. *Nature Chemical Biology*, 1(2), 112–119.
- Faguet GB. (2015). A brief History of Cancer: Age-old Milestones Underlying our Current Knowledge Database. *International Journal of Cancer*, 136, 2022-2036.
- Fakhrjou, A., Naghavi-Behzad, M., Montazeri, V., Karkon-Shayan, F., Norouzi-Panahi, L., & Piri, R. (2016). The relationship between histologic grades of invasive carcinoma of breast ducts and mast cell infiltration. *South Asian Journal of Cancer*, 5(1), 5–7. <http://doi.org/10.4103/2278-330X.179699>
- Fentiman, I.S., (2016). Male breast Cancer Is Not Congruent with the Female Disease. *Crit Rev Oncol/Hematol*; 1-6. <http://dx.doi.org/10.1016/j.critrevonc.2016.02.017>
- Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, Mathers C, Rebelo M, Parkin DM, Forman D, Bray, F. GLOBOCAN 2012 v1.0, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 11 [Internet]. Lyon, France: International Agency for Research on Cancer; 2013. Available from: <http://globocan.iarc.fr>, accessed on day/month/year. Accessed March 23, 2018.
- Gethins, M. (2012). Breast Cancer in Men. , *JNCI: Journal of the National Cancer Institute*, 104(6); 436–438, <https://doi.org/10.1093/jnci/djs172>
- Ha, T. K., Kim, M. E., Yoon, J. H., Bae, S. J., Yeom, J., & Lee, J. S. (2013). Galangin induces human colon cancer cell death via the mitochondrial dysfunction and caspase-dependent pathway. *Experimental Biology and Medicine* , 238(9), 1047–1054.

- Hadjzadeh, M.-A.-R., Ghanbari, H., Keshavarzi, Z., & Tavakol-Afshari, J. (2014). The Effects of Aqueous Extract of *Alpinia Galangal* on Gastric Cancer Cells (AGS) and L929 Cells in Vitro. *Iranian Journal of Cancer Prevention*, 7(3), 142–146.
- Hajdu, SI. (2011). A Note from History: Landmarks in History of Cancer, Part 1. *Cancer*, 117(5):1097-1102 DOI: 10.1002/cncr.25553
- Hall, JM., Lee, MK., Newman, B., Morrow, JE., Anderson, L.A., Huey, B., & King, M.C. (1990). Linkage of Early-Onset Familial Breast Cancer to Chromosome 17q21. *Science* 250, 1684–1689.
- Hankinson, S., Tamimi, R., & Hunter, D. (2008). Breast cancer. Cancer Epidemiology by Site-specific Cancers: Breast Cancer, in: Adami HO., Hunter, D., & Trichopoulos, D., (Eds.), Textbook of Cancer Epidemiology, 2nd ed., Oxford University Press, New York, NY.
- Hasima, N., Aun, L. I. L., Azmi, M. N., Aziz, A. N., Thirthagiri, E., Ibrahim, H., & Awang, K. (2010). 1'S-1'-acetoxyeugenol acetate: a new chemotherapeutic natural compound against MCF-7 human breast cancer cells. *Phytomedicine: International Journal of Phytotherapy and Phytopharmacology*, 17(12), 935–939.
- heo my, sohn sj and au ww (2001) Antigenotoxicity of galangin as a cancer chemopreventive agent candidate, *Mutat. Res.*, 488: 135–50
- Herr HW. (2011). Percivall Pott, The Environment and Cancer. *BJU International*. 108(4), 479-481. doi: 10.1111/j.1464-410X.2011.10487. x. <https://www.cancer.org/cancer/cancer-basics/history-of-cancer/what-is-cancer.html> Accessed March 14, 2018.
- In, L. L. A., Azmi, M. N., Ibrahim, H., Awang, K., & Nagoor, N. H. (2011). 1'S-1'-acetoxyeugenol acetate: a novel phenylpropanoid from *Alpinia conchigera* enhances the apoptotic effects of paclitaxel in MCF-7 cells through NF-κB inactivation. *Anti-Cancer Drugs*, 22(5), 424–434.
- Institute of Medicine. 2007. *Cancer Control Opportunities in Low- and Middle-Income Countries*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/11797>
- Kementrian Kesehatan RI. (2013). Riset Kesehatan Dasar 2013. Retrieved from: <http://www.depkes.go.id/resources/download/general/Hasil%20Riskasdas%202013.pdf> Accessed March 23, 2018.
- Kementrian Kesehatan RI. (2015). Situasi Penyakit Kanker. Pusat Data dan Informasi. Retrieved February 2nd2018 from: <http://www.depkes.go.id/resources/download/pusdatin/infodatin/infodatin-kanker.pdf>
- Kuete, V., & Efferth, T. (2015). African flora has the potential to fight multidrug resistance of cancer. *BioMed Research International*, 2015, 914813.
- Lakhtakia, R. (2014). A Brief History of Breast Cancer: Part I: Surgical domination reinvented. *Sultan Qaboos University Medical Journal*, 14(2), e166–e169.
- Lester, SC., Bose, S., & Chen YY, et al. (2009). Protocol for the examination of specimens from patients with invasive carcinoma of the breast. *Arch Pathol Lab Med*, 133(10):1515–1538

- Liu, W., Yin, D., Li, N., Hou, X., Wang, D., Li, D., & Liu, J. (2016). Influence of Environmental Factors on the Active Substance Production and Antioxidant Activity in *Potentilla fruticosa* L. and Its Quality Assessment. *Scientific Reports*, 6, 28591.
- McGuire S. (2016). World Cancer Report 2014. Geneva, Switzerland: World Health Organization, International Agency for Research on Cancer, WHO Press, 2015. *Adv Nutr.* ;7:418–9; doi:10.3945/an.116.012211.
- Melanathuru V., Rengarajan S & Thangavel N. (2017). COMPARATIVE STUDY OF ANTIOXIDANT AND ANTICANCER ACTIVITY OF ALPINIA CALCARATA AND ALPINIA GALANGA. *International Journal of Pharmacy and Pharmaceutical Sciences*. Vol 9, Issue 12, 186-193. DOI: <http://dx.doi.org/10.22159/ijpps.2017v9i12.21599>
- Mosmann, T. (1983). Rapid colorimetric assay for cellular growth and survival: application to proliferation and cytotoxicity assays. *Journal of Immunological Methods*, 65(1-2), 55–63.
- Mushtaq M., Darekar S., & Kashuba E. (2016). DNA Tumor Viruses and Cell Metabolism. *Oxidative Medicine and Cellular Longevity*, vol.2016, 1-9. doi:10.1155/2016/6468342
- National Cancer Institute. (2017). Types of Cancer Treatment. Retrieved from: <https://www.cancer.gov/about-cancer/treatment/types> Accessed March 27, 2018
- National Cancer Institute. (2018). BRCA Mutation: Cancer Risk and Getting Testing. Retrieved from: <https://www.cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet#q1> Accessed March 26, 2018.
- Noro, T., Sekiya, T., Katoh, M., Oda, Y., Miyase, T., Kuroyanagi, M., Ueno, A., Fukushima, S., 1988. Inhibitors of xanthine oxidase from *Alpinia galanga*. *Chem. Pharm. Bull.* 36 (1), 244–248
- Nounou M,I., ElAmrawy F., Ahmed N., Abdelraouf K., Goda S., & Syed-Sha-Qhattal H. (2015). Breast Cancer: Conventional Diagnosis and Treatment Modalities and Recent Patents and Technologies. *Breast Cancer: Basic and Clinical Research*, 9(s2) 17–34 doi:10.4137/BCBCr.s29420
- Osborn G. (2013). Management of Breast Cancer: Basic Principles. *Surgery*, 31(1): 27-31.
- Panich, U., Kongtaphan, K., Onkoksoong, T., Jaemsak, K., Phadungrakwittaya, R., Thaworn, A., ... Wongkajornsilp, A. (2010). Modulation of antioxidant defense by *Alpinia galanga* and *Curcuma aromatica* extracts correlates with their inhibition of UVA-induced melanogenesis. *Cell Biology and Toxicology*, 26(2), 103–116.
- Quadri sa, quadri an, hahn me, *et al.* (2000) The bioflavonoid galangin blocks aryl hydrocarbon receptor activation and polycyclic aromatic hydrocarbon induced pre-B cell apoptosis, *Mol. Pharmacol.*, 58: 515–25.
- Rao AR., Hanchenale V., Lanioado M., Karim O., & Motiwala H. (2008). Sir Percival Pott and His Memorable Contribution to The Epidemiology of the Chimney Sweeper's Cancer and the Epidemic of Tuberculosis [Abstract]. *The Journal of urology*, 179(4), 310
- Rasjidi I. (2011). *Buku Ajar Onkologi Klinik*. Jakarta. Indonesia: Pnenerbit Buku Kedokteran EGC

- Rehemtulla, A. (2010). Dinosaurs and Ancient Civilizations: Reflections on the Treatment of Cancer. *Neoplasia (New York, N.Y.)*, 12(12), 957–968.
- Reis-Filho, JS., & Puztai L. (2011). Gene Expression Profiling in Breast Cancer: Classification, Prognostication and Prediction. *Lancet*, 378: 1812-23.
- Riss TL, Moravec RA, Niles AL, et al. (2013) [Updated 2016 Jul 1] Cell Viability Assays. In: Sittampalam GS, Coussens NP, Brimacombe K, et al., editors. *Assay Guidance Manual* [Internet]. Bethesda (MD): Eli Lilly & Company and the National Center for Advancing Translational Sciences; 2004-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK144065/>
- Samarghandian, S., Hadjzadeh, M.-A.-R., Afshari, J. T., & Hosseini, M. (2014). Antiproliferative activity and induction of apoptotic by ethanolic extract of *Alpinia galanga* rhizome in human breast carcinoma cell line. *BMC Complementary and Alternative Medicine*, 14, 192.
- Sari, P.D.H. (2017). *Aktivitas antiproliferatif ekstrak terstandar lengkuas (alpinia galanga) berdasarkan senyawa 1'-asetoksi kavikol asetat pada sel kanker payudara mcf7*: A thesis in Pharmacy (undergraduate thesis). Universitas Muhammadiyah, Surakarta, Indonesia.
- Sibbering M., & Courtney C-A. (2015). Management of breast cancer: basic principles, *Surgery*, <http://dx.doi.org/10.1016/j.mpsur.2015.10.005>
- Siddiqui, I. A., Sanna, V. , Ahmad, N. , Sechi, M. and Mukhtar, H. (2015), Resveratrol nanoformulation for cancer prevention and therapy. *Ann. N.Y. Acad. Sci.*, 1348: 20-31. doi:[10.1111/nyas.12811](https://doi.org/10.1111/nyas.12811)
- Sinha KK. (2003). Spieces and Flavoring (Flavouring) Crops| Use of Spieces in the Food Industry. In: caballero (2nd Edition) *Encyclopedia of Food Sciences and Nutrition*. Amsterdam, NL: Elsevier. Available from: <https://www.sciencedirect.com/science/book/9780857090409>
- Skandarajah, A., & Cancer Council Australia Oncology Education Committee. Breast Cancer. In *Clinical Oncology for Medical Student*. Retrieved from: [https:// wiki. cancer. org. au](https://wiki.cancer.org.au) Accessed March 24, 2018
- Spitale A., Mazzola P., Soldini D., Mazzucchelli L., & Bordoni A. (2009). Breast cancer classification according to Immunohistochemical Markers: Clinicopathologic Features and Short-term Survival Analysis in a Population-based study from the South Switzerland. *Annals of Oncology*, 20: 628–63. doi:[10.1093/annonc/mdn675](https://doi.org/10.1093/annonc/mdn675)
- Sudhakar, A. (2009). History of Cancer, Ancient and Modern Treatment Methods. *Journal of Cancer Science & Therapy*, 1(2), 1–4. <http://doi.org/10.4172/1948-5956.100000e2>
- Tang, Z., & Hickey I. (2014). Cell cycle and cell division. *Nature Education*. Retrieved from: <https://www.nature.com/scitable/topic/cell-cycle-and-cell-division-14122649> Accessed July 1, 2018.
- Tapia-Alveal, C., Calonge, T. M., & O'Connell, M. J. (2009). Regulation of Chk1. *Cell Division*, 4(1), 8.
- Thokcom SHS., & Thokcom BS. (2014). Pliminary Phytochemical Screening and Determination from Rhizome and Flower of *Alpinia galangal*. *World Journal of Pharmacy and Pharmaceutical Sciences*, 3(11); 1354-1361

- Torre LA., Siegel RL., Ward EM., & Jemal A. (2015). Global Cancer Incidence and Mortality Rates and Trends- An Update. *Cancer Epidemiol Biomarkers Prev*; 25(1). DOI: 10.1158/1055-9965.EPI-15-0578
- US Cancer Statistics Working Group. (2012). *United States Cancer Statistics: 1999–2008 incidence and mortality web-based report*. Atlanta (GA): US Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute. Retrieved from: <http://apps.nccd.cdc.gov/uscs/> Accessed March 25, 2018.
- Vanden Berghe, T., Grootjans, S., Goossens, V., Dondelinger, Y., Krysko, D. V., Takahashi, N., & Vandenabeele, P. (2013). Determination of apoptotic and necrotic cell death in vitro and in vivo. *Methods*, 61(2), 117–129.
- Vandenabeele, P., Galluzzi, L., Vanden Berghe, T., & Kroemer, G. (2010). Molecular mechanisms of necroptosis: an ordered cellular explosion. *Nature Reviews. Molecular Cell Biology*, 11(10), 700–714.
- Venkitaraman, AR. (2001). Functions of BRCA1 and BRCA2 in the Biological Response to DNA Damage. *Journal of Cell Science*, 114; 3591-3598
- Wang, J., Zhang, L., Chen, G., Zhang, J., Li, Z., Lu, W., Liu, M., Pang, X., 2014c. Small molecule 1'-acetoxychavicol acetate suppresses breast tumor metastasis by regulating the SHP-1/STAT3/MMPs signaling pathway. *Breast Cancer Res. Treat.* 148 (2), 279–289.
- Warnes G. (2016). DNA fragmentation. Barts and The London School of Medicine and Dentistry. Retrieved from: <http://www.icms.qmul.ac.uk/flowcytometry/uses/apoptosis/dnafragmentation/> Accessed July 2, 2018.
- Wlodkowic, D., Skommer, J., & Darzynkiewicz, Z. (2009). Flow Cytometry-Based Apoptosis Detection. In *Methods in Molecular Biology* (pp. 19–32).
- Wong, A.K., Pero, R., Ormonde, P.A., Tavtigian S.V., & Bartel, P.L. (1997). RAD51 Interacts With The Evolutionarily Conserved BRC Motifs In The Human Breast Cancer Susceptibility Gene Brca2. *J. Biol.Chem.* 272, 31941–31944.
- Wooster, R., Bignell, G., Lancaster, J., Swift, S., Seal, S., Mangion, J., Collins, N., Gregory, S., Gumbs, C., & Micklem, G. (1995). Identification of the breast cancer susceptibility gene BRCA2. *Nature* 378, 789–792
- World Health Organization. (2018). Cancer. Retrieved from: <http://www.who.int/mediacentre/factsheets/fs297/en/> accessed March 23, 2018.
- Zeng, Q.-H., Lu, C.-L., Zhang, X.-W., & Jiang, J.-G. (2015). Isolation and identification of ingredients inducing cancer cell death from the seeds of *Alpinia galanga*, a Chinese spice. *Food & Function*, 6(2), 431–443.
- Zhou, Y.-Q., Liu, H., He, M.-X., Wang, R., Zeng, Q.-Q., Wang, Y., ... Zhang, Q.-W. (2018). A Review of the Botany, Phytochemical, and Pharmacological Properties of Galangal. In *Natural and Artificial Flavoring Agents and Food Dyes* (pp. 351–396).