
REFERENCES

- Adinew, G. M., Messeha, S., Taka, E., Ahmed, S. A., & Soliman, K. F. (2023). The role of apoptotic genes and protein-protein interactions in triple-negative breast cancer. *Cancer Genomics & Proteomics*, 20(3), 247-272.
- Aguilar-Cazares, D., Chavez-Dominguez, R., Carlos-Reyes, A., Lopez-Camarillo, C., Hernandez de la Cruz, O. N., & Lopez-Gonzalez, J. S. (2019). Contribution of angiogenesis to inflammation and cancer. *Frontiers in oncology*, 9, 1399.
- Ahmad, S. R., & Ghosh, P. (2022). A systematic investigation on flavonoids, catechin, β -sitosterol and lignin glycosides from *Saraca asoca* (ashoka) having anti-cancer & antioxidant properties with no side effect. *Journal of the Indian Chemical Society*, 99(1), 100293.
- Akanji, M. A., Salau, A. K., & Yakubu, M. T. (2013). Safety evaluation of aqueous extract of *Crateva adansonii* leaves on selected tissues of rats. *Fountain Journal of Natural and Applied Sciences*, 2(1).
- Akihisa, T., Pan, X., Nakamura, Y., Kikuchi, T., Takahashi, N., Matsumoto, M., ... & Tokuda, H. (2013). Limonoids from the fruits of *Melia azedarach* and their cytotoxic activities. *Phytochemistry*, 89, 59-70.
- Alamilla-Presuel, J. C., Burgos-Molina, A. M., González-Vidal, A., Sendra-Portero, F., & Ruiz-Gómez, M. J. (2022). Factors and molecular mechanisms of radiation resistance in cancer cells. *International Journal of Radiation Biology*, 98(8), 1301-1315.
- Aliyu Ibrahim, J., Omoregie Egharevba, H., & Shingu Gamaniel, K. (2017). Chemical and Biological Screening Approaches to Phytopharmaceuticals. *International Journal of Sciences*, 3(10), 22–31. <https://doi.org/10.18483/ijsci.1443>

-
- Allwood, J. W., & Goodacre, R. (2010). An Introduction To Liquid Chromatography–Mass Spectrometry Instrumentation Applied In Plant Metabolomic Analyses. *Phytochemical Analysis: An International Journal of Plant Chemical And Biochemical Techniques*, 21(1), 33-47.
- Al-Mahmood, S., Sapiezynski, J., Garbuzenko, O. B., & Minko, T. (2018). Metastatic and triple-negative breast cancer: challenges and treatment options. *Drug delivery and translational research*, 8, 1483-1507.
- Alonso-González, C., Menéndez-Menéndez, J., González-González, A., González, A., Cos, S., & Martínez-Campa, C. (2018). Melatonin enhances the apoptotic effects and modulates the changes in gene expression induced by docetaxel in MCF-7 human breast cancer cells. *International Journal of Oncology*, 52(2), 560-570.
- Alvarez-García, V., González, A., Martínez-Campa, C., Alonso-González, C., & Cos, S. (2013). Melatonin modulates aromatase activity and expression in endothelial cells. *Oncology reports*, 29(5), 2058-2064.
- Antony, A., & Farid, M. (2022). Effect of temperatures on polyphenols during extraction. *Applied Sciences*, 12(4), 2107.
- Anulika, N. P., Ignatius, E. O., Raymond, E. S., Osasere, O. I., & Abiola, A. H. (2016). The chemistry of natural product: Plant secondary metabolites. *Int. J. Technol. Enhanc. Emerg. Eng. Res*, 4(8), 1-9.
- Araya, L. E., Soni, I. V., Hardy, J. A., & Julien, O. (2021). Deorphanizing caspase-3 and caspase-9 substrates in and out of apoptosis with deep substrate profiling. *ACS Chemical Biology*, 16(11), 2280-2296.
- Arendt, J., & Skene, D. J. (2005). Melatonin as a chronobiotic. *Sleep medicine reviews*, 9(1), 25-39.
-

-
- Arfin, S., Agrawal, K., Maurya, S., Asthana, S., Di Silvestre, D., & Kumar, D. (2023). Lead phytochemicals and marine compounds against ceruloplasmin in cancer targeting. *Journal of Biomolecular Structure and Dynamics*, 1-17.
- Asadi, M., Taghizadeh, S., Kaviani, E., Vakili, O., Taheri-Anganeh, M., Tahamtan, M., & Savardashtaki, A. (2022). Caspase-3: structure, function, and biotechnological aspects. *Biotechnology and Applied Biochemistry*, 69(4), 1633-1645.
- Atta, E. M., Mohamed, N. H., & Abdelgawad, A. A. (2017). Antioxidants: An overview on the natural and synthetic types. *Eur. Chem. Bull*, 6(8), 365-375.
- Aung, T. N., Qu, Z., Kortschak, R. D., & Adelson, D. L. (2017). Understanding the effectiveness of natural compound mixtures in cancer through their molecular mode of action. *International journal of molecular sciences*, 18(3), 656.
- Awounfack, C. F., Ateba, S. B., Zingue, S., Mouchili, O. R., & Njamien, D. (2016). Safety evaluation (acute and sub-acute studies) of the aqueous extract of the leaves of *Myrianthus arboreus* P. Beauv.(Cecropiaceae) in Wistar rats. *Journal of ethnopharmacology*, 194, 169-178.
- Baj, J., Dring, J. C., Czezelewski, M., Kozyra, P., Forma, A., Flieger, J., ... & Teresiński, G. (2022). Derivatives of plastics as potential carcinogenic factors: the current state of knowledge. *Cancers*, 14(19), 4637.
- Bakar-Ateş, F., Özmen, N., Kaya-Sezginer, E., & Kurt, E. E. (2018). Effects of colchicine on cell cycle arrest and MMP-2 mRNA expression in MCF-7 breast adenocarcinoma cells. *Turk. Hij. Den. Biyol. Derg*, 75, 239-244.
- Banerjee, V., Sharda, N., Huse, J., Singh, D., Sokolov, D., Czinn, S. J., ... & Banerjee, A. (2021). Synergistic potential of dual andrographolide and melatonin targeting of metastatic colon cancer cells: Using the Chou-Talalay combination index method. *European Journal of Pharmacology*, 897, 173919.
-

-
- Barbosa, W. L. R., Nascimento, M. S., Pinto, L. N., Maia, F. L. C., Sousa, A. J. A., Silva, J. O. C., ... & Oliveira, D. R. (2012). Selecting medicinal plants for development of phytomedicine and use in primary health care. *Bioactive compounds in phytomedicine*, 3-24.
- Barzaman, K., Moradi-Kalbolandi, S., Hosseinzadeh, A., Kazemi, M. H., Khorramdelazad, H., Safari, E., & Farahmand, L. (2021). Breast cancer immunotherapy: Current and novel approaches. *International immunopharmacology*, 98, 107886.
- Bhalla, M., Mittal, R., Kumar, M., & Kushwah, A. S. (2022). Pharmacological Aspects of a Bioactive Compound Arbutin: A Comprehensive Review. *Biointerface Res. Appl. Chem*, 13, 119.
- Bhat, A. A., Thapa, R., Afzal, O., Agrawal, N., Almalki, W. H., Kazmi, I., ... & Gupta, G. (2023). The pyroptotic role of Caspase-3/GSDME signalling pathway among various cancer: A Review. *International journal of biological macromolecules*, 124832.
- Boice, A., & Bouchier-Hayes, L. (2020). Targeting apoptotic caspases in cancer. *Biochimica et Biophysica Acta (BBA)-Molecular Cell Research*, 1867(6), 118688.
- Borokar, A. A., & Pansare, T. A. (2017). Plant profile, phytochemistry and pharmacology of Ashoka (*Saraca asoca* (Roxb.), De. Wilde)-A comprehensive review. *Int. J. Ayurvedic Herb. Med*, 7(2), 2524-2541.
- Bortner, C. D., Oldenburg, N. B., & Cidlowski, J. A. (1995). The role of DNA fragmentation in apoptosis. *Trends in Cell Biology*, 5(1), 21–26.
- Brand-Williams, W., Cuvelier, M. E., & Berset, C. L. W. T. (1995) Use of a free radical method to evaluate antioxidant activity. *LWT-Food science and Technology*, 28(1), 25-30.
- Bruno, R. S. (2019). The Role of Tocopherols in Health. In *Handbook of Nutraceuticals and Functional Foods* (pp. 105-126). CRC Press.
-

-
- Burguin, A., Diorio, C., & Durocher, F. (2021). Breast cancer treatments: updates and new challenges. *Journal of personalized medicine*, 11(8), 808.
- Cailleau, R., et al. (1978). Breast tumor cell lines from pleural effusions. *Journal of the National Cancer Institute*, 61(4), 967-978
- Calaf, G. M., Ponce-Cusi, R., & Carrión, F. (2018). Curcumin and paclitaxel induce cell death in breast cancer cell lines. *Oncology reports*, 40(4), 2381–2388. <https://doi.org/10.3892/or.2018.6603>
- Cao, G., Pei, W., Lan, J., Stetler, R. A., Luo, Y., Nagayama, T., ... & Chen, J. (2001). Caspase-activated DNase/DNA fragmentation factor 40 mediates apoptotic DNA fragmentation in transient cerebral ischemia and in neuronal cultures. *Journal of Neuroscience*, 21(13), 4678-4690.
- Cao, H., Wang, S., & Wang, Y. (2021). Recent Advances in the Biosynthesis and Regulation of Taxol and Related Taxoids. *Frontiers in Plant Science*, 12, 768.
- Chang, C. M., Lam, H. Y. P., Hsu, H. J., & Jiang, S. J. (2021). Interleukin-10: A double-edged sword in breast cancer. *Tzu chi medical journal*, 33(3), 203-211.
- Chen, K. Y., Chien, W. C., Liao, J. M., Tsai, C. W., Chang, W. S., Su, C. H., ... & Bau, D. T. (2021). Contribution of interleukin-10 genotype to triple negative breast cancer risk. *Anticancer Research*, 41(5), 2451-2457.
- Cheng, X., Xu, X., Chen, D., Zhao, F., Wang, W., Theriault, J., ... & Deng, X. (2014). Breast cancer cell-derived metalloproteinase-2 cleaves TGF β to promote tumor progression and metastasis. *Cancer Research*, 74(3), 671-682.
- Chien, Y. C., Liu, L. C., Ye, H. Y., Wu, J. Y., & Yu, Y. L. (2018). EZH2 promotes migration and invasion of triple-negative breast cancer cells via regulating TIMP2-MMP-2/-9 pathway. *American journal of cancer research*, 8(3), 422.
-

-
- Chiou, Y. S., Li, S., Ho, C. T., & Pan, M. H. (2018). Prevention of breast cancer by natural phytochemicals: Focusing on molecular targets and combinational strategy. *Molecular nutrition & food research*, 62(23), 1800392.
- Chirumamilla, P., Dharavath, S.B. & Taduri, S. GC–MS Profiling and antibacterial activity of *Solanum khasianum* leaf and root extracts. *Bull Natl Res Cent* 46, 127 (2022).
- Chirumamilla, P., Taduri, S. GC–MS Fingerprinting and antibacterial activity of *Solanum khasianum* stem and fruit extracts. *Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.* 93, 565–575 (2023).
- Chomczynski P, Sacchi N (1987) Single-step method of RNA isolation by acid guanidinium thiocyanate-phenol-chloroform extraction. *Anal Biochem* 162(1):156–159
- Choudhary, A., Elumalai, P., Raghunandhakumar, S., Lakshmi, T., & Roy (2021), A. Anti-Cancer Effects of *Saraca asoca* Flower Extract on Prostate Cancer Cell Line. *Journal of Pharmaceutical research international*. 33(62B): 330-338
- Clark, A. G., & Vignjevic, D. M. (2015). Modes of cancer cell invasion and the role of the microenvironment. *Current opinion in cell biology*, 36, 13-22.
- Cory, A. H., Owen, T. C., Barltrop, J. A., & Cory, J. G. Use of an aqueous soluble tetrazolium/formazan assay for cell growth assays in culture. *Cancer Commun.* 1991; 3(7): 207-212
- CT, S., CK, J., KM, P., & Balachandran, I. (2020). Identification of validated substitute for Asoka (*Saraca asoca* (Roxb.) Willd.) by phytochemical and pharmacological evaluations. *Future Journal of Pharmaceutical Sciences*, 6, 1-11.
- Dai, J., & Mumper, R. J. (2010). Plant phenolics: extraction, analysis and their antioxidant and anticancer properties. *Molecules*, 15(10), 7313-7352.
-

-
- Daina, A., Michielin, O., & Zoete, V. (2019). SwissTargetPrediction: updated data and new features for efficient prediction of protein targets of small molecules. *Nucleic acids research*, 47(W1), W357-W364.
- Dalavi, C. M., Naravula, J., Kavi Kishor, P. B., & Patil, S. (2023). Rapid, reliable plantlet regeneration, hairy root induction and *in vitro* potential for solasodine alkaloid accumulation in an important medicinal plant *Solanum virginianum*. *Plant Cell, Tissue and Organ Culture (PCTOC)*, 153(1), 191-204.
- Daniel, M., & Mammen, D. (2016). Analytical methods for medicinal plants and economic botany. *Scientific Publishers*.
- Dar, R. A., Shahnawaz, M., Ahanger, M. A., & Majid, I. (2023). Exploring the diverse bioactive compounds from medicinal plants: a review. *J. Phytopharm*, 12, 189-195.
- Dasari, S., Njiki, S., Mbemi, A., Yedjou, C. G., & Tchounwou, P. B. (2022). Pharmacological effects of cisplatin combination with natural products in cancer chemotherapy. *International journal of molecular sciences*, 23(3), 1532.
- De Pascalis, C., & Etienne-Manneville, S. (2017). Single and collective cell migration: the mechanics of adhesions. *Molecular biology of the cell*, 28(14), 1833-1846.
- De Ruyck, J., Brysbaert, G., Blossey, R., & Lensink, M. F. (2016). Molecular docking as a popular tool in drug design, an *in silico* travel. *Advances and Applications in Bioinformatics and Chemistry*, 1-11.
- Debnath, M., Karan, T., Pandey, J., & Biswas, M. (2010, August). Comparative Phytochemical and Biological Evaluation of Different Extracts Obtained from the Leaves of *Saraca asoka*. *Pharmacognosy Journal*, 2(12), 476–480. [https://doi.org/10.1016/s0975-3575\(10\)80034-3](https://doi.org/10.1016/s0975-3575(10)80034-3)
- Dehelean, C. A., Marcovici, I., Soica, C., Mioc, M., Coricovac, D., Iurciuc, S., ... & Pinzaru, I. (2021). Plant-derived anticancer compounds as new perspectives in drug discovery and alternative therapy. *Molecules*, 26(4), 1109.
-

-
- Dent, R., Trudeau, M., Pritchard, K. I., Hanna, W. M., Kahn, H. K., Sawka, C. A., ... & Narod, S. A. (2007). Triple-negative breast cancer: clinical features and patterns of recurrence. *Clinical Cancer Research*, 13(15), 4429-4434.
- Dent, S. F., Morse, A., Burnette, S., Guha, A., & Moore, H. (2021). Cardiovascular toxicity of novel HER2-targeted therapies in the treatment of breast cancer. *Current Oncology Reports*, 23, 1-12.
- Desdiani, D., Rengganis, I., Djauzi, S., Setiyono, A., Sadikin, M., Jusman, S. W. A., ... & Fadilah, F. (2020). *In vitro* assay and study interaction of *Uncaria gambir* (Hunter) Roxb. as anti-fibrotic activity against A549 cell line. *Pharmacognosy Journal*, 12(6).
- Dhankhar, R., Vyas, S. P., Jain, A. K., Arora, S., Rath, G., & Goyal, A. K. (2010). Advances in novel drug delivery strategies for breast cancer therapy. *Artificial Cells, Blood Substitutes, and Biotechnology*, 38(5), 230-249.
- Dharshini, A. D., Elumalai, P., Raghunandhakumar, S., Lakshmi, T., & Roy, A. (2021). Evaluation of Anti-Cancer Activity of *Saraca asoca* Flower Extract against Lung Cancer Cell Line. *Journal of Pharmaceutical Research International*, 33(62A), 423-431.
- Dillekås, H., Rogers, M. S., & Straume, O. (2019). Are 90% of deaths from cancer caused by metastases?. *Cancer medicine*, 8(12), 5574-5576.
- Disha, N. S., & Karthikeyan, E. (2024). An Eye-Catching and Comprehensive Review of *Melia azedarach* Linn's (Paradise Tree). *Pharmacognosy Research*, 16(2).
- Dofara, S. G., Chang, S. L., & Diorio, C. (2020). Gene polymorphisms and circulating levels of MMP-2 and MMP-9: a review of their role in breast cancer risk. *Anticancer Research*, 40(7), 3619-3631.
- Dong, H., Diao, H., Zhao, Y., Xu, H., Pei, S., Gao, J., ... & Lin, D. (2019). Overexpression of matrix metalloproteinase-9 in breast cancer cell lines remarkably increases the cell
-

-
- malignancy largely via activation of transforming growth factor beta/SMAD signalling. *Cell proliferation*, 52(5), e12633.
- Doonan, F., & Cotter, T. G. (2008). Morphological assessment of apoptosis. *Methods*, 44(3), 200-204.
- Dragan, A. I., Pavlovic, R., McGivney, J. B., Casas-Finet, J. R., Bishop, E. S., Strouse, R. J., ... & Geddes, C. D. (2012). SYBR Green I: fluorescence properties and interaction with DNA. *Journal of fluorescence*, 22, 1189-1199.
- DSNBK, P., Achanti, S., Kumar, V., Panda, S. P., Jash, R., Obilineni, I., ... & Mohammad, B. A. (2023). *In silico* and *-n vitro* anthelmintic properties of phytochemicals in *Rostellularia quinquangularis* (J. Koenig ex Roxb.) Nees. *Iranian Journal of Pharmaceutical Sciences*, 19(2), 110-123.
- Elbashir, M. K., Mohammed, M., Mwambi, H., & Omolo, B. (2023). Identification of hub genes associated with breast cancer using integrated gene expression data with protein-protein interaction network. *Applied Sciences*, 13(4), 2403.
- Elmore, S. (2007). Apoptosis: a review of programmed cell death. *Toxicologic pathology*, 35(4), 495-516.
- El-Shahawy, A. A. (2021). A Highly Cellular Uptake Ternary Nanocomposite Titanate Nano-Tubes/CuFe₂O₄/Zn-Fe Could Induce Intrinsic Apoptosis of Prostate Cancer Cells: An Extended Study. *Journal of Biomedical Nanotechnology*, 17(2), 303-311.
- Elstrodt, F., et al. (2006). "BRCA1 mutation analysis of 41 human breast cancer cell lines reveals three new deleterious mutants." *Cancer research*, 66(1), 41-45
- Ervina, M., Poerwono, H., Widyowati, R., & Matsunami, K. (2020). Bio-selective hormonal breast cancer cytotoxic and antioxidant potencies of *Melia azedarach* L. wild type leaves. *Biotechnology reports*, 25, e00437.
-

-
- Espino, J., Pariente, J. A., & Rodríguez, A. B. (2012). Oxidative stress and immunosenescence: therapeutic effects of melatonin. *Oxidative Medicine and Cellular Longevity*, 2012.
- Fabricant, D. S., & Farnsworth, N. R. (2001). The Value of Plants Used in Traditional Medicine for Drug Discovery. *Environmental Health Perspectives*, 109, 69.
- Fan, L. L., Sun, G. P., Wei, W., Wang, Z. G., Ge, L., Fu, W. Z., & Wang, H. (2010). Melatonin and doxorubicin synergistically induce cell apoptosis in human hepatoma cell lines. *World journal of gastroenterology: WJG*, 16(12), 1473.
- Fantini, M., Benvenuto, M., Masuelli, L., Frajese, G. V., Tresoldi, I., Modesti, A., & Bei, R. (2015). *In vitro* and *in vivo* antitumoral effects of combinations of polyphenols, or polyphenols and anticancer drugs: Perspectives on cancer treatment. *International journal of molecular sciences*, 16(5), 9236-9282.
- Farhood, B., Goradel, N. H., Mortezaee, K., Khanlarkhani, N., Najafi, M., & Sahebkar, A. (2019). Melatonin and cancer: From the promotion of genomic stability to use in cancer treatment. *Journal of cellular physiology*, 234(5), 5613-5627.
- Fasoulakis, Z., Kolios, G., Papamanolis, V., Kontomanolis, E. N., & Kontomanolis, E. (2018). Interleukins associated with breast cancer. *Cureus*, 10(11).
- Feng, Y., Chen, L., Luo, Q., & Wu, M. (2020). Recent advances in network pharmacology applications in Chinese herbal medicine. *Journal of ethnopharmacology*, 260, 112486.
- Franchin, M., Rosalen, P. L., da Cunha, M. G., Silva, R. L., Colón, D. F., Bassi, G. S., ... & Cunha, T. M. (2016). Cinnamoyloxy-mammeisin isolated from geopropolis attenuates inflammatory process by inhibiting cytokine production: involvement of MAPK, AP-1, and NF- κ B. *Journal of natural products*, 79(7), 1828-1833.
- Franken, N. A., Rodermond, H. M., Stap, J., Haveman, J., & Van Bree, C. Clonogenic assay of cells *In vitro*. *Nat. Protoc.* 2006; 1(5): 2315-2319.
-

-
- Fridlender, M., Kapulnik, Y., & Koltai, H. (2015). Plant derived substances with anti-cancer activity: from folklore to practice. *Frontiers in plant science*, 6, 163161.
- Fujiki, H., Sueoka, E., Watanabe, T., & Sukanuma, M. (2015). Primary cancer prevention by green tea, and tertiary cancer prevention by the combination of green tea catechins and anticancer compounds. *Journal of cancer prevention*, 20(1), 1.
- Fujiki, H., Sueoka, E., Watanabe, T., & Sukanuma, M. (2015). Primary cancer prevention by green tea, and tertiary cancer prevention by the combination of green tea catechins and anticancer compounds. *Journal of cancer prevention*, 20(1), 1.
- Fujita, K. I., Kubota, Y., Ishida, H., & Sasaki, Y. (2015). Irinotecan, a key chemotherapeutic drug for metastatic colorectal cancer. *World journal of gastroenterology*, 21(43), 12234.
- Gerstberger, S., Jiang, Q., & Ganesh, K. (2023). Metastasis. *Cell*, 186(8), 1564-1579.
- Granzotto, M., Rapozzi, V., Decorti, G., & Giraldi, T. (2001). Effects of melatonin on doxorubicin cytotoxicity in sensitive and pleiotropically resistant tumor cells. *Journal of pineal research*, 31(3), 206-213.
- Gregoire, A. M., VoPham, T., Laden, F., Yarosh, R., O'Brien, K. M., Sandler, D. P., & White, A. J. (2022). Residential ultraviolet radiation and breast cancer risk in a large prospective cohort. *Environment international*, 159, 107028.
- Gromkowska-Kępa, K. J., Puścion-Jakubik, A., Markiewicz-Żukowska, R., & Socha, K. (2021). The impact of ultraviolet radiation on skin photoaging—review of *In vitro* studies. *Journal of cosmetic dermatology*, 20(11), 3427-3431.
- Gulcin, İ. (2020). Antioxidants and antioxidant methods: An updated overview. *Archives of toxicology*, 94(3), 651-715.
- Gurunathan, S., Qasim, M., Kang, M. H., & Kim, J. H. (2021). Role and therapeutic potential of melatonin in various type of cancers. *OncoTargets and therapy*, 2019-2052.
-

-
- Gutiérrez-Grijalva, E. P., López-Martínez, L. X., Contreras-Angulo, L. A., Elizalde-Romero, C. A., & Heredia, J. B. (2020). Plant alkaloids: Structures and bioactive properties. *Plant-derived bioactives: chemistry and mode of action*, 85-117.
- Hacışevki, A., & Baba, B. (2018). An overview of melatonin as an antioxidant molecule: a biochemical approach. *Melatonin molecular biology, clinical and pharmaceutical approaches*, 5, 59-85.
- Hajibabaie, F., Abedpoor, N., & Mohamadynejad, P. (2023). Types of cell death from a molecular perspective. *Biology*, 12(11), 1426.
- Hanna, M., Seddiek, H., Aboulhoda, B. E., Morcos, G. N., Akabawy, A., Elbaset, M. A., ... & Shoukry, T. (2022). Synergistic cardioprotective effects of melatonin and deferoxamine through the improvement of ferritinophagy in doxorubicin-induced acute cardiotoxicity. *Frontiers in Physiology*, 13, 1050598.
- Harborne, A. J. (1998). *Phytochemical methods a guide to modern techniques of plant analysis*. Springer science & business media.
- Hasan, M., Browne, E., Guarinoni, L., Darveau, T., Hilton, K., & Witt-Enderby, P. A. (2020). Novel melatonin, estrogen, and progesterone hormone therapy demonstrates anti-cancer actions in MCF-7 and MDA-MB-231 breast cancer cells. *Breast Cancer: Basic and Clinical Research*, 14, 1178223420924634.
- HemaIswarya, S., & Doble, M. (2006). Potential synergism of natural products in the treatment of cancer. *Phytotherapy Research: An International Journal Devoted to Pharmacological and Toxicological Evaluation of Natural Product Derivatives*, 20(4), 239-249.
- Hill, S. M., & Blask, D. E. (1988). Effects of the pineal hormone melatonin on the proliferation and morphological characteristics of human breast cancer cells (MCF-7) in culture. *Cancer research*, 48(21), 6121-6126.
-

-
- Hill, S. M., Belancio, V. P., Dauchy, R. T., Xiang, S., Brimer, S., Mao, L., ... & Blask, D. E. (2015). Melatonin: an inhibitor of breast cancer. *Endocrine-related cancer*, 22(3), R183-R204.
- Hollestelle, A., et al. (2007). "Distinct gene mutation profiles among luminal-type and basal-type breast cancer cell lines." *Breast cancer research and treatment*, 121(1), 53-64
- Horwitz, K. B., et al. (1977). "Estrogenic activity and transformation in human breast cancer cells in culture." *Cancer research*, 37(7 Pt 1), 2363-2371.
- Huang, C. et al. (2019). "The roles of apoptotic pathways in the low efficacy of breast cancer treated with chemotherapy". *Journal of Cellular Physiology*, 234(7), 10523-10534.
- Hussain, A., Sharma, C., Khan, S., Shah, K., & Haque, S. (2015). *Aloe vera* inhibits proliferation of human breast and cervical cancer cells and acts synergistically with cisplatin. *Asian Pacific Journal of Cancer Prevention*, 16(7), 2939-2946.
- Hussein, R. A., & El-Anssary, A. A. (2019). Plants secondary metabolites: the key drivers of the pharmacological actions of medicinal plants. *Herbal medicine*, 1(3), 11-30.
- Iqbal, J., Abbasi, B. A., Batool, R., Mahmood, T., Ali, B., Khalil, A. T., ... & Ahmad, R. (2018). Potential phytochemicals for developing breast cancer therapeutics: nature's healing touch. *European Journal of Pharmacology*, 827, 125-148.
- Islam, T., Streck, L., Paz, M. F. C. J., Sousa, J. M. D. C., Alencar, M. V. O. B. D., Mata, A. M. O. F. D., ... & Melo-Cavalcante, A. A. D. C. (2016). Preparation of phytol-loaded nanoemulsion and screening for antioxidant capacity.
- Jabamalaairaj, A., Priatama, R. A., Heo, J., & Park, S. J. (2019). Medicinal metabolites with common biosynthetic pathways in *Solanum nigrum*. *Plant Biotechnology Reports*, 13, 315-327.
- Jagatheeswari, D. (2014). Morphological studies on flowering plants (*Solanaceae*). *International Letters of Natural Sciences*, 10.
-

-
- Jain, M., Mishra, A., Yadav, V., Shyam, H., Kumar, S., Mishra, S. K., & Ramakant, P. (2023). Long-term yogic intervention decreases serum interleukins IL-10 and IL-1 β and improves cancer-related fatigue and functional scale during radiotherapy/chemotherapy in breast cancer patients: a randomized control study. *Supportive Care in Cancer*, 31(1), 6.
- Javaid, U., Javaid, S., Ashraf, W., Rasool, M. F., Noman, O. M., Alqahtani, A. S., ... & Imran, I. (2021). Chemical profiling and dose-dependent assessment of fear reducing and memory-enhancing effects of *Solanum virginianum* in rats. *Dose-Response*, 19(1), 1559325821998486.
- Jeenathunisa, N., & Rajan, S. (2021). *In vitro* Cytotoxic studies of *Saraca asoca* bark extracts on HT-29 cancer cell Line. *Research Journal of Pharmacy and Technology*, 14(1), 42-46.
- Jiang, H., & Li, H. (2021). Prognostic values of tumoral MMP2 and MMP9 overexpression in breast cancer: A systematic review and meta-analysis. *BMC cancer*, 21, 1-13.
- Kadioglu, O., Nass, J., Saeed, M. E., Schuler, B., Efferth, T., & Kaatz, M. (2021). Molecular docking and pharmacogenomics of natural compounds against estrogen receptor alpha: A computational approach. *Phytochemistry Reviews*, 20(1), 169-186.
- Kapoor, L. D. (2017). *Handbook of Ayurvedic medicinal plants: Herbal reference library*. Routledge.
- Kar, B., & Sivamani, S. (2015). Apoptosis: basic concepts, mechanisms and clinical implications. *International Journal of Pharmaceutical Sciences and Research*, 6(3), 940.
- Kar, D., Ghosh, P., Suresh, P., Chandra, S., & Paul, D. (2022). Review on Phyto-chemistry & pharmacological activity of *Melia azedarach*. *International Journal of Experimental Research and Review*, 28, 38-46.
- Kariri, Y. A., Aleskandarany, M. A., Joseph, C., Kurozumi, S., Mohammed, O. J., Toss, M. S., ... & Rakha, E. A. (2020). Molecular complexity of lymphovascular invasion: the role of cell migration in breast cancer as a prototype. *Pathobiology*, 87(4), 218-231.
-

-
- Kasibhatla, S., Amarante-Mendes, G. P., Finucane, D., Brunner, T., Bossy-Wetzel, E., & Green, D. R. (2006). Analysis of DNA fragmentation using agarose gel electrophoresis. *Cold Spring Harbor Protocols*, 2006(1), pdb-prot4429.
- Kaunda, J.S.; Qin, X.J.; Zhu, H.T.; Wang, D.; Yang, C.R.; Zhang, Y.J. Previously Undescribed Pyridyl-Steroidal Glycoalkaloids and 23S,26R-Hydroxylated Spirostanoid Saponin from the Fruits of *Solanum Violaceum* Ortega and Their Bioactivities. *Phytochemistry* 2021, 184, 112656.
- Kerr, J. F., Wyllie, A. H., & Currie, A. R. (1972). Apoptosis: A basic biological phenomenon with Wide ranging Implications in Tissue Kinetics. *British Journal of Cancer*, 26(4), 239–257.
- Khanfar, M. A., & El Sayed, K. A. (2013). The Veratrum alkaloids jervine, veratramine, and their analogues as prostate cancer migration and proliferation inhibitors: biological evaluation and pharmacophore modeling. *Medicinal Chemistry Research*, 22, 4775-4786.
- Kibbe, W. A. (2007). OligoCalc: an online oligonucleotide properties calculator. *Nucleic acids research*, 35(suppl_2), W43-W46.
- Kim, S. H., & Choi, K. C. (2013). Anti-cancer effect and underlying mechanism (s) of kaempferol, a phytoestrogen, on the regulation of apoptosis in diverse cancer cell models. *Toxicological research*, 29, 229-234.
- Konar, A., & Chatterjee, R. (2022). *Solanum Xanthocarpum*-A Critical Approach to the Lesser Known Aspects of the Herb. *International Journal of Scientific Research in Biological Sciences*, 9(5).
- Kowalczyk, T., Sitarek, P., Toma, M., Picot, L., Wielanek, M., Skała, E., & Śliwiński, T. (2020). An extract of transgenic *Senna obtusifolia* L. hairy roots with overexpression of PgSS1 gene in combination with chemotherapeutic agent induces apoptosis in the leukemia cell line. *Biomolecules*, 10(4), 510.
-

-
- Kubatka, P., Zubor, P., Busselberg, D., Kwon, T. K., Adamek, M., Petrovic, D., ... & Kruzliak, P. (2018). Melatonin and breast cancer: Evidences from preclinical and human studies. *Critical reviews in oncology/hematology*, 122, 133-143.
- Kumar, P., Kadakol, A., Krishna Shashtrula, P., Arunrao Mundhe, N., Sudhir Jamdade, V., C Barua, C., & Bhanudas Gaikwad, A. (2015). Curcumin as an adjuvant to breast cancer treatment. *Anti-Cancer Agents in Medicinal Chemistry (Formerly Current Medicinal Chemistry-Anti-Cancer Agents)*, 15(5), 647-656.
- Kumari, P., Raina, K., Thakur, S., Sharma, R., Cruz-Martins, N., Kumar, P., ... & Chaudhary, A. (2022). Ethnobotany, phytochemistry and pharmacology of palash (*Butea monosperma* (Lam.) Taub.): a systematic review. *Current Pharmacology Reports*, 8(3), 188-204.
- Kupchan, S. M., Barboutis, S. J., Knox, J. R., & Lau Cam, C. A. (1965). Beta-solamarine: tumor inhibitor isolated from *Solanum dulcamara*. *Science*, 150(3705), 1827-1828.
- Kushwaha, M., & Narayan, S. (2018). An analysis of Anti-inflammatory activity of methanolic extract of leaves of *Solanum virginianum* using-carrageenan induce Paul edema model. *Journal of Pharmacognosy and Phytochemistry*, 7(4), 3305-3311.
- Lambert, A. W., Pattabiraman, D. R., & Weinberg, R. A. (2017). Emerging biological principles of metastasis. *Cell*, 168(4), 670-691.
- Lamouille, S., Xu, J., & Derynck, R. (2014). Molecular mechanisms of epithelial–mesenchymal transition. *Nature Reviews Molecular Cell Biology*, 15(3), 178-196.
- Lee, H. J., & Kang, Y. J. (2018). Breast cancer metastasis to the stomach mimicking primary gastric cancer: A case report. *World Journal of Clinical Cases*, 6(5), 82–86.
- Lee, S. V., & Bahaman, A. R. (2010). Modified gel preparation for distinct DNA fragment analysis in agarose gel electrophoresis. *Tropical Biomedicine* 27(2): 351–354.
-

-
- Lefebvre, T., Destandau, E., & Lesellier, E. (2021). Selective extraction of bioactive compounds from plants using recent extraction techniques: A review. *Journal of Chromatography A*, 1635, 461770.
- Li, H., Qiu, Z., Li, F., & Wang, C. (2017). The relationship between MMP-2 and MMP-9 expression levels with breast cancer incidence and prognosis. *Oncology letters*, 14(5), 5865-5870.
- Li, N., Cao, L., Wang, Y. R., Tao, X. Q., Ding, G., Wang, Z. Z., & Xiao, W. (2016). Induction of solasonine on apoptosis of human breast cancer Bcap-37 cells through mitochondria-mediated pathway. *Chinese Herbal Medicines*, 8(2), 164-172.
- Lipinski, C. A. (2004). Lead-and drug-like compounds: the rule-of-five revolution. *Drug discovery today: Technologies*, 1(4), 337-341.
- Lisec J, Schauer N, Kopka J, Willmitzer L, Fernie AR. (2015). Corrigendum: Gas Chromatography Mass Spectrometry-Based Metabolite Profiling In Plants. *Nat Protoc* ;10:10–1038
- Liu, F., Li, L., Lan, M., Zou, T., Kong, Z., Cai, T., ... & Cai, Y. (2021). Key factor regulating inflammatory microenvironment, metastasis, and resistance in breast cancer: interleukin-1 signaling. *Mediators of Inflammation*, 2021, 1-18.
- Liu, J., Wu, F., Wang, M., Tao, M., Liu, Z., & Hai, Z. (2023). Caspase-3-responsive fluorescent/photoacoustic imaging of tumor apoptosis. *Analytical Chemistry*, 95(25), 9404-9408.
- Liu, L., Hao, X., Song, Z., Zhi, X., Zhang, S., & Zhang, J. (2021). Correlation between family history and characteristics of breast cancer. *Scientific reports*, 11(1), 6360.
- Lopez, A., Reyna, D. E., Gitego, N., Kopp, F., Zhou, H., Miranda-Roman, M. A., ... & Gavathiotis, E. (2022). Co-targeting of BAX and BCL-XL proteins broadly overcomes resistance to apoptosis in cancer. *Nature communications*, 13(1), 1199.
-

-
- Ma, Z., Xu, L., Liu, D., Zhang, X., Di, S., Li, W., ... & Yan, X. (2020). Utilizing melatonin to alleviate side effects of chemotherapy: a potentially good partner for treating cancer with ageing. *Oxidative medicine and cellular longevity*, 2020.
- Machado, L. B., Brody, M. B., Rotenberg, S. E., Stachelek, G. C., & Fernandez, J. G. (2023). Breast cancer tumor board: a radiologist's guide to postmastectomy radiation therapy. *RadioGraphics*, 43(3), e220086.
- Mafi, A., Rezaee, M., Hedayati, N., Hogan, S. D., Reiter, R. J., Aarabi, M. H., & Asemi, Z. (2023). Melatonin and 5-fluorouracil combination chemotherapy: opportunities and efficacy in cancer therapy. *Cell Communication and Signaling*, 21(1), 33.
- Mandal, R., Barrón, J. C., Kostova, I., Becker, S., & Strebhardt, K. (2020). Caspase-8: The double-edged sword. *Biochimica et Biophysica Acta (BBA)-Reviews on Cancer*, 1873(2), 188357.
- Manning, F., & Zuzel, K. (2003). Comparison of types of cell death: apoptosis and necrosis. *Journal of Biological Education*, 37(3), 141-145.
- Manzari, M. T., Shamay, Y., Kiguchi, H., Rosen, N., Scaltriti, M., & Heller, D. A. (2021). Targeted drug delivery strategies for precision medicines. *Nature Reviews Materials*, 6(4), 351-370.
- Maroufi, N. F., Vahedian, V., Hemati, S., Rashidi, M. R., Akbarzadeh, M., Zahedi, M., ... & Nouri, M. (2020). Targeting cancer stem cells by melatonin: Effective therapy for cancer treatment. *Pathology-Research and Practice*, 216(5), 152919.
- Martemucci, G., Costagliola, C., Mariano, M., D'andrea, L., Napolitano, P., & D'Alessandro, A. G. (2022). Free radical properties, source and targets, antioxidant consumption and health. *Oxygen*, 2(2), 48-78.
- Martínez-Campa, C., Álvarez-García, V., Alonso-González, C., González, A., & Cos, S. (2024). Melatonin and Its Role in the Epithelial-to-Mesenchymal Transition (EMT) in Cancer. *Cancers*, 16(5), 956.
-

-
- Martín-Renedo, J., Mauriz, J. L., Jorquera, F., Ruiz-Andrés, O., & González, P. (2010). Melatonin Induces Cell Cycle Arrest and Apoptosis in Hepatocarcinoma HepG2 Cell Line. *Journal of Pineal Research*, 49(2), 193–200.
- Marti-Soler, H., Gubelmann, C., Aeschbacher, S., Alves, L., Bobak, M., Bongard, V., ... & Marques-Vidal, P. (2014). Seasonality of cardiovascular risk factors: an analysis including over 230 000 participants in 15 countries. *Heart*, 100(19), 1517-1523.
- Mathan, G., Fatima, G., Saxena, A. K., Chandan, B. K., Jaggi, B. S., Gupta, B. D., ... & Kumar, V. (2011). Chemoprevention with aqueous extract of *Butea monosperma* flowers results in normalization of nuclear morphometry and inhibition of a proliferation marker in liver tumors. *Phytotherapy research*, 25(3), 324-328.
- Mayer, L. D., & Janoff, A. S. (2007). Optimizing combination chemotherapy by controlling drug ratios. *Molecular interventions*, 7(4), 216.
- ME, J. F., Siegel, R. L., Isabelle Soerjomataram, M. D., & Ahmedin Jemal, D. V. M. (2024). Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries.
- Mehdi, S., Mehmood, M. H., Ahmed, M. G., & Ashfaq, U. A. (2023). Antidiabetic activity of *Berberis brandisiana* is possibly mediated through modulation of insulin signaling pathway, inflammatory cytokines and adipocytokines in high fat diet and streptozotocin-administered rats. *Frontiers in Pharmacology*, 14, 1085013.
- Menéndez-Menéndez, J., & Martínez-Campa, C. (2018). Melatonin: an anti-tumor agent in hormone-dependent cancers. *International journal of endocrinology*, 2018.
- Milella, R. A., De Rosso, M., Gasparro, M., Gigante, I., Debiase, G., Forleo, L. R., ... & Flamini, R. (2023). Correlation between antioxidant and anticancer activity and phenolic profile of new Apulian table grape genotypes (*V. Vinifera* L.). *Frontiers in Plant Science*, 13, 1064023.
-

- Mizushima Y and Kobayashi M. (1968). Interaction of anti-inflammatory drugs with serum proteins, especially with some biologically active proteins. *Journal of Pharma Pharmacol* ; 20:169- 173.
- Mönig, S. P., Baldus, S. E., Hennecken, J. K., Spiecker, D. B., Grass, G., Schneider, P. M., ... & Hölscher, A. H. (2001). Expression of MMP-2 is associated with progression and lymph node metastasis of gastric carcinoma. *Histopathology*, 39(6), 597-602.
- Mortezaee, K., Potes, Y., Mirtavoos-Mahyari, H., Motevaseli, E., Shabeeb, D., Musa, A. E., ... & Farhood, B. (2019). Boosting immune system against cancer by melatonin: A mechanistic viewpoint. *Life sciences*, 238, 116960.
- Murray, N. P. (2024). The role of matrix metalloproteinase-2 in the metastatic cascade: a review. *Oncologie*, 26(1), 27-40.
- Mwamatope, B., Tembo, D., Chikowe, I., Kampira, E., & Nyirenda, C. (2020). Total phenolic contents and antioxidant activity of *Senna singueana*, *Melia azedarach*, *Moringa oleifera* and *Lannea discolor* herbal plants. *Scientific African*, 9, e00481.
- Nahak, G., & Sahu, R. K. (2010). *In vitro* antioxidative activity of *Azadirachta indica* and *Melia azedarach* Leaves by DPPH scavenging assay. *J. Am. Sci*, 6(6), 123-128.
- Nahar, L., Al-Groshi, A., Kumar, A., & Sarker, S. D. (2022). Arbutin: Occurrence in plants, and its potential as an anticancer agent. *Molecules*, 27(24), 8786.
- Nair, D. B., Sujith, S., Roshni, S. S., Sneha, G., Begam, N., & Nisha, A. R. (2023). Antiproliferative Effect of Methanolic Extract of *Saraca asoca* bark and its Possible Targets of Action. *The Journal of Phytopharmacology*; 12(2):70-75
- Najafi, M., Goradel, N. H., Farhood, B., Salehi, E., Solhjoo, S., Toolee, H., ... & Mortezaee, K. (2019). Tumor microenvironment: Interactions and therapy. *Journal of cellular physiology*, 234(5), 5700-5721.

-
- Nirmala M., Samundeeswari A. & Sankar P. (2011). Natural plant resources in anticancer therapy- A review. *Research in Plant Biology*, 1(3), 1-14.
- Nivedha, M. (2019). Pharmacognostical, Phytochemical Studies and Evaluation of Antidiabetic Activity of Roots of *Melia Azedarach* Linn (Doctoral dissertation, College of Pharmacology, Madras Medical College, Chennai).
- Önder, G. Ö., Sezer, G., Özdamar, S., & Yay, A. (2022). Melatonin has an inhibitory effect on MCF-7 and MDA-MB-231 human breast cancer cell lines by inducing autophagy and apoptosis. *Fundamental & Clinical Pharmacology*, 36(6), 1038-1056.
- Orning, P., & Lien, E. (2021). Multiple roles of caspase-8 in cell death, inflammation, and innate immunity. *Journal of Leucocyte Biology*, 109(1), 121-141.
- Osorio-Tobón, J. F. (2020). Recent advances and comparisons of conventional and alternative extraction techniques of phenolic compounds. *Journal of Food Science and Technology*, 57, 4299-4315.
- Oumeddour, A. (2023). Screening of potential hub genes and key pathways associated with breast cancer by bioinformatics tools. *Medicine*, 102(11), e33291.
- Öz, E., & İlhan, M. N. (2006). Effects of melatonin in reducing the toxic effects of doxorubicin. *Molecular and cellular biochemistry*, 286, 11-15.
- Özkan, İ., Koçak, P., Yıldırım, M., Ünsal, N., Yılmaz, H., Telci, D., & Şahin, F. (2021). Garlic (*Allium sativum*)-derived SEVs inhibit cancer cell proliferation and induce caspase mediated apoptosis. *Scientific reports*, 11(1), 14773.
- Parveen, A., Parveen, R., Akhtar, A., Parveen, B., Siddiqui, K. M., & Iqbal, M. (2020). Concepts and quality considerations in Unani system of medicine. *Journal of AOAC International*, 103(3), 609-633.
- Patel, F., Upadhyay, K., Mammen, D., Robin, E., Ramachandran, A. V., & Baxi, D. (2023). Phytochemical composition and antiproliferative activity of *Opuntia elatior* Mill.: In vitro
-

-
- and in silico studies on breast cancer cell line MCF-7. *Journal of Applied Biology and Biotechnology*, 12(1), 117-127.
- Patel, S., et al. (2020). "Apoptosis-Inducing Effect of Luteolin on Human Breast Cancer MCF-7 Cells and Its Regulatory Mechanisms." *Journal of Environmental Pathology, Toxicology and Oncology*, 39(3), 217-230
- Patil, P. (2005). Anti-ulcer and anti-secretory properties of the *Butea monosperma* (Lam) bark extracts with relation to anti-oxidant studies (Doctoral dissertation, Rajiv Gandhi University of Health Sciences (India)).
- Perou, C. M., Sørlie, T., Eisen, M. B., van de Rijn, M., Jeffrey, S. S., Rees, C. A., ... & Botstein, D. (2000). Molecular portraits of human breast tumours. *Nature*, 406(6797), 747-752. doi: 10.1038/35021093
- Petrova, D., Cruz, M., & Sánchez, M. J. (2022). BRCA1/2 testing for genetic susceptibility to cancer after 25 years: a scoping review and a primer on ethical implications. *The Breast*, 61, 66-76.
- Pezzani, R., Salehi, B., Vitalini, S., Iriti, M., Zuñiga, F. A., Sharifi-Rad, J., ... & Martins, N. (2019). Synergistic effects of plant derivatives and conventional chemotherapeutic agents: an update on the cancer perspective. *Medicina*, 55(4), 110.
- Pietkiewicz, S., Schmidt, J. H., & Lavrik, I. N. (2015). Quantification of apoptosis and necroptosis at the single cell level by a combination of Imaging Flow Cytometry with classical Annexin V/propidium iodide staining. *Journal of immunological methods*, 423, 99-103.
- Pinilla, K., Drewett, L. M., Lucey, R., & Abraham, J. E. (2022). Precision breast cancer medicine: early stage triple negative breast cancer—a review of molecular characterization, therapeutic targets and future trends. *Frontiers in Oncology*, 12, 866889.
-

-
- Pissurlenkar, R. R., Shaikh, M. S., Iyer, R. P., & Coutinho, E. C. (2009). Molecular mechanics force fields and their applications in drug design. *Anti-Infective Agents in Medicinal Chemistry (Formerly Current Medicinal Chemistry-Anti-Infective Agents)*, 8(2), 128-150.
- Polina, S., Marka, N., & Manohar Rao, D. (2020). Preliminary Screening of Anti-Microbial, Anti-Oxidant and Anti-Cancer Potential of *Butea monosperma* Flower Extracts. *Indian J. Pure Appl. Biosci.*, 8(6), 442-454.
- Pon Nivedha, R., Suryanarayanan, V., Selvaraj, C., Singh, S. K., & Rajalakshmi, M. (2017). Chemopreventive effect of saponin isolated from *Gymnema sylevestre* on prostate cancer through *in silico* and *in vivo* analysis. *Medicinal Chemistry Research*, 26, 1915-1925.
- Prat, A., Cheang, M. C., Martín, M., & Perou, C. M. (2015). Prognostic significance of progesterone receptor–positive tumor cells within immunohistochemically defined luminal A breast cancer. *Journal of Clinical Oncology*, 33(20), 203-209. doi: 10.1200/JCO.2014.57.0485
- Prior, R. L., Lazarus, S. A., Cao, G., Muccitelli, H., & Hammerstone, J. F. (2001). Identification of procyanidins and anthocyanins in blueberries and cranberries (*Vaccinium* spp.) using high-performance liquid chromatography/mass spectrometry. *Journal of agricultural and food chemistry*, 49(3), 1270-1276.
- Puthdee, N., et al. (2020). Synergistic Enhancement of Tamoxifen Cytotoxicity by *Centella asiatica* and Its Underlying Mechanisms in MCF-7 Cells. *Molecules*, 25(14), 3149.
- Pyke, C., Ralfkiaer, E., Tryggvason, K., & Danø, K. (1993). Messenger RNA for two type IV collagenases is located in stromal cells in human colon cancer. *The American journal of pathology*, 142(2), 359.
- Qian, F., Arner, B. E., Kelly, K. M., Annageldiyev, C., Sharma, A., Claxton, D. F., ... & Prabhu, K. S. (2022). Interleukin-4 treatment reduces leukemia burden in acute myeloid leukemia.
-

-
- FASEB journal*: official publication of the Federation of American Societies for Experimental Biology, 36(5), e22328.
- Rai, M., Singh, A. V., Paudel, N., Kanase, A., Falletta, E., Kerkar, P., ... & Soos, M. (2023). Herbal concoction unveiled: a computational analysis of phytochemicals' pharmacokinetic and toxicological profiles using novel approach methodologies (NAMs). *Current Research in Toxicology*, 5, 100118.
- Rana, F., & Avijit, M. (2015). Anti-inflammatory activity of flower extract of *Butea monosperma*. *Int J Pharmacogn*, 2, 266-8.
- Rathod, C. P., & Ghante, M. H. (2021). Pharmacological importance of *Saraca asoca*: a review. *Research Journal of Pharmacognosy and Phytochemistry*, 13(3), 131-135.
- Rekha, J. B., & Jayakar, B. (2011). Anti-cancer activity of ethanolic extract of Leaves of *Butea monosperma* (Lam) Taub. *Journal of Current Pharma Research*, 1(2), 106.
- Rodrigues, R., Duarte, D., & Vale, N. (2022). Drug repurposing in cancer therapy: influence of patient's genetic background in breast cancer treatment. *International Journal of Molecular Sciences*, 23(8), 4280.
- Rohilla, P., Chhikara, A., & Dahiya, P. (2023). Phytochemical Screening, *In vitro* Anti-bacterial, and Antioxidant Efficacy of *Solanum virginianum* L. Aerial Vegetative Parts Extracted in Four Solvents. *Pharmacognosy Research*, 15(4).
- Romano, J. D., & Tatonetti, N. P. (2019). Informatics and computational methods in natural product drug discovery: a review and perspectives. *Frontiers in genetics*, 10, 442506.
- Roth, A., Kuballa, B., Bounthan, C., Cabalion, P., Sévenet, T., Beck, J. P., & Anton, R. (1986). Cytotoxic activity of polyindoline alkaloids of *Psychotria forsteriana* (Rubiaceae)(1). *Planta medica*, 52(06), 450-453.
-

-
- Roy, A., Anand, A., Garg, S., Khan, M. S., Bhasin, S., Asghar, M. N., & Emran, T. B. (2022). Structure-based *in silico* investigation of agonists for proteins involved in breast cancer. *Evidence-Based Complementary and Alternative Medicine*, 2022.
- Ryoo, H. D., & Bergmann, A. (2012). The role of apoptosis-induced proliferation for regeneration and cancer. *Cold Spring Harbor perspectives in biology*, 4(8), a008797.
- Saha, J., Mukherjee, S., Gupta, K., & Gupta, B. (2013). High-performance thin-layer chromatographic analysis of antioxidants present in different parts of *Saraca asoca* (Roxb.) de Wilde. *Journal of pharmacy research*, 7(9), 798-803.
- Sakat S, Juvekar AR, Gambhire MN. (2010). *In vitro* antioxidant and anti-inflammatory activity of methanol extract of *Oxalis corniculata* Linn. *International Journal of Pharma and Pharmacological Sciences*; 2(1):146-155.
- Saklani, A., & Jain, S. K. (1989). Ethnobotanical observations on plants used in northeastern India. *International journal of crude drug research*, 27(2), 65-73.
- Salar, R. K., & Seasotiya, L. (2011). Free radical scavenging activity, phenolic contents and phytochemical evaluation of different extracts of stem bark of *Butea monosperma* (Lam.) Kuntze. *Frontiers in Life Science*, 5(3-4), 107-116.
- Salleh, L. M., Hartati, H., Jamaludin, R., Yunus, M. A. C., Yakub, H., & Aziz, A. A. (2014). Antioxidant activity and total phenolic contents in methanol extracts from *Swietenia mahagoni* and *Andrographis paniculata*. *Jurnal Teknologi*, 69(4).
- Salvi, S., Varghese, R., Digholkar, G., Deshpande, A., Malvankar, C., Pawar, A., & Kumar, D. (2022). *Saraca asoca*: A scoping review on the phytoconstituents, bioactives and their therapeutic effects. *German Journal of Pharmaceuticals and Biomaterials*, 1(3), 3-13.
- Sanjay, J., Sweta, S., Rakesh, B., & Praveen, K. (2009). Standardization of 'Dashamularishta': A Polyherbal Formulation. *Pharmacognosy Journal*, 1(3).
-

-
- Saraswathi, K., Bharkavi, R., Khusro, A., Sivaraj, C., Arumugam, P., Alghamdi, S., ... & Sahibzada, M. U. K. (2021). Assessment On *In Vitro* Medicinal Properties And Chemical Composition Analysis Of *Solanum Virginianum* Dried Fruits. *Arabian Journal of Chemistry*, 14(12), 103442.
- Sathishkumar, K., Chaturvedi, M., Das, P., Stephen, S., & Mathur, P. (2022). Cancer incidence estimates for 2022 & projection for 2025: result from National Cancer Registry Programme, India. *Indian Journal of Medical Research*, 156(4&5), 598-607.
- Schmidt, B., Ferreira, C., Alves Passos, C. L., Silva, J. L., & Fialho, E. (2020). Resveratrol, curcumin and piperine alter human glyoxalase 1 in MCF-7 breast cancer cells. *International Journal of Molecular Sciences*, 21(15), 5244.
- Schmittgen TD, Livak KJ. Analyzing real-time PCR data by the comparative CT method. *Nat Protoc*. 2008;3(6):1101–1108. doi: 10.1038/nprot.2008.73.
- Shang, C., & Xu, D. (2022). Epidemiology of Breast Cancer. *Oncologie*, 24(4).
- Sharma, D., & Paul, Y. (2013). Preliminary and pharmacological profile of *Melia azedarach* L.: An overview. *Journal of Applied Pharmaceutical Science*, 3(12), 133-138.
- Sheibani, M., Azizi, Y., Shayan, M., Nezamoleslami, S., Eslami, F., Farjoo, M. H., & Dehpour, A. R. (2022). Doxorubicin-induced cardiotoxicity: an overview on pre-clinical therapeutic approaches. *Cardiovascular Toxicology*, 22(4), 292-310.
- Shrihastini, V., Muthuramalingam, P., Adarshan, S., Sujitha, M., Chen, J. T., Shin, H., & Ramesh, M. (2021). Plant derived bioactive compounds, their anticancer effects and in silico approaches as an alternative target treatment strategy for breast cancer: An updated overview. *Cancers*, 13(24), 6222.
- Simmonds, M. S. (2006). Selection, identification and collection of plants for analysis. *Encyclopedia of analytical chemistry: applications, theory and instrumentation*, 1-14.
-

-
- Singh, S., Pandey, V. P., Yadav, K., Yadav, A., & Dwivedi, U. N. (2020). Natural products as anti-cancerous therapeutic molecules targeted towards topoisomerases. *Current Protein and Peptide Science*, 21(11), 1103-1142.
- Singleton, V. L., Orthofer, R., & Lamuela-Raventós, R. M. (1999). Analysis of total phenols and other oxidation substrates and antioxidants by means of folin-ciocalteu reagent. *Methods in enzymology*, 299, 152-178.
- Sivasankari, B., Anandharaj, M., & Gunasekaran, P. (2014). An ethnobotanical study of indigenous knowledge on medicinal plants used by the village peoples of Thoppampatti, Dindigul district, Tamilnadu, India. *Journal of ethnopharmacology*, 153(2), 408-423.
- Slamon, D. J., Leyland-Jones, B., Shak, S., Fuchs, H., Paton, V., Bajamonde, A., ... & Norton, L. (2001). Use of chemotherapy plus a monoclonal antibody against HER2 for metastatic breast cancer that overexpresses HER2. *New England Journal of Medicine*, 344(11), 783-792. doi: 10.1056/NEJM200103153441101
- Soule, H. D., et al. (1973). "Isolation and characterization of a spontaneously immortalized human breast epithelial cell line, MCF-10." *Cancer research*, 33(12), 3239-3249.
- Stevens, J. B., Liu, G., Bremer, S. W., Ye, K. J., Xu, W., Xu, J., ... & Heng, H. H. (2007). Mitotic cell death by chromosome fragmentation. *Cancer research*, 67(16), 7686-7694.
- Stuelten, C. H., Parent, C. A., & Montell, D. J. (2018). Cell motility in cancer invasion and metastasis: insights from simple model organisms. *Nature Reviews Cancer*, 18(5), 296-312.
- Su, Q., Li, W., Zhang, X., Wu, R., Zheng, K., Zhou, T., ... & Ran, J. (2023). Integrated bioinformatics analysis for the screening of hub genes and therapeutic drugs in Hepatocellular carcinoma. *Current Pharmaceutical Biotechnology*, 24(8), 1035-1058.
-

-
- Su, S. C., Hsieh, M. J., Yang, W. E., Chung, W. H., Reiter, R. J., & Yang, S. F. (2017). Cancer metastasis: Mechanisms of inhibition by melatonin. *Journal of Pineal Research*, 62(1), e12370.
- Subramaniyan, B., Polachi, N., & Mathan, G. (2016). Isocoreopsin: An active constituent of n-butanol extract of *Butea monosperma* flowers against colorectal cancer (CRC). *Journal of Pharmaceutical Analysis*, 6(5), 318-325.
- Sultana, S., Asif, H. M., Akhtar, N., Waqas, M., & Rehman, S. U. (2014). Comprehensive Review on Ethanobotanical Uses, Phytochemistry and Pharmacological Properties of *Melia azedarach* Linn. *Asian Journal of Pharmaceutical Research and Health Care*, 26-32.
- Sun, W., & Shahrajabian, M. H. (2023). Therapeutic potential of phenolic compounds in medicinal plants—Natural health products for human health. *Molecules*, 28(4), 1845.
- Sun, X., Li, X., & Ma, Q. (2019). Induction of Apoptosis and Suppression of Invasion in Human Glioma Cells by Syringic Acid. *Cancer Management and Research*, 11, 7459–7469.
- Sundaram, G. M., Quah, S., & Sampath, P. (2018). Cancer: the dark side of wound healing. *The FEBS Journal*, 285(24), 4516-4534.
- Suraweera, C. D., Hinds, M. G., & Kvensakul, M. (2020). Poxviral strategies to overcome host cell apoptosis. *Pathogens*, 10(1), 6.
- Szklarczyk, D., Kirsch, R., Koutrouli, M., Nastou, K., Mehryary, F., Hachilif, R., ... & von Mering, C. (2023). The STRING database in 2023: protein–protein association networks and functional enrichment analyses for any sequenced genome of interest. *Nucleic acids research*, 51(D1), D638-D646.
- Talib, W. H., Awajan, D., Hamed, R. A., Azzam, A. O., Mahmud, A. I., & Al-Yasari, I. H. (2022). Combination anticancer therapies using selected phytochemicals. *Molecules*, 27(17), 5452.
- Tanriover, G., Dilmac, S., Aytac, G., Farooqi, A. A., & Sindel, M. (2022). Effects of melatonin and doxorubicin on primary tumor and metastasis in breast cancer model. *Anti-Cancer*
-

-
- Agents in Medicinal Chemistry (Formerly Current Medicinal Chemistry-Anti-Cancer Agents)*, 22(10), 1970-1983.
- Tarighati, E., Keivan, H., & Mahani, H. (2023). A review of prognostic and predictive biomarkers in breast cancer. *Clinical and experimental medicine*, 23(1), 1-16.
- Tarnowski, B. I., Spinale, F. G., & Nicholson, J. H. (1991). DAPI as a useful stain for nuclear quantitation. *Biotechnic & histochemistry*, 66(6), 296-302.
- Testa, U., Castelli, G., & Pelosi, E. (2019). Cellular and molecular mechanisms underlying prostate cancer development: therapeutic implications. *Medicines*, 6(3), 82.
- Thakur, B., Kumar, Y., & Bhatia, A. (2019). Programmed necrosis and its role in management of breast cancer. *Pathology-Research and Practice*, 215(11), 152652.
- Thomford, N. E., Senthebane, D. A., Rowe, A., Munro, D., Seele, P., Maroyi, A., & Dzobo, K. (2018). Natural products for drug discovery in the 21st century: innovations for novel drug discovery. *International journal of molecular sciences*, 19(6), 1578.
- Tiwari, S., & Prakash, K. (2024). Unrevealing The Complex Interplay: Molecular Docking: A Comprehensive Review On Current Scenario, Upcoming Difficulties, Forthcoming Initiatives, And Viewpoints. *International Journal of Chemistry Research*, 1-9.
- Tolosa, L., Donato, M. T., & Gómez-Lechón, M. J. (2015). General cytotoxicity assessment by means of the MTT assay. *Protocols in in vitro hepatocyte research*, 333-348.
- Toney, N. J., Opdenaker, L. M., Cicek, K., Frerichs, L., Kennington, C. R., Oberly, S., ... & Sims-Mourtada, J. (2022). Tumor-B-cell interactions promote isotype switching to an immunosuppressive IgG4 antibody response through upregulation of IL-10 in triple negative breast cancers. *Journal of Translational Medicine*, 20(1), 112.
- Trabulsy, P. (2019). Complementary and alternative medicine. *Cancer: Prevention, Early Detection, Treatment and Recovery*, 499-530.
-

-
- Tran, Q. H., Hoang, D. H., Song, M., Choe, W., Kang, I., Kim, S. S., & Ha, J. (2021). Melatonin and doxorubicin synergistically enhance apoptosis via autophagy-dependent reduction of AMPK α 1 transcription in human breast cancer cells. *Experimental & Molecular Medicine*, 53(9), 1413-1422.
- Trepat, X., Chen, Z., & Jacobson, K. (2012). Cell migration. *Comprehensive Physiology*, 2(4), 2369.
- Truong, D. H., Nguyen, D. H., Ta, N. T. A., Bui, A. V., Do, T. H., & Nguyen, H. C. (2019). Evaluation of the use of different solvents for phytochemical constituents, antioxidants, and *In vitro* anti-inflammatory activities of *Severinia buxifolia*. *Journal of food quality*, 2019.
- Tsang, J. Y., & Gary, M. T. (2020). Molecular classification of breast cancer. *Advances in anatomic pathology*, 27(1), 27-35.
- Tzang, B. S., Chen, V. C. H., Hsieh, C. C., Wang, W. K., Weng, Y. P., Ho, H. Y., ... & Chen, Y. L. (2020). Differential associations of proinflammatory and anti-inflammatory cytokines with depression severity from noncancer status to breast cancer course and subsequent chemotherapy. *BMC cancer*, 20, 1-9.
- Upadhyay, K., Patel, F., Mammen D., Robin, E., & Baxi, D. (2020). Recent Scenario of Medicinal Plants of India in Cancer Therapeutics Recent Scenario of Medicinal Plants of India in Cancer Therapeutics. *Interwoven: An Interdisciplinary Journal of Navrachana University*, Vol. 3, Issue 2,25-42.
- Venkatesh, R., Vidya, R., & Kalaivani, K. (2014). Gas chromatography and mass spectrometry analysis of *Solanum villosum* (Mill) (Solanaceae); 5283-5287.
- Vihinen, P. et al. (2018). "Matrix metalloproteinases in early-stage breast cancer: diagnostic, prognostic, and therapeutic implications". *Oncology Reviews*, 12(1), 324.
-

-
- Wang, P., Yang, H. L., Yang, Y. J., Wang, L., & Lee, S. C. (2015). Overcome cancer cell drug resistance using natural products. *Evidence-Based Complementary and Alternative Medicine, 2015*.
- Xu, B. J., & Chang, S. K. (2007). A comparative study on phenolic profiles and antioxidant activities of legumes as affected by extraction solvents. *Journal of food science, 72*(2), S159-S166.
- Xu, J., Gao, F., Liu, W., & Guan, X. (2024). Cell-cell communication characteristics in breast cancer metastasis. *Cell Communication and Signaling, 22*(1), 55.
- Yadav, P., Yadav, R., Jain, S., & Vaidya, A. (2021). Caspase-3: A primary target for natural and synthetic compounds for cancer therapy. *Chemical biology & drug design, 98*(1), 144-165.
- Yan, X., Yu, Q., Guo, L., Guo, W., Guan, S., Tang, H., ... & Gan, Z. (2017). Positively charged combinatory drug delivery systems against multi-drug-resistant breast cancer: Beyond the drug combination. *ACS Applied Materials & Interfaces, 9*(8), 6804-6815.
- Yarrow JC, Perlman ZE, Westwood NJ, Mitchison TJ. (2004) A high-throughput cell migration assay using scratch wound healing, a comparison of image-based readout methods. *BMC biotechnology*.4:1-9.
- Yuan, L., Cai, Y., Zhang, L., Liu, S., Li, P., & Li, X. (2022). Promoting apoptosis, a promising way to treat breast cancer with natural products: *A comprehensive review. Frontiers in Pharmacology, 12*, 801662.
- Yuan, Y., Jiang, Y. C., Sun, C. K., & Chen, Q. M. (2016). Role of the tumor microenvironment in tumor progression and the clinical applications. *Oncology reports, 35*(5), 2499-2515.
- Zahra, N., Mazhar, A., Zahid, B., Naeem, M. A., Sarwar, A., Aziz, T., ... & Alasmari, A. F. (2024). Evaluation of influence of *Butea monosperma* floral extract on inflammatory biomarkers. *Open Chemistry, 22*(1), 20230199.
-

- Zhang, B., Cao, X., Liu, Y., Cao, W., Zhang, F., Zhang, S., ... & Zhang, Y. (2019). Tumor-derived matrix metalloproteinase-2 (MMP-2) predicts poor prognosis in breast cancer. *Journal of Translational Medicine*, 17(1), 1-12.
- Zhishen, J., Mengcheng, T., & Jianming, W. (1999). The determination of flavonoid contents in mulberry and their scavenging effects on superoxide radicals. *Food chemistry*, 64(4), 555-559.
- Zhu, W. J., Liu, Y., Cao, Y. N., Peng, L. X., Yan, Z. Y., & Zhao, G. (2021). Insights into health-promoting effects of plant microRNAs: a review. *Journal of agricultural and food chemistry*, 69(48), 14372-14386.