

Cancer Preventative & Anti-Cancer Actions of Roselle (*Hibiscus sabdariffa*)

- EI-Demerdash, A., et al. "From hue to health: Exploring the therapeutic potential of plant-pigment-enriched extracts." *Microorganisms*. 2025 Aug; 13(8): 1818.
- Ezcurra-Hualde, M., et al. "Intratumoral administration of *Hibiscus sabdariffa*-derived anthocyanins exerts potent antitumor effects in murine cancer models." *Front. Immunol.* 2025 Mar; 16: 1549890.
- Ladeira Bernardes, A., et al. "Oral intake of *Hibiscus sabdariffa* L. increased c-Myc and caspase-3 gene expression and altered microbial population in colon of BALB/c mice induced to preneoplastic lesions." *Eur. J. Nutr.* 2025 Mar; 64(3): 109.
- Espinosa-Sánchez, A., et al. "*Hibiscus sabdariffa* as a novel alternative strategy against *Helicobacter pylori* infection development to gastric cancer." *J. Med. Food.* 2024 Dec; 27(12): 1158-1167.
- Akram, H., et al. "Antioxidant and antineoplastic activities of *Hibiscus sabdariffa* Linn. petal extracts against oral squamous cell carcinoma cell line." *Oral Health Prev. Dent.* 2024 Feb; 22: 131-138.
- Yasmin, R., et al. "Novel insight into the cellular and molecular signalling pathways on cancer preventing effects of *Hibiscus sabdariffa*: A review." *J. Cancer Prev.* 2023 Sep; 28(3): 77-92.
- Tsai, M., et al. "Hibiscus anthocyanins extracts induce apoptosis by activating AMP-activated protein kinase in human colorectal cancer cells." *Nutrients*. 2023 Sep; 15(18): 3972.
- Huang, K., et al. "Anticancer effects of gossypetin from *Hibiscus sabdariffa* in oral squamous cell carcinoma." *J. Appl. Oral Sci.* 2023 Oct; 31: e20230243.
- Hamza, A., et al. "Hibiscus-cisplatin combination treatment decreases liver toxicity in rats while increasing toxicity in lung cancer cells via oxidative stress- apoptosis pathway." *Biomed. Pharmacother.* 2023 Sep; 165: 115148.
- Bernardes, A., et al. "Hibiscus (*Hibiscus sabdariffa* L.) supplementation increases butyrate synthesis and reduces inflammatory cells, attenuating the formation of aberrant crypt foci in BALB/c mice induced to pre-neoplastic lesions." *Br. J. Nutr.* 2023 Jan; 129(2): 352-363.
- Listro, R., et al. "From nature to synthetic compounds: Novel 1(N),2,3 Trisubstituted-5-oxopyrrolidines targeting multiple myeloma cells." *Int. J. Mol. Sci.* 2022 Oct; 23(21): 13061.
- Malacrida, A., et al. "Evaluation of antitumoral effect of *Hibiscus sabdariffa* extract on human breast cancer cells." *Biochem. Biophys. Rep.* 2022 Sep; 32: 101353.
- Bassong, T., et al. "Effects of *Hibiscus sabdariffa* calyxes aqueous extract on antioxidant status and histopathology in mammary tumor-induced in rats." *Evid. Based Complement. Alternat. Med.* 2022 Apr; 2022: 9872788.
- Chiaino, E., et al. "Hibiscus flower and olive leaf extracts activate apoptosis in SH-SY5Y cells." *Antioxidants (Basel)*. 2021 Dec; 10(12): 1962.
- Malacrida, A., et al. "Anti-multiple myeloma potential of secondary metabolites from *Hibiscus sabdariffa* - Part 2." *Molecules*. 2021 Oct; 26(21): 6596.
- Semsri, S., et al. "In-vitro Studies of Anti-EGFR Tyrosine Kinase Activity of Thai nutraceutical Plants." *Iran J. Pharm. Res.* 2020 Spring; 19(2): 199-206.

- Malacrida, A., et al. "Anti-multiple myeloma potential of secondary metabolites from *Hibiscus sabdariffa*. *Molecules*. 2019 Jul; 24(13): 2500. 31323932; PMCID: PMC6651714.
- Kam, A., et al. "Roseltide rT7 is a disulfide-rich, anionic, and cell-penetrating peptide that inhibits proteasomal degradation." *J. Biol. Chem.* 2019 Dec; 294(51): 19604-19615.
- Gheller, A., et al. "Antimutagenic effect of *Hibiscus sabdariffa* L. aqueous extract on rats treated with monosodium glutamate." *Scientific World Journal*. 2017; 2017: 9392532.
- Joshua, M., et al. "Disruption of angiogenesis by anthocyanin-rich extracts of *Hibiscus sabdariffa*." *Int. J. Sci. Eng. Res.* 2017 Feb; 8(2): 299-307.
- Tsai, T., et al. "Anthocyanins from roselle extract arrest cell cycle G2/M phase transition via ATM/Chk pathway in p53-deficient leukemia HL-60 cells." *Environ. Toxicol.* 2017 Apr; 32(4): 1290-1304.
- Goldberg, K., et al. "Components in aqueous *Hibiscus rosa-sinensis* flower extract inhibit *in vitro* melanoma cell growth." *J. Tradit. Complement. Med.* 2016 Feb 23; 7(1): 45-49.
- Malacrida, A., et al. "Antitumoral effect of *Hibiscus sabdariffa* on human squamous cell carcinoma and multiple myeloma cells." *Nutr. Cancer*. 2016 Oct; 68(7): 1161-70.
- Amran, N., et al. "Antioxidant and cytotoxic effect of *Barringtonia racemosa* and *Hibiscus sabdariffa* fruit extracts in MCF-7 human breast cancer cell line." *Pharmacognosy Res.* 2016 Jan-Mar; 8(1): 66-70.
- Formagio, A., et al. "Phenolic compounds of *Hibiscus sabdariffa* and influence of organic residues on its antioxidant and antitumoral properties." *Braz. J. Biol.* 2015 Jan-Mar; 75(1): 69-76.
- Chiu, C., et al. "*Hibiscus sabdariffa* leaf polyphenolic extract induces human melanoma cell death, apoptosis, and autophagy." *J. Food Sci.* 2015 Mar; 80(3): H649-58.
- Sarkar, B., et al. "Antioxidant and DNA damage protective properties of anthocyanin-rich extracts from *Hibiscus* and *Ocimum*: a comparative study." *Nat. Prod. Res.* 2014; 28(17): 1393-8.
- Tsai, T., et al. "An anthocyanin-rich extract from *Hibiscus sabdariffa* Linnaeus inhibits N-nitrosomethylurea-induced leukemia in rats." *J. Agric. Food Chem.* 2014 Feb; 62(7): 1572-80.
- Olvera-Garcia, V., et al. "*Hibiscus sabdariffa* L. extracts inhibit the mutagenicity in microsuspension assay and the proliferation of HeLa cells." *J. Food Sci.* 2008 Jun; 73(5): T75-81.
- Lin, H., et al. "Chemopreventive properties of *Hibiscus sabdariffa* L. on human gastric carcinoma cells through apoptosis induction and JNK/p38 MAPK signaling activation." *Chem. Biol. Interact.* 2007 Jan; 165(1): 59-75.
- Hou, D., et al. "Delphinidin 3-sambubioside, a *Hibiscus* anthocyanin, induces apoptosis in human leukemia cells through reactive oxygen species-mediated mitochondrial pathway." *Arch. Biochem. Biophys.* 2005 Aug; 440(1): 101-9.
- Chang, Y., et al. "*Hibiscus* anthocyanins rich extract-induced apoptotic cell death in human promyelocytic leukemia cells." *Toxicol. Appl. Pharmacol.* 2005 Jun; 205(3): 201-12.
- Lin, H., et al. "*Hibiscus* polyphenol-rich extract induces apoptosis in human gastric carcinoma cells via p53 phosphorylation and p38 MAPK/FasL cascade pathway." *Mol. Carcinog.* 2005 Jun; 43(2): 86-99.
- Tseng, T., et al. "Induction of apoptosis by hibiscus protocatechuic acid in human leukemia cells via reduction of retinoblastoma (RB) phosphorylation and Bcl-2 expression." *Biochem. Pharmacol.* 2000 Aug; 60(3): 307-15.
- Chewonarin, T., et al. "Effects of roselle (*Hibiscus sabdariffa* Linn.), a Thai medicinal plant, on the mutagenicity of various known mutagens in *Salmonella typhimurium* and on formation of

aberrant crypt foci induced by the colon carcinogens azoxymethane and 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine in F344 rats." *Food Chem. Toxicol.* 1999 Jun; 37(6): 591-601.
Tseng, T., et al. "Inhibitory effect of Hibiscus protocatechuic acid on tumor promotion in mouse skin." *Cancer Lett.* 1998 Apr; 126(2): 199-207.

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