Table S2 Health benefits of bioactive compounds in sweet potato leaves (N/S not specified in the study).

Cultivar Color	Cultivar and Region	Parts	Sample Form	Type of study	Physiological function	Related components	Reference
Purple	Pin 375(IB2013-2014), (Taiwan province)	Apical shoots	Fresh	*in vitro*	Enhanced glucose uptake and antidiabetic potential	Flavonoids	[51]
	S-1467 (India)	Leaf	Fresh	*in vitro*	Antioxidant, antiproliferative against cancer cells	Anthocyanins	[5]
	Taoyuan District Agriculture Improvement Station (Taiwan province)	Leaf	N/S	*In vivo*	Boosted immunity, enhanced immune cell activity	Polyphenol, β-Carotene	[52]
	Pin 375 (Taiwan province)	Leaf	Fresh	*in vitro*	Improved metabolic health, reduces inflammation	Flavonoid	[53]
	Taiwan province	Leaf	Fresh	*In vitro* and *ex vivo*	Inhibited angiogenesis, suppressed vessel growth	Polyphenol	[54]
	Taiwan province	Leaf	Fresh	*in vivo*	Enhanced antioxidant, reduces DNA damage	Polyphenol	[55]
	Taiwan province	Leaf	Fresh	*in vivo*	Reduced inflammation, enhanced post-exercise recovery	Polyphenols, flavonoids	[56]
	Taiwan province	Leaf	Fresh	*in vivo*	Boosted immunity, elevated immune	Polyphenols	[57]

					responses		
	Xuzi No.8 (China)	Leaf	Dried	*In vitro and in vivo*	Lowered uric acid, alleviated renal inflammation	Polyphenols, caffeoylquinic acids	[58]
	Taiwan province	Leaf	Dried	*In vitro*	Inhibited cell adhesion, suppressed vascular inflammation	Cyanidin, quercetin	[59]
	Malaysia	Leaf	Fresh	*In vivo*	Safe for use, no observed toxicity	Lutein	[60]
	Korea	Leaf	Dried	*In vivo*	Protected liver, reduced alcohol-induced injury	Chlorogenic acid	[61]
	Churakoi (Japan)	Leaf	Dried	*In vitro*	Inhibited adipogenic differentiation in stem cells	Anthocyanins, caffeic acid, quercetin.	[62]
	Antin-3(Indonesia)	Leaf	Dried	*In vivo*	Protected skin from UV damage for topical use	Flavonoids antioxidants	[63]
	Georgia Jet; TU-82-155; J6-66; W-308; N-31; Jewel (USA)	Leaf	Fresh	*In vitro and in vivo*	Antioxidant, anti-inflammatory, cardioprotective	Carbohydrates, protein, amino acids, fiber, omega-3 fatty acids, vitamins, minerals, antioxidants	[64]
	Suioh (USA)	Leaf	Fresh	*in vitro*	Antioxidant, antimutagenic, antidiabetic	Anthocyanins, polyphenols, dietary fiber, polysaccharides; vitamins, minerals	[8]
	Ayamurasaki (Indonesia)	Leaf	Fresh	*In vivo*	Promoted postpartum recovery, enhanced lactation	Vitamins, iron	[65]
	Indonesia	Leaf	Dried	*In vivo*	Hypoglycemic,	Phenolic, Flavonoids, anthocyanins	[66]

					alleviateed diabetic oxidative stress		
	Indonesia	Leaf	Dried	*In vitro and in vivo*	Promoted hair growth, inhibited scalp fungi	Pyropheophorbide A, hyperoside, flavonoids	[67]
	Indonesia	Leaf	Dried	*In vivo*	Antihyperlipidemic, lowers cholesterol and MDA	Flavonoids, anthocyanins	[68]
	Maejo 341 (Thailand)	Peel	Dried	*In vitro*	Antioxidant, anti-inflammatory, anti-osteoporosis	Cyanidin-3-O-glucoside, peonidin-3-O-glucoside, pelargonidin-3-O-glucoside, cyanidin, peonidin	[69]
	Silk Sweet (Japan)	Leaf and stems	Dried	*In vitro*	Anti-inflammatory, regulated glucose and lipid	-	[70]
Green	1,389 genotypes worldwide (Japan)	Leaf	Dried	*In vitro*	Antioxidant, antimutagenic for cancer prevention	Caffeoylquinic acid	[71]
	Tainung 10, 57, 66, YSP (Taiwan province)	Leaf	Dried	*In vitro*	Strong antioxidant, protected skin cells	Phenolics, flavonoids	[72]
	Danjami, Hayanmi, Hogammi, Jinyulmi, Poongwonmi, and Yeonjami (Korea)	Leaf, stem	Dried	*In vitro*	Antioxidant, blanching reduced activity	Phenolic acids, vitamin C	[73]
	Koganesengan (Japan)	Leaf	Dried	*In vivo*	Anti-obesity, improved lipid metabolism	Polyphenols, Dietary Fiber	[74]
	Indonesia	Leaf	N/S	*In vitro*	Inhibited dengue virus	Dehydroabietinol, Amino acids	[75]

					protease, antiviral potential		
	Naruto Kintoki, Suioh, Elegant Summer, Beni Azuma, Purple Sweet Road, Quick Sweet, Kogane Sengan, and Simon No. 1(Japan)	Leaf	Dried	*In vitro and in vivo*	Prevented LDL oxidation, cardioprotective	Polyphenols	[76]
	Tainung 57 (Taiwan province)	Leaf	Dried	*in vivo*	Lowers cholesterol, inhibited thrombosis	Polyphenols, dietary fibers	[77]
	Suioh (Japan)	leaf and petiole	N/S	*in vivo*	Anticancer, induced apoptosis in cancer cells	Caffeic acid, 3,4,5-tri-O-caffeoylquinic acid	[78]
	Georgia Jet (Taiwan province)	aerial	Frozen	*in vitro*	Inhibited pancreatic cancer, promoted apoptosis	16-amino-acid protein	[79]
	Whatley/ Loretan (TU-155), (USA)	Leaf	Dried	*In vitro and in vivo*	Anticancer against prostate cancer, reduced tumor	Quinic Acid, Caffeic Acid, Chlorogenic Acid, isochlorogenic acids	[80]
	Whatley/ Loretan (TU-155), (USA)	Leaf	Dried	*In vitro and in vivo*	Induced apoptosis, inhibited cancer progression	Polyphenols	[81]
	Jishu No. 16 (China)	Leaf	Dried	*in vitro*	Antioxidant, hypoglycemic for diabetes care	Phenethyl cinnamides, 3,4,5-tricaffeoylquinic acid	[82]
	Zhecaishu 726 (China)	leaf and petiole	Lyophilized	*in vitro*	High antioxidant, protected against oxidative stress	Caffeoylquinic acids, Flavonoids	[16]

	Bophelo, Beauregard, Blesbok, Ndou, 08.21p, Purple-purple (South Africa)	Leaf	Fresh	*in vitro*	Enhanced antioxidant, improved nutrient availability	Carotenoids, Vitamin C, Phenolic	[83]
	IRAD-tib1, IRAD-1112	Apical	Dried	*in vivo*	Anti-hyperlipidemic, improved liver function	Polyphenols, Flavonoids, Anthraquinones	[84]
	Kenya	Leaf	Fresh	*vitro*	Rich in iron, relieved micronutrient deficiency	Iron	[85]
	China	Leaf	Dried	*In vitro*	Natural anti-inflammatory, for dietary use	Polyphenols	[86]
	Nanshu012, Nanshu016, Jishu26, Yanshu26, Xinxiang, Quanshu9, Guangshu87, Xiangshu, Chuanshu294, Longshu9, Nanshu99, Nanshu017, Yushu17 (China)	Leaf	Dried	*In vitro*	Potential anti-leukemia activity	Flavonoids	[87]

References

[1] Li G, Lin Z, Zhang H, Liu Z, Xu Y, et al. 2019. Anthocyanin accumulation in the leaves of the purple sweet potato (Ipomoea batatas L.) cultivars. Molecules 24(20):3743.https://doi.org/10.3390/molecules24203743

[2] Jyothi A, Moorthy S, Eswariamma C. 2005. Anthocyanins in sweet potato leaves-varietal screening, growth phase studies and stability in a model system. International Journal of Food Properties 8(2):221-32. https://doi.org/10.1081/JFP-200063051

[3] Islam MS, Jalaluddin M, Garner JO, Yoshimoto M, Yamakawa O. 2005. Artificial shading and temperature influence on anthocyanin compositions in sweetpotato leaves. *HortScience* 40(1):176-80. https://doi.org/10.21273/HORTSCI.40.1.176

[4] Steingass CB, Burkhardt J, Bäumer V, Kumar K, Mibus-Schoppe H,et al. 2023. Characterisation of acylated anthocyanins from red cabbage, purple sweet potato, and Tradescantia pallida leaves as natural food colourants by HPLC-DAD-ESI (+)-QTOF-MS/MS and ESI (+)-MSn analysis. *Food Chemistry* 416:135601. https://doi.org/10.1016/j.foodchem.2023.135601

[5] Vishnu VR, Renjith RS, Mukherjee A, Anil SR, Sreekumar J, et al. 2019. Comparative study on the chemical structure and *in vitro* antiproliferative activity of anthocyanins in purple root tubers and leaves of sweet potato (*Ipomoea batatas*). *Journal of agricultural and food chemistry* 67(9):2467-75. https://doi.org/10.1021/acs.jafc.8b05473

[6] Zhang D, Tan Y, Dong F, Zhang Y, Huang Y, et al. 2021. The expression of *IbMYB1* is essential to maintain the purple color of leaf and storage root in sweet potato [*Ipomoea batatas* (L.) *Lam*].*Frontiers in Plant Science* 12:688707.https://doi.org/10.3389/fpls.2021.688707

[7] Islam MS, Yoshimoto M, Ishiguro K, Okuno S, Yamakawa O. 2003. Effect of artificial shading and temperature on radical scavenging activity and polyphenolic composition in sweetpotato (*Ipomoea batatas* L.) leaves. *Journal of the American Society for Horticultural Science* 128(2):182-87. https://doi.org/10.21273/JASHS.128.2.182

[8] Islam S. 2006. Sweetpotato (*Ipomoea batatas* L.) leaf: its potential effect on human health and nutrition. *Journal of Food Science* 71(2):R13-R121. https://doi.org/10.1111/j.1365-2621.2006.tb08912.x

[9] Rodrigues N, Mohammad SS, Gao C, Ivone MJ, Barbosa M, et al. 2023. Separation process characteristics of phenolic compounds from organic purple-fleshed sweet potatoes (*Ipomoea batatas* L.) leaves using macroporous resins. *Journal of Food Process Engineering* 46(8):e14365. https://doi.org/10.1111/jfpe.14365

[10] Sun H, Mu B, Song Z, Ma Z, Mu T. 2018. The *in vitro* antioxidant activity and inhibition of intracellular reactive oxygen species of sweet potato leaf polyphenols. *Oxidative medicine and cellular longevity* 1:9017828.https://doi.org/10.1155/2018/9017828

[11] Liu J, Mu T, Sun H, Fauconnier ML. 2019. Optimization of ultrasonic-microwave synergistic extraction of flavonoids from sweet potato leaves by response surface methodology. *Journal of Food Processing and Preservation* 43(5):e13928. https://doi.org/10.1111/jfpp.13928

[12] Ranteallo Y, Ahmad M, Syam A, Nilawati A. Identification and quantification of minerals and vitamins of purple sweet potato (Ipomoea batatas) leave. Proc. IOP Conference Series: Earth and Environmental Science, 2023, 1230:012134: IOP Publishing.

[13] Fu ZF, Tu ZC, Zhang L, Wang H, Wen QH, et al. 2016. Antioxidant activities and polyphenols of sweet potato *(Ipomoea batatas* L.*)* leaves extracted with solvents of various polarities. *Food bioscience* 15:11-18.https://doi.org/10.1016/j.fbio.2016.04.004

[14] Carvalho IS, Cavaco T, Carvalho LM, Duque P. 2010. Effect of photoperiod on flavonoid pathway activity in sweet potato (*Ipomoea batatas* (L.)Lam.) leaves. *Food chemistry* 118(2):384-90.https://doi.org/10.1016/j.foodchem.2009.05.005

[15] Padda MS, Picha D. 2007. Antioxidant activity and phenolic composition in 'Beauregard'sweetpotato are affected by root size and leaf age. *Journal of the American Society for Horticultural Science* 132(4):447-51. https://doi.org/10.21273/JASHS.132.4.447

[16] Zhang C, Liu D, Wu L, Zhang J, Li X, et al. 2019. Chemical characterization and antioxidant properties of ethanolic extract and its fractions from sweet potato (*Ipomoea batatas* L.) leaves. *Foods* 9(1):15. https://doi.org/10.3390/foods9010015

[17] Bai C, Chen R, Zhang Y, Bai H, Tian L, et al. 2023. Comparison in structural, physicochemical and functional properties of sweet potato stems and leaves polysaccharide conjugates from different technologies. *International Journal of Biological Macromolecules* 247:125730. https://doi.org/10.1016/j.ijbiomac.2023.125730

[18] Ghasemzadeh A, Omidvar V, Jaafar H. 2012. Polyphenolic content and their antioxidant activity in leaf extract of sweet potato (*Ipomoea batatas*). *Journal of Medicinal Plants Research* 6(15):2971-76.https://doi.org/10.5897/JMPR11.1353

[19] Sasaki K, Oki T, Kobayashi T, Kai Y, Okuno S. 2014. Single-laboratory validation for the determination of caffeic acid and seven caffeoylquinic acids in sweet potato leaves. *Bioscience, Biotechnology, and Biochemistry* 78(12):2073-80. https://doi.org/10.1080/09168451.2014.942253

[20] Xu W, Liu L, Hu B, Sun Y, Ye H, et al. 2010. TPC in the leaves of 116 sweet potato (*Ipomoea batatas* L.) varieties and Pushu 53 leaf extracts. *Journal of Food Composition and Analysis* 23(6):599-04.https://doi.org/10.1016/j.jfca.2009.12.008

[21] Redovniković IR, Bogović M, Belko D, Delonga K, Fabek S, et al. 2012. Influence of potassium fertilisation on the levels of phenolic compounds in sweet potato (*Ipomoea batatas* L.) leaves. *The Journal of Horticultural Science and Biotechnology* 87(1):47-51. https://doi.org/10.1080/14620316.2012.11512829

[22] Hue SM, Boyce AN, Somasundram C. 2011. Influence of growth stage and variety on the pigment levels in *Ipomoea batatas* (sweet potato) leaves. *African Journal of Agricultural Research* 6(10):2379-85.https://doi.org/10.5897/AJAR11.299

[23] Huang X, Tu Z, Xiao H, Li Z, Zhang Q, et al. 2013. Dynamic high pressure microfluidization-assisted extraction and antioxidant activities of sweet potato(*Ipomoea batatas* L.) leaves flavonoid. *Food and Bioproducts Processing* 91(1):1-6. https://doi.org/10.1016/j.fbp.2012.07.006

[24] Suárez S, Mu T, Sun H, Añón MC. 2020. Antioxidant activity, nutritional, and phenolic composition of sweet potato leaves as affected by harvesting period. *International Journal of Food Properties* 23(1):178-88.https://doi.org/10.1080/10942912.2020.1716796

[25] Jeong DW, Park YK, Nam SS, Han SK. 2015. Effect of hot-air drying temperature on nutritional components and rehydration rate of sweetpotato leaves. *Food Science and Preservation* 22(4):498-04. https://doi.org/10.11002/kjfp.2015.22.4.498

[26] Yoshimoto M, Kurata R, Okuno S, Ishiguro K, Yamakawa O, et al. 2005. Nutritional value and physiological functions of sweetpotato leaves. *International Symposium on Sweetpotato and Cassava: Innovative Technologies for Commercialization* 703:107-116. https://doi.org/10.17660/ActaHortic.2006.703.11

[27] Al-Mohanna T, Ahsan N, Bokros NT, Dimlioglu G, Reddy KR, et al. 2019. Proteomics and proteogenomics analysis of sweetpotato (*Ipomoea batatas*) leaf and root. *Journal of proteome research* 18(7):2719-34. https://doi.org/10.1021/acs.jproteome.8b00943

[28] Omoba OS, Oyewole GO, Oloniyo RO. 2020. Chemical compositions and antioxidant properties of orange fleshed sweet potato leaves and the consumer acceptability in vegetable soup. *Preventive Nutrition and Food Science* 25(3):293. https://doi.org/10.3746/pnf.2020.25.3.293

[29] Huang WD, Lin KH, Hsu MH, Huang MY, Yang ZW, et al. 2014. Eliminating interference by anthocyanin in chlorophyll estimation of sweet potato (*Ipomoea batatas* L.) leaves. *Botanical studies* 55(1):11. https://doi.org/10.1186/1999-3110-55-11

[30] Su X, Griffin J, Xu J, Ouyang P, Zhao Z, et al. 2019. Identification and quantification of anthocyanins in purple-fleshed sweet potato leaves. *Heliyon* 5(6): e01964. https://doi.org/10.1016/j.heliyon.2019.e01964

[31] Mardiyanto M, Apriani EF, Alfarizi MH. 2022. Formulation and *in-vitro* antibacterial activity of gel containing ethanolic extract of purple sweet potato leaves (*Ipomoea batatas* (L.)) loaded poly lactic co-glycolic acid submicroparticles against staphylococcus aureus. *Research Journal of Pharmacy and Technology* 15(8):3599-605. https://doi.org/10.52711/0974-360X.2022.00603

[32] Krochmal-Marczak B, Cebulak T, Kapusta I, Oszmiański J, Kaszuba J, et al. 2020. The content of phenolic acids and flavonols in the leaves of nine varieties of sweet potatoes (*Ipomoea batatas* L.) depending on their development, grown in Central Europe. *Molecules* 25(15):3473. https://doi.org/10.3390/molecules25153473

[33] Jia R, Tang C, Chen J, Zhang X, Wang Z. 2022. Total phenolics and anthocyanins contents and antioxidant activity in four different aerial parts of leafy sweet potato (*Ipomoea batatas* L.). *Molecules* 27(10):3117. https://doi.org/10.3390/molecules27103117

[34] Chiu CH, Lin KH, Lin HH, Chu WX, Lai YC, et al. 2022. Analysis of chlorogenic acid in sweet potato leaf extracts. *Plants* 11(15):2063. https://doi.org/10.3390/plants11152063

[35] Luo C, Wang X, Gao G, Wang L, Li Y, et al. 2013. Identification and quantification of free, conjugate and total phenolic compounds in leaves of 20 sweetpotato cultivars by HPLC–DAD and HPLC–ESI–MS/MS. *Food chemistry* 141(3):2697-706. https://doi.org/10.1016/j.foodchem.2013.05.009

[45] Abong' GO, Muzhingi T, Okoth MW, Ng'ang'a F, Ochieng PE, et al. 2021. Processing methods affect phytochemical contents in products prepared from orange-fleshed sweetpotato leaves and roots. *Food Science & Nutrition* 9(2):1070-8. https://doi.org/10.1002/fsn3.2081

[46] Ishiguro K, Toyama J, Islam MS, Yoshimoto M, Kumagai T, et al. 2004. Suioh, a new sweetpotato cultivar for utilization in vegetable greens. *Acta Horticulturae* 1:339-46. https://doi.org/10.17660/ActaHortic.2004.637.42

[47] Truong VD, Avula RY, Pecota KV, Yencho GC. 2018. Sweetpotato production, processing, and nutritional quality. *Handbook of vegetables and vegetable processing* 35:811-38. https://doi.org/10.1002/9781119098935.ch35

[48] Sun H, Mu T, Xi L, Zhang M, Chen J. 2014. Sweet potato(*Ipomoea batatas* L.) leaves as nutritional and functional foods. *Food chemistry* 156:380-9.https://doi.org/10.1016/j.foodchem.2014.01.079

[49] Anastácio A, Carvalho IS. 2016. Food applications and health benefits related to antioxidant activity of phenolic compounds from sweet potato peels and leaves: review of literature and patents. Sweet Potato: Production, Nutritional Properties and Diseases, ed. Sullivan D. New York: Nova Science Publishers.pp. 47-120. https://novapublishers.com/shop/sweet-potato-production-nutritional-properties-and-diseases/

[50] Chirwa-Moonga T, Muzungaile T, Siyumbano N, Moonga HB, Nyau V. 2020. Nutrient composition of raw and steamed, green and purple sweet potato leaf varieties(*Ipomoea batatas*). *Journal of Medicinally Active Plants* 9(4):253-61. https://doi.org/10.7275/9ns0-1640

[51] Lee CL, Lee SL, Chen CJ, Chen HC, Kao MC, et al. 2016. Characterization of secondary metabolites from purple *Ipomoea batatas* leaves and their effects on glucose uptake. *Molecules* 21(6):745.https://doi.org/10.3390/molecules21060745

[52] Chen CM, Li SC., Lin YL, Hsu CY, Shieh MJ, et al. 2005.Consumption of purple sweet potato leaves modulates human immune response: T-lymphocyte functions, lytic activity of natural killer cell and antibody production. *World Journal of Gastroenterology: WJG* 11(37):5777. https://doi.org/10.3748/wjg.v11.i37.5777

[53] Lee SL, Chin TY, Tu SC, Wang YJ, Hsu YT, et al. 2015. Purple sweet potato leaf extract induces apoptosis and reduces inflammatory adipokine expression in 3T3-L1 differentiated adipocytes. *Evidence-Based Complementary and Alternative Medicine* 1:126302. https://doi.org/10.1155/2015/126302

[54] Chen CM, Li SC, Chen CYO, Au HK, Shih CK, et al. 2011.Constituents in purple sweet potato leaves inhibit *in vitro* angiogenesis with opposite effects *ex vivo*. *Nutrition* 27(11-12):1177-82.https://doi.org/10.1016/j.nut.2011.01.005

[55] Chen CM, Lin YL, Chen CO, Hsu CY, Shieh MJ, et al. 2008.Consumption of purple sweet potato leaves decreases lipid peroxidation and DNA damage in humans. *Asia Pacific Journal of Clinical Nutrition* 17(3):408-14. https://doi.org/10.6133/apjcn.2008.17.3.07

[56] Chang WH, Hu SP, Huang YF, Yeh TS, Liu JF. 2010. Effect of purple sweet potato leaves consumption on exercise-induced oxidative stress and IL-6 and HSP72 levels. *Journal of applied physiology* 109(6):1710-5. https://doi.org/10.1152/japplphysiol.00205.2010

[57] Chang WH, Chen CM, Hu SP, Kan NW, Chiu CC, et al. 2007. Effect of purple sweet potato leaves consumption on the modulation of the immune response in basketball players during the training period. Asia Pacific journal of clinical nutrition 16(4):609-15. https://doi.org/10.6133/APJCN.2007.16.4.04

[58] Sun R, Kan J, Cai H, Hong J, Jin C, et al. 2022. *In vitro* and *in vivo* ameliorative effects of polyphenols from purple potato leaves on renal injury and associated inflammation induced by hyperuricemia. *Journal of Food Biochemistry* 46(2):e14049. https://doi.org/10.1111/jfbc.14049

[59] Chao PY, Huang YP, Hsieh WB. 2013. Inhibitive effect of purple sweet potato leaf extract and its components on cell adhesion and inflammatory response in human aortic endothelial cells. *Cell Adhesion & Migration* 7(2):237-45. https://doi.org/10.4161/cam.23649

[60] Rodrigues N, Mohammad SS, Gao C, Ivone MJ, Barbosa M, et al. 2023. Separation process characteristics of phenolic compounds from organic purple-fleshed sweet potatoes (*Ipomoea batatas* L.) leaves using macroporous resins. *Journal of Food Process Engineering* 46(8):e14365. https://doi.org/10.1111/jfpe.14365

[61] Kang H, Lee SG. 2021. Protective effect of purple sweet potato leaf (*Ipomoea batatas* Linn Convolvulaceae) against alcohol-induced liver damage in mice. *Tropical Journal of Pharmaceutical Research* 20(2):301-8. https://doi.org/10.4314/tjpr.v20i2.12

[62] Ishii M, Ikeda N, Miyata H, Takahashi M, Nishimura M. 2022. Purple sweet potato leaf extracts suppress adipogenic differentiation of human bone marrow–derived mesenchymal stem cells. *Journal of Food Biochemistry* 46(2):e14057. https://doi.org/10.1111/jfbc.14057

[63] Dipahayu D, Arifiyan D, Indramaya DM, Anggraeni S. 2019. Safety study of purple sweet potatoes leaves extract (*Ipomoea batatas*(l.) lamk) Antin-3 variety as a sunscreen active ingredient on human skin. *International Journal of Drug Delivery Technology* 9(2):120-24. https://doi.org/10.25258/ijddt.9.2.2

[64] Johnson M, Pace RD. 2010. Sweet potato leaves: properties and synergistic interactions that promote health and prevent disease. *Nutrition reviews* 68(10):604-15. https://doi.org/10.1111/j.1753-4887.2010.00320.x

[65] Malikha NZ, Prisusanti RD. 2019. The Effect of Giving Purple Sweet Potato Leaves Toward The Involution of Mother in The Posture and Sufficient Mother Breast Milk On Babies 0-6 Months. *Journal Of Nursing Practice* 3(1):96-101. https://doi.org/10.30994/jnp.v3i1.70

[66] Solihah I, Herlina EM, Haryanti H, Amalia M, Puspita RS. 2023. The hypoglycemic effect of purple sweet potato leaf fractions in diabetic rats. *Journal of Advanced Pharmacy Education & Research* 13(3):65. https://doi.org/10.51847/rQSvc5gZwg

[67] Armadany FI, Sopyan I, Mustarichie R. 2024. Antifungal activity and hair growth stimulation of purple sweet potato leaf fraction (*Ipomoea batatas* (L.) Lamk) and its molecular mechanism through androgen receptor inhibition. *Pharmacia* 71:1-14. https://doi.org/10.3897/pharmacia.71.e119384

[68] Mahfudh N, Mantali MF, Sulistyani N. 2022. The antihyperlipidemic effect of purple sweet potato leaf extract (*ipomoea batatas* l.) and red yeast rice combination on hypercholesterol rats. *Indonesian Journal of Pharmacy*33:93-9. https://doi.org/10.22146/ijp.2115

[69] Saenjum C, Thim-Uam A, Khonthun C, Oonlao P, Nuntaboon P, et al. 2025. Anthocyanins from a new hybrid sweet potato peel cultivated in Northern Thailand mitigate LPS-induced inflammation and RANKL-induced osteoporosis by regulating ROS-mediated pathways. *Inflammopharmacology* 33(1):381-99. https://doi.org/10.1007/s10787-024-01634-5

[70] Sugai K, Miyamoto Y, Sato T, Hakamata Y, Murakoshi T, etal. 2025. A pilot study on the effects of sweet potato petiole and leaf powder on gut microbiota and aging-related biomarkers in an aged microminipig model. *Metabolites* 15(11):713. https://doi.org/10.3390/metabo15110713

[71] Islam MS, Yoshimoto M, Yamakawa O. 2003. Distribution and physiological functions of caffeoylquinic acid derivatives in leaves of sweetpotato genotypes. *Journal of Food Science* 68(1):111-6. https://doi.org/10.1111/j.1365-2621.2003.tb14124.x

[72] Liao WC, Lai YC, Yuan MC, Hsu YL, Chan CF. 2011. Antioxidative activity of water extract of sweet potato leaves in Taiwan. *Food Chemistry* 127(3):1224-8. https://doi.org/10.1016/j.foodchem.2011.01.131

[73] Jang Y, Koh E. 2019.Antioxidant content and activity in leaves and petioles of six sweet potato (*Ipomoea batatas* L.) and antioxidant properties of blanched leaves. *Food science and biotechnology* 28(2):337-45. https://doi.org/10.1007/s10068-018-0481-3

[74] Kurata R, Kobayashi T, Ishii T, Niimi H, Niisaka S, et al. 2017. Influence of sweet potato (*Ipomoea batatas* L.) leaf consumption on rat lipid metabolism. *Food Science and Technology Research* 23(1):57-62. https://doi.org/10.3136/fstr.23.57

[75] Kharisma VD, Probojati RT, Murtadlo AAA, Ansori ANM, Antonius Y, et al. 2021. Revealing potency of bioactive compounds as inhibitor of dengue virus (DENV) NS2b/NS3 protease from sweet potato(*Ipomoea batatas* L.) leaves. *Indian Journal of Forensic Medicine & Toxicology* 15(1):1627-32. https://doi.org/10.37506/ijfmt.v15i1.13644

[76] Nagai M, Tani M, Kishimoto Y, Iizuka M, Saita E, et al. 2011. Sweet potato (*Ipomoea batatas* L.) leaves suppressed oxidation of low density lipoprotein (LDL) *in vitro* and in human subjects. *Journal of Clinical Biochemistry and Nutrition* 48(3):203-8. https://doi.org/10.3164/jcbn.10-84

[77] Chang HH, Lan YC, Chung SD, Chien CT. 2021. Sweet potato leaf feeding decreases cholesterol, oxidative stress and thrombosis formation in syrian hamsters with a high-cholesterol diet. *Life* 11(8):802. https://doi.org/10.3390/life11080802

[78] Kurata R, Adachi M, Yamakawa O, Yoshimoto M. 2007. Growth suppression of human cancer cells by polyphenolics from sweetpotato (*Ipomoea batatas* L.) leaves. *Journal of Agricultural and Food Chemistry* 55(1):185-90. https://doi.org/10.1021/jf0620259

[79] Chang VHS, Yang DHA, Lin HH, Pearce G, Ryan CA, et al.2013. *IbACP*, a sixteen-amino-acid peptide isolated from *Ipomoea batatas* leaves, induces carcinoma cell apoptosis. *Peptides* 47:148-56. https://doi.org/10.1016/j.peptides.2013.02.005

[80] Gundala SR, Yang C, Lakshminarayana N, Asif G, Gupta MV, et al. 2013. Polar biophenolics in sweet potato greens extract synergize to inhibit prostate cancer cell proliferation and *in vivo* tumor growth. *Carcinogenesis* 34(9):2039-49. https://doi.org/10.1093/carcin/bgt141

[81] Karna P, Gundala SR, Gupta MV, Shamsi SA, Pace RD, et al. 2011. Polyphenol-rich sweet potato greens extract inhibits proliferation and induces apoptosis in prostate cancer cells *in vitro* and *in vivo*. *Carcinogenesis* 32(12):1872-80. https://doi.org/10.1093/carcin/bgr215

[82] Zhang L, Tu ZC, Yuan T, Wang H, Xie X, et al. 2016. Antioxidants and α-glucosidase inhibitors from *Ipomoea batatas* leaves identified by bioassay-guided approach and structure-activity relationships. *Food chemistry* 208:61-67. https://doi.org/10.1016/j.foodchem.2016.03.079

[83] Mashitoa FM, Akinola SA, Shoko T, Seke F, Sunette LM, et al. 2023. Effect of lactic acid fermentation on the quality and phytochemical constituent in smoothies made from the leaves of different sweet potato(*Ipomoea batatas* L.) cultivars. *International Journal of Food Science and Technology* 58(9):4697-714. https://doi.org/10.1111/ijfs.16576

[84] Fanmoe MJ, Ngoune LT, Ndjouenkeu R. 2021. *Ipomea batatas* Leaf Powder from Cameroon: Antioxidant Activity and Antihyperlipidemic Effect in Rats Fed with a High-Fat Diet. *Journal of Lipids* 1:5539878. https://doi.org/10.1155/2021/5539878

[85] Cheboswony RJ, Muthoka S, Waswa LM, Malinga JN. 2025. Consumption of sweet-potato leaves vegetable and its contribution to iron intake among women of reproductive age in Bomet County, Kenya. *Kabarak Journal of Research & Innovation* 15(01):326-47. https://doi.org/10.58216/kjri.v15i01.535

[86] Zhang H, Zhang L, Gao F, Yang S, Deng Q, et al. 2025. Purification, Composition, and Anti-Inflammatory Activity of Polyphenols from Sweet Potato Stems and Leaves. *Foods* 14(16):2903. https://doi.org/10.3390/foods14162903

[87] Xu L, Zeng K, Duan Z, Liu J, Zeng Y, et al. 2025. Screening potential antileukemia ingredients from sweet potato: integration of metabolomics analysis, network pharmacology, and experimental validation. *Frontiers in Nutrition* 12:1518525. https://doi.org/10.3389/fnut.2025.1518525