

## Antioxidant & Cellular Protective Research on Bitter Melon (*Momordica charantia*)

Jat, G., et al. "Antioxidant activities, dietary nutrients, and yield potential of bitter gourd (*Momordica charantia* L.) lines in diverse growing environments." *Front. Nutr.* 2024 Aug; 11: 1393476.

Seifi, S., et al. "The therapeutic potential of Wild Bitter Melon to ameliorate muscle atrophy in a murine model." *Avicenna J. Phytomed.* 2024 May-Jun; 14(3): 388-401.

Idrees, M., et al. "Investigation of the effect of addition of *Momordica charantia* to glibenclamide on amelioration of endothelial dysfunction in diabetic rats by activating Takeda G protein-coupled receptor 5." *Pak. J. Pharm. Sci.* 2023 Sep; 36(5): 1451-1456.

Liu, J., et al. "Protective effects and mechanisms of *Momordica charantia* polysaccharide on early-stage diabetic retinopathy in type 1 diabetes." *Biomed. Pharmacother.* 2023 Dec; 168: 115726.

Zhang, Y., et al. "Integrated secondary metabolomic and antioxidant ability analysis reveals the accumulation patterns of metabolites in *Momordica charantia* L. of different cultivars." *Int. J. Mol. Sci.* 2023 Sep; 24(19): 14495.

Aşır, F., et al. "*Momordica charantia* reduced ovarian ischemia - reperfusion injury by suppressing APAF-1 expression." *Eur. Rev. Med. Pharmacol. Sci.* 2023 Mar; 27(6): 2182-2188.

Hussain, L., et al. "Therapeutic investigation of standardized aqueous methanolic extract of bitter melon (*Momordica charantia* L.) for its potential against polycystic ovarian syndrome in experimental animals' model: *In vitro* and *in vivo* studies." *Evid. Based Complement. Alternat. Med.* 2022 Sep; 2022: 5143653.

Arun, S., et al. "*Momordica charantia* fruit extract with antioxidant capacity improves the expression of tyrosine-phosphorylated proteins in epididymal fluid of chronic stress rats." *J. Integr. Med.* 2022 Nov; 20(6): 534-542.

Liao, P., et al. "A gastro-resistant peptide from *Momordica charantia* improves diabetic nephropathy in db/db mice via its novel reno-protective and anti-inflammatory activities." *Food Funct.* 2022 Feb; 13(4): 1822-1833.

Adelusi, T., et al. "Exploring the inhibitory potentials of *Momordica charantia* bioactive compounds against Keap1-Kelch protein using computational approaches." *In Silico Pharmacol.* 2021 Jun; 9(1): 39.

Perumal, V., et al. "Antioxidants profile of *Momordica charantia* fruit extract analyzed using LC-MS-QTOF-based metabolomics." *Food Chem. (Oxf)*. 2021 Jan; 2: 100012.

Akyüz, E., et al. "Comparison of antioxidant capacities and antioxidant components of commercial bitter melon (*Momordica charantia* L.) products." *Turk. J. Chem.* 2020 Dec; 44(6): 1663-1673.

Huang, H., et al. "The antioxidant activities *in vivo* of bitter gourd polysaccharide." *Int. J. Biol. Macromol.* 2020 Feb; 145: 141-144.

Soliman, G., " *Momordica charantia* extract protects against diabetes-related spermatogenic dysfunction in male rats: Molecular and biochemical study." *Molecules.* 2020 Nov; 25(22): 5255.

Chen, F., et al. "Preparation, analysis, antioxidant activities *in vivo* of phosphorylated polysaccharide from *Momordica charantia*." *Carbohydr. Polym.* 2021 Jan; 252: 117179.

Offor, U., et al. " *Momordica charantia* mitigates hepatic injury following adjuvant treatment with antiretroviral drugs in diabetic animal models." *Toxicol. Res.* 2019 Dec; 36(1): 37-44.

Offor, U., et al. "Renal histopathological and biochemical changes following adjuvant intervention of *Momordica charantia* and antiretroviral therapy in diabetic rats." *Iran J. Basic Med. Sci.* 2019 Nov; 22(11): 1359-1367.

Malekshahi, H., et al. " *Momordica charantia* reverses type II diabetes in rat." *J. Food. Biochem.* 2019 Nov; 43(11): e13021.

He, Q., et al. "Hypolipidemic and antioxidant potential of bitter gourd (*Momordica charantia* L.) leaf in mice fed on a high-fat diet." *Pak. J. Pharm. Sci.* 2018 Sep; 31(5): 1837-1843.

Emre, B., et al. "Effect of intrauterine infusion of *Momordica charantia* L. on oxidative stress and pregnancy rate in infertile cows." *J. Vet. Res.* 2017 Dec 27; 61(4): 489-496.

Naz, R., et al. "Dietary supplementation of bitter gourd reduces the risk of hypercholesterolemia in cholesterol fed Sprague Dawley rats." *Pak. J. Pharm. Sci.* 2016 Sep; 29(5): 1565-1570.

Deng, Y., et al. "Protective effect of *Momordica charantia* water extract against liver injury in restraint-stressed mice and the underlying mechanism." *Food Nutr. Res.* 2017 Jul 13; 61(1): 1348864.

Kunde, D., et al. "Bitter melon protects against ER stress in LS174T colonic epithelial cells." *BMC Complement. Altern. Med.* 2017 Jan; 17(1): 2.

Güdr, A. "Influence of total anthocyanins from bitter melon (*Momordica charantia* Linn.) as antidiabetic and radical scavenging agents." *Iran. J. Pharm. Res.* 2016 Winter; 15(1): 301-9.

Shodehinde, S., et al. "Phenolic composition and evaluation of methanol and aqueous extracts of bitter gourd (*Momordica charantia* L) leaves on angiotensin-I-converting enzyme and some pro-oxidant-induced lipid peroxidation *in vitro*." *J. Evid. Based Complementary Altern. Med.* 2016 Oct; 21(4): NP67-NP76.

Aljohi, A., et al. "Antiglycation and antioxidant properties of *Momordica charantia*." *PLoS One.* 2016 Aug; 11(8): e0159985.

Lee, H., et al. "Methanol extract of bitter melon alleviates UVB-induced MMPs expression via MAP Kinase and AP-1 signaling in human dermal fibroblasts *in vitro*." *Phytother. Res.* 2016 Sep; 30(9): 1519-26.

Yadav, B., et al. "Antioxidant activity of various extracts of selected gourd vegetables." *J. Food Sci. Technol.* 2016 Apr; 53(4): 1823-33.

Chen, G., et al. "A conjugated fatty acid present at high levels in bitter melon seed favorably affects lipid metabolism in hepatocytes by increasing NAD(+)/NADH ratio and activating PPAR $\alpha$ , AMPK and SIRT1 signaling pathway." *J. Nutr. Biochem.* 2016 Jul; 33: 28-35.

Senanayake, G., et al. "Mechanisms underlying decreased hepatic triacylglycerol and cholesterol by dietary bitter melon extract in the rat." *Lipids.* 2012 May; 47(5): 495-503.

Raish, M., et al. "*Momordica charantia* polysaccharides mitigate the progression of STZ induced diabetic nephropathy in rats." *Int. J. Biol. Macromol.* 2016 Oct; 91: 394-9.

Tan, H., et al. "Polysaccharide with antioxidant,  $\alpha$ -amylase inhibitory and ACE inhibitory activities from *Momordica charantia*." *Int. J. Biol. Macromol.* 2016 Apr; 85: 487-96.

Sagor, A., et al. "Supplementation of fresh ucche (*Momordica charantia* L. var. muricata Willd) prevented oxidative stress, fibrosis and hepatic damage in CCl<sub>4</sub> treated rats." *BMC Complement. Altern. Med.* 2015 Apr 11; 15: 115.

Gong, J., et al. "*Momordica charantia* polysaccharides could protect against cerebral ischemia/reperfusion injury through inhibiting oxidative stress mediated c-Jun N-terminal kinase 3 signaling pathway." *Neuropharmacology.* 2015 Apr; 91: 123-34.

Panda, B., et al. "Pectic polysaccharide from the green fruits of *Momordica charantia* (Karela): structural characterization and study of immunoenhancing and antioxidant properties." *Carbohydr. Res.* 2015 Jan 12; 401: 24-31.

Tsai, T., et al. "Antioxidant, cell-protective, and anti-melanogenic activities of leaf extracts from wild bitter melon (*Momordica charantia* Linn. var. abbreviata Ser.) cultivars." *Bot. Stud.* 2014 Dec; 55(1): 78.

Abas, R., et al. "Protective effect of *Momordica charantia* fruit extract on hyperglycaemia-induced cardiac fibrosis." *Oxid. Med. Cell Longev.* 2014; 2014: 429060.

Lu, K., et al. "Wild bitter gourd protects against alcoholic fatty liver in mice by attenuating oxidative stress and inflammatory responses." *Food Funct.* 2014 May; 5(5): 1027-37.

Kim, H., et al. "The butanol fraction of bitter melon (*Momordica charantia*) scavenges free radicals and attenuates oxidative stress." *Prev. Nutr Food Sci.* 2013 Mar; 18(1): 18-22.

Tan, S., et al. "An optimised aqueous extract of phenolic compounds from bitter melon with high antioxidant capacity." *Antioxidants (Basel).* 2014 Dec; 3(4): 814-29.

Kim, H., et al. "The butanol fraction of bitter melon (*Momordica charantia*) scavenges free radicals and attenuates oxidative stress." *Prev. Nutr. Food Sci.* 2013 Mar; 18(1): 18-22.

Yu, Y. et al. "Bitter melon extract attenuating hepatic steatosis may be mediated by FGF21 and AMPK/Sirt1 signaling in mice." *Sci. Rep.* 2013 Nov 5; 3: 3142.

Mahomoodally, F., et al. "Antioxidant, antiglycation and cytotoxicity evaluation of selected medicinal plants of the Mascarene Islands." *BMC Complement. Altern. Med.* 2012 Sep; 12: 165.

Saha, S., et al. "Antioxidant and anti-inflammatory effect of conjugated linolenic acid isomers

against streptozotocin-induced diabetes." *Br. J. Nutr.* 2012 Sep; 108(6): 974-83

Lin, K., et al. "Antioxidant constituents from the stems and fruits of *Momordica charantia*." *Food Chem.* 2011 Jul; 127(2): 609-14.

Nerurkar, P., et al. "*Momordica charantia* (bitter melon) attenuates high-fat diet-associated oxidative stress and neuroinflammation." *J. Neuroinflammation.* 2011 Jun 3; 8: 64.

Kavitha, N., et al. "Influence of *Momordica charantia* on oxidative stress-induced perturbations in brain monoamines and plasma corticosterone in albino rats." *Indian J. Pharmacol.* 2011 Jul; 43(4): 424-8.

Chen, C., et al. "Cucurbitane triterpenoids from *Momordica charantia* and their cytoprotective activity in tert-butyl hydroperoxide-induced hepatotoxicity of HepG2 cells." *Chem. Pharm. Bull.* (Tokyo). 2010 Dec; 58(12): 1639-42.

Chang, C., et al. "Octanorcucurbitane triterpenoids protect against tert-butyl hydroperoxide-induced hepatotoxicity from the stems of *Momordica charantia*." *Chem. Pharm. Bull.* (Tokyo). 2010 Feb; 58(2): 225-9.

Chaturvedi, P. "Bitter melon protects against lipid peroxidation caused by immobilization stress in albino rats." *Int. J. Vitam. Nutr. Res.* 2009; 79(1): 48-56.

Sathishsekar, D., et al. "Antioxidant properties of *Momordica charantia* (bitter gourd) seeds on streptozotocin induced diabetic rats." *Asia Pac. J. Clin. Nutr.* 2005; 14(2): 153-8.

Ansari, N., et al. "Antioxidant activity of five vegetables traditionally consumed by South-Asian migrants in Bradford, Yorkshire, UK." *Phytother. Res.* 2005; 19(10): 907-11.

Ya, W., et al. "Screening of 44 plant extracts for anti-tyrosinase and antioxidant activities." *Pak. J. Pharm. Sci.* 2015 Sep; 28(5): 1737-44.

**Return to the Rain-Tree [Tropical Plant Database File on Bitter Melon](#)**

**Copyrighted 2025 by [Leslie Taylor](#). All rights reserved.**