

Editorial Note to Flavonoids

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Editorial

Flavonoids are made up of around 6000 phenolic chemicals are secondary metabolic products of plants that can be absorbed by eating a variety of edible plants. Onions, apples, berries, kale, leeks, broccoli, blueberries, red wine, and tea all contain flavonols (such as quercetin, kaempferol, and isoquercetin, among others) [1]. Flavonoids have a polyphenolic structure, indicating that they are antioxidants. On the other hand, flavonoid biological activity, on the other hand, go beyond antioxidant capabilities, though some of them are antioxidants. connected to them Flavonoids have been demonstrated to protect against a variety of diseases. cardiovascular disease, gastrointestinal abnormalities, and neurological system-related illnesses such as depression, epilepsy, and Alzheimer's disease are only a few examples as well as neurodegenerative disorders. Flavonoids' anti-inflammatory effects have only recently been found [2]. Clinical investigations, as well as in vitro and in vivo experiments, are utilised to back up the findings in the literature. Flavonoids have been found to have anti-inflammatory properties, such as acting as antioxidants, altering gene expression (cytokines, adhesion molecules), and activating enzymes. On the other hand, the role of flavonoids in this particular arm of the immune response is still entirely understood. The 'Flavonoids, Inflammation, and Immune System' Special Issue of Nutrients was created to help researchers keep up to speed on these substances from two biological perspectives: the inflammatory response, which is predominantly carried out by macrophages and neutrophils, and the immune system. Flavonoids, for example, have anti-inflammatory properties and protect your cells from oxidative damage, which can lead to disease. Cardiovascular disease, diabetes, cancer, and cognitive illnesses like Alzheimer's and dementia can all be prevented with these dietary antioxidants [3]. Quercetin, a flavonol with well-known biological properties, is the focus of a review article that looks at the effects and mechanisms of quercetin on inflammation and immune function in in vitro, in vivo, and clinical research. The majority of the recently reviewed literature backs up the benefits of long-term supplementation. As an example of the numerous ways of quercetin's action, a study paper in the issue looks in depth at this flavonol's ability to influence epithelial cell sealing via close junction gene

expression control by microRNAs. Another flavonol with well-known biological effects is myricetin. It offers a thorough review of research that demonstrate its anti-oxidant, anti-photoaging, anti-cancer, anti-platelet aggregation, anti-hypertensive, anti-inflammatory, immunomodulatory, and anti-allergic actions and uses, among others. They suggest that, while more toxicity research is needed, myricetin could soon become a new therapy option for these disorders [4]. We encourage more clinical trials and laboratory studies to characterise intracellular action mechanisms, determine the amount of flavonoids required to achieve such results, and determine the precise action of each flavonoid or flavonoid-containing extract, in addition to staying up to date on the specific actions of flavonoids on immunity and inflammation. Flavonoids and their influence on central nervous system protection are of particular interest, especially in the case of neurodegenerative illness induced by a combination of oxidative stress, inflammation, and transition metal deposition; there is a wealth of material accessible. Alzheimer's disease and associated dementias are two of the most common neurodegenerative diseases. Flavonoids, such as flavonols, have been linked to lower dementia rates in the general population [5].

References

1. Rupasinghe HP (2020) Special issue "flavonoids and their disease prevention and treatment potential": recent advances and future perspectives. *Molecules* 25: 4746.
2. Brunetti C, Di Ferdinando M, Fini A, Pollastri S, Tattini M, et al. (2013) Flavonoids as antioxidants and developmental regulators: relative significance in plants and humans. *Int J Mol Sci* 14: 3540-3555.
3. Lazarus SA, Hammerstone JF, Schmitz HH (1999) Chocolate contains additional flavonoids not found in tea. *The lancet* 354:1825.
4. Gao X, Cassidy A, Schwarzschild MA, Rimm EB, Ascherio A, et al. (2012) Habitual intake of dietary flavonoids and risk of Parkinson disease. *Neurol* 78: 1138-1145.
5. Pignatelli P, Pulcinelli FM, Celestini A, Lenti L, Ghiselli A, et al. (2000) The flavonoids quercetin and catechin synergistically inhibit platelet function by antagonizing the intracellular production of hydrogen peroxide. *Am J Clin Nutr* 72:1150-1155.