

Research Work Title

An Antioxidant Mechanism and Phytochemical Analysis of Plants



Researcher | İlhami GÜLÇİN

Country | Republic of Türkiye

Field | Biochemistry

Scientific Affiliation | Ataturk University, Türkiye

Abstract

Professor İlhami GÜLÇİN's research has primarily focused on two key areas in the field of biochemistry. The first area of study involves exploring the antioxidant properties of various aromatic and medicinal plants, as well as phytochemicals and synthetic phenolic compounds. Through his investigations, he has identified and examined the antioxidant capacity of compounds such as caffeic acid, curcumin, resveratrol, and eugenol. These findings have garnered significant attention from the scientific community. The second aspect of Professor GÜLÇİN's work revolves around the purification, characterization, and inhibition properties of some metabolic enzymes associated with various global diseases. In pursuit of this, he has developed novel inhibitors for therapeutic purposes, with a particular purpose on carbonic anhydrase isoenzymes linked to conditions such as glaucoma, epilepsy, mountain sickness, stomach and duodenal ulcers, idiopathic intracranial hypertension, osteoporosis, and other neurological disorders. Additionally, Prof. GÜLÇİN's research has showcased the inhibitory effects of various inhibitors on acetylcholinesterase, butyrylcholinesterase, α -glycosidase, and α -amylase, as well as their potential in treating the aforementioned diseases.

Professor İlhami GÜLÇİN's extensive body of work, comprising 500 SCI-covered articles, has earned him the distinction of being a "Highly Cited Researcher" in 2014, 2015, and 2018, as recognized by Clarivate. Further, Professor GÜLÇİN is a distinguished member of the Turkish Academy of Sciences (TÜBA).

