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ORIGINAL PAPERS

ON THE RELEVANCE OF THE APICOL 12 Gamma "Blue Honey" IN COGNTIVE AND BIOCHEMICAL FUNCTIONS

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Abstract. *We are bringing here a brief description on our latest results from the Honey Enriched with Additives Alleviates Behavioral, Oxidative Stress, and Brain Alterations Induced by Heavy Metals and Imidacloprid in Zebrafish-related study, which is referring on the Apicol 12 Gamma "Blue Honey" in cognitive and biochemical functions, as well as additionally describing pollinic spectrum of honey, reflecting the diversity of pollen sources and providing details about floral and geographical provenance, by referring also to some local and regional aspects on this matter.*

Keywords: Apicol 12 Gamma "Blue Honey", cognitive and biochemical functions, pollinic, local, regional, Romania.

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INTRODUCTION

The study titled "Honey Enriched with Additives Alleviates Behavioral, Oxidative Stress, and Brain Alterations Induced by Heavy Metals and Imidacloprid in Zebrafish" investigated the impact of **the Apicol 12 Gamma "Blue Honey"** on behavior, oxidative stress, and brain alterations induced by heavy metals and imidacloprid (a pesticide) on the zebra fish (Danio rerio) [1].

Histological and immunohistochemical analyzes showed astrocyte activation and neurotoxic damage in the brain, with notable damage and increased expression of GFAP and S100B proteins. IMI exposure reduced cell proliferation, while Hg + Cd exposure increased it. HF supplementation reduced oxidative stress and neurotoxicity, suggesting that bioactive compounds in honey may mitigate the negative effects of chemical pollutants in aquatic ecosystems.