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Natural Antioxidants: An Approach Towards Tuberculosis Management

Green Tea Polyphenol (EGCG) as Potential Adjunct in Combating Mycobacterium tuberculosis Pathogenesis



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Tuberculosis (TB) has been reported to have fifth highest fatality rate in the world, a disease claiming between 2 and 3 million lives a year. One of the important reasons why this killer parasite is spiraling out of control at an alarming rate is attributed to the prevalence of multidrug-resistant (MDR) strains and emergence of AIDS-related TB. Focus has now been shifted towards development of compounds from natural sources that have antimycobacterial activity. The incorporation of such compounds, like polyphenols namely Epigallocatechin-3-gallate (EGCG) from green tea, as the natural component of tuberculosis treatments has been studied here. Reactive oxygen species and tumor necrosis factor (TNF-) are the hallmarks of tuberculosis. The augmented expression of TNF- at both the gene and protein levels in MTB-infected monocytes is suppressed by EGCG in dose-dependent manner. Also, EGCG ameliorated the IFN- levels, the glutathione peroxidase activity, which correlated inversely with the downregulation of ROS and TNF- in MTB-infected monocytes. Hence, EGCG may prove to be a valuable natural antioxidant in tuberculosis management.

- [The National Domain in Canada and Its Proper Conservation](#)
- [The National Park Service Its History, Activities, and Organization](#)
- [National Strategy for Research and Data on Children` Lives, 2011-2016](#)
- [Natural Disasters : Fire and Flood, Hurricanes and Tornadoes, Volcanoes and Earthquakes](#)
- [Native American Programs ACT](#)
- [Nationalist Democratic Action](#)