Description

Dimethyl fumarate is a fumaric acid methyl ester that is clinically used to treat psoriasis and under investigation as a potential treatment for multiple sclerosis (MS). Dimethyl fumarate exhibits immunomodulatory, antioxidative, and anti-inflammatory activities. In vitro, dimethyl fumarate increases expression of heme oxygenase 1 (HO-1) and Nrf2 and decreases proliferation of T cells and release of inflammatory cytokines. Dimethyl fumarate activates nicotinic acetylcholine receptors (nAChRs), although the relevance of this activity is unknown. Previously, this compound has been used as a radiosensitizer. Recently, dimethyl fumarate has displayed efficacy in models of multiple sclerosis, decreasing relapse and improving neurologic outcomes.

References


