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Mefloquine

National Cancer Institute

Source

National Cancer Institute. *Mefloquine*. NCI Thesaurus. Code C61827.

A quinolinemethanol derivative with antimalarial, anti-inflammatory, and potential chemosensitization and radiosensitization activities. Although the exact mechanism remains to be elucidated, mefloquine, a weak base, preferentially accumulates in lysosomes and disrupts lysosomal function and integrity, thereby leading to host cell death. Similar to chloroquine, the chemosensitizing and radiosensitizing activities of this agent may be related to its inhibition of autophagocytosis, a cellular mechanism involving lysosomal degradation that minimizes the production of reactive oxygen species (ROS) related to tumor reoxygenation and tumor exposure to chemotherapeutic agents and radiation. Compared to chloroquine, mefloquine has better blood-brain-barrier (BBB) penetration.