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Ubidecarenone Nanodispersion BPM31510n

National Cancer Institute

Source

National Cancer Institute. *Ubidecarenone Nanodispersion BPM31510n*. NCI Thesaurus. Code C118621.

A nanodispersion containing the benzoquinone ubidecarenone (coenzyme Q10), with potential protective, antioxidant and antineoplastic activities. Upon administration, ubidecarenone nanodispersion BPM31510 modulates tumor cell metabolism and causes an anti-Warburg effect by inducing a shift from lactate dependency towards mitochondrial oxidative phosphorylation, and induces tumor cell apoptosis. This inhibits tumor cell proliferation. BPM 31510 also induces the activation and maturation of T-lymphocytes, and changes the surface expression of certain immune checkpoint modulators. In addition, as an antioxidant, ubidecarenone protects against cell damage, by preventing both the peroxidation of lipid membranes and the oxidation of LDL-cholesterol. Ubidecarenone is an essential coenzyme for mitochondrial enzyme complexes involved in oxidative phosphorylation and the production of adenosine triphosphate (ATP).