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Plasmodium vivax-infected Red Blood Cell

National Cancer Institute

Source

National Cancer Institute. *Plasmodium vivax-infected Red Blood Cell*. NCI Thesaurus. Code C155655.

A preparation of red blood cells (RBCs) that have been infected with the malaria parasite *Plasmodium vivax* (*P. vivax*), with potential immunomodulating and antineoplastic activities. Upon administration of the *P. vivax*-infected RBCs, the *P. vivax* infection stimulates host immune responses against the *P. vivax*-infected RBCs. This also stimulates both innate and adaptive anti-tumor immune responses. This leads to the production of cytokines, including interferon-gamma (IFN- γ) and tumor-necrosis factor alpha (TNF- α), the proliferation and activation of natural killer (NK) cells, dendritic cells (DCs), CD4-positive T-lymphocytes, and cytotoxic T-lymphocytes (CTLs). This results in the inhibition of tumor cell proliferation, induction of tumor cell apoptosis, and prevents angiogenesis.