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# MOF Compound RiMO-301

National Cancer Institute

## Source

National Cancer Institute. *MOF Compound RiMO-301*. NCI Thesaurus. Code C148280.

A nanoparticle-based metal-organic framework (MOF) compound composed of proprietary X-ray-absorbing metals, with potential radiosensitizing properties. Upon intratumoral administration and subsequent irradiation of the tumor site, RiMO-301 absorbs the X-ray photons and produces reactive oxygen species (ROS), such as hydroxyl radicals and singlet oxygen, which induces ROS-mediated DNA damage in the irradiated cancer cells leading to tumor cell lysis. In addition, RiMO-301 may also contain an as of yet unidentified immunomodulating agent loaded into the channels/pores of the construct that may induce an immune response against the tumor-associated antigens (TAAs) released by the lysed tumor cells, thereby locally killing additional tumor and non-tumor cells. MOFs, porous crystalline materials composed of metal clusters and organic linkers, generate ROS at much lower X-ray dosages than used in standard radiotherapy, which results in reduced radiation exposure and X-ray damage to normal, healthy cells.