

**GOLIATH:
Gold-Silica hybrids for light-assisted therapy of melanoma**

ADRESSED PATHOLOGY: Melanoma

GENERAL OBJECTIVE:

The purpose of the project is the development and preclinical evaluation of light-induced thermo-responsive drug nanocarriers for the combined chemothermal treatment of melanoma. Gold nanoparticles will be used as switchable light-to-thermal sensitizers engineered in a mesoporous silica matrix that can host small therapeutic drugs. Different responsive components will be built over this material to either control the drug release or perform a multi-therapeutic action. Melanoma is a paradigm of highly aggressive cancers, which although molecularly-targeted and immune therapies have significantly improved patient prognosis, long-term therapeutic responses are still limited. Therefore, the field is still in need of selective, affordable and effective anticancer agents.

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