



## Nanoscintillator-Porphyrin Complexes for Bimodal RadioPhotoDynamic Therapy

**Acronym:** NanoBiT

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“Develop nanoparticle contrast agents that would increase efficiency and reduce the toxicity of radiotherapy”

Radiotherapy is considered effective in treating cancer, but success is limited due to incomplete response, resistance and damage to surrounding tissues. The aim of this project is to develop nanoparticle contrast agents that would increase efficiency and reduce the toxicity of radiotherapy. Nanoparticles will be engineered to enable activation of photosensitizers by X-rays. Radiotherapy and photodynamic therapy will be combined into a novel bimodal approach that will enhance local radiation effects and allow treatment of tumors using lower radiation doses than in conventional radiotherapy. Nanoparticles will be designed and tested in preclinical in vitro and in vivo models.

