ONCOGEL

Development status

Phase 3

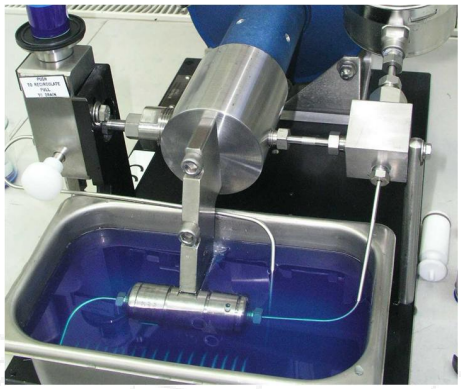
Technology validation and implementing it in real environment. Testing the technology outside of the laboratory and its adjustment to external conditions.

IP protection status

European, Canadian, Norwegian and Czech patents granted based on PCT/CZ2007/000107

Partnering strategy

Co-development, Collaboration, investment, licensing



Institution

INSTITUTE OF PHYSIOLOGY CAS

Challenge

Photodynamic therapy of malignant tumors has become an advanced and routine therapy for selected cancer diagnoses. Metvix® (Photocure) and Levulan® (Dusapharma), based on δ-aminolevulic acid, have been approved in EU for basaliomas and actinic keratoses in EU. Patients have to wait for 3 to 18 hr (drug-to light time interval) after their application before the 570-670 nm light dose is used to induce a photodynamic effect, which may lead to tumor remission or retardation of tumor growth. To be able to cure almost instantly by light for photodynamic therapy of skin, we have developed “ONKOGEL”, a liposomal gel containing hydrophobic hydroxy-aluminum phthalocyanine.

Description

Using a patented procedure of microfluidization, a micronized powder of water-insoluble hydroxy-aluminum phthalocyanine microcrystals is mixed with amorphous pharmaceutical grade lecithin in a desired buffer solution. Resulting liposomal suspension is than mixed with a translucent gel. In preclinical testing on nude mice with xenotransplanted human tumors, our patented preparation exhibited drug-to light time interval of 10 min with dose-dependent efficiency for remission of amelanotic melanoma and ultimate nearly 100% efficiency for remission of basalioma. Advantages of ONKOGEL: - Short drug-to-light interval - 670 nm irradiation penetrating more than 2 cm into the skin or tissue - Expected short tumor clearance - Expected high efficiency - Next generation is ready, i.e., patented nanoparticle drug formulation for curing by 980 nm light

Commercial opportunity

We are currently looking for a business partner, who could develop exemplar drug formulations in a quality and with the required auxiliary testing in order to apply for the approval of clinical testing in a phase I & IIa by the state Drug Control Agency (Státní ústav pro kontrolu léčiv, SÚKL). If expectations of the high efficiency for curing human skin cancer turn out to be true, subsequent clinical testing may be organized with a strong partner ready to manufacture the product and

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