

Press Release



Press & Public Relations
Office, Promotion and
Development Sector

Telephone: 22894304

Email: prinfo@ucy.ac.cy

Website: www.ucy.ac.cy/pr



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New Project PLASMA-TreatS-TUMORS Launched: «Plasma Transport of Reactive Species on Tumors»

The plasma model will be able to predict the suitable dosage of plasma components produced with the APPJ, which is needed for cancer elimination and which will be validated with the experiments.



The implementation of a new project with acronym “**PLASMA-TreatS-TUMORS**” and entitled “Plasma Transport of Reactive Species on Tumors” is a fact. The project is funded by the Research and Innovation Foundation (RIF) with €150.000 (*RESTART 2016-2020 Programme for Research, Technological Development and Innovation, Horizon 2020 – 2nd Opportunity, Protocol Number: OPPORTUNITY/0916/MSCA/0023*).

The aim of the intersectoral project “PLASMA-TreatS-TUMORS” is to shine a light in key open questions of cancer medicine field benefiting significantly from knowledge transfer between expert researchers in physical, electrical and mechanical engineering, and pharmaceutical sciences.

Dr. Kristaq Gazeli, Experienced Researcher of the project «PLASMA-TreatS-TUMORS».

A cutting edge numerical and experimental investigation is proposed in PLASMA-TreatS-TUMORS to combine and validate a technologically advanced multidimensional plasma fluid model (PFM) combined with a novel multiscale, multiphysics, in-silico modelling framework (FEB3 Platform), investigate the atmospheric pressure plasma jet (APPJ) parameter space that induces regression of tumors and apoptosis of melanoma cancer cells, and identify the role of different plasma components. The plasma model will be able to predict the suitable dosage of plasma components produced with the APPJ, which is needed for cancer elimination and which will be validated with the experiments. The official launch date of the research project was the 1st of January 2021 and the project is scheduled to run for 24 months. The main part of the project “PLASMA-TreatS-TUMORS” will be realized by the experienced researcher Dr. Kristaq Gazeli at the Electromagnetics and Novel Applications Lab (ENAL) of the University of Cyprus. The project coordinator is Professor George E. Georghiou (ENAL Director). Dr. Gazeli holds a PhD degree in Physics and in Electrical and Computer Engineering having a postdoctoral experience and distinctions in research laboratories in France. Within the framework of the research project Dr. Gazeli will be trained by the Assistant Professor Vasileios Vavourakis of the Department of Mechanical and Manufacturing Engineering (MME) of the University of Cyprus, and a secondment is foreseen for the experimental part, which will be done at the University of Patras in close collaboration with Professor Panagiotis Svarnas and Professor Sophia G. Antimisariis.

For more information, you may contact Dr. Kristaq Gazeli (email: gazeli.kristaq@ucy.ac.cy) or Professor George E. Georgiou (email: geg@ucy.ac.cy) or navigate to the ENAL webpage: <http://www.enal.ucy.ac.cy/>



End of announcement