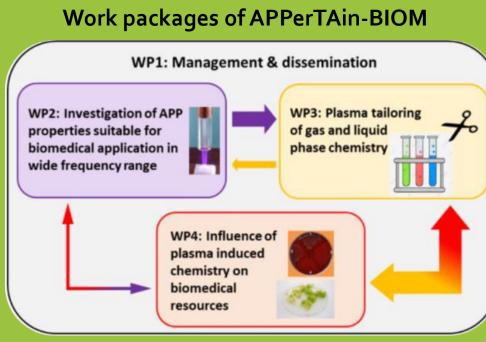


Atmospheric pressure plasmas operating in wide frequency range – a new tool for production of biologically relevant reactive species for applications in biomedicine

Newsletter Issue #5 August 2024

The main idea of APPerTAin-BIOM project is to tailor rich plasma chemistry to be effective green technology for treatment of drugresistant bacteria or plant cells for production of chemical compounds needed in pharmacy or cosmetics. With this in mind we have started to assemble laboratory pilot Atmospheric Pressure Plasma (APP) systems that will be characterized and optimized for application during the APPerTAin-BIOM project.

In order to be able to set the guidelines for technology transfer at the end of the project we need to know in great detail plasma chemistry in gas phase and its interaction with liquids. This first period was used for further literature search and procurements of necessary equipment and consumables. Also, the first aseptic in vitro carrot calli culture is set up and it will serve as source of plant material during the project.



Project Partners - Science and Research Organizations (SRO)



Institute of Physics Belgrade, University of Belgrade (IPB)

School of Dental Medicine, University of Belgrade (STOMF)



Faculty of Medicine (School of Medicine), University of Belgrade (MFUB)

Institute for Biological Research Siniša Stanković, University of Belgrade (IBISS)

News:

- July 2024 APPerTAin-BIOM members attending of ESCAMPIG conference in Brno, Czech Republic.
- July 2024 –
 Visit by Dr. Tom Field from Belfast University.
- June 2024 –
 Dr N. Puač had an
 invited lecture at the
 2nd ICLPR-ST.
- Febuary 2024 Production of PAW-MW plasma sources producing PAW for treatment of bacteria.
- Febuary 2024 Visit of foreign students through ERASMUS.



Science Fund of the Republic of Serbia This research was supported by the Science Fund of the Republic of Serbia 7739780, APPerTAin-BIOM

Production of PAW-MW plasma sources producing PAW for treatment of bacteria. Inductively coupled and capacitively coupled MW plasma sources for **PAW** production

Science Fund of the Republic of Se





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We had a visit from a exchange students attending the courses at the Faculty of Mathematics, University of Belgrade. The visit was organized in collaboration with Astronomical Observatory Belgrade and Prof. Dr. Nataša Pavlov, Faculty of Mathematics.

Dr N. Puač had an invited lecture at the 2nd The International Conference on Laser, Plasma and Radiation -Science and Technology (ICLPR-ST).





Science Fund of the Republic of Serbia This research was supported by the Science Fund of the Republic of Serbia 7739780, APPerTAin-BIOM

We had another visit from prof. tom. Field from Belfast University. We have continued our joint work on the underwater discharge that will be used for water treatments.





Members of APPerTAin-BIOM project attended ESCAMPIG 2024 conference that was held in Brno, Czech Republic .



This research was supported by the Science Fund of the Republic of Serbia 7739780, APPerTAin-BIOM