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

Newsletter
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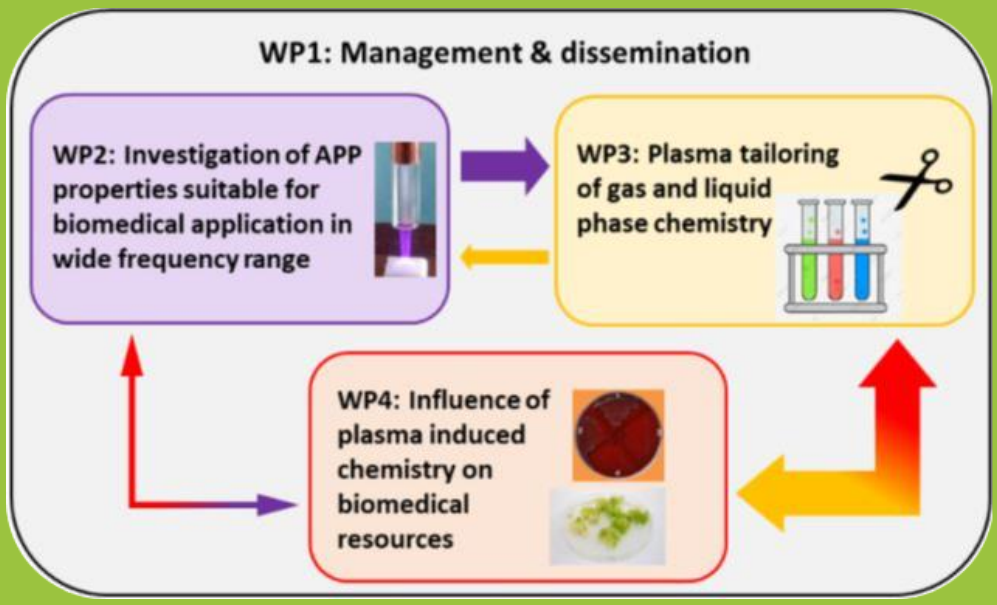
The main idea of APPerTAin-BIOM project is to tailor rich plasma chemistry to be effective green technology for treatment of drug-resistant bacteria or plant cells for production of chemical compounds needed in pharmacy or cosmetics. With this in mind we have started to assemble laboratory pilot Atmospheric 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.

Work packages of APPerTAin-BIOM



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:

- **January 2024 –**The TV show about APPerTAin-BIOM project was broadcast on Brainz TV channel.
- **December 2023 -** APPerTAin-BIOM Q8 meeting at the Institute for Biological research "Siniša Stanković".
- **November 2023 -** The APPerTAin-BIOM project and Center of Excellence for Non-equilibrium processes have hosted a visit from a French Embassy.
- **September 2023 -**PI Dr. Nevena Puač visited International Atomic Energy Agency (IAEA), United Nations, Vienna, Austria.
- **September 2023 –** Neda Babucić, Olivera Jovanović and Nikola Škoro have attended VEIT 2023
- **September 2023 -** Dr. M. Miletić, Dr. B. Toljić and Dr. D. Vuković attended PLASMA 2023
- **September 2023** – PI N. Puač and M. Puač have attended Plathinium 2023 conference

Science Fund of the Republic of Serbia

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

PI N. Puač and M. Puač have attended Plathinium 2023 conference in Antibes, France.

Dr. Maja Miletić, Dr. Boško Toljić and Dr. Dragana Vuković have attended PLASMA 2023 International Conference on Research and Applications of Plasmas in Warsaw, Poland.

Neda Babucić, Olivera Jovanović and Nikola Škoro have attended VEIT 2023 in Sozopol, Bulgaria where N. Škoro and O. Jovanović have given invited lectures.

Science Fund of the Republic of Serbia

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PI Dr. Nevena Puač was invited to present, among all, the topics of APPerTAin-BIOM project at the International Atomic Energy Agency (IAEA), United Nations, Vienna, Austria.

The APPerTAin-BIOM project and Center of Excellence for Non-equilibrium processes have hosted a visit from a French Embassy. PI have presented the Center of Excellence and topics and results of APPerTAin-BIOM project.

APPerTAin-BIOM Q8 meeting at the Institute for Biological research "Siniša Stanković". Discussion about the new experiment and activities for Y3.

Brainz TV and the Knowledge Committee of Serbia created TV show about Center of Excellence for Non-equilibrium Processes where we presented the APPerTAin-BIOM project. The TV show was broadcast on Brainz TV channel. https://www.youtube.com/watch?v=cerHZeXE7Eg&t=1s

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