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Strasbourg

Press Release

Uncovering the Hidden Potential of European Bryophytes for Sustainable Biotechnology: BRYOMOLECULES, a new EU-funded project to advance the current knowledge, exploitation and conservation of natural resources for bioeconomy.

Kicked off on 1 September 2024, the “Bioprospection and production of bioactive molecules from European bryophytes” (BRYOMOLECULES) project aims to explore the untapped potential of EU bryophytes (mosses and liverworts) to develop innovative, sustainable bioactive compounds for use in cosmetics and pharmaceuticals while contributing to the EU Green Deal.

Bryophytes, including mosses and liverworts, have long been overlooked in the world of biotechnology. However, these ancient plants hold a treasure trove of biologically active compounds (BACs) with immense potential for bioeconomy. The BRYOMOLECULES project, a groundbreaking research initiative funded by the European Union within the Horizon Europe program, aims to explore and harness this potential, driving innovation in the cosmetics and pharmaceutical industries.

The BRYOMOLECULES project employs cutting-edge biotechnological approaches. By establishing innovative methods for cultivating bryophytes and engineering their metabolic pathways in controlled environments, the project aims to produce high-value BACs without relying on overharvesting natural populations. This dual strategy not only ensures a steady supply of these valuable compounds but also aligns with the European Union’s commitment to environmental sustainability and resource efficiency, paving the way for a greener, more sustainable bioeconomy.

Over the next three years, BRYOMOLECULES will provide groundbreaking insights into the vast untapped potential of European bryophytes, making significant contributions towards the European Green Deal, namely by:

- Advancing knowledge of European bryophytes and how they can be used in bioeconomic development, particularly in the cosmetic and pharmaceutical sectors;
- Developing innovative biotechnological methods to produce BACs, enabling new, greener biochemical routes that contribute to decreasing environmental impact;
- Driving economic growth by creating new, marketable, and patentable bio-based innovations that will support the development of sustainable industries in Europe, contributing to the circular economy;
- Engaging the public through educational initiatives to raise awareness about the ecological and economic value of bryophytes;

- Promoting the valorisation of the biotechnological capacity of European bryophytes by providing alternative methods for producing BACs, and at the same time reducing the pressure on natural populations by promoting conservation and preventing biodiversity loss;
- Active collaboration between academic and industrial partners, enhancing the competitiveness of European biotech companies and BAC producers. This collaborative approach will drive innovation and ensure that Europe remains at the forefront of bioeconomic development.

The ultimate goal of the BRYOMOLECULES project is to unlock the biotechnological potential of European bryophytes and support a transition to a greener, more sustainable economy.

PARTNERS

Fondazione Edmund Mach, Italy (coordinator)

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Lund University, Sweden

Medical University of Lublin, Poland

Université Jean Monnet, France

Plant Advanced Technologies, France

European Science Foundation, France

Bionos Biotech, Spain

PROJECT FACTS

Start date : 1 September 2024

End date : 31 August 2027

Budget: € 3 629 672,50

EU funding : € 3 629 672,50

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Stay informed !

Read more about BRYOMOLECULES at: <https://bryomolecules.eu/>

Find us on X (@bryomolecules) and LinkedIn:

<https://www.linkedin.com/company/bryomolecules-project>



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