Bacteriophages as vehicles for antimicrobial resistance determinants: Do they represent an environmental risk?

**Fact Sheet**

**Project Information**

**PHASTER**

Grant agreement ID: 101106707

**Funded under**

Marie Skłodowska-Curie Actions (MSCA)

**Total cost**

€ 0,00

**EU contribution**

€ 165,312,96

**Start date**

1 May 2023

**End date**

30 April 2025

**Coordinated by**

FUNDACIO INSTITUT CATALA DE RECERCA DE L'AIGUA

Spain

**Project description**

**A closer look at bacteriophages and antibiotic resistance**

Antibiotic resistance can emerge from environmental sources, such as soil, water and food. This is where bacteria are exposed to antibiotics or antimicrobial agents. With the support of the Marie Skłodowska Curie Actions programme, the PHASTER project will explore the presence, diversity, and abundance of bacteriophages in the environment to understand the mechanisms and factors that promote antibiotic resistance. This is timely, considering recent studies suggest that antibiotic resistance found in clinical settings may emerge from environmental sources. Specifically, PHASTER will investigate the sources of antibiotic resistance genes,
their environmental distribution, and how anthropogenic inputs affect their spread. Metagenomics and bioinformatics approaches will be used, and mesocosm experiments will be conducted. The project’s findings will inform public health strategies.

**Fields of science**

- medical and health sciences > health sciences > public health
- engineering and technology > environmental engineering > water treatment processes > wastewater treatment processes
- medical and health sciences > basic medicine > pharmacology and pharmacy > pharmaceutical drugs > antibiotics
- medical and health sciences > basic medicine > pharmacology and pharmacy > drug resistance > antibiotic resistance
- agricultural sciences > animal and dairy science > domestic animals > animal husbandry > animal feed

**Keywords**

- Horizontal gene transfer
- bacteriophages
- antibiotic resistance
- anthropogenic pollution

**Programme(s)**

- HORIZON.1.2 - Marie Skłodowska-Curie Actions (MSCA) - MAIN PROGRAMME

**Topic(s)**

- HORIZON-MSCA-2022-PF-01-01 - MSCA Postdoctoral Fellowships 2022

**Call for proposal**

- HORIZON-MSCA-2022-PF-01

See other projects for this call
Funding Scheme

MSCA-PF - MSCA-PF

Coordinator

FUNDACIO INSTITUT CATALA DE RECERCA DE L'AIGUA

Net EU contribution
€ 165 312,96

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Links
Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network

Other funding
€ 0,00

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