CZU: 001:579

OPEN SCIENCE PRACTICE USED IN STRENGTHENING THE NATIONAL COLLECTION OF NON-PATHOGENIC MICROORGANISMS

Bogdan Nina[1]*, Sîrbu Tamara[1], Bîrsa Maxim[1],
Cernăuțeanu Victor[2], Cojocaru Irina[3]
[1]Institute of Microbiology and Biotechnology, Chisinau, Republic of Moldova
[2]Information Society Development Institute, Chisinau, Republic of Moldova
[3]Moldova State University, Chisinau, Republic of Moldova
*E-mail: nina.bogdan.91@gmail.com

Microbiology is a field of biological science that studies microorganisms, most of interest and important are includes in collections for maintenance and distribution. But the requirements to the collections of microorganisms as a reliable and informationally associated biological material are increase. National Collection of Non-Pathogenic Microorganisms (CNMN) functions at the Institute of Microbiology and Biotechnology and present an important depository of scientific and industrially valuable strains of microorganisms (fungi, yeasts, actinomycetes, bacteria, cyanobacteria, microalgae) in the Republic of Moldova. The digitalization, processing and standardization of CNMN scientific data facilitates their sharing and reuse between science and industry fields.

Research aim is to strengthen the National Collection of Non-Pathogenic Microorganisms by adopting open science practices on access, preservation, sharing and reuse of scientific data. The objectives:

- Conceptualization of CNMN according to the FAIR principles for scientific data (Findability, Accessibility, Interoperability, and Reuse of digital assets)
- Digitization, processing and standardization of Collection scientific date
- The development of CNMN digital tools (using Agile principles)
- Facilitating the integration of CNMN into the pan-European digital infrastructure MIRRI (Microbial Resource Research Infrastructure)

Open science is a policy priority for the European Commission (EC) and the standard method of working under its research and innovation funding programmes as it improves the quality, efficiency and responsiveness of research. It enables to store, curate and share research knowledge between partners from across academia, industry, public authorities, citizen groups and countries [1].

As a result of the project implementation, digital tools of National Collection of Non- Pathogenic Microorganisms information system will be developed, respecting the Open Science practices regarding the management of scientific data. This would enable preparing and submitting international projects related to microbial biodiversity and the application of microorganisms in various branches of the economy.

Acknowledgments: The research was funded out within the project 21.70086.38ȘD (ANCD)

References:

1. Open Science. European Commission website, 2021. Disponibil: https://ec.europa.eu/info/research-and-innovation/strategy/strategy-2020-2024/our-digital-future/open-science_en (accesat 28.06.2022)

Keywords: non-pathogenic microorganisms, national collection, conceptualization of CNMN, digital tools, information system.