Visegrad Fund

NON-ANTIBIOTIC APPROACHES TO CONTROL MASTITIS IN DAIRY COWS

Kick-off meeting, 4.11.2024

Project ID: 22420065

The project is co-financed by the governments of Czechia, Hungary, Poland and Slovakia through Visegrad Grants from the International Visegrad Fund.
The mission of the fund is to advance ideas for sustainable regional cooperation in Central Europe.

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Grantee

UNIVERSITY OF VETERINARY MEDICINE AND PHARMACY IN KOŠICE

- Visegrad Fund

Implementation and participating countries

Project start: **11/2024**

Project end: **04/2026**

The general mission of the Visegrad Fund is to advance ideas for sustainable regional cooperation in Central Europe.

Slovakia

Czech Republic

Hungary

Poland

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Organizations

Grantee: University of Veterinary Medicine and Pharmacy in Košice, Slovakia

- Project Coordinator: **Zuzana Lacková, DVM, PhD.**

Partner 1: Mendel University in Brno, Czech Republic

Partner 2: University of Veterinary Medicine Budapest, Hungary

Partner 3: Wroclaw University of Environmental and Life Sciences, Poland

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The general goal of the project

- The main objective of the project is international cooperation of university research teams from V4 countries with the focus on the **detection and prevention of mastitis in dairy cattle farms**.

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The specific goal of the project

The project teams up 4 research groups from Slovakia, Czech Republic, Hungary and Poland to develop:

- new methods for early detection of mastitis in dairy cows
- propose a new protective product of mammary gland based on lactobacilli, and prepare guidelines for mastitis prevention for farmers in the V4 region and beyond.
- as a result, the use of antibiotics on dairy farms will be reduced in line with the EU strategy to fight antimicrobial resistance.

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Monitored dairy farms

- Dairy farms will be selected
- Min. 100 pcs and max. 300 pcs of dairy cows in one farm
- Breeds consist from Simental cattle or Hostein cattle
- Cows in lactation cycle (14 -100 after calving and 50 days before drying)
- Min. one complete investigation of all cows
- Sampling of milk, blood, CMT and clinical investigation.
- Detection of udder pathogens and their virulence factors with rapid tests
- Cultivation and detection of lactobacilli

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Cultivation sets for rapid farm diagnosis of mastitis pathogens

3M PetriFILM

PM test (Pure Milk Test)

MicroMast Test

MastiSensor

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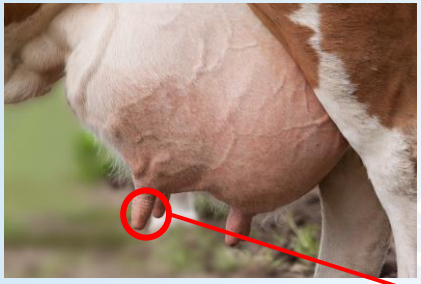
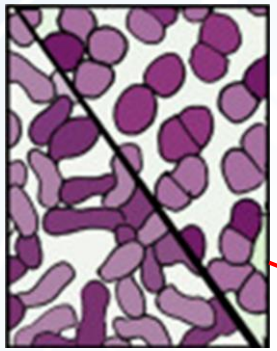
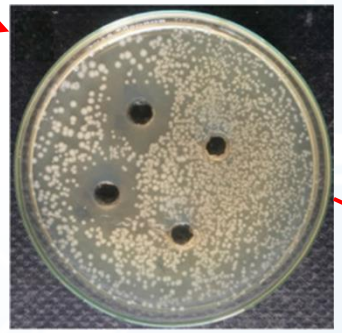
Develop a new protective product of mammary gland based on lactobacilli



Isolation of lactic acid bacteria - LAB



Cultivation and selection of suitable LAB



Testing to inhibit growth of udder pathogens

A potential therapeutic effect of LAB

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Budget overview

Accommodation and board	4,600.00 EUR
Copyright, licenses, fees	1,210.00 EUR
Expert fees/Fees for authors or artists	1,500.00 EUR
Printing/publishing costs	4,400.00 EUR
Rent and related technical services	250.00 EUR
Translation and interpreting costs	600.00 EUR
Transportation and postage	3,631.00 EUR
Project overhead costs	1,619.00 EUR
Total	**17,810.00 EUR**

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Project events and outputs

1st meeting of project research teams (online), Kosice, SK

- In 04/11/2024 Slovakia, UVMP Košice

1st Research Phase - Data Collection from milk yield and transport of samples

- From 20/01/2025 to 22/01/2025 Czechia, Brno

Participation in a Conference

- From 26/03/2025 to 28/03/2025 Slovakia, Piešťany

2nd research phase - data collection from milk yield and transport of samples

- From 12/05/2025 to 14/05/2025 Hungary, Budapest

Participation in a Conference

- From 10/09/2025 to 12/09/2025 Hungary, Gödöllő

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Project events and outputs

3rd research phase - Data collection from milk yield and transport of samples

- From 22/09/2025 to 24/09/2025 Poland, Wroclaw

2nd meeting of project research team, Košice, SK

- From 02/03/2026 to 03/03/2026 Slovakia, UVMP Košice

Publishing book and article

Participation in Conference

- From 23/03/2026 to 26/03/2026 Poland, Zakopane

Creating and updating a website

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Planned outputs

- **1x Scientific book**
- **1x Research article in WoS or Scopus**
- **3x Conference**

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Tasks distribution

- UVMP (SK) - blood and milk sampling with determination of udder pathogens and their virulence factors.
- UPWR (PL) - examination of milk samples for qualitative and quantitative parameters with evaluation of fatty acids profile
- UVMB (HU) - examination of milk and blood samples for determination of oxidative and antioxidant parameters
- MENDELU (CZ) - examination of milk and blood samples to determine the immunological profile

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THANK YOU FOR YOUR ATTENTION

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