



**NMR-IMPROV**



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**HORIZON-MSCA-2022-SE-01**

**Project ID 101131564**

## **Training School**

**On-line: 31.03.2025 – 02.04.2025**

### **QUALITY AND AUTHENTICITY METHODS AND PROTOCOLS FOR DAIRY PRODUCTS (in the context of NMR relaxation)**

#### **Agenda (time CET)**

**Please register in advance for each day**

**March 31<sup>st</sup> (Monday, 31.03.2025)**

**Link: <https://zoom.us/meeting/register/KwPtKJTwsShCXuwqzoupF5g>**

9:30 – 10:00 Roberto Anedda - PCR: Welcome and Introduction to the Training School

10:00 – 10:30 Danuta Kruk – UWM: **NMR-IMPROV**

10:30 – 11:00 Roberto Anedda - PCR: Benchtop NMR relaxometry instruments and industrial applications, general features

#### **COFFEE BREAK**

11:30 – 12:00 Roberto Anedda - PCR: NMR relaxometry of cheeses: key sample preparation guidelines and fast experiments with TD-NMR on cheese

12:00 – 12:30 Özlem Özmutlu Karslioglu – HSWT: **NMR Relaxometry as a Tool for Understanding Alternative Proteins' Rheology**

#### **LUNCH BREAK**

14:00 -15:00 Faisal Shah - UWM: **NMR Relaxation as a Tool for Investigating the Molecular Behavior of Plant-Derived Food Matrices**

15:00 – 16:00 Roberto Anedda - PCR: New certified and regulated analytical methods: from academic scientific research to routine industrial applications

16:00 – 17:00 Ozan Tas – Esmâ İlhan - METU: **Use of Different TD-NMR Approaches for Investigating Feta and Parmesan Cheese Samples**

**April 1<sup>st</sup> (Tuesday, 01.04.2025)**

**Link:** <https://zoom.us/meeting/register/FJ2rojzAQiih4kJKH8irWQ>

9:30 – 9:40 Roberto Anedda - PCR: Welcome and Introduction to the second day

9:40 – 11:00 Roberto Anedda - PCR: Applications of NMR relaxometry to quality and authentication issues in the dairy sector: overview

**COFFEE BREAK**

11:30 – 13:00 Stelar: **Benchtop FFC-NMR instruments demo session on dairy samples: from sample preparation to acquisition, and data analysis.**

**LUNCH BREAK**

14:00 -15:00 METU Rasim Gul **NMR Relaxometry for Quality and Authenticity Assessment of Dairy and Plant-Based Cheeses: Insights from Recent NMR-IMPROV Applications**

15:00 – 16:00 METU Ezgi Cifte - **Furkan Erdem NMR Analysis on feta cheese with different fat contents**

16:00 – 17:00 METU Erdem Mercan: **Investigation of Caking in Milk Powders: Effects of Processing Conditions, Humidity, and Temperature Using NMR Relaxation Techniques**

**April 2<sup>nd</sup> (Wednesday 02.04.2025)**

**Link:** [https://zoom.us/meeting/register/beNGU9ANRXOmRGbfYG\\_krA](https://zoom.us/meeting/register/beNGU9ANRXOmRGbfYG_krA)

9:30 – 9:40 Roberto Anedda-PCR: Welcome and Introduction to the third day

9:40 – 11:00 Josiah Ateka - JKUAT-KENYA: **The dairy landscape in Kenya (a developing country) - products, challenges and future perspectives**

11:30 – 13:00 Resonance Systems: **Benchtop TD-NMR systems and applications**

**LUNCH BREAK**

14:00 -15:00 Elizabeth Wafula - JKUAT-KENYA: **The dairy landscape in Kenya (a developing country), developing countries i.e. East Africa and Sub-Saharan Africa - products, challenges and future perspectives - entry points for the application of NMR relaxometry**

15:00 – 16:00 Anastasiia Nagmutdinova - UniBo: **Low-Field NMR exploration of dairy products. Practical demonstration**

16:00 – 17:00 **Questions & Answers Session** and Final Remarks (moderated by **Danuta Kruk and Roberto Anedda**)