

NEWSLETTER

Editor-in-chief: Natalja Jarohnovica
Issue 3 - January 2026

HORIZON-WIDERA-2023-ACCESS-O2



21st European Magnetic Resonance Congress (EUROMAR2025)
Oulu, Finland
6th - 10th July, 2025



Researcher's Night 2025 at
Latvian Institute of Organic Synthesis
19th March 2025



NMR School 2025:
"Biomolecular NMR:
Advanced Tools, AI
Perspective"
September 29th -
October 3th, 2025



Nordic/Baltic NMR PI
Meeting,
Gothenburg, Sweden
14th - 15th October 2025



New Collaboration:
Chemestmed
(Tartu, Estonia)
November 2025



Seminar "Real-world
coordination stories and
lessons learned by
Francesca Morelli" (CERM/
CIRMMP Infrastructure,
Florence, Italy)
23rd November, 2025



1st Joint conference of the
Latvian Institute of Organic
Synthesis and the Latvian
Biomedical Research and
Study Centre
28th November, 2025

Italian Autumn of MR LATVIA

ITACA SB NMR Summer School in Florence, Italy



MR LATVIA joined the ITACA SB School in Florence, hosting the Satellite Event "Building connections through the exchange of ideas and practices in NMR." The meeting brought together leading scientists and PhD students for inspiring talks, lively discussions, and new collaborative ideas. Presentations highlighted innovative heteronuclei applications, novel probes, and exciting NMR opportunities at LIOS, reinforcing MR LATVIA's mission to support young researchers and strengthen international partnerships.



CERM/ CIRMMP Infrastructure (Florence, Italy) in Riga

From 24–28 November 2025, LIOS and the MR LATVIA project hosted experts from the CERM/CIRMMP Infrastructure (Florence, Italy) for a week of high-level scientific exchange and strategic cooperation. The visit strengthened Latvia's international role in high-field NMR and life-science research, showcased emerging national capabilities, and opened new pathways for collaboration across structural biology, molecular biomedicine, and advanced magnetic resonance. The week concluded with the 1st LIOS/LBMC Conference at the University of Latvia House of Science, highlighting shared achievements and future ambitions.

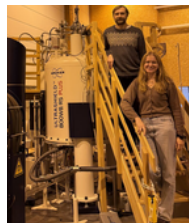


December in Florence

December 2025 marked a key mid-project milestone for MR LATVIA, centred on infrastructure alignment, capacity building, and implementation readiness through targeted engagement with the CERM/CIRMMP NMR Infrastructure. Following the November delegation visit to Riga, December included three focused exchange visits involving Ruslans Muhamadejevs (Platform Operations), Dr. Alons Lends (Scientific Lead), and Natalja Jarohnovica (Project Management). These activities strengthened operational harmonisation, knowledge transfer, and collaboration with leading European research infrastructures in Florence and Lyon. MR LATVIA extends sincere thanks to the CERM/CIRMMP team for their continued support and constructive collaboration.

BUILDING NMR EXCELLENCES

CNRS-CRMN Lyon, France



As part of the MR LATVIA project, ESRs Alvis Zvirgzdins and Kristine Senkāne carried out research mobility visits at the Centre of Nuclear Magnetic Resonance (CRMN, CNRS) in Lyon, France, focused on advanced high-field solid-state NMR (ssNMR) training and data acquisition.

Alvis is conducting a six-month stay involving high-field ssNMR analysis of transthyretin amyloid fibrils and spider silk hydrogels (up to 1 GHz), gaining extensive hands-on experience in MAS probe handling, rotor packing, spectrometer operation, and pulse sequence optimisation.

Kristine completed a two-month visit dedicated to high-field ssNMR studies of spider silk hydrogels at 1 GHz and 800 MHz, acquiring 1D/2D spectra, relaxation data, and water-filtered experiments, and gaining practical skills in sample preparation, multidimensional ssNMR methods, rotor packing and data interpretation. Both mobilities strengthened ESR technical independence, contributed new experimental data to MR LATVIA's scientific objectives, and reinforced international collaboration in high-field NMR.

CERM/ CIRMMP Infrastructure, Florence, Italy



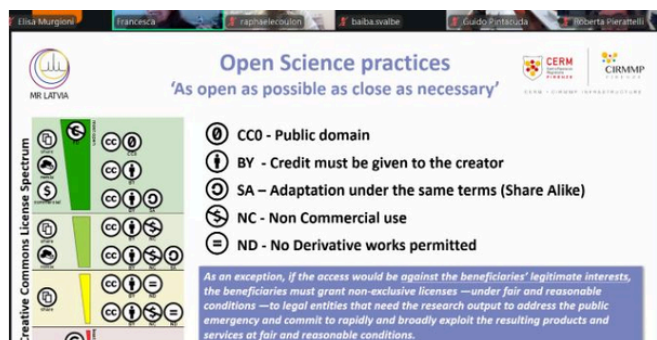
Similarly to Alvis Zvirgzdins and Kristine Senkāne at CNRS-CRMN, PhD student Diana Niño Avellaneda is undertaking an ESR secondment at the CERM/CIRMMP research infrastructure until mid-February 2026 to advance her expertise in solution NMR. Her work focuses on acquiring and analysing liquid-state NMR spectra for the structural characterization of an Interleukin-31-based vaccine candidate, while training in sample preparation and multidimensional ¹H/¹³C-detected experiments for protein assignment and dynamics studies.

Key Numbers -
achieved in
17 months

9 Inter-institutional scientific and management webinars
19 Short term admin-technical-scientific staff visits
2 Hands-on workshops/ Seminars

3 Conferences with Presentation
3 ESR visits
1 ACCESS platform is ready to be launched

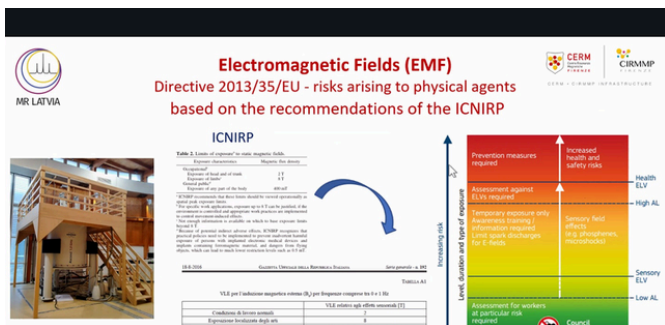
Page 1/2



● The 3rd Inter-institutional Management Webinar on «Pre-award EU grant management»

(5/11/2025)

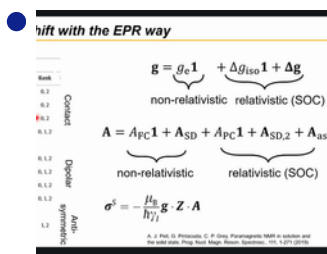
Speakers from CNRS (France) and CIRMMMP (Italy) shared practical insights on navigating EU calls, early partner engagement, FP10 planning, balanced and multidisciplinary consortia, and the importance of transparent collaborative writing — summed up by the principle “As open as possible, as closed as necessary.” The event highlighted early planning, strong coordination, and effective communication as key drivers of competitive EU projects.



● The 4th Inter-institutional Management Webinar on Safety Protocols for NMR and BioTech users

(26/11/2025)

Rebecca Del Conte (CERM/CIRMMMP) presented CERM's structured workflow for managing NMR time requests from internal, EU and external users, and explained a priority-based method that allocates machine time around maintenance, specialised experiments and user categories. She also outlined CERM's safety framework, aligned with EU legislation and the ALARA principle, covering chemical and biological risks, cryogenics and EMF exposure, alongside mandatory training requirements. Contributions from CRMN and LIOS added perspectives on coordinating high-demand NMR facilities and applying safety procedures in different research environments, underscoring the value of shared operational expertise across the MR LATVIA network.

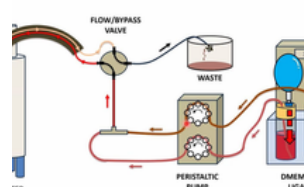


The 4th Inter-institutional Scientific Webinar on Solid-State NMR for Organic Chemistry, Catalysts, and Materials research at CRMN Lyon

(24/09/2025)

The webinar highlighted solid-state NMR advances from CRMN Lyon, including fast MAS and AMAT approaches for resolving paramagnetic spectra in spin crossover and magnetic materials (Papavasileiou), and DNP-enhanced NMR for detecting low-loading platinum sites in heterogeneous catalysts using J-HMQC and INADEQUATE experiments (Insinna), underscoring solid-state NMR's growing impact in materials, catalysis, and organic chemistry research, and the importance of communication between spectroscopists and chemists.

● 2-channel bioreactor setup



The 5th Inter-institutional Scientific Webinar on Advanced Labelling Schemes for Protein NMR in Live Human Cells

(10/12/2025)

The webinar highlighted recent advances enabling high-fidelity protein NMR in live human cells. Key topics included selective amino-acid isotopic labelling, endogenous transaminase-based labelling routes, methyl- and ^{13}C -enrichment for probing side-chain dynamics, and ^{19}F strategies for sensitive conformational readouts. Outcomes emphasized improved intracellular spectral resolution, enhanced access to folding and interaction states, and growing infrastructure-level collaboration to integrate advanced labelling schemes into high-field European NMR platforms.

Save the dates

Scientific Seminar with CERM/CIRMMMP experts (04/02/2026)

MR LATVIA and consortium partners will be launching a

Scientific on-site seminar at LIOS: “Metalloproteins and Interactions Studied by NMR” in February 2026 - led by CERM/CIRMMMP Infrastructure, Florence, Italy

6th Inter-institutional Scientific Webinar (18/02/2026-online)

MR LATVIA and consortium partners will be launching a

6th Inter-institutional Scientific webinar in February 2026 - led by LIOS, Riga, Latvia

7th Inter-institutional Scientific Webinar (18/03/2026-online)

MR LATVIA and consortium partners will be launching a

7th Inter-institutional Scientific webinar in March 2026 - led by CNRS-Lyon, France

Join the MR LATVIA community -

follow us on social media and our website for more updates

@MR LATVIA

http://mrlatvia.osi.lv

