



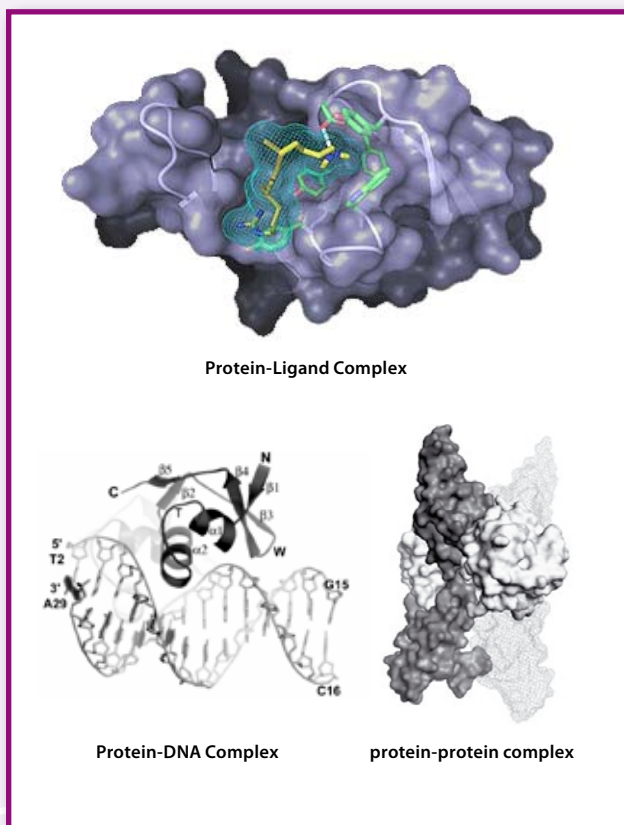
# East-NMR: Enhancing Access and Services to East European users towards an efficient and coordinated Pan-European pool of NMR capacities to enable global collaborative research & boost technological advancements

**Nuclear Magnetic Resonance (NMR) spectroscopy is a technology used in modern life sciences research. Already it has proven itself to be of great value for investigating the structure and dynamics of biomolecules as well as their functional characterisation. This allows NMR technology to be used in an even wider field of work including drug discovery. Efforts have already begun to bring together different NMR facilities across Europe and the East-NMR project will work alongside the EU-NMR project to unify and promote NMR centres in Eastern Europe. Improving access to these facilities will serve to boost technological advancements and bring research centres across Europe together to share technology and data.**

## ● INTEGRATING THE EAST

Currently, support for NMR investments varies greatly across Europe. In Eastern Europe, NMR infrastructures are significantly less developed than their counterparts in Western Europe. This means that half of the human resources in European NMR are underused. This is manifested by a large number of Eastern European scientists leaving to work outside of Europe. This trend is likely to continue if efforts are not made to boost the role of Eastern European research centres and the impact of European NMR research could be drastically decreased. Europe has a history of respected NMR methodology development and has received three Nobel prizes for work in this area. Though Europe will only maintain this respected position if adequate resources are given to integrate and maintain Europe's NMR facilities.

There is considerable potential for Eastern European countries to play a role in increasing the competitiveness of the European Research Area, particularly in terms of human capital and openness to innovation. However, there is little demand from Eastern Europe to access NMR research infrastructures. This trend is alarming to many researchers in Western Europe, as research infrastructures bring a wide range of benefits and help produce better research.



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There are multiple reasons for the lack of interest in NMR research infrastructures, ranging from a lack of knowledge about the potential of NMR spectroscopy for molecular biology research to a perceived lack of accessibility of research infrastructures to difficulties preparing NMR-ready samples.

Some local efforts have been made to reverse this trend and some investments have been made in the region. However, there are few funding options for research groups interested in national or transnational access.

## ● BRIDGING THE DIVIDE

The East-NMR project is working to improve the current situation in NMR spectroscopy by offering wider access to NMR instrumentation through research infrastructures in the East. These efforts will also encourage users across the whole of Europe to explore different fields of NMR research. It is expected that East-NMR will boost the level of participation of scientists from Eastern Europe and Europe-wide research infrastructures providing transnational access to everyone.

As part of the project, research centres in Eastern Europe will be connected and researchers will have access to facilities across the region to complete NMR research. Moreover, the project will serve as a conduit for the sharing of best practices, helping bring all centres to the same level.

East-NMR will also boost collaboration between NMR research institutes which will help establish an efficient and cost-effective service network for bio-NMR covering a wider user base. Such collaboration will also serve to raise awareness of life science research while providing access for Eastern European user groups to different research institutes.

Many technological developments are occurring rapidly in the diversified field of NMR but few Research Institutes are able to provide access to latest hardware instrumentation. Joining efforts around key infrastructures collects and disseminates generated expertise needed for further innovation. There is a consensus in the NMR community that better access is needed to current solid-state NMR facilities if research in the field is going to advance. East-NMR, by bringing the East and West together, will work to bring further innovation to NMR itself as well benefits to life sciences in general.



**Project acronym:** East-NMR

**Funding scheme (FP7):** Integrating Activities (IA)

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**EU project officer:** Christos Profilis

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