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► **To cite this version:**

Pierre Dorlet, Guillaume Gerbaud, Emilien Etienne, Stéphane Grimaldi, Bruno Guigliarelli, et al..
MOSBRI- A New European Research Infrastructure for Molecular Biophysics. *Biochimica biophysica
acta (BBA) - Bioenergetics*, 2022, 1863, pp.148684. 10.1016/j.bbabbio.2022.148684 . hal-03805560

HAL Id: hal-03805560

<https://hal.science/hal-03805560>

Submitted on 7 Oct 2022

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MOSBRI- A New European Research Infrastructure for Molecular Biophysics

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MOSBRI (Molecular-Scale Biophysics Research Infrastructure www.mosbri.eu), a consortium of 13 academic centers of excellence and 2 industrial partners from 11 different European countries, coordinated by Institut Pasteur (Paris, France) is founded by The European Union's Horizon 2020 INFRAIA program (grant agreement N° 101004806).

Molecular-scale biophysics is the study of the architecture, dynamics and interactions of the giant molecules of life (proteins, DNA, RNA, polysaccharides, lipids) via measurements of their physical properties. It is fundamental to both our understanding of how living organisms work, and our ability to block or enhance the function of these molecules, notably for therapeutic purposes. Deciphering the complexity of the behavior of macromolecular assemblies requires a multi-faceted approach resorting to a variety of distinct biophysical methods.

The MOSBRI project will enable to create a geographically distributed, scientifically integrated research infrastructure combining the distinct instrumentation and expertise of the individual partner laboratories, thus allowing to tackle an unusually wide variety of life science research questions. Access to the large panel of cutting-edge biophysical technologies and unparalleled range of expertise of the consortium will be available at no cost to all European researchers from both academia and industry.

MOSBRI offers access to a range of biophysical instruments and methodologies at our partner sites such as advanced spectroscopies (CD, EPR, FTIR, MST), hydrodynamics (AUC, DLS, MALS, SAXS, TD), thermodynamics (DSC, DSF, ITC), real time biosensing (BLI, QCM, SPR), single-molecule approaches (AFM, optical tweezers, timeresolved single particle fluorescence) and more.

MOSBRI will also ensure the optimal use of these advanced biophysical techniques and foster joint developments, further boosting the advancement of knowledge and technology. It will also disseminate its knowhow through an ambitious program of training workshops and meetings, particularly suited to early career researchers and others new to the field.

MOSBRI will therefore play an important role in maintaining Europe's leading position in the rapidly evolving research and development field of Molecular Biophysics, which holds a strategic position at the crossroads of a variety of disciplines and is thus critical for cellular, molecular and structural biology, biological chemistry, as well as biomedicine, bio-production and biotechnology.

For more information visit our website (www.mosbri.eu) or email contact@mosbri.eu

doi:10.1016/j.bbabi.2022.148684