Dynamics of Protein–Ligand Interactions

Fact Sheet

Project Information

DynaPLIX

Grant agreement ID: 101071843

DOI
10.3030/101071843

Funded under
European Research Council (ERC)

Total cost
€ 8 721 625,00

EU contribution
€ 8 721 625,00

Coordinated by
LUNDS UNIVERSITET
Sweden

Project description

Insight into protein conformational changes during function

The function of proteins depends on dynamic changes in their three-dimensional conformations, and dynamic interactions with other molecules. Current knowledge of protein structure mainly comes from experiments that provide snapshots of single protein states. Funded by the European Research Council, the DynaPLIX project will develop methods that will enable the study of the motions of proteins while they carry out their function. The project will unveil the dynamic process of ligand binding to proteins from a perspective that integrates structure, kinetics and thermodynamics. Given the commercial role of proteins, the generated methods will help advance industrial and medical applications of proteins.
Fields of science

natural sciences > earth and related environmental sciences > geology > mineralogy > crystallography
natural sciences > mathematics > applied mathematics > dynamical systems
natural sciences > biological sciences > biochemistry > biomolecules > proteins > enzymes
natural sciences > biological sciences > molecular biology > structural biology
natural sciences > physical sciences > optics > spectroscopy

Keywords

- Protein dynamics
- Ligand binding kinetics
- Molecular recognition
- Energy landscape
- Conformational ensembles
- Molecular dynamics simulations
- time-resolved X-ray crystallography
- NMR spectroscopy
- NMR relaxation

Programme(s)

HORIZON.1.1 - European Research Council (ERC)  MAIN PROGRAMME

Topic(s)

- ERC-2022-SyG - ERC Synergy Grants

Call for proposal

- ERC-2022-SYG

See other projects for this call

Funding Scheme

- ERC-SYG - ERC-SYG

Coordinator
LUNDS UNIVERSITET

Net EU contribution
€ 3 646 723,00

Address
Paradisgatan 5c
22100 Lund
Sweden

Region
Södra Sverige > Sydsverige > Skåne län

Links
Contact the organisation  
Website  
Participation in EU R&I programmes  
HORIZON collaboration network

Other funding
€ 0,00

Participants (2)

KOBENHAVNS UNIVERSITET

Net EU contribution
€ 2 553 873,00

Address
Norregade 10
1165 København

Region
Danmark > Hovedstaden > Byen København

Links
Contact the organisation  
Website  
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HORIZON collaboration network

Other funding
€ 0,00