MOSBRI
Molecular-Scale Biophysics Research Infrastructure

Newsletter 6 – June 2023

2nd MOSBRI Scientific Conference (MOSBRI 2023) in Zaragoza.

The MOSBRI 2023 conference was the second on-site international scientific meeting organised since the MOSBRI project was launched. The meeting provided a platform for international scientific exchange and showcased the newest developments in molecular-scale biophysics and related areas.

170 participants attended the meeting at the Patio de la Infanta in Zaragoza (Spain) organized by BIFI-LACRIMA - Universidad de Zaragoza. The programme covered 8 thematic sessions with outstanding oral presentations by MOSBRI consortium members, TNA beneficiaries, industry representatives and other EU and international scientists. Moreover, 67 posters were displayed, and 16 industrial sponsors presented the latest developments in biophysical instrumentation.

Following on from the 1st MOSBRI Scientific Conference (Institut Pasteur, Paris, June 2022), this new opportunity to network extensively in person was highly appreciated, notably during the two evening poster sessions and the conference dinner.

Participants of the MOSBRI 2023 conference in Zaragoza, Spain.

The next MOSBRI conference will take place in Ljubljana, Slovenia from the 3rd to 6th of June 2024. SAVE THE DATE!

ESC5 course on the characterisation of protein interactions in Prague

MoB-IBT held an end-user short course focused on label-free techniques for the characterisation of protein interactions from the 3rd to 5th of May 2023. Ten participants from six different EU countries learned about techniques such as Isothermal Titration Calorimetry (ITC), Label-Free Microscale Thermophoresis (LF MST), Differential Scanning Fluorimetry (DSF) and Mass Photometry (MP). They acquired knowledge on sample requirements, experimental setup, data collection, equipment handling, and design and analysis of experiments – at a level allowing them to use these techniques regularly in their own experiments. The programme included tutorial lectures, instrument demonstrations and practical sessions.

Students and tutors of the ESC5 course at BIOCEV in Prague.

All course material is available for download on the MOSBRI website
https://www.mosbri.eu/training/end-user-short-courses/esc5/

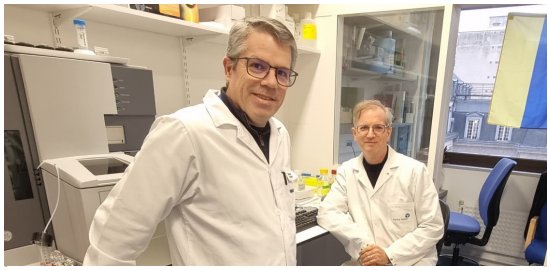
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101004806

ESC6 course on EPR spectroscopy in Marseille

Practical training and social events of the ESC6 course at the BIP laboratory in Marseille.

A MOSBRI end-user short course on "EPR spectroscopy: metal centres and radicals for the study of proteins" took place in Marseille from the 15th to 17th May 2023. Eleven participants from seven countries (Czech Republic, Germany, Hungary, Italy, Portugal, Spain and United Kingdom) attended this 2-day course at the BIP laboratory (CNRS Aix-Marseille Université). Its main goal was to explain the basics of EPR spectroscopy and to show the different approaches by which it can be used to study biomolecules. The programme included lectures during the first afternoon followed by three different EPR practicals performed in small groups for the remaining one and a half days. The attendees discovered the different uses of EPR spectroscopy from classical continuous wave EPR to more advanced pulsed EPR, by running experiments both at room and cryogenic temperatures. All EPR-MRS members contributed to make this event interesting and convivial.

All course material is available for download on the MOSBRI website
https://www.mosbri.eu/training/end-user-short-courses/esc6/



Pedro Castanheira (left) from Immunethep and Patrick England (right) at the PFBMI, Institut Pasteur Paris.

Pasteur-PFBMI hosted a TNA visitor from a Portuguese pharmaceutical SME

Immunethep is a Portuguese SME that aims to overcome anti-microbial resistance by developing antibodies directed against a key target of bacterial pathogens: glyceraldehyde-3-phosphate dehydrogenase (GAPDH). To assess the affinity, kinetic parameters and specificity of several mouse antibodies that could serve as leads for novel therapeutic treatments, Pedro Castanheira carried out a fruitful 2-week TNA visit to Institut Pasteur (Paris) with the aim of monitoring in real time the details of the interactions between a series of mAbs and the GAPDHs of different species, using biolayer interferometry (BLI) and surface plasmon resonance (SPR) in parallel.

International access call, a synergy between MOSBRI, iNEXT-Discovery and Instruct-ERIC

MOSBRI, iNEXT-Discovery and Instruct-ERIC launched their first international joint call for proposals in 2023 to support scientists worldwide. The free-of-charge access to services provided by these three research infrastructures aimed to strengthen collaboration within the global structural biology community, promoting the exchange of experiences, staff and access provision across the world. 11 research proposals from 4 Latin American and European countries were submitted to this call and are currently being evaluated by a scientific committee. Access is planned to be carried out during the second half of 2023 at the different centres of MOSBRI, iNEXT-discovery and Instruct-ERIC in Europe. It is hoped this call will be the first of many initiatives between research infrastructures to reinforce research and innovation at an international level.

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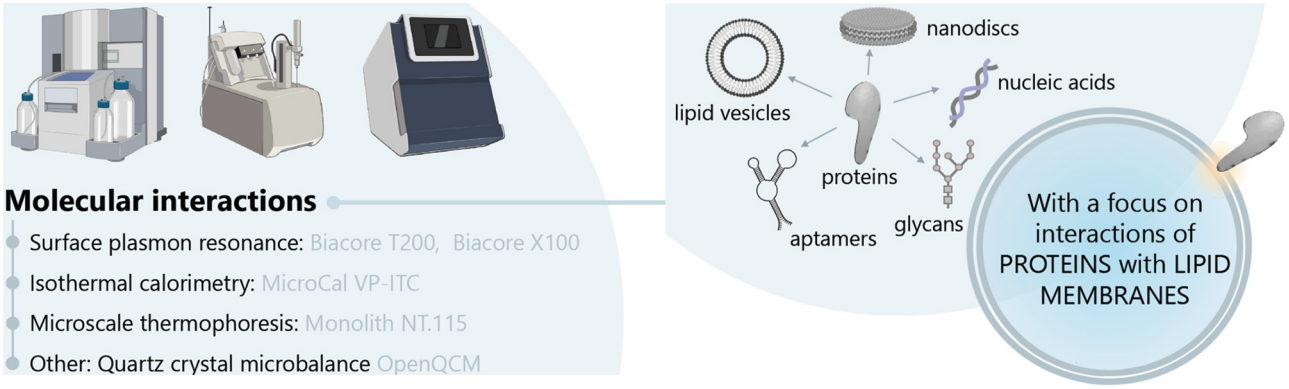
Are you interested in gaining expertise in molecular interactions?

The National Institute of Chemistry (NIC) in Ljubljana, Slovenia, now offers prolonged visit opportunities under the MOSBRI trans-national access (TNA) programme. Here you can gain knowledge and expertise in many aspects of molecular interaction studies. If needed, the project can start from molecular cloning, protein production, purification, and quality control, with this then leading to molecular interaction studies using e.g., Surface Plasmon Resonance (SPR), Isothermal Calorimetry (ITC), Microscale Thermophoresis (MST) as well as other methods like quartz crystal microbalance (QCM).



The programme is open to any student or scientist, but would be especially suitable for young investigators who have an on-going project that would benefit from expertise in molecular interactions. We suggest a stay of 1-2 months depending on the project, but the maximum duration for a single TNA proposal is 90 days.

You can read more about NIC at https://www.mosbri.eu/partners/nic/

In other news…

3rd MOSBRI General Assembly – June 2023

The 3rd general assembly took place on the 7th of June 2023 in Zaragoza, Spain. This meeting was organised as a satellite event of the MOSBRI 2023 conference. 23 members from 13 MOSBRI partners and 2 members of the Scientific Advisory Board (SAB) participated in the discussions. The long-term sustainability of the project and contingency measures in response to challenges faced during the first 24 months of the action were discussed. The next general assembly will be organised in the frame of the MOSBRI 2024 conference in Ljubljana, Slovenia.

Upcoming MOSBRI Courses

The end-user short course, ESC4, on **Advanced kinetic approaches to unravel protein structure and function** will be held from the **2nd to 4th of October 2023** at Sapienza Università in Rome, Italy. Read more about this course and **apply** at:

https://www.mosbri.eu/training/end-user-short-courses/esc4/

The end-user short course, ECS7, on **Single molecule approaches** will be held from the **6th to 8th of November 2023** at Rijksuniversiteit Groningen in The Netherlands. Read more about this course and **apply** at:

https://www.mosbri.eu/training/end-user-short-courses/esc7/

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