

The 3rd MOSBRI scientific conference in Ljubljana, Slovenia

The 3rd MOSBRI conference will take place from the 10th to 13th June 2024. Confirmed keynote speakers include Lynne J. Regan (University of Edinburgh, UK), Roman Jerala (National Institute of Chemistry, Slovenia), Harald Schwalbe (Goethe University, Germany) and Andrej Sali (UCSF, USA). Other invited speakers include renowned biophysics experts from 12 countries worldwide, some of them members of the MOSBRI consortium, 10 transnational access (TNA) beneficiaries and 11 industry representatives who will present the latest developments of biophysical instrumentation and technologies. The full list of confirmed speakers can be found at <https://www.mosbri.eu/events/conferences/ljubljana-2024/speakers-ljubljana>.

Registration is open at <https://www.mosbri.eu/events/conferences/ljubljana-2024/registration-ljubljana/>.

Early bird registration deadline is the 31st of March 2024. Apply to present a talk, a poster, or to benefit from one of the 15 bursaries for PhD students and early-stage post-doctoral fellows. The bursaries will cover 3 nights' accommodation and €300 towards travel expenses. **The deadline to apply for a bursary is the 31st of March 2024.** Prizes will be awarded for the best poster and oral presentations; they include annual memberships to the Association of Resources for Biophysical research in Europe (ARBRE).

Visit the conference website for more details and to register:

<https://www.mosbri.eu/events/conferences/ljubljana-2024/>

Upcoming Events

MOSBRI Courses – Places still available!

The basic level school, BLS2, on **Single molecule biophysics in cell lysates** will be held from the **13th to 17th of May 2024** at the Institute of Biotechnology, Czech Academy of Sciences, Vestec, Czech Republic. Read more about this school and **apply** (*deadline 31st March 2024*) at:

<https://www.mosbri.eu/training/basic-level-schools/bls2/>

The end-user short course, ECS8, on **Basic and advanced protocols in biological calorimetry (BioCal)** will be held from the **8th to 10th of July 2024** at Institute BIFI, Zaragoza, Spain. Read more about this course and **apply** (*deadline 1st May 2024*) at:

<https://www.mosbri.eu/training/end-user-short-courses/esc8/>



MOSBRI Consensus meetings

A one-day hybrid consensus meeting on **Real-time monitoring using biophysical approaches, of respiratory activity in bacteria** will take place on the 9th of April 2024 online and at Sapienza University of Rome. This consensus meeting aims to outline and define novel frontiers of real-time techniques for monitoring respiratory and metabolic activities in bacteria using biophysical methods. The event will combine expertise from manufacturers alongside academia and its main objective is to define, project, and establish benchmarks for these monitoring techniques. Participation is **free of charge**, but registration is mandatory.

Registration deadline: Thursday 28th March 2024.

Read more about this consensus meeting and apply at: <https://www.mosbri.eu/events/meetings/cm-april2024/>



MOSBRI beyond Europe

The MOSBRI transnational access (TNA) programme offer extends to researchers outside Europe and in the last two months of 2023, scientists travelled close to 10,000 km to work on their projects at MOSBRI TNA sites. MOSBRI hosted two research projects from Brazil, one through the normal MOSBRI TNA access route and one via a joint international call launched by MOSBRI, together with Instruct-ERIC, and iNEXT-Discovery.

Dr Italo Augusto Cavini and Adriano Alves Furtado from University of São Paulo visited Pasteur- PFBMI in Paris to work on a project *Investigating septin assembly by mass photometry*. Septins are membrane-associated, GTP-binding proteins which can assemble into non-polar heteropolymers. Their filaments are involved in many eukaryotic cell processes, such as cytokinesis, vesicle trafficking, exocytosis, barrier formation and bacterial entrapment. The visit to Pasteur-PFBMI aimed to study septin assembly and to detect the various heterocomplexes present in different septin samples.



However interesting visiting Pasteur- PFBMI is, a visit from São Paulo to Paris must include seeing the Eiffel tower.

Dr Mateus Aoki from the Oswaldo Cruz Foundation (Fiocruz) visited BIFI-LACRIMA in Zaragoza to work on a project on liquid biopsies in pancreatic cancer and chronic myeloid leukemia from Brazilian patients. Oncology relies on early diagnostic, treatment, and prognostic evaluation by biomarkers, especially non or minimally invasive ones. The project aimed at differentiating plasma samples between healthy Brazilian subjects and those with the disease using Differential Scanning Calorimetry and Fluorimetry, which provide a global view of the macromolecular composition of blood serum samples, shedding light into disease-related alterations and potential biomarkers.

Dr Mateus Aoki from the Oswaldo Cruz Foundation (Fiocruz) visited BIFI-LACRIMA in Zaragoza to work on a project on liquid biopsies in pancreatic cancer and chronic myeloid leukemia from Brazilian patients.

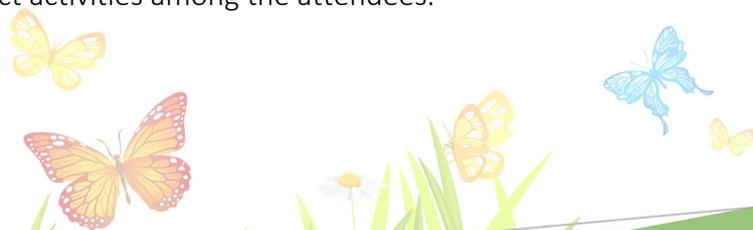


Dr Mateus Aoki visiting BIFI-LACRIMA from Brazil also had time to enjoy the Christmas lights in Zaragoza.

Oncology relies on early diagnostic, treatment, and prognostic evaluation by biomarkers, especially non or minimally invasive ones. The project aimed at differentiating plasma samples between healthy Brazilian subjects and those with the disease using Differential Scanning Calorimetry and Fluorimetry, which provide a global view of the macromolecular composition of blood serum samples, shedding light into disease-related alterations and potential biomarkers.

Annual winter school in Linz, Austria

Claudio Canale participated as speaker in the 23rd annual winter school held in Linz, Austria from 2nd to 5th of February 2024. This event focused on biological single-molecule research, nanoscience, nanomedicine, cell-science and bio-nanotechnology and included force and optical microscopy/spectroscopy techniques. He also presented a poster about MOSBRI and promoted the project activities among the attendees.





EMBL-SPC: the MOSBRI access provider which helps users to solve protein puzzles.

The Sample Preparation and Characterization Facility at EMBL Hamburg (EMBL-SPC) is one of the 13 access providers offering transnational access (TNA) to MOSBRI users. It specializes in the utilization of biophysical techniques to resolve how proteins interact with other molecules.

As one of the best-equipped facilities in Europe, EMBL-SPC offers:

(I) Biophysical characterization of Integral Membrane Proteins, allowing high-throughput screening to identify optimal conditions suitable for downstream handling during purification.

(II) Time-resolved studies, which combine several methods to obtain kinetic information from different readouts such as time-resolved SAXS, stopped-flow devices, and binding kinetics for surface-immobilized proteins on bilayer and gate-coupled interferometers.

The EMBL-SPC facility is operated by Maria Garcia-Alai, Head of Facility, and Angelica Struve, Facility Officer, who provide support and training to TNA visitors.

Apply for access to this and other MOSBRI facilities at

<https://www.mosbri.eu/apply-for-tna/>



EMBL-SPC facility in Hamburg. Maria Garcia-Alai, head of facility (top) and Angelica Struve, facility officer (bottom).

If you have any questions related to TNA through MOSBRI, you can contact

tna@mosbri.eu

28th School of Pure and Applied Biophysics in Venice

Three MOSBRI members: Valérie Belle (EPR-MRS), Daniel Aili (proLinC) and Claudio Canale (LAMBS) participated as speakers in the 28th School of Pure and Applied Biophysics (organised by the Italian Biophysical Society, SIBPA) held in Venice from 5th to 9th February 2024. The aim of this course was to explore the implementation of experimental techniques to investigate the structure, conformation, dynamics, and interactions of biomolecules in diverse environments, from solutions to living cells and tissues. The speakers advocated the use of techniques such as electron paramagnetic resonance spectroscopy (EPR), real-time biosensing for biomolecular interaction analysis, AFM assisted STED microscopy, and encouraged the course participants to apply for TNA to these and other biophysics services, as well as to participate in other activities organized by MOSBRI.



Venue of the event, Palazzo Franchetti. MOSBRI partners at the 28th SIBPA school 2024 in Venice. Claudio Canale (left), Daniel Aili (centre) and Valérie Belle (right).