

Società Italiana di Biofisica Pura e Applicata
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- **Calls for Positions [CfPo]**
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[bySIBPA] XXVII Congresso Nazionale SIBPA 2024

Complimenti a tutti i ragazzi che sono stati selezionati per ricevere la borsa SIBPA per partecipare al congresso, che include l'iscrizione con tutto ciò che comprende, l'alloggio e la cena sociale:

Bonizzi Arianna

Conigliaro Pauline

Coppola Maria Antonietta

De Felice Martina

Di Franco Elisabetta

Ghignoli Samuele

Innamorati Chiara

Longo Elisa

Longo Lisa



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Luchetti Nicole
Mancini Tiziana
Mosetti Rosanna
Muronì Alessia
Noferi Benedetta
Parenti Vittorio
Passeri Alessandra Anna
Pepe Alessia
Pisano Valentina
Plakhova Vera
Puleo Giorgia

Siamo lieti dei numerosi abstract ricevuti per il nostro prossimo congresso che si terrà a Genova dal 16 al 20 giugno! Possiamo accettare ulteriori abstract esclusivamente per contributi poster sino al 15 maggio.

Vi anticipiamo che l'assemblea della società si terrà martedì 18 sera, mentre la cena sociale sarà mercoledì 19 giugno ed il suo costo è incluso nell'iscrizione al congresso.

Ulteriori informazioni e dettagli alla pagina web, in continuo aggiornamento:
<https://www.sibpa.it/CongressoNazionaleSIBPAGenoVA/index.php>



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[CONGR] 110 Congresso SIF

La SIF organizza il suo [110° Congresso Nazionale](#) dal 9 al 13 settembre a Bologna presso il nuovo Distretto Navile, Edificio UE1 in Via della Beverara 123/1.

I riassunti, in italiano o in inglese, dovranno essere inseriti online entro il 22 aprile 2024. I riassunti dovranno avere un massimo di 1200 caratteri, senza figure, senza note bibliografiche e l'autore dovrà indicare la Sezione pertinente.

Di norma ogni autore può essere segnalato come speaker in una sola comunicazione. I lavori accettati verranno presentati oralmente. Almeno uno degli autori della comunicazione, possibilmente il presentatore, deve essere Socio della Società Italiana di Fisica.

Quest'anno la Sezione 5 - Biofisica e fisica medica, è presieduta da Alberto Diaspro, Università di Genova e IIT Genova.

[CfPO] Open PhD and Postdoc position, Marseille

Dear Colleagues,

I am looking for motivated master interns, PhD students, and postdocs in theoretical physics to work on the interactions between mechanics, biochemistry, and genetics in stem cell aggregates. The positions are fully funded by the ERC Synergy Grant project BREAKDANCE. Our theory work will be carried out in close collaboration with the experimental labs of Pierre-François Lenne (Marseille), Vikas Trivedi (Barcelona), and Verena Rupprecht (Barcelona).

For more details on the positions, please see <https://www.merkellab.net/open-positions>

A recent preprint from our consortium can be found here:

<https://www.biorxiv.org/content/10.1101/2023.09.22.559003>

Please do not hesitate to contact me for any informal inquiries.

With best regards,

Matthias Merkel, Ph.D.

Centre National de la Recherche Scientifique (CNRS) Centre de Physique Théorique Alan Turing Center for Living Systems Aix-Marseille Université
matthias.merkel@posteo.de <https://www.merkellab.net/>



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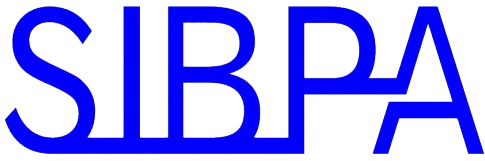
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[CfPO] Open PhD position, Marseille

PhD thesis title: Probing the structural dynamics of the full-length cytochrome P450 reductase involved in the xenobiotic metabolism

Laboratory : Bioénergétique et Ingénierie des Protéines, BIP-UMR7281

Team : Biophysique des metalloprotéines et des systèmes dynamiques

Supervisor : Dr. Marlène Martinho

email : marlene.martinho@univ-amu.fr

Description of the PhD project

Recently, we reported the study of soluble Homo sapiens CPR using Site-Directed Spin Labelling (SDSL) and Electron Paramagnetic Resonance (EPR). We have successfully investigated the dynamics and conformational changes of the one electron reduced soluble form of human CPR by incorporating a non-canonical amino acid at selected strategic positions and subsequent specific nitroxide labelling. DEER experiments on semiquinone (sq)/nitroxide pairs on CPR, and molecular dynamics (MD) studies, have been conducted proving the existence of two main states in solution. The range of conformations of CPR may be crucial to the interaction and binding between CPR and CYPs, possibly via the selection of competent conformations depending on the redox state of CPR. The alterations in the conformational equilibrium of CPR induced by mutations on the flavin domains or by the binding of small molecules have been previously documented. However, these studies did not concurrently track the redox state of flavins.

During the thesis, our innovative approach described above will be applied and developed to the full-length protein to study its native environment and its partnership with CYPs, by assessing the effect of membrane, the nature of lipids, co-enzyme binding and redox chemistry in structural changes. It will involve the monitoring of CPR during the main flavine redox states implicated in ET and/or under varying ionic strengths. Complementary biophysical studies will be employed to fully study the protein, such as Cryo-EM (in collaboration). This will provide comprehensive insights into the dynamic interplay in CPR at various redox states, particularly those competent in ET to specific CYPs involved in the xenobiotic metabolism.



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Candidate profile

The student will be hosted in the BIP lab in Marseille for a 3-year PhD contract from Aix-Marseille University to begin in October 2024. The BIP lab has a strong expertise in spectroscopic and theoretical studies of proteins. It hosts one of the major French EPR facilities of the national EPR network that includes continuous wave and pulsed EPR spectrometers operating at various frequencies and equipped with multi-resonance capabilities. The BIP lab is the only French lab working with the SDSL-EPR approach on biological systems. The candidate must have a Master of Science in Chemistry or Biochemistry. An interest in interdisciplinary projects is expected. Highly motivated, independent and dynamic, he/she should be able to work in a multidisciplinary team and have communication skills including for international collaborations. He/she will be involved in the biochemistry and the biophysics studies.

Please send applications by email before April, 20th 2024 including:

- a detailed CV
- an official transcript of master and undergraduate studies, and master exam grades
- a motivation letter for the project
- a recommendation letter of the Master's internship supervisor by e-mail at marlene.martinho@univ-amu.fr

Doctoral school interview in Marseille : May, 28th and 29th 2024

[CS] Single molecule biophysics in cell lysates, 13th-17th May 2024 Vestec, Czech Republic

This basic-level school is aimed at biologists, biophysicists, biochemists, structural biologists, etc., who want to learn a technique enabling high throughput screening for dynamic parameters of biochemical interactions on a single molecule level.

Single molecule imaging techniques enable following bio-molecular interactions with unprecedented resolution. Following single molecules in cells is often challenging due to the complex geometry of the intracellular environment. By contrast, in in vitro reconstituted systems, comprising only few bio-molecules of interest, single molecule imaging is achievable e.g. by placing the sample in close



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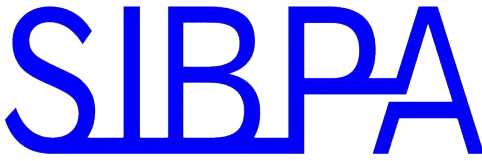
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vicinity of a glass surface and using Total Internal Reflection Fluorescence (TIRF) microscopy. However, the main obstacle of this method is obtaining functional bio-molecular samples in high enough quantity and purity. During the Basic Level School, we will explore an experimental approach combing the best of the two worlds by imaging bio-molecular interactions with single molecule resolution in cell lysates. This method employs the usage of established in vitro methods, such as TIRF imaging, while not being dependent on laborious sample preparation, and, importantly, enables following single molecule dynamics in the presence of other cellular components. Hands on training will be provided on TIRF-based single molecule imaging in cell lysates and basic image analysis of the acquired data. As an example, for one experimental system we will explore interactions between microtubules and microtubule-associated proteins, such as molecular motors. Invited speakers: Carsten Janke, Institut Curie & Tim Mitchison, Harvard Medical School

The course will combine both theoretical and practical content, starting with a short introductory round and theoretical lectures and will then continue with hands-on microscopy and data analysis sessions. Finally, there will be presentations of the acquired results.

Other details: The course is aimed at trainees with little experience in the domain and/or people wanting to acquire new scientific and technical skills: graduate and PhD students, post-doctoral fellows, early career scientists, technicians, core facility staff.

Visit the website to find out more and to apply to take part in the course.

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

[WS] Workshop on Structural Biophysics, Bordeaux

Dear colleagues,

registration is open for the Workshop on Structural Biophysics that will take place in the beautiful city of Bordeaux from October 14-18th 2024.

<https://biophysics2024.sciencesconf.org/>



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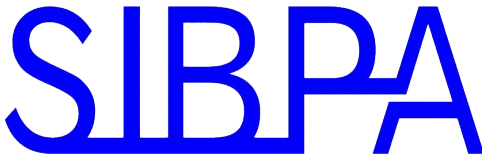
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This workshop proposes to make an inventory of the latest technological advances and provides a theoretical and practical training on the main techniques of structural biophysics. It also aims at introducing integrative methodologies.

- ⇒ AFM
- ⇒ EM and cryo-EM
- ⇒ X-ray
- ⇒ Solution and Solid-state NMR
- ⇒ Spectroscopy
- ⇒ Mass spectrometry
- ⇒ Molecular Modelling

It is a great opportunity for young scientists in the field!

This CNRS Workshop is free of charge for all CNRS employees, including accommodations, lunch, and the Gala cocktail.

Registration fees are as follows:

FREE for CNRS employees (PhD / Postdoc / research scientist / engineer)

PhD / postdoc non-CNRS 300€

Academics non-CNRS 400€

Industry 1500€

Deadline for application May 7th. Places are limited!

For questions, please contact the organizer: Birgit Habentsein:
b.habenstein@cbmn.u-bordeaux.fr

Best regards,

Isabel D. Alves, PhD

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