

NEWSLETTER 2019

#8/9 – August/September

- ✓ Calls for Positions [CfPo]
- ✓ Congresses [CONGR]
- ✓ Conferences/Meetings [CONF/MT]
- ✓ Workshops/Symposia [WS/SY]
- ✓ Courses and Schools [CS]
- ✓ Call for papers [CfPa]
- ✓ EBSA News associated with
biophysics [Ebsa]
- ✓ Media (communication) [MC]
- ✓ Events sponsored a/o supported
by SIBPA [bySIBPA]



[CfPo] [Ebsa] PhD position Southampton (UK)/ Marseille (FR)

Funding available for a PhD studentship for a project "Reverse-engineering photosynthesis for improved light harvesting by investigating recombination mechanism in single biomolecules on a chip" Directed by Luca Sapienza in Southampton (website: www.quantum.soton.ac.uk) in collaboration with James Sturgis (Marseille) and Alexandra Olaya Castro (UCL). The project is due to start october 2019.

The student will gain expertise in optical spectroscopy, quantum optics, nanofabrication and biochemistry, carrying out an interdisciplinary research project between quantum physics and biology. The project aims at integrating cutting-edge quantum technology to the investigation of quantum effects in biomolecules. We will use platform technologies such as microfabricated single photon emitters, photonic waveguides and optical cavities. Leveraging the combined technologies will enable us to probe quantum states in a single complex biological system, going far beyond current spectroscopic techniques.

If you know a potential student please do not hesitate to bring this possibility to their attention. For further information contact Luca Sapienza (l.sapienza@soton.ac.uk).

[CfPO] [Ebsa] PhD Position in Computational Biophysics, Germany

A PhD position is available in the group of Prof. Jochen Hub at Saarland University, Germany, to be filled as soon as possible. Please visit us for further details at:

<https://biophys.uni-saarland.de/jobs.html>

Topic: Molecular dynamics simulations of a malaria membrane channels

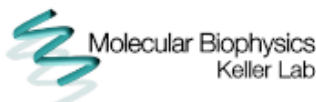
[CfPO] [Ebsa] Postdoc position, Molecular Dynamics Simulations, Saarbrücken, Germany

A postdoc position is available in the group of Prof. Jochen Hub at Saarland University, Germany, to be filled as soon as possible. Please visit us for further details at:

<https://biophys.uni-saarland.de/jobs.html>

Topic: Interpretation of experimental data with MD simulations

[CfPO] [Ebsa] Postdoctoral Position in Membrane Biophysics, Kaiserslautern, Germany



The Molecular Biophysics group of Professor Sandro Keller invites applications for a

Postdoctoral Position in Membrane Biophysics

initially for **one year** (possibly with extension) starting as soon as possible.

The research activities of the Keller group lie at the interface of biology, chemistry, and physics, with a particular focus on protein–lipid interactions. More information can be found here: www.bio.uni-kl.de/en/molbiophysik/ag-keller/

Tasks and responsibilities

The project aims at (1) unravelling **the mechanism of action** of a human pore-forming protein and (2) testing **small-molecule inhibitors** of pore formation. This shall be accomplished with the aid of a range of biophysical and biochemical methods, in particular, time-resolved and steady-state fluorescence spectroscopy and electrophysiological experiments using planar lipid bilayers. The postdoctoral fellow is expected to take the lead in a highly competitive research project involving academic and industrial collaborators, write publications, and give oral presentations at international conferences.

Qualifications

We are looking for a highly motivated postdoctoral fellow with

- a PhD in molecular biology, chemistry, physics, or related fields
- expertise in membrane biophysics or biochemistry, ideally of pore-forming proteins
- experience with optical spectroscopy or planar lipid bilayers
- a strong publication record
- the ability to work independently and in teams
- proficiency in written and spoken English

Application

Applications must be in English and include the following information in a single PDF:

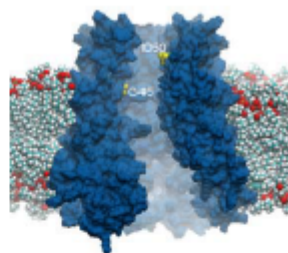
- a motivation letter (max. two pages)
- a *curriculum vitae* (max. two pages)
- a list of publications

Please e-mail your application to sandro.keller@biologie.uni-kl.de as soon as possible.

[CfPO] Two Telethon Postdoctoral Position at IBBC-CNR

Two postdoctoral positions to work on therapeutic approaches for rare diseases caused by aberrant connexin hemichannels

Overview: Two postdoctoral position are available to work on a project titled “A therapeutic approach for rare genodermatoses caused by aberrant connexin hemichannels” funded by a grant awarded to Professor Fabio Mammano¹ (PI) by Italy’s Fondazione Telethon². Each one is a one-year position with the expectation of being renewed for a second year pending satisfactory performance. Applicant evaluation will begin immediately, with proposed contract starting date on Dec 1st, 2019.



Lab and Project: The Mammano Lab is focused on the development of translational approaches for orphan diseases linked to connexin dysfunction, that improve therapeutic outcomes, increase patient compliance, and minimize negative side effects. The Lab is located in the Institute of Biochemistry and Cell Biology (IBBC)³ of the National Research Council (CNR) with sites in Naples and Rome (Monterotondo), Italy. The funded project will be carried out in close collaboration with the Shanghai Institute for Advanced Immunochemical Studie⁴ of ShanghaiTech University, to discover and test the therapeutic potentials of antibodies that target the extracellular domain of connexins in order to gain control over hyperactive hemichannels [1, 2].

Job Descriptions: The ideal candidates will be creative, highly motivated, and have a passion for performing translational research. The selection process will place a strong emphasis on creative thinking and the ability to communicate with a multidisciplinary team.

Candidates for position No. 1 should have preferentially:

- I. a PhD (or equivalent research experience) in a quantitative science such as Biomedical Engineering or Physics or Neuroscience;
- II. experience with and willingness to conduct patch clamp electrophysiology experiments in combination with fluorescence imaging (this will be considered an asset);
- III. expertise in cell culture maintenance and transfection or viral transduction with lentiviral vectors;
- IV. willingness to conduct multi-well based functional assays to measure ATP release (bioluminescence), cell viability (MTT absorbance) and dye uptake or Ca²⁺ uptake (fluorescence) in cultured keratinocytes using plate readers (e.g. Perkin Elmer ENSPIRE or the like);

Candidates for position No. 2 should have preferentially:

- I. a PhD (or equivalent research experience) in Biology or Biomedical Sciences;
- II. expertise in molecular biology (cloning, mutagenesis, qPCR);
- III. experience in the production and purification of lentivirus and/or adeno associated virus;

¹ <https://orcid.org/0000-0003-3751-1691>

² <http://www.telethon.it/en>

³ <https://www.cnr.it/en/istitute/130/istituto-di-biochimica-e-biologia-cellulare-ibbc>

⁴ <http://siais.shanghaitech.edu.cn/eng/>

[CfPO] Two-Years Research Fellowship at VIMM, Padova



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

28TH AUGUST 2019

TWO-YEAR RESEARCH FELLOWSHIP AVAILABLE IN PADUA (PADOVA), ITALY:

“Human brain organoids as a model to recapitulate neuronal dysfunction in Parkinson’s disease”

PROJECT DESCRIPTION

Brain organoids have recently emerged as a three-dimensional tissue culture platform to study neuronal and glial functional properties in physiological and pathological conditions. The project aims to characterize functional midbrain organoids derived from patients carrying pathological variants of the gene encoding the beta-glucocerebrosidase (GBA) lysosomal enzyme, known to confer a 5- to 7-fold increased risk to develop Parkinson’s disease. The selected candidate will study organoids (<https://youtu.be/cHvhWv37g74U2>) both at single cell and network level using a combination of electrophysiology (patch-clamp) and imaging equipment (wide-field, confocal, 2 photon-STED). The results will be correlated to key pathological pathways including alpha-synuclein aggregation, lysosomal and endoplasmic reticulum stress. The multidisciplinary nature of this new research project (PRIN, Research Project of National Relevance) is evident from the broad range of expertise of the PIs involved: imaging and electrophysiology (Mario Bortolozzi, VIMM), biochemistry (Massimo Aureli, University of Milan), iPSC models (Alessio Di Fonzo, Policlinico of Milan), genetics and medicine (Stefano Duga, Humanitas University).

LOCATION

The selected candidate will work at the Venetian Institute of Molecular Medicine (VIMM, <https://www.vimm.it>) in the laboratory of Mario Bortolozzi, where state-of-the-art biological and biophysical facilities are available. The VIMM is an internationally recognized institute with the mission of establishing a close link between basic and clinical research and promoting translational research. The institute is a dynamic and stimulating environment, located in an attractive historical city (close to Venice and the beautiful Dolomites Mountains).

QUALIFICATIONS

Application are solicited from candidates holding a master’s degree (or equivalent degree), with at least three years research experience, or a Ph.D. A strong scientific background involving at least two of the following techniques is required: 1) neuronal/glial differentiation of iPSCs; 2) fluorescence microscopy; 3) electrophysiology. Candidates will also be evaluated based on motivation, flexibility and proved ability to work independently.

CONTACTS

To apply for this position, candidates should send an email to mario.bortolozzi@unipd.it including:

- 1) a cover letter describing scientific experience, interests and career goals;
- 2) full CV;
- 3) the names and contact information of at least two professional references.

Applications will be reviewed immediately and considered until the position is filled (deadline: end of September 2019)

JOB DETAILS

Employer: University of Padua (Padova), Italy. Website: <http://www.unipd.it/en/>

Funding: Italian Ministry of Research and University (MIUR).

Supervisor: Mario Bortolozzi, Ph.D., associate professor at the Department of Physics and Astronomy “G. Galilei”, University of Padua. Principal investigator at the Venetian Institute of Molecular Medicine (VIMM), Via G. Orus 2A, 35129, Padua. Website: <http://www.vimm.it/scientific-board/mario-bortolozzi/>.

Job type: Research Fellowship.

Salary: 1500 euro/month (net amount, tax free). Note that this salary permits to have a good quality of life in Padua for a single person.

Employment type: 2-year contract starting from October 2019.

Job hours: Full-time.

[CfPo] [Ebsa] PhD positions in single molecule biophysics

The Kaplan lab (<https://kaplan.net.technion.ac.il>) has several openings for students interested in a PhD in experimental single molecule biophysics.

Physics students: The position involves design and construction of an advanced optical setup combining optical manipulation and fluorescence detection, and its use to characterize the interplay between chromatin dynamics and gene expression.

Biology students: The position combining molecular biology and high resolution, single molecule optical tweezers to study the interactions between transcription factors, polymerases and chromatin.

The lab is a highly interdisciplinary one, and students can expect to acquire a wide set of skills during their studies. The Technion - Israel Institute of Technology is located at the beautiful city of Haifa, on the Mediterranean coast and about an hour from Tel Aviv.

Some recent works from the lab: [Rudnizky et. al., PNAS \(2019\)](#), [Zananbiri et. al., eLife \(2019\)](#),

[Rudnizky et. al., Nature Communications \(2016\)](#)

Ariel Kaplan, PhD
Faculty of Biology & Lorry I. Lokey Interdisciplinary Center
Technion - Israel Institute of Technology
Technion City, Haifa 32000, Israel
email: akaplantz@technion.ac.il

[Congr] [Ebsa] Best platform to share your scientific research: Toxicology Congress 2019

It is with great pleasure that we welcome you to attend the **2nd World Congress and Expo on Toxicology and Pharmacology** during October 28-29, 2019 | Rome, Italy.

Benefits of Attending

- All accepted abstracts will be published in the respective Journals
- Each abstract will receive a DOI provided by Cross Ref
- Chance of B2B meeting
- Opportunity to organize Workshop/Symposium

For more details of scientific sessions and submission of abstract please click below
https://biocoreconferences.com/toxicology-congress-2019/abstract_submission.php

[WS/SY] Life Cell Single Molecule Tracking Symposium, Ulm, Germany

Dear friends and colleagues,

It is with pleasure that we invite you to attend the **Life Cell Single Molecule Tracking Symposium** taking place at **Ulm University** on **November 8-9, 2019**.

The meeting will focus on single molecule tracking in living systems. Topics are open to include developments in instrumentation and fluorophores, analysis and modeling approaches and applications to physical, biological or medical questions.

Besides the excellent line-up of speakers, there will be short talks selected from abstract submissions and poster presentations. The symposium thus will offer great opportunities for scientific exchange, networking and discussions, to spread knowledge about this beneficial methodology and to stimulate new developments. We particularly encourage early stage researchers to present their work.

We are pleased to announce our guest speakers:

Karin Busch (Münster), Robert Coleman (New York), Ignacio Izeddin (Paris), Kai Johnsson (Heidelberg), Ulrich Kubitscheck (Bonn), Davide Mazza (Milano), Jacob Piehler (Osnabrück).

The **abstract submission deadline is October 15, 2019**. Participation in the symposium is free of charge, but registration is mandatory to facilitate planning. Please refer to the meeting website for a preliminary programme, additional information and registration: <http://www.uni-ulm.de/einrichtungen/moman/livecell/info>. Please share this information with colleagues who may be interested in attending.

We are looking forward to seeing you in November for an exciting meeting!

Best regards,
Christof Gebhardt

Center for Translational Imaging
MoMAN

CRC 1279

ulm university universität **uulm**

Live Cell Single Molecule Tracking Symposium

Speakers
Karin Busch (Münster)
Robert Coleman (New York)
Ignacio Izeddin (Paris)
Kai Johnsson (Heidelberg)
Ulrich Kubitscheck (Bonn)
Davide Mazza (Milano)
Jacob Piehler (Osnabrück)

Organizer
Christof Gebhardt (Ulm)

Ulm University
N27 Multimediaroom
8.-9. November 2019

Registration and abstract submission:
www.uni-ulm.de/einrichtungen/moman/livecell/info
Abstract deadline: October 15, 2019
We gratefully acknowledge our sponsors (updated on website)

[CONF/MT] Astbury Conversation: Seeing into Cells, Leeds, UK

Join the
Astbury Conversation
23–24 March 2020

**INTERNATIONAL
CONFERENCE:
SEEING INTO CELLS**

**Network with 250+ international researchers, academics and organisations,
including world-leading contributors:**

Richard Henderson CH, FRS, FMedSci, HonFRSC MRC Laboratory of Molecular Biology	Bernd Bukau University of Freiburg	Syma Khalid University of Southampton
Marc Baldus Utrecht University's Bijvoet Center for Biomolecular Research	Bridget Carragher New York Structural Biology Center	Laura Kiessling Massachusetts Institute of Technology
Wendy Barclay Imperial College London	Anthony Hyman FRS Max Planck Institute of Molecular Cell Biology and Genetics	Wanda Kukulska LMB Cambridge

Registration is open
astburyconversation.leeds.ac.uk | [#AstburyConv20](https://twitter.com/AstburyConv20)

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CENTRE**

UNIVERSITY OF LEEDS

[CS] [Ebsa] Young Scientists Program at IUPAB 2020 Conference

The International Union for Pure and Applied Biophysics (IUPAB), the Brazilian Biophysical Society (SBBf) and the Brazilian Society for Biochemistry and Molecular Biology (SBBq) will jointly host the 20th IUPAB, 45th Annual SBBf Meeting and 49th Annual SBBq Meeting in Brazil, October 26-30, 2020. The venue for the conference will be the beautiful city of Foz do Iguaçu
<http://iupab2020.sbbq.org.br/>.

As part of the scientific activities, a satellite IUPAB-SBBf-SBBq Young Scientists Program (YSP) will be held in São Paulo, Brazil, October 22th to 24th, 2020. This program, aimed toward students and recent PhDs, will provide a unique opportunity for 40 young scientists from different countries to discuss their scientific results, novel ideas, and career development. Participants in the YSP will be selected from candidates worldwide and will receive fellowships for both the YSP and IUPAB-SBBf-SBBq Congress.

Applications for the 2020 YSP is open from May 1 to October 1 2019. Please link
<http://iupab2020.sbbq.org.br/> for updated information.

Key Dates

01/05/2019: Registration opens.

01/10/2019: Registration and abstract submission deadline.

01/12/2019: Recipients of YSP Fellowships are announced.

[CfPo] [Ebsa] PhD studentship at Queen Mary University of London (Rational design of selective modulators of skeletal myosin)

Applications are invited for the PhD studentship “Rational design of selective modulators of skeletal myosin” funded by Muscular Dystrophy UK (MDUK) and starting from January 2020 in Dr. Arianna Fornili’s group at Queen Mary University of London and Dr. Julien Ochala’s group at King's College London.

The aim of the project is to use a combination of molecular modelling and biophysics techniques to design and test small molecules that can selectively target skeletal myosin, a key component of the molecular machinery involved in muscle contraction. The main outcome will be a new set of potential myosin modulators, that is compounds that can bind to myosin and modify its function, to be used as leads in the development of drugs for severe muscle diseases such as nemaline myopathy.

More information can be found at <https://www.findaphd.com/phds/project/rational-design-of-selective-modulators-of-skeletal-myosin/?p105203>, the deadline for formal applications is on 14th October 2019.

Dr. Arianna Fornili, Lecturer in Computational Organic Chemistry
School of Biological and Chemical Sciences, Joseph Priestley Building (room G.04)
Queen Mary, University of London, Mile End Road, E1 4NS London UK
email: a.fornili@qmul.ac.uk, website: <https://afornililab.wordpress.com>

[CS] [Ebsa]Ecol de Houches "Fluorescence markers for advanced microscopy", Les Houches, France

We are delighted to announce the second edition of our school on "Fluorescence markers for advanced microscopy. From photophysics to biology".

It will be organized at the [Ecole de Physique des Houches](http://www.ecoledephysique.fr), in the french Alps, from March 29th to April 3rd, 2020

This school aims at training students and researchers to master fluorescent markers used in advanced fluorescence bioimaging: their diversity, how they actually work and what are their current development.

Invited speakers are :

[Dominique Bourgeois](#) – IBS Grenoble – France
[Peter Dedecker](#) – KU Leuven – Belgium
[Ulrike Endesfelder](#) – MPI Marburg – Germany
[Marie Erard](#) – LCP Orsay – France
[Dorus Gadella](#) – University of Amsterdam – NL

[Arnaud Gautier](#) – ENS Paris – France
[Jonathan Grimm](#) – Janelia Research Campus – USA
[Andrey Klymchenko](#) – LPB Strasbourg – France
[Melike Lakadamyali](#) – University of Pennsylvania – USA
[Emmanuel Margeat](#) – CBS Montpellier – France
[Fabienne Merola](#) – LCP Orsay – France
[Hideaki Mizuno](#) – KU Leuven – Belgium
[Ivana Nikić-Spiegel](#) – Universität Tübingen – Germany
[Amy Palmer](#) – University of Colorado – USA
[Markus Sauer](#) – Universität Würzburg – Germany
[Jerome Wenger](#) – Institut Fresnel Marseille – France
[Jörg Wiedenmann](#) – University of Southampton – UK

Registration deadline : September 30th, 2019
<https://fluorescenceleshouches.wordpress.com/>

**[WS/SY] [Ebsa] BILL2019, Bilayers at the ILL workshop, 11-13 December 2019, Grenoble, FR
- Abstracts submission closing on 6 October!**

Dear colleague,
please consider attending the BILL2019 workshop at the ILL (Grenoble, France) in December this year and meet outstanding speakers in biomembrane research (<https://workshops.ill.fr/e/BILL2019>).
The aim of the workshop is to bring together researchers working with on the physico-chemical characterization of lipid bilayers by means of experimental (including scattering and direct space techniques) and theoretical approaches.

Among the specific subjects that will be covered are:

- structure and self-assembly
- interactions
- dynamics
- natural membranes (including natural lipids for artificial membranes)
- numerical simulations
- applications of bilayer-based systems
- emerging methods

Note: The submission deadline closes on October 6!!!

Assoc.-Prof. Dr. Georg Pabst,
University of Graz, Institute of Molecular Biosciences, Biophysics Division,
Humboldtstr 50/III, 8010 Graz, Austria
phone: +43 316 380 4989, email: georg.pabst@uni-graz.at , web: homepage.uni-graz.at/de/georg.pabst/

[WS/SY] [Ebsa] XXII. Annual Linz Winter Workshop

Dear Colleague,

We would like to invite you to attend the XXII. Annual Linz Winter Workshop in Linz, Austria, held from January 31st until February 3rd, 2020.

The workshop will focus on biological single molecule research and nano-science, and include force and optical microscopy/spectroscopy techniques. It is the aim to provide a common platform for industry and academia.

Program:

Friday, January 31st, 7.00 pm: Get together and Registration.

Saturday, February 1st: Talks and Poster Sessions, Evening: City Tour & Dinner.

Sunday, February 2nd: Talks and Poster Sessions, Evening: Conference Reception.

Monday, February 3rd: Talks continued until 6 pm.

We will also arrange a skiing day in the Austrian alps on Friday, January 31st, and a Winter School for young scientists and new-comers from January 28th until January 30th.

Confirmed Speakers:

Plenary Speaker:

Hermann Gaub (LMU, Munich)

Invited speakers:

David Alsteens (UCLouvain)

Dario Anselmetti (Univ. Bielefeld)

Yves Dufrene (UCLouvain)

Georg Fantner (EPFL, Lausanne)

Marco Fritzsche (Univ. Oxford)

Gabriel Gomila (IBEC, Barcelona)

Stefan Jakobs (Univ. Göttingen)

Eric Lesniewska (Univ. Burgundy, Dijon)

Piotr Marszalek (Duke Univ.)

Pierre-Emmanuel Milhiet (INSERM, Montp.)

Shivprasad Patil (Univ. Pune)

Simon Scheuring (Cornell Univ.)

Thomas Schmidt (Univ. Leiden)

Sebastian Wood (Natl. Phys. Lab., UK)

Liming Ying (Imp. Coll. London)

Toshio Ando (Univ. Kanazawa)

Mitchell Doktycz (Oak Ridge Natl. Lab)

Ulrike Endesfelder (MPI Marburg)

Laura Finzi (Emory Univ.)

Ricardo Garcia (CSIC, Madrid)

Rainer Hillenbrand (NANOGENE)

Alexander Jesacher (MedUniv. Innsbruck)

Hongbin Li (UBC Vancouver)

Mervyn Miles (Univ. Bristol)

Joon Won Park (Postech, Pohang)

Matthias Rief (Tech. Univ. Munich)

Ulrich Schmid (TU Vienna)

Wesley Wong (Harvard Univ.)

Sunney Xie (Peking Univ.)

We would very much look forward to your coming and participation. Further information and registration is available at <https://www.iku.at/institut-fuer-biophysik/veranstaltungen/linz-winterworkshop/>.

Important dates:

Registration and abstract submission deadline: December 1st, 2019.

Sincerely yours,

Peter Hinterdorfer & Gerhard Schütz

Conference Chairs

[Newsletter closed on 25/09/2019]