



# **NEWSLETTER 2020**

# # 2 – February

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## [by SIBPA] [CONGR] Congresso Nazionale congiunto SIBPA-SIFB 2020, Parma

www.sibpa-sifb2020.unipr.it



Convegno congiunto SIBPA - SIFB 2020

7-9 luglio 2020 Università di Parma



# Società Italiana di Biofisica Pura e Applicata XXV Congresso Nazionale SIBPA 2020

Società Italiana di Fotobiologia Congresso Annuale SIFB 2020

# Topics

**Molecular Biophysics** 

**Cell and tissue Biophysics** 

Systems Biophysics/ Environmental Biophysics

Light-responsive materials

Light and human health

In vitro photodynamic investigations: focus on antimicrobial and antitumoral strategies

**Applied Photobiology and Biophysics** 

Photobiology and Biophysics at the nanoscale

Optical and spectroscopic methods applied to Biology and Medicine









www.sibpa-sifb2020.unipr.it





#### [CfPO] PhD position in single cell mechanical phenotyping, University of Glasgow, UK

Looking for a PhD student to join the Ctr for the Cellular Microenvironment (<u>http://glasgow.thecemi.org</u>) at the Glasgow Univ. The student will be involved in a project run in collaboration with the chidren hospital Giannina Gaslini (Genova, I) to characterize the mechanical fingerprints of single cells extracted from patients affected by a rare myogenic disorder (CIPO), with the ultimate aim to find a reliable marker to be exploited towards early diagnosis of the disease.

#### Deadline: March 20 2020.

More details and how to apply at: <u>https://www.findaphd.com/phds/project/phd-in-engineering-identification-of-label-free-biomarkers-in-visceral-myopathy/?p119083</u>

Massimo Vassalli |University of Glasgow | massimo.vassalli@glasgow.ac.uk

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#### [CfPO] Five PhD positions in Neurobiology at SISSA, Trieste

The PhD Course in Neurobiology of the International School for Advanced Studies has 5 PhD Student positions available.

#### Deadline for applications on April 3, 2020.

PhD interviews will take place on May 25-26, 2020 at SISSA or through Skype.

The PhD program is concentrated into 3-4 years, with small research groups. Lecturers and students are from several countries. All activities are in English. For further information about the PhD course, see <a href="http://phdneurobiology.sissa.it/">http://phdneurobiology.sissa.it/</a> a/o contact Menini (PhD Coordinator) menini@sissa.it.

Projects available include:

- Somatosensation
- Peripheral Nervous System
- Olfactory Systems and Ion Channels
- Synaptic Neurophysiology and Neuronal Networks
- Bionanotechnology
- New Materials and Neurons
- Dynamics and time scales of neuronal excitabilityNeuronal networks properties
- Role of noise in the nervous system
- Biophysical modelling of the nervous system
- Spinal networks patho-physiology and locomotion
- Interfaces to simultaneously stimulate and record signals from the spinal cord
- Computational modelling of ion channels, neurons, and networks
- Information processing and excitability in neocortical neurons
- In vitro optogenetic control of neuronal networks



## [CfPO] [Ebsa] 3 year PhD position - Galvagnion group - University of Copenhagen

3 year PhD position in protein biophysics available from June 2020: <u>https://candidate.hr-</u> <u>manager.net/ApplicationInit.aspx/?cid=1307&departmentId=19005&ProjectId=151319&MediaId=5&</u> <u>SkipAdvertisement=false</u>

The PhD project aims at understanding how protein-protein and protein-lipid interactions can switch from functional to deleterious and lead to protein deposition in the context of Parkinson's Disease. We are a looking for a highly motivated candidate with an expertise in molecular biology, recombinant protein production and protein biophysics.

The PhD project is founded by a Carlsberg Foundation Young Researcher Fellowship grant and will be held in the group "Protein-membrane interactions in health and disease" at the department of Drug Design and Pharmacology, at the University of Copenhagen, Denmark:

https://drug.ku.dk/disciplines/peptides-and-proteins/protein-membrane-interactions-in-health-anddisease/

For more details, follow the links above or contact Céline Galvagnion at <u>celine.galvagnion@sund.ku.dk</u>.

The closing date is March 12th, 2020.

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### [CfPO] [Ebsa] PhD-student in simulation of assembly of bio-molecules using pH

We are looking for a PhD student at the Department of Applied Physics of KTH Royal Institute of Technology, Stockholm, Sweden.

In this project the assembly of bio-molecules into fibers is studied using atomistic molecular dynamics simulation. In experiments, assembly is often controlled using pH, but protonation states of individual surface groups cannot be measured.

With a new dynamic protonation algorithm, implemented in the popular simulation package GROMACS, we can efficiently generate correct protonation states in simulations. This can be used for rational optimization of assembly conditions and products.

#### Deadline: March 15, 2020.

More details and how to apply at: <a href="https://www.kth.se/en/om/work-at-kth/lediga-jobb/what:job/jobID:314612/where:4/">https://www.kth.se/en/om/work-at-kth/lediga-jobb/what:job/jobID:314612/where:4/</a>

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[CfPO] Two Post-doc positions, FMP (Leibniz-Forschungsinstitut fuer Molekulare Pharmakologie) and MDC (Max-Delbrueck-Centrum fuer Molekulare Medizin), Berlin

# Postdocs in Electrophysiology and/or Cell Biology

#### in the group of Prof. T.J. Jentsch (FMP/MDC, Berlin)

In ERC- and DFG-funded projects, we investigate the structure-function, cell biology and physiology of anion channels in cell culture and in newly generated genetic mouse models. Projects are focused on the newly identified ASOR/TMEM206 and VRAC/LRRC8 anion channels, and on selected members of the CLC family of chloride channels and transporters. Intriguingly, VRAC channels not only transport chloride, but also organic molecules including neurotransmitters and drugs.

We are an international, highly interdisciplinary group with a strong interest in elucidating the role of anion channels in the physiology and pathology of various organs, which include e.g. the brain, endocrine cells, and the kidney.

We are looking for highly motivated young scientists with a solid background in physiology and cell biology and a keen interest in science. For the first position, we expect previous experience in electrophysiology, preferably in patch-clamp analysis of tissue (e.g. brain) slices, or alternatively in biophysics and structurefunction analysis of channels. Experience in ion concentration imaging and/or programming would be an asset. The successful candidate will have the opportunity to extend her/his expertise to other areas in molecular and cell physiology.

For the second position, the ideal candidate should have solid practical experience and theoretical background in cell biology, and preferably also in physiology and histology. Previous experience in the study of intracellular organelles and trafficking would be an asset as an important focus of our work concerns ion transport in endolysosomes.

Our lab is well equipped with several patch-clamp setups, ion imaging, confocal microscopy and all common equipment for molecular cell biology and morphology. We have direct access to the outstanding core facilities of the FMP and the MDC, generously funded academic non-university research institutes.

Both positions are available immediately. Please send your application, including motivation letter, CV, and names and contacts of references, to Prof. Thomas J. Jentsch, <u>jentsch@fmp-berlin.de</u>.

Selected recent publications:

Voss F.K., Ullrich F., Münch J., Lazarow K., Lutter D., Mah N., Andrade-Navarro M.A., von Kries J.P., Stauber T., Jentsch T.J. (2014). Identification of LRRC8 heteromers as an essential component of the volume-regulated anion channel VRAC. *Science* 344, 634-638.

Stuhlmann T., Planells-Cases R., Jentsch T.J. (2018). LRRC8/VRAC anion channels enhance β-cell glucose sensing and insulin secretion. Nature Communications 9:1974

Ullrich F., Blin S., Lazarow K., Daubitz T., von Kries J.P., Jentsch T.J. (2019). Identification of TMEM206 proteins as pore of PAORAC/ASOR acid-sensitive chloride channels. *eLife* 8.

Göppner C., Orozco I.J., Hoegg-Beiler M.B., Soria A.H., Hübner C.A., Fernandes-Rosa F.L., Boulkroun S., Zennaro M.C., Jentsch T.J. (2019). Pathogenesis of hypertension in a mouse model for *CLCN2*-related hyperaldosteronism. *Nature Communications* 10: 4678.

Visit our webpage http://www.fmp-berlin.de/jentsch.html to know more about our lab.

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## [CfPO] [EBSA] Postdoctoral position at the Federal University of São Paulo, Brazil

# Postdoctoral position in Membrane Biophysics to study the interaction of antimicrobial peptides with model membranes at the Federal University of São Paulo, Brazil

We are seeking a talented and motivated postdoctoral fellow to join our team in the Department of Biophysics at the Federal University of São Paulo in the city of São Paulo (Brazil). The aim of the project is to investigate the interaction of antimicrobial peptides with membranes of different lipid compositions. The insertion and orientation of the peptides in the membranes, as well as the integrity and structure of the lipid bilayer will be determined by biophysical techniques, such as fluorescence, CD, calorimetry, optical microscopy of GUVs, electrical measurements in bilayers, EPR or SAXS. These methods can reveal relationships between the composition of the membrane and the activity of these peptides. This project is a part of the Thematic Project entitled "Nanostructured systems: from membrane biomimetic models to carriers of bioactives" supported by FAPESP (2016/13368-4).

Interested candidates should send a short CV (up to 3 pages) highlighting the expertise in the area and a Motivation Letter describing their interest in the position and their proposal to contribute to the project (one page) to the contact below. Previously selected candidates must send two Letters of Recommendation and will be interviewed in person or online if the pre-selected candidate is outside of São Paulo.

The vacancies are open to Brazilians and foreigners. The selected candidate will receive a Postdoctoral Scholarship from FAPESP in the amount of R\$ 7,373.10 monthly and an additional 15% of the annual scholarship amount to meet unforeseen expenses and directly related to the research activity. This is a full time post for a period of up to 24 months. http://fapesp.br/oportunidades/3409/

Contact information: Dr. Karin A. Riske (<u>kariske@unifesp.br</u>) Department of Biophysics, Unifesp Rua Pedro de Toledo, 669, 9º andar, CEP 04039-032, São Paulo, SP, Brazil

Deadline application: February 28th, 2020

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# [CS] [Ebsa] REGISTRATION OPEN: 15<sup>th</sup> Intl School of Biophysics, 27/8-5/09-2020, Croatia

The registration for the 15th School is open, please note that the EBSA grants are available. The intense hands-on training component, with 10 experimental and theoretical modules to select from, will be held at the University of Split, Aug 27-31. The School will then move (by ship :-) ) to the town of Primošten (Sep 1-5, 2020).





# NEWSLETTER 2020, # 2 – February

## [CS] School of Physical Chemistry 2020, Accademia Pontiana, Napoli







# School of Physical Chemistry 2020

# Supramolecular Interactions in Biological Systems Naples June 8<sup>th</sup>-12<sup>th</sup>



The Physical Chemistry Division of the Italian Chemical Society is pleased to announce the national School of Physical Chemistry 2020. This year's topic is Supramolecular Interactions in Biological Systems.

The School of Physical Chemistry 2020 will be held in the beautiful city of Naples at Accademia Pontaniana in Via Mezzocannone 8.

It will start on Monday June 8<sup>th</sup> at 13:00 and will end on Friday June 12<sup>th</sup> at 13:00.

Lectures will be oriented to graduate students, PhD students, postdocs and young researchers, covering a comprehensive path from fundamental aspects to cutting-edge applications of physico-chemical methods and models for the study and the characterization of supramolecular interactions in biological systems.

The registration fee is 300 € and includes the welcome buffet on Monday, the lunches from Tuesday to Thursday and all the coffee breaks. Thanks to the financial support of the Physical Chemistry Division of the Italian Chemical Society 4 grants covering the registration fee will be made available.

Students are invited to present a poster on their research activity, which will be discussed during coffee breaks.

Visit <u>irenerussokrauss.wixsite.com/ilmiosito</u> for more information and registration





# [CONF/MT] [Ebsa] 60th Anniversary meeting of the British Biophysical Society (BBS)

60th Anniversary meeting of the British Biophysical Society, University of Nottingham 1-3 July 2020

Registration is now OPEN at: https://britishbiophysics.org/posts/2019/2019-05-5-bbs2020/

The British Biophysical Society Biennial meeting is the largest national meeting of the UK biophysics community and this edition is particularly special as it celebrates the 60th Anniversary of the creation of the society.

Biophysics through time and space: The BBS@60' will be the 60th Anniversary Meeting of the British Biophysical Society, to be held at the University of Nottingham, on 1st to 3rd July 2020.

Young researchers are particularly encouraged to submit their abstracts, as approximately 50% of all talks will be selected from the submitted abstracts.

#### Abstract submission deadline: 15th May 2020. Early registration deadline: 1st May 2020.

#### Registration deadline: 5th June 2020

Invited Speakers:

Prof Richard Henderson FRS, MRC Laboratory of Molecular Biology, Cambridge Prof Banafshe Larijani, Center for Therapeutic Innovation, University of Bath Prof Perdita Barran, University of Manchester Prof Anthony Watts, University of Oxford Dr Allen Orville, Diamond Light Source, Harwell Dr Amanda Wright, Optics and Photonics Group, University of Nottingham Dr Tim Knowles, School of Biosciences, University of Birmingham Dr Tom Clarke, University of East Anglia Dr David Brockwell, University of Leeds Prof. Mike Fried, University of Kentucky Prof. Ben Luisi, University of Cambridge Prof. Peter Crowly, NUI Galway, Ireland Dr Corinne Smith, University of Warwick

For more information, visit: <u>https://britishbiophysics.org/posts/2019/2019-05-5-bbs2020/</u>







# [CONF/MT] [Ebsa] European Membrane Meeting in Graz -- Abstract Submission Deadline is Approaching

The deadlines for submitting abstracts to the 7<sup>th</sup> European Joint Theoretical/Experimental Meeting on Membranes (EJTEMM 2020), May 6-8 2020 in Graz (Austria), as well as early registration are approaching rapidly (**March 01, 2020**).

Note that we do have also travel funds (EBSA bursary) for a limited number of students. For further information, please see our conference homepage (<u>https://7th-european-membrane-meeting.uni-graz.at/en/</u>).

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[Newsletter closed on 25/02/2020]