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International Union for Pure and Applied Biophysics

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Report from the Secretary General

Juan Carmelo Gómez-Fernández

IUPAB Secretary General

Once again IUPAB must thank to our Adhering Bodies, National Societies of Biophysics and to the Biophysics Community for their support during the special and difficult times that we are living due to the pandemia and wishing that all of you are keeping safe.

The 20th IUPAB Congress will be held on October 4th-8th 2021 in a virtual format. You will find information about it in this issue, together with an invitation letter from the organizers. This is the main activity of IUPAB and therefore you are all invited to participate. During this Congress the Avanti-IUPAB prize will be presented to Prof. A. Watts and the IUPAB-Young prize will be presented to Dr. Yoav Shechtman. In association with the Congress an IUPAB General Assembly will be held and during it the new elected officers will take office. This General Assembly will take place at 14:30 hours, on October 6th, 2021. The new Officers and Councillors of IUPAB are listed, with biographical details, in this issue.

To attend the virtual General Assembly it will be necessary to register. Only the appointed delegates of the Adhering Bodies, the Councillors and the Councillors elected will not need to register. But the Observer Adhering Bodies will have to designate delegates and also any other person from the Biophysics community. The registration must consist in an application sent to the Secretary General before September 22nd, 2021



Secretary General, Juan Carmelo Gómez-Fernández



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(jcgomez@um.es).

During the first week of September it was just confirmed by online vote of the delegates that the venue for the IUPAB 2027 IUPAB Congress will be Berlin (Germany) and the organizers will make a presentation during the Congress.

The two IUPAB Focused Meetings due for 2021, to be held in India and in Canada, were postponed to 2022 and details about them should be known soon.

The 2023 Congress due to be held in Kyoto in June 2023 was postponed to similar dates but of 2024. The organizers will make a presentation during the General Assembly about the state of the organizational process.

Please remember the new modalities of sponsoring policies of IUPAB <u>here</u>. These new modalities are:

-Sponsorship of a prize for

communications made by students or young biophysicists.

Societies of countries linked to IUPAB as Adhering Bodies may apply for this prize to ne awarded to presentations made by young biophysicists during meetings of these societies. The prize could also be given during meetings of associations of young biophysicists. See in this <u>link</u> the details to be taken into account:

-Sponsorship of Plenary Lectures in major biophysics meetings and conferences.

IUPAB will sponsor plenary lectures in major meetings or congresses of biophysics like those of EBSA (Europe), ABA (Asia-Pacific), Biophysical Society and LaFEBS (Latin American countries). See this <u>link</u>.

Applications should be sent to the Secretary General (jcgomez@um.es).

Best wishes from IUPAB Secretary General.

Executive Committee

President Manuel Prieto

Manuel Prieto is Full Professor of Instituto Superior Técnico (IST), of "Universidade de Lisboa" (Portugal). His work in Molecular and Cell Biophysics obtained international recognition in the area of advanced photophysical methodologies, namely on the application of state-of-the art fluorescence methodologies, both in ensemble average and under the microscope, allowing to retrieve topological and dynamic information on biological systems, using quantitative approaches. Examples of the broad research interests are membrane biophysics such as phase diagrams, detection and study of membrane nanodomains, lipid-protein/peptide and lipid-DNA interactions, amyloid fiber formation, and ion channels.

Officers and Members of the Council

After the elections recently held the list of Officers and Members of Council will be the following (they will take office at the end of the General Assembly that will take place on October 6th, 2021.

President: Manuel Prieto Past President: Marcelo Morales President Elect: Anthony Watts

Secretary General: Juan C. Gómez-Fernández

Treasurer: Christina Sizun

Councillors:

Gabriela Amodeo

Anastasia A. Anashkina

John Baenziger Matthew Baker V. R. Chary David Crossman Ana Denicola Hans-Joachim Galla Angela M. Gronenborn Takayuki Nishizaka Peter Pohl Gabriella Viero



He has been deeply involved in international organizations, namely in Europe and Latin America, was a former President of EBSA and is a regular collaborator of <u>international agencies</u> e.g., at the EU.



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Past President Marcelo Morales

Graduated in Medicine from the University of São Paulo (1995) and Ph.D. in Biological Sciences (Biophysics) from the Federal University of Rio de Janeiro (1998). Morales is currently a Full Professor at the Federal University of Rio de Janeiro, where his line of



research is focused on the area of Biophysics and Physiology, with an emphasis on Biophysics and Cellular and Systems Physiology (Renal and Respiratory) and Molecular Biology. He works mainly on the following topics: a) Gene expression of ion transporters in the renal and pulmonary epithelium; Cell Therapies (stem cells) in models of kidney and lung disease; c) Gene Therapy in animal models using viral and non-viral vectors (nanoparticles) in prevalent diseases. Its preclinical research results are already being tested in humans, as is the case with therapy using bone marrow-derived stem cells for the treatment of pulmonary silicosis, asthma, emphysema, segmental and focal glomerulosclerosis. He has an important role in Brazilian and International scientific policy: He was General Secretary and President of the Latin

American Federation of Biophysical Societies (LAFeBS), Former President and Secretary General of the Brazilian **Biophysics Society (SBBf), Former** Coordinator of the Brazilian Council of **Animal Experimentation Control** (CONCEA) of the Ministry of Science and Technology and Innovation (MCTI), Member of the Council of the International Union of Biophysics (IUPAB). He was also Coordinator of the Latin American Graduate Program in **Biophysics (POSLATAM - linked to** IUPAB), Secretary of the Brazilian Federation of Experimental Biology Societies (FESBE), Secretary of the Brazilian Society for the Advancement of Science (SBPC). He was Director of Agricultural, Biological and Health Sciences at Brazilian Nacional Council For Research (CNPq) (2014-2019) and assumed the interim Presidency of CNPq (September to December 2016) and the role of Deputy President (2015-2019). He is currently the President of the International Union of Pure and Applied Biophysics (IUPAB) (for 2017-2021), and Full member of the Brazilian Academy of Sciences, the National Academy of Medicine and the National Academy of Pharmacy. He is the current Secretary of State for Policies for Training and Strategic Actions at the Ministry of Science, Technology, Innovations and Communications of Brazil.

President Elect Anthony Watts

Tony Watts is at the Biochemistry Department, Oxford University, Oxford UK, since 1980, being a full time Tutorial Fellow at St Hugh's College, Oxford, finally taking the role as Vice-Principal (2015-2017). Currently he is an Emeritus

Professor at this University. He has being interested in spectroscopic techniques, like ESR and NMR applied to membranes and also to applications like Lipodiscs. He has been very active with the British Biophysical Society, being chair of this Society and also a member of the Executive Committee of the **European Biophysical Societies'** Association (EBSA) and President of this Association. He has been managing editor of the European Biophysics Journal, Editor in Chief of Biophysical Chemistry and an Associate Editor of the Biophysical Journal, Tony also sat on the editorial board of and several other Journals. He is also a Fellow of the Royal Chemical Society, the Institute of



Physics, the Royal Society of Biology and the Biophysical Society, as well as recipient of several national and international awards. In October 2021, Tony assumed the role of Presidentelect of IUPAB.

Secretary General Juan C. Gómez-Fernández

Emeritus Professor at the Department of Biochemistry and Molecular Biology A, University of Murcia. Spain. Editorial Boards: Chemistry and Physics of Lipids (Elsevier); Biomedical Spectroscopy and



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Imaging (IOS Press). Biophysical Reviews (Springer). Biomolecules (MDPI). Professional Memberships: President of the Spanish Biophysical Society (2010-2014). -President of the Academy of Science of Murcia (2015-2019). Secretary General of the International Union for Pure and Applied Biophysics



since 2017 and currently. Current Research interest: My current research interests are related to the interaction with lipids of PKCs isoenzymes and to molecular interactions in membranes and the application of nanoparticles in Medicine and Technology.

Treasurer Christina Sizun

Christina Sizun received a PhD degree in physical chemistry from the University of Strasbourg in 2001. She developed her interest in Nuclear Magnetic Resonance, in the liquid and solid state, and first applied it to inorganic catalysis, then to biological molecules. After postdoctoral stays at the Max Planck Institute for Biochemistry in Martinsried and at the European Institute for Chemistry and Biology in Bordeaux, she was appointed a permanent researcher position at the French National Center for Scientific Research in Gif-sur-Yvette. one of the high field NMR locations in France. She is presently a group leader.



She investigates the structure and dynamics of viral proteins, notably of respiratory syncytial virus, to establish the structural bases of their mechanisms and assess their potential as antiviral targets. She is involved in biological NMR teaching and has been active in the French Biophysical Society for several years.

Councillors

Gabriela Amodeo

Ph.D. in Biology, Universidad Nacional del Sur, Argentina Associate Professor, Departamento de Biodiversidad y Biología Experimental, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires Principal Investigator, IBBEA (UBA-CONICET)



Contact: amodeo@bg.fcen.uba.ar Fulbright Scholar (2004) Past-President Sociedad Argentina de Biofísica (2015-2016) Member of the Biophysics Node in AUGM (Asociación de Universidades Grupo Montevideo) Research field: plant aquaporins, physiology and biophysics, plant water relations ORCID ID: 0000-0003-3350-4750

Anastasia A. Anashkina

Anastasia A. Anashkina - Secretary of National Committee of Russian Biophysicists. She is a senior researcher in the Laboratory of protein-DNA



interactions, Engelhardt Institute of Molecular Biology Russian Academy of Sciences. Anastasia A. Anashkina is a Lecturer at the Sechenov First Medical University. She supervises student's graduate and postgraduate works.

John Baenziger

John Baenziger is a professor in the Faculty of Medicine at the University of Ottawa in Ottawa, Canada. His research is focused on understanding the



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structures and mechanisms of function of pentameric ligand-gated ion channels, such as the nicotinic acetylcholine receptor. In particular, his lab has made seminal contributions to understanding of the mechanisms by which lipids modulate the activity of the nAChR. He has been an active member in the biophysical community serving as President of the Biophysical Society of Canada from 2014 -2019, Treasurer of





International Union of Pure and Applied Biophysics (IUPAB) from 2017 - 2021 and as the Canadian Ambassador to the Biophysical Society, 2019-. He has also served in many leadership positions, particularly with regards to graduate studies, at the University of Ottawa.

Matthew Baker

Dr <u>Matt Baker</u> is a Senior Scientia Lecturer and Group Leader in the School of Biotechnology and Biomolecular Science at the University of New South Wales (UNSW) in Sydney, Australia. He applies methods in synthetic and evolutionary biology to engineer and investigate the motors that make microbes swim and the proteins that sense force. Matt completed his DPhil in the Department of Physics in Oxford University in 2011 and started his group



at UNSW in Synthetic and Structural Biology in 2018. He was elected Vice-President of the Australian Society of Biophysics for 2019-20, and is the current President of the Australian Society of Biophysics (2021-2022) and the Secretary of the Australasian Evolution Society.

of Physiology, University of Auckland. He is internationally recognised for his work on cardiac muscle cell remodelling in the failing human heart. His research is noted for its originality, leading to new understanding of the sub-cellular processes that drive the pathophysiology of heart failure. He is an expert in state-of-the-art fluorescence imaging including confocal microscopy and super-resolution microscopy that is providing unprecedented nanoscopic insight into cardiac disease and leading the way in discovering new targets for therapeutic intervention.

Ana Denicola

Ana Denicola, Pharmaceutical Chemist from Universidad de la República,



Uruguay (1984) and Ph.D. in Biochemistry from Virginia Tech, Va, USA (1989). She is Full Professor and Head of Physical Biochemistry, School of Science, Universidad de la República, CEINBIO, PEDECIBA and level III SNI (Sistema Nacional de Investigadores), Member by number of the National Academy of Science of Uruguay (ANCiU).

Line of research is redox biochemistry, oxidative stress and associated diseases, with 90 publications, book chapters,

K. V. R. Chary

Director& Professor, Indian Institute of Science Education and Research Berhampur, Transit Campus, Government ITI Building, Berhampur, Engineer School Junction, National Highway 59, Berhampur, India

David Crossman

David is director of the Cardiac Nanobiology Group in the Department





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conferences, international courses, editorial board member, many master and doctoral thesis directed. L'Oréal-UNESCO Prize 2009 "Por las mujeres en la ciencia". Premio Morosoli de Plata 2014 in science and technology.

Hans-Joachim Galla

Prof. Emeritus. Institute for Biochemistry, University of Münster, Germany

Angela Gronenborn

Angela M. Gronenborn currently holds the UPMC Rosalind Franklin Professorship and Chair of the Department of Structural Biology. She is also a Professor of Bioengineering and Chemistry at the University of Pittsburgh. Throughout her career, Dr. Gronenborn was involved in developing NMR methodology for structure determination of biological



macromolecules. In the area of HIV research, Dr. Gronenborn directs the Pittsburgh Center for HIV Protein Interactions (PCHPI). Dr. Gronenborn served on numerous Scientific Advisory Boards, the Council of the Biophysical Society (President in 2018-2019). She trained more than 50 graduate students and post-doctoral fellows and authored more that 500 peer-reviewed publications. Dr. Gronenborn is an elected Fellow of the Royal Society of Chemistry (UK), the American Association for the Advancement of Science and the International Society of Magnetic Resonance. She was elected to the National Academy of Sciences (US), the Norwegian Academy of Arts and Sciemces Letters, the German National Academy of Sciences and the American Academy of Arts & Sciences.

Takayuki Nishizaka

Dr. Nishizaka is a professor in the Physics Department of the historically celebrated Gakushuin University, the oldest private university in Japan, located in Tokyo. Gakushuin ranks first of the Japanese universities in quality of research in the Natural Sciences, and his research in Biophysics has strongly contributed to the high score (see the article <u>Nature 555, S73 (2018)</u>). He has been worked as Executive Committee in Asian Biophysics Association (ABA) and Administration Officer for International Affairs in Biophysical Society of Japan (BSJ).

His early career focused on the study of eukaryotic linear motor proteins. This included the development of advanced optical microscopes to study biomolecules at the single molecule level. Later, Nishizaka expanded his interests to motors of organisms in the Bacteria and Archaea Domains, which culminated in landmark publications outlining mechanisms for how these molecular machines function. He is the



only researcher who has embarked on understanding the molecular mechanisms of not only all representative motor families in eukaryotes (myosin, kinesin and dynein), but also bacterial machineries (those in *mycoplasma*, *cyanobacteria* and *spiroplasma*) and archaeal flagella motor. In addition, he contributed to the visualization of the mechanics and chemical reaction of the world's smallest rotary motor, F1-ATPase, for the first time and deciphered its sophisticated working with technical *tour de force*.

Peter Pohl

Full Prof. Biophysics, Kepler University Linz, Austria

Gabriella Viero

Gabriella Viero is group leader of the Laboratory of Translational Architectomics at the Institute of Biophysics (CNR Italy). Her research is dedicated to RNA biology, translation and motor neuron diseases. The laboratory is interestd in studying ribosomes and polyribosomes by uniquely combining biophysical



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approaches with sequencing techniques. The lab is seeeking to move forward strong interdisciplinary

approaches in biophysics, combining expertise in biophysics, biochemistry, mathematics, IT, neuropathology and cell biology. The laboratory has developed methods for characterizing polysomes in troublesome biological samples by POL-Seq and RIBO-Seq and computational tool for data analysis. During her career she published 50 papers in high impact journals (Nat. Cell Bio.; J.Cell Biol; Nucleic Acids Res; Cell Rep; Mol Cell; Nat Commun; Proc Natl Acad Sci USA; Immunity, PLOS Comput Biol and others).

Biophysics in Virology: A conversation with Peter Palese

Luis Martinez-Gil, ERI BioTecMed, UV, Valencia (Spain)

*This article has been reproduced from "Biofísica Magazine" (SEB), Issue 16(1) - Jan-Apr 2020, with the permission of the publisher

As we have seen in this section, biophysics is a highly interdisciplinary field, capable of merging with many other branches of science such as biochemistry, medical physics, cell biology, microbiology, mathematics, and immunology. Like probably many of you, as a result of this integrative nature, throughout my career I've



Luis Martinez-Gil

walked the line between biophysics and other scientific areas – in my case specially virology. So, when I was asked to contribute to **Beyond Biophysics**, I jumped at the chance as it fits right into my scientific interests.

In the past few years, the outbreaks of *Ebola*, *Zika*, and other viruses like

Dengue and **Nipa**h, have prompted an increase in concern about viral-based infectious diseases. Given the worry expressed by governments,

organizations, the mass media, and as a result, by society at large, it seems to be the right moment to focus on what biophysics and biophysicists can contribute to and learn from the investigation of viruses, viral diseases, and their treatment and prevention. To discuss this and other related topics, I had a conversation with PROF. PETER PALESE, a world-class authority in virology and without a doubt one of the most respected voices when it comes to RNA viruses.

DR. PETER PALESE is Chair of the Department of Microbiology at the Icahn School of Medicine at Mount Sinai in New York City. He is one of the world's most accomplished virologists, with an astonishing scientific CV that includes more than 400 publications. He established the first genetic maps for influenza A, B, and C viruses; identified the function of several viral genes; defined the mechanism of neuraminidase inhibitors; and revealed that most negative-strand RNA viruses possess proteins with interferon antagonist activity. Furthermore, DR. PALESE pioneered the field of reverse genetics for negative-strand RNA viruses, allowing the introduction of site -specific mutations into viral genomes. This revolutionary technique has proven crucial for the study of the structure/ function relationships of viral genes, for the investigation of viral pathogenicity, and the development of novel vaccines. Among other breakthroughs, reverse genetics allowed DR. PALESE and his colleagues to reconstruct and study the pathogenicity of the highly virulent but extinct 1918 pandemic influenza virus (the "Spanish flu"). In recent years, he has focused on the development of a universal influenza vaccine, a tremendous challenge that would (and most likely will, thanks to DR. PALESE'S efforts) provide crossprotection against many influenza strains.

LMG: Traditionally virology, like



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biophysics, has been an interdisciplinary field. In fact, there has always been a strong interaction between these two areas. There are many examples of this intense collaboration in the study of protein-lipid interactions, membrane dynamics, and ion channels. More recently, the research on intrinsically disordered proteins has also been a meeting point for virology and biophysics.

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PP: The discipline of virology is barely 100 years "young" and took its early steps learning about virulent pathogens in plants (tobacco mosaic viruses) and animals including humans (Rous sarcoma virus, poliovirus). In the last fifty years, virology has made tremendous progress by drawing in researchers from many fields. First, it was the area of biochemistry which fertilized virology. A prime example is the discovery of the viral enzyme reverse transcriptase, which was not only a unique scientific breakthrough, helping us in understanding cancer and other diseases, but was also the driving force for an entire industry. Biotechnology, as a major business, would not have happened without the discovery of reverse transcriptase. A large percentage of new FDA-approved medicines are biologicals and they were made possible by this technological advance. Modern virology has been the driving element for many significant discoveries over the last several decades, just to name a few: Splicing of genes, development of new vaccines, introduction of new antivirals, gene therapy, etc. Most of these discoveries have only been possible by the introduction of sophisticated biophysics -based assays and methodologies.

The discovery of the viral enzyme reverse transcriptase was a unique scientific breakthrough and a driving force for an entire industry

virology has become a discipline by itself we have come a long way but, clearly, we still have a lot of work to do. In your opinion, what are the current challenges

in virology? And, in which of these can biophysicists participate?

PP: The megatrends in virology concern the appearance of highly pathogenic emerging viruses , the difficulties caused by resistance to antivirals, the increase of the aging population in many parts of the world, the availability of big data and the need for new and better vaccines. Colleagues, who have good training in physics, biophysics and

mathematics, may be needed to push along these fields and help in advancing progress. Biophysics will be most helpful in developing in vitro as well as in vivo animal models. Quantitative methodologies are simply de rigeur for modern science and computational biology is here to stay. We, virologists, need all the help we can get!

LMG: A huge effort is underway in the virology community to develop not only new but improved vaccines. You and your team are a great example, as you are working hard on establishing advanced vaccines for influenza. What do you think future vaccines will do, that the current ones don't? **PP:** Viral vaccines have been extraordinarily successful. Just consider the eradication of *smallpox* worldwide and the major impact of vaccines on diseases such as measles, mumps, poliomyelitis, and rubella. However, we have only a dozen protective vaccines against viruses and there are many many more deadly viruses, against which we have no effective vaccines, among them *HIV*, *hepatitis C*,



Prof. Peter Palese

cytomegalovirus, Ebolavirus - just to name a few. Also, some vaccines show variable effectiveness and we would be greatly helped by novel and improved vaccines which would drastically reduce morbidity and mortality associated with infections by these agents. Influenza vaccines fall into this latter category. The current influenza vaccines are better than their reputation, but there is a real medical need to develop safe, long-lasting, highly protective and cheap vaccines against these variable respiratory agents. One approach which, at the present time, is followed up by many different research groups

LMG: Certainly in the short time that



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focuses on the design of vaccine constructs which induce a protective immune response against **conserved domains** in the virus. Such vaccines inducing protection by virtue of eliciting antibodies against the non-variable part of the virus are currently in human trials. It is hoped that they will be effective against constantly changing seasonal as well as pandemic strains.

Much effort is directed towards developing novel **virus-like particles** for use in vaccines taking advantage of biophysical advances in producing stable and highly immunogenic preparations. Also much work is done improving adjuvants which are dosesparing and have the capability of dramatically enhancing the efficacy of vaccines in the

future. It is highly likely that these novel approaches

We have only a dozen protective vaccines against viruses

will change our armamentarium of effective and safe vaccines against many viruses and possibly cancer as well.

LMG: Previously, you mentioned the appearance of highly pathogenic emerging viruses. Indeed, recently we have witnessed Ebola and Nipah outbreaks in Africa and South-East Asia respectively, as well as the spread of mosquitotransmitted viruses such as Zika and Dengue. Do you think these appearances are due to the impact of the human population (global warming, increased mobility at a global scale, and overpopulation)? Or have viruses simply always come and gone and we just happen to have become better at identifying new infections?

PP: Viruses have been with us forever and evolutionary studies have shown that certain DNA viruses including herpesviruses and papilloma viruses have had a long (possibly) symbiotic relationship with humans. Whether some of the newly

emerging viruses including HIV, Nipah viruses and SARS are

really novel is questionable. In days past the diagnostic procedures were not good enough to identify and quantitate small amounts of emerging viruses. Thus, it is possible that these viruses have been around but have been under the radar – so to speak. Alternatively, these emerging viruses may have formed only recently or have been transmitted from animals to humans not so long ago. The extraordinary increase in agriculture resulting in vast numbers of farm animals as well as the

> rise in the human population may have increased the chances that large

quantities of viruses have replicated and that novel viruses have taken hold in these populations. Also, new mutations may have occurred in these viruses resulting in greater virulence and transmission. Thus, environmental factors may well have been the root of this (apparent) increase in emerging viruses.

LMG: Translational research is a common practice in virology. I believe virologists have done a terrific job transforming basic research knowledge into clinical or industrial applications.

What are your thoughts on this matter? What advice would you give to a young biophysicist willing to move from basic

Environmental factors may well have been the root of the apparent increase in emerging viruses

to applied research?

PP: Interdisciplinary translational research is the way to go in the future. In fact, there is an understanding that most of the basic research is currently supported by governments and that this taxpayer-funded activity should ultimately be helpful to humanity. Hard science relying on biophysical principles will be needed to continue the extraordinary progress of virology for the benefit of humankind.

To me, talking to DR. PALESE is always enlightening; I feel that his scientific knowledge and his passion for virology are contagious. I hope that reading these lines will inspire some of you as well and, who knows, you may even want to try some virology...

Note Added in proof: This article was written before the recent Wuhan coronavirus outbreak (novel coronavirus, 2019- nCoV, similar to 2003 SARS-CoV), which presently hits China and threats to extend to other parts of the world. The answers given here by DR. PALESE are particularly appropriate comments for this worrying epidemic case.

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20th International Congress of IUPAB a joint event with the 45th Annual Meeting of SBBf and 49th Annual Meeting of SBBq

October 4 - 8, 2021 | Foz do Iguaçu, Brazil



International congress brings state-of-the-art research in biophysics and biochemistry

Biophysicists and biochemists from around the world will meet at the 20th Congress of the International Union for Pure and Applied Biophysics (IUPAB), which will be held in virtual format from 4th and 8th of October 2021, together with the 50th Annual Meeting of the Brazilian Society for Biochemistry and Molecular Biology (SBBq), and the 45th Annual Meeting of the Brazilian Biophysics Society (SBBf).

"This is an important congress because it will bring together international biophysics, Brazilian biophysics united with the Latin American one, and also the Brazilian biochemistry congress, which is a very strong community. We brought in scientists who are working on the frontier, in the state of the art, both in biophysics and biochemistry, which are areas of knowledge that complement each other", said Rosangela Itri, a professor at the São Paulo University (USP) Physics Institute, and chair of the congress with professor Mauricio S. Baptista, from the Institute of Chemistry at USP.

A high point of the congress is the quality of the program, with the participation of speakers from 24 countries, representing the world scientific scene in biochemistry and biophysics. "The main criterion for choosing the speakers was to bring international leaders in their respective areas. But, also, we invited biophysicists and biochemists equally, and, geographically, we sought to invite scientists who represented the world scenario", said Baptista. Ten keynote speakers, two of them winners of the Nobel Prize in Chemistry - Michael Levitt (2013) and Richard Henderson (2017) and 24 symposia, with more than 80 speakers, will cover a wide range of research topics. The program includes lectures, symposia, courses, discussion groups, and poster sessions.

Congress participants will have the opportunity to discuss the issue "Gender in Science", which will be a symposium theme, reflecting the organizers' concern with gender balance in the event. Another novelty will be the presentation of some lectures sponsored by companies.

To make possible a virtual congress of this size, the chairs contracted the most advanced platform for virtual

Please, visit our web site for more information



20th International Congress of IUPAB a joint event with the 45th Annual Meeting of SBBf and 49th Annual Meeting of SBBq

October 4 - 8, 2021 | Foz do Iguaçu, Brazil



conferences, which, according to Baptista, will allow the best interactive experience during the event. "Furthermore, our congress fair, SBBqExpo, is very strong, many companies are joining us and we are working to provide a very positive experience on this platform."

All abstracts presented at the congress will be published in a special issue of the journal Biophysics Reviews, scheduled for December this year, which will also feature review articles written by the main speakers.

Young scientists

Activities aimed at young scientists have already started: a webinar series - The YS Webinar Series - has been held since May, with participants from 14 countries on five continents. The webinars take place every 15 days until September, with lectures by senior scientists, post-docs, and doctoral students. Participants are exempt from the congress registration fee, and they will also present their work at the congress.

In addition to interacting with scientists from around the world, the researchers participating in the congress will have the opportunity to present their work and compete for prizes.

During the congress, the 24th Young Talent Award in Life Sciences, for young scientists from Latin American countries, will be held. The award is promoted by SBBq and Cytiva. In addition to the cash prize, the winner receives a flight ticket to attend an international congress of their choice, and an invitation for an oral presentation at the next SBBq Meeting. <u>Applications</u> until 07/30/2021. Besides, there will be poster awards at the congress.

Researchers from all over the world can also apply until July 20th for <u>IUPAB</u> <u>fellowships</u> that cover the registration fee. The SBBf will also offer Brazilian biophysicists fellowships that cover the fee.

For more information and registration, visit <u>http://iupab2020.sbbq.org.br</u>.

Please, visit our web site for more information



Michèle Auger Award for Young Scientists' Independent Research (2022)

Michèle Auger Award for Young Scientists' Independent Research (2022)

In late 2018, the journal lost a much admired editorial board member, Prof. Michèle Auger, to illness (IUPAB 2019). To commemorate Michèle's association with the journal, Biophysical Reviews started a competition with the twin aims of honoring her memory and promoting some of the values that were important to her (described in Hall 2019). Conducted on a yearly basis, the award winner receives the following.

(i) A year's paid subscription to the journal (courtesy of Springer-Nature) (ii) An invitation from the journal to publish a single author review article on an aspect of their research work, with this Review containing a printed foreword on the life and research of Prof. Michèle Auger

(iii) A personal plaque to keep in perpetuity along with their name and year of award printed on a memorial plaque kept by the principal officer of the journal

Each year, a call for nominations for 'The Michèle Auger Award for Young Scientists' Independent Research' is put out in the editorial of issue 3, with an entry deadline set for October 31 (Hall 2020a). The requirement for nomination is that the young scientist be currently involved in biophysical research and be under 40 by the deadline of application. In 2020, the inaugural 'Michèle Auger Award for Young Scientists' Independent Research' was conducted and this competition was won by Dr. Alexandra Zidovska, Assistant Professor at New

York University (Hall 2020b; Zidovska 2020). For the 2021 award, the journal received 15 nominations.

Judging was carried out by a panel of sixteen judges. All judges were at the senior professor/head of school/head of institute level with twelve male and four female judges1.

Each nominee was assessed according to three categories, (i) originality, (ii) independence, and (iii) scientific excellence.

The winner of this year's prize was Associate Professor Jorge Alegre-Cebollada. Jorge is a group leader at the National Institute of Cardiovascular Research (CNIC) in Madrid, Spain. More can be read about his research at his laboratory home page (https:// www.cnic.es/en/investigacion/

molecular-mechanics-cardiovascularsystem). Jorge will soon receive a plaque and complementary journal subscription and is scheduled to publish his awarded review article (carrying a foreword on the life and research of Prof. Michèle Auger) as the lead article of volume 13 issue 4 (published mid-August 2021).

Nominations for the 2022 prize can be made in the form of a candidate's one page curriculum vitae, along with five original manuscripts, to be submitted by email to either the Chief Editor, or any one of the Biophysical Reviews' Executive Editors, prior to 2021, October 31st. Judging will be carried out by a special committee assembled from the Biophysical Reviews' Editorial Board, with this assembly taking place after the submission deadline. Results

will be announced in December, with the winner's single author Review to be published in the following year.

Submissions can be made via email in the form described above to any of the following.

Chief Editor:

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XLIX Argentinean Biophysical Society Annual Meeting



December 1 - 3, 2021 | Virtual meeting



The XLIX Annual meeting of the Argentinean Biophysical Society (SAB) will be from December 1st to the 3rd, 2021, as a virtual meeting. Our annual meeting is open to national and international scientists who carry out original research to promote the development of Biophysics in the country, in the region and all over the world. The meeting includes plenary lectures, thematic symposia, short talks and lightning talks selected from abstracts and poster presentations.

Confirmed speakers:

Plenary Lectures

Frances Separovic, Australia David Eisenberg, USA Carlos Bustamante, USA Peter Tieleman, Canada

Nuno Santos, Portugal Larisa Cybulsky, Argentina Hugo Adamo, Argentina Mariani Fiori, USA

Young investigator talks selected from abstracts SAB student travel fellowships available

Satellite Meeting

The V Meeting of Young Biophysicists organized by the <u>Young Initiative on Biophysics</u> will be held on November 30th, 2021.

Please, visit our web site for more information about the meeting



V Meeting of Young Biophysicists

XLIX Argentinean Biophysical Society Annual Meeting Satellite Meeting Young Initiative on Biophysics

November 30, 2021 | Virtual meeting

Sociedad olofísica Argentina de Biofísica

V MEETING OF YOUNG BIOPHYSICISTS 11.30.2021

Registration is open!

Until the 11.01 you can register to the activities of this year's meeting.

To know more about the program and content click here.

Don't miss out!



Registration

LINK

JOVENES BIOFÍSICOS Organized by Sponsored by

If you have any comments or/and questions, you can reach us at our social media or at secretaria.yib@gmail.com

Argentina



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YIB Symposium

XLIX Argentinean Biophysical Society Annual Meeting Satellite Meeting

December 1, 2021 | Virtual meeting





YIB Symposium at the XLIX SAB annual meeting

We are looking for the YIB symposium speakers held at the XLIX SAB annual meeting taking place in December from 01-03. 2021.

You must be an undergraduate, master or PhD student, or a postdoc working in biophysics, in Argentina, LatinAmerica or the world

ABSTRACTS MUST BE SEND BY SEPTEMBER 17TH TO SECRETARIA.YIB@GMAIL.COM

FOR MORE INFO CLICK IN THE LINK!



Workshop on Structural Biophysics

December 6 - 10, 2021 | Bordeaux, France



Dear colleagues,

it is a pleasure to announce the upcoming Workshop on Structural Biophysics that will take place in Bordeaux from the 6-10 December 2021.

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 Solution and Solid-state NMR Spectroscopy Mass spectrometry X-ray Molecular Modelling

5 days of intense biophysical workshop at the charming Bordeaux site!

The workshop aims at providing a solid technological and methodological background to **post-doctoral fellows**, **PhD students**, **research scientists and engineers** for each technique and to demonstrate the power of each and the complementarity of the techniques.

Registrations will open in September, stay tuned! Since **places are limited to thirty** we will select on the basis of CV of the candidate.

Please reserve the dates in your calendar and stay tuned for the opening of inscriptions and the website in beginning of September!



IUPAB News Number 78, September, 2021

Executive Committee of IUPAB

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The Executive Committe and the Council are depicted at the end of he General Assembly in Edinburgh, 18th July, 2017





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IUPAB News Number 78, September, 2021

Activities of the INTERNATIONAL UNION for PURE and APPLIED BIOPHYSICS From the Secretary-General: Professor Dr. Juan C. Gomez-Fernandez **Courier address:** Departamento de Bioquímica y Biología Molecular A, Facultad de Veterinaria. Universidad de Murcia, Edificio 17, 30100.Murcia, Spain. Telephone: +34-868884766. Email: jcgomez@um.es **IUPAB** is registered in France according Loi du 1er Juillet 1901-Art. 5, n° ordre 03/000309, n° dossier 00158190

The International Union for Pure and Applied Biophysics (IUPAB) was formed in Stockholm in 1961 as the International Organisation for Pure and Applied Biophysics. It was established as the International Union in 1966, when it became a member of the ICSU (International Council for Science) family. Affiliated to it are the national adhering bodies of 61 countries. Its function is to support research and teaching in biophysics. Its principal regular activity is the triennial International Congresses and General Assemblies.



Important Announcement Sponsorship Policy of IUPAB

As from now on there will be a change in the sponsorship policy with respect to that posted in: <u>http://iupab.org/about/</u> <u>sponsorship/</u> So that point 8, will read:

Applications for financial support of Conferences, Schools and other

should be returned to the Secretary General at least before June 30th of the year prior to the event if it is scheduled for the first semester of the following year or before the 31st of December if it will take place during the second semester. If organizers of meetings are seeking only the approval of IUPAB, including the use of the IUPAB logo, but not requesting financial support, applications may be submitted to the Secretary General at any time and will be considered by the Executive Committee by correspondence.

Note from the Editor:

IUPAB News will be happy to reproduce articles previously published by bulletins or other publications of any of our Adhering Bodies. We will be also happy to consider articles written by biophysicists on scientific or other subjects of broad interest for the biophysical community. You may contact the Secretary General with respect to this matter.

IUPAB is not responsible for the opinions expressed in the articles here included, nor necessarily share these opinions.

The Editor of IUPAB News is the IUPAB Secretary General Juan Carmelo Gómez-Fernández. This publication is produced and published at the University of Murcia, Departamento de Bioquímica y Biología Molecular A, Campus de Espinardo, Murcia, Spain.

Assistant Editor: Alessio Ausili

It can be found online at: <u>http://iupab.org/category/newsletters/</u>

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