Tamara Miljus (PSI Villigen)

GPCR Workshop, Kona, Hawaii, December 5-9, 2017

The GPCR Workshop is one of the most relevant conferences in the field of G protein-coupled receptors (GPCRs) organised biennially on the Hawaii Island by Confometrx Research Foundation (Santa Clara, USA) and Monash Institute of Pharmaceutical Sciences (Melbourne, Australia). Main focuses of the Workshop were advances in structural understanding of GPCRs, novel signalling paradigms, the intersection of computational advances and chemical biology and preclinical and clinical translation, with the clear goal to facilitate progress in understanding of how GPCRs work at a cellular and molecular level in order to facilitate the development of more effective therapeutics for GPCR targets.

It comprised of morning lectures given by invited well-established scientists where we heard about all classes of GPCRs, structural insights into their activation and importance of kinetics, achievements in structure-based drug design, how the general understanding of GPCR signalling is improving, but we also heard about current difficulties in the field, allosteric and biased ligands which are considered to be the future of drug market due to the reduction of side-effects, physiologically relevant preclinical studies and clinical trials. Afternoon poster sessions were a great opportunity for all the participants to present their latest research, discuss potential problems, get new ideas or start collaborations. Evenings were reserved for discussion sessions where participants were encouraged to shortly present their research, controversial data and intriguing problems so that interesting and insightful discussions develop around them. I found it especially nice as it gives young and not-yet-established scientists a chance for their ideas to get noticed and further developed.

During the poster sessions I presented my work on Biased signalling in cannabinoid CB1 and CB2 receptors. I was very excited to get positive feedback and constructive criticism from both students as well as prominent scientists. I learned a lot about high-quality research being done all around the world and got to meet very interesting and knowledgeable scientists, while our conversations helped me think about my future career steps. Additionally, I found the GPCR Workshop to be extremely motivating and intellectually stimulating experience.

Taken together, due to being organised in a beautiful venue surrounded by excellent spirit of Hawaii, the GPCR Workshop perfectly brings together world leaders and new generation of scientists in a relaxed manner, yet is not lacking intense and inspiring discussions. Therefore I am very grateful to LS² for supporting my participation!

Damian Dudka, University of Geneva

Jacques Monod Roscoff "Cell cycle inside out" 2017, 18-22 September, Roscoff, France

Jacques Monod Roscoff conference is a recognized as one of the most important cell cycle conferences in Europe. It takes place every 2-3 years in the Marine Station in Roscoff (Britanny, France). This year the conference hosted 30 invited speakers, who are world-class specialists in the cell cycle field of research. Overall there were 119 participants. The conference started in the evening the 18th of September and lasted until the morning 22th of September. It was organized in 12 sessions, which covered the topics concerning key mitotic structures and processes such as: anaphase-promoting complex/cyclosome (APC/C), kinetochore, centrosome, spindle assembly checkpoint (SAC) signaling, mitotic spindle assembly, genetic instability and cytokinesis.

Personally, I was most specifically interested in talks given by scientist who work on centrosomes and kinetochores as my PhD thesis concern these particular structures. Therefore I mostly focused on presentations of: Renata Basto, Monica Bettencourt-Dias, Geert Kops, Jordan Raff, Helder Maiato, Rebecca Heald and Andrea Musacchio.

I have participated in the meeting by presenting a poster during one of the two poster sessions. My project concerning the role of the centrosome in the symmetry of the mitotic spindle has received more attention than I had expected, which reflects the degree of interaction between the meeting's participants. One of many advantages of this conference was a very high number of group leaders compared to PhD students and post-docs, which gave me the opportunity to freely talk to my potential future supervisors. Importantly, the organizers invited also the editors of leading cell biology journals such as: Nature Cell Biology, Nature Communications, PLOS Biology and Journal of Cell Science. I had a pleasure to personally talk to some of them and receive a feedback on both my PhD project and also my further scientific career.

What is more, I have expanded my scientific network by attending this year's Roscoff meeting. Not only did I renew the contact with my PhD thesis committee member Monica Bettencourt-Dias and our lab's long-term collaborator Helder Maiato, but also I discussed my research with such prominent scientists as Renata Basto, Rebecca Heald and Laurance Pelletier. Finally, I met several PhD students and post-docs with whom I hope to stay in contact and establish collaborations. I have already asked for a specific cell line of human cells and immunofluorescence protocols from the labs of Daniel Gerlich and Renata Basto.

To sum up, I am glad to have participated in the Cell cycle inside out 2017 conference in Roscoff. I am certain that I will benefit from the feedback I have received as well as from the new contacts that I have made. Therefore, I would like to sincerely thank the LS² for supporting my participation in this meeting.



Marc Van Oostrum, ETH Zurich

HUPO 2017, Dublin, 17.-21.September 2017

Thanks to the LS² travel grant I was able to attend the 16th Human Proteome Organization (HUPO) World Congress in Dublin, Ireland from 17-21st September 2017. The vision of the congress was to bring together world leaders and the new generation of scientists to promote knowledge of the Human Proteome under the topic "Integrated Proteomics for Healthcare Systems". Besides plenary lectures from leading scientists in the field, the congress featured a keynote address of 47th Vice President of the United States of America Joseph R. Biden Jr. on the theme of International Cooperation in the Fight against Cancer.

For me personally, the conference was a great opportunity to hear about the latest research going on in laboratories from all over the world and see distinguished scientists I only knew from reading their publications. My abstract was selected for poster and oral presentation in the context of the PhD abstract competition providing me with the opportunity to present my research to the proteomics community. In a short talk, I described our current efforts in global analysis of the glycoprotein population residing in the plasma membrane (surfaceome) of primary neuronal cultures. Using chemoproteomic technologies we took snapshots of the neuronal surfaceome during differentiation in vitro and thereby provide a quantitative map of surfaceome dynamics throughout different developmental stages ranging from neurite outgrowth to synapse formation. Following my presentation, I had interesting discussions with various people about my project, which I found very encouraging to further develop the scientific questions I'm currently working on. I was very excited to hear that the jury liked my presentation and selected me as winner of the PhD abstract competition during the awards ceremony at the end of the congress. Last but not least, I had many interesting interactions with people coming from all over the world and working in different environments, I believe this broadened my own perspective on the research field and the scientific community in general.

In conclusion, it was a great opportunity for me to attend the 16h Human Proteome Organization World Congress and am very grateful to the LS² for supporting this endeavour.



Simonas Savickas, ETH Zurich HUPO 2017, Dublin, 17.-21.September 2017

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AP	PLICANT DETAILS											
1.	First Name	Simonas			Surr	name	Savickas					
2.	Report Date	22.09.2	017									
3.	Travel Dates	From:	17	1	09	/	2017	to	21	/	09	/ 2017
PR	OPOSED EVENT											
4.	Conference Name	HUPO 2017										
5.	Conference	Dublin, Ireland										
	Location											
6.	Type of	🗆 Oral										
	presentation at this	Poste	er									
	conference	Other:										
7.	Presentation Title	Title Deciphering interconnected activities of matrix met									allopr	oteinases in
		the healing skin wound by targeted degradomics										
8.	A brief summary of	The Human Proteome Organization (HUPO) is an international scientific										
	the conference	organization representing and promoting proteomics through										
	attended	international cooperation and collaborations by fostering							stering the			
(m	ax 100 words)	development of new technologies, techniques and training. For 16 years										
		organizations aim has been to define and promote proteomics to beth								nics to better		
		understand human disease by gathering leading internationa										
		laboratories in life sciences, bioinformatics, mass spectrometry, sys							etry, systems			
		biology, pathology, and medicine. Today HUPO has become one							e one of the			
		most renowned point of contact for proteomics research and								esearch and		
		commercialization activities. It attracts scientists and vendors from										
		different parts of the world.										
9.	Outline of the	Gained a better overarching idea of a proteome in context							text			
	knowledge and	Have understood the need of AHA chemistry in my own re						n research				
	ckills gained by	Learned data analysis methods using OpenECHO										
	skins gamed by	Saw the unmet need for proteolysis research										
	attending this	• Exchanged contacts with a leading scientist for a possible fu								ssible future		
	conference	collaboration.										
10.	How will the new	The idea	as pre	sente	ed du	ring t	he lectu	ires an	d the f	ruitfu	l disc	ussions have
	knowledge and	broadened my research perspective. First, I have better understood								derstood the		
	skills benefit my	urgency of my own field. Secondly, I have learned from the mistakes of									e mistakes of	
	current role?	others and understood how to progress faster. Finally, after returning to										
		University I followed up on each conversation I had during HUPO and										
		got immediate feedback. Their suggestions to contact their scientif								eir scientific		
		colleagu	ues m	ay lea	ad to	inter	esting f	uture	develor	pmen	ts.	
13.	Other notes	I would	highl	y enc	oura	ge oth	ner PhD	stude	nts, Pos	stDoo	s to a	attend HUPO
		for its	rema	rkabl	e sci	ientif	ic cont	ent, g	reat si	peake	ers a	nd inspiring
		innovat	ion. \	Withc	out LS	S2 tra	avel gra	ant it	would	have	beer	n difficult to
		attend	the co	onfere	ence	and c	onvince	e my si	upervis	or to	join a	as well.
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Ana Teresa López-Jiménez, University of Geneva

Cold Spring Harbor Meeting "Microbial Pathogenesis and Host Response", 12-16 September 2017, Cold Spring Harbor, NY

I am a Ph.D student in the laboratory of Prof. Thierry Soldati, in the University of Geneva. I was recently awarded the LS² Travel Grant which allowed me to attend the Cold Spring Harbor Meeting "Microbial Pathogenesis and Host Response", from the 12th to the 16th of September, 2017.

I had the chance that my abstract was selected for an oral presentation, which took place during the first session of the meeting, called "Visualizing Host-Pathogen Interactions". There, I presented one of my PhD projects in which I have used a newly developed microfluidic device called the "InfectChip" to visualize long-term single-cell amoeba-bacteria interactions. I have used this device to characterize the infection cycle of mycobacteria in an amoeba host, Dictyostelium discoideum. I am very glad that I was given this opportunity to present this project orally for several reasons. First of all, because I could show plenty videos of our microscopy experiments, which enabled me to expose the dynamic aspect of the infection course that could be hardly depicted in a poster. In addition, the fact that this session took place at the very beginning of the conference opened many opportunities of networking since many people contacted me during the following days to ask questions about our experimental set up, as well as about the exciting results we obtained. All these comments have substantially enriched our manuscript, which is close to submission now.

The panel of speakers was stunning, and exposed me to the cutting-edge state of research in the field, which has improved both my scientific knowledge and skills. The abundant networking opportunities, including poster sessions, "meet the speaker" lunches, social events and shared in-campus housing enabled me to meet many students, postdoctoral fellows and principal investigators. Importantly, I could discuss with important researchers relevant to my main research interests, including scientists working with mycobacteria or amoeba, experts in single-cell biology as well as the most renowned cell biologist of infection. I hope that all these new contacts will lead not only to opportunities to continue my career as a postdoc but also to future collaborations during my research career.



Sheng-Fu Huang, University of Zurich

20th International Symposium on Signal Transduction at the Blood-Brain, Barriers; Kraków, Poland, 13-15 September 2017

First of all, I would like to thank the LS² grant for supporting my conference travel possible. With this travel grant I participated the 20th International Symposium on Signal Transduction at the Blood-Brain Barriers, which was held in Kraków on Sep 13th-15th, 2017. It is the biggest European international conference in Blood-Brain Barriers field.

The presentations, mainly given by postdocs and group leaders, provided insight into the modulation of brain barriers of all kinds; the most of the contributions were related with immunology, pathology and clinical applications. I found the presentations to be of high quality and speakers also presented unpublished data. I was especially focussed on the cell-cell communications during injury such as ischemic stroke and Alzheimer disease to try to understand the cell adaptation under stress. The newest developments and innovations in clinical studies were also presented inspired me to apply my study to be a potential therapeutic purposes.

These years "metabolic axis in Blood-Brain Barriers" triggered a heated debate, the metabolic interactions between barrier related cells are still unclear. To have a handle to understand it, my poster presentation specifically aimed to understand metabolites crosstalk between astrocytes and endothelial cells during injury. The metabolic modulation between BBB cells is a new perspective that can dramatically improve our knowledge of BBB physiology as well as pathological progression. During the poster session I also gained many interesting and helpful suggestions from many groups leaders and PhD students to improve and expand my project.

Taken together, attending this international BBB conference in Kraków allowed me to experience the cutting edge of blood-brain barriers research, expand my scientific network and establish partnerships that improve my studies as well as technological point of view. I am therefore highly grateful for the LS² Travel Grant.



Ji Huang, University of Fribourg

The FEPS 2017 congress, 13-15 September 2017, Vienna, Austria

First, I would like to express my appreciation to the Life Sciences Switzerland committee for supporting me to participate FEPS 2017 congress, the joint meeting of the Federation of European Physiological Societies and the Austrian Physiological Society. The Federation of European Physiological Societies (FEPS) was founded during the Regional Meeting of IUPS in Prague (Czech Republic) in 1991. It now comprises 27 Constituent Societies. This meeting is organized every year while changing the location.

There were around hundreds of attendees attending FEPS 2017 of all fields of Physiology. The scientific program was scientifically excellent including 1 keynote lecture, 5 plenary lectures, 18 symposia and many poster sessions. The sessions span topics from modern Physiology teaching techniques to Cell- and Molecular Physiology, with special focus on Vascular and Cardiac Physiology, Neuroscience, and Molecular and Cellular Physiology.

In the poster session of renal physiology, I presented my project-Role of arginase-II in regulation of renal aquaporin-2 and water reabsorption. During the poster session, I had sufficient time to discuss my project with international experts and received very helpful feedback from them. Specially, I got new ideas for the current project from the discussion. The opportunity to do presentation in front of audience consisting of international experts, postdocs and academic peers fostered communication between researchers from different countries. By reviewing other's posters, I also learn some knowledge in different fields and new methodology as well. To my surprise, I was awarded with a FEPS 2017 poster prize.

I found participating in this congress is quite helpful. Now I am at later stage of my PhD and I am looking for a postdoc position and interesting research topics in my future career. This meeting provides me possibility to exchange ideas and explore my further career.

In summary, this congress was well organized and the city where FEPS 2017 congress took place was beautiful. Therefore, thank the Life Sciences committee again for their generous support. I am very glad that I received the rare opportunity.



Noémie Matthey, EPFL Lausanne

EMBO conference on Bacterial networks (BacNet17), – Sant Feliu de Guixols, Spain, 09-14 September 2017

I had the honor to receive a LS² travel grant, which gave me the great opportunity to attend the EMBO conference on "Bacterial networks (BacNet)" from the 9th to the 14th of September 2017. The conference took place in Spain, in a lovely town by the Mediterranean Sea named Sant Feliu de Guixols. The BacNet conference occurs every two years and is a key international meeting covering new developments in the field of bacterial networks. This year around 155 researchers attended the conference including numerous experts from all over the world. During this conference the field of bacteriology was covered within 8 sessions on various exciting topics. Personally, I was particularly interested in the following sessions: "Signal transduction and environmental adaptation", "Cell shape, polarity and division", "Bacterial networks and motility", "Phenotypic heterogeneity and modeling" and "Bacterial communities". The scientific program was excellent with exciting talks, such as the projects presented by Prof. Judith Armitage, Prof. Nicola Stanley-Wall, Prof. Frank Bruggeman, Prof. Lars Dietrich, Prof. Martin Thanbichler, Prof. Mark Buttner, Prof. Morgan Beeby, Prof. Kevin Foster and many others. Importantly, the topic "Science & Society" was also presented within a session. In this session, Bang Wong, who is the creative director of the Broad Institute at MIT and Harvard University (USA), showed several strategies to better represent and build pictures from numerical data. In the same session, Dr. Markus Schmidt, who is the founder and CEO of a research and science communications company named Biofaction (Austria), presented through movies and mobile applications ways to engage the public in the debate about life sciences. Additionally, the BacNet conference offered for the first time the possibility to PhD students and postdocs to participate in an informal meeting with three editors from different journals (PLOS, Nature Microbiology and Journal of Molecular Biology). By participating at this meeting, I had the chance to meet these editors and to ask them questions about their careers, which was highly interesting. Besides this event, the BacNet conference organized several lunch tables to have the opportunity to meet some of the principal investigators and also invited us to visit the "Dalì theatre and museum", which was astonishing. Altogether, these events promoted interactions between scientists. At this conference, three poster sessions were scheduled with a total of 97 posters, where I enjoyed discovering and discussing projects of other participants. I myself had the opportunity to present my doctoral work performed in the group of Prof. Melanie Blokesch at EPFL through a poster presentation. Presenting my poster, entitled "How evolution of Vibrio cholerae can benefit from an interbacterial killing device" gave me the opportunity to discuss my work and receive feedback from several prestigious researchers. I also very much enjoyed the opportunity to get into contact with the other conference participants through this poster session, which was also a great opportunity to gather ideas about my future career. My research is focusing on the acquisition of exogenous DNA via natural competence for transformation by the marine bacterium Vibrio cholerae. In V. cholerae, this mode of horizontal gene transfer is enhanced by the type VI secretion system (T6SS). The T6SS is a molecular killing device that mediates kin-discriminating neighbor predation, which leads to the lysis and subsequent release of genetic material from the killed prey cell. The naturally competent bacterium can further use the released genomic DNA as transforming material. The ability to discuss my work was a wonderful experience, which was rewarded by the organizers through a poster prize. Overall, I would like to thank the LS² society for their support, as I was able to profit immensely from the BacNet conference.



Mario Gonzalo Garcia Arraez, EPF Lausanne

Society for Invertebrate Pathology (SIP) conference 2017, San Diego (USA), 13-17 August 2017

Abstract of my oral presentation: Toxin-mediated control of insect host population by the endosymbiotic bacteria Spiroplasma poulsonii. Spiroplasma is a group of widespread arthropod-associated bacteria. They exhibit a wide range of interactions with their hosts, from parasitism to mutualism. All species lack cell wall components, which make them invisible to the immune system of their insect hosts. Spiroplasma poulsonii (S. poulsonii) is an endosymbiotic bacterium that infects specifically the fruit fly, Drosophila melanogaster. S. poulsonii is found extracellularly in the hemolymph but can colonize the germline during oogenesis to be vertically transmitted from mother to offspring. S. poulsonii can disrupt the sex ratio of its host by inducing male killing, which consists in the specific death of all male embryos. While male-killing has been reported in many species, the molecular mechanisms underlying this phenotype are still unknown. We have isolated a new S. poulsonii variant called blind-killer that kills only 25% of the offspring of young female flies increasing to 70% for the offspring of two-weeks old females. Interestingly, the sex ratio of the offspring is not affected by the infection, since both male and female embryos die in similar proportions. In order to gain insight into the blind-killing phenotype, we have sequenced and compared the genome and transcriptome of both male-killer and blind-killer strains. Intriguingly, a family of toxin encoding genes, called Ribosome Inactivating Proteins (RIPs), were found to be differently expressed between the two strains. To date, Spiroplasma RIPs have been involved in the protection exerted by this endosymbionts against entomopathogenic nematodes in Drosophila neotestacea. It was proposed that these RIP toxins can specifically cleave the ribosomal 28S RNA of the nematodes. We are now investigating the role RIPs in male-killing. Meeting report. The Society for Invertebrate Pathology (SIP) was founded in 1967 as an interdisciplinary scientific society that would draw together members from diverse scientific backgrounds under the unified discipline of invertebrate pathology. After 50 years of history, the society is divided in several disciplines to support all areas related to invertebrate pathology. These areas are bacteria, disease of beneficial invertebrates, microbial control, fungi microsporidia, nematodes and viruses. I gave an oral presentation for the division of microbial control, which is an association of invertebrate pathologists who aim to support basic and applied research on microbial control. Through this division we discussed ideas, knowledge and experience on the biology of insect pathogens and their application in biological control primarily for integrated management of pests in cultivated crops. In relation to the conference this year, on the first day (Sunday 13th of August) there was a meeting oriented to scientists who want to learn about bio-industries that are relevant in our field of research. More than 20 different companies were invited to explain the goals of their work and how they develop all their ideas. The kick-off meeting with the private companies was highly interesting for PhD students. We got an important input from outside of academia to potentially orientate our career to a different profession. The rest of the conference was scheduled with talks from the scientific community and events to enhance socialization. Data presented in this meeting focussed on finding applications; so most people made fundamental biology research without wondering about the mechanism. I had the chance to give an oral presentation in the microbial control session. It was a very useful experience in terms of networking; I met people from all over the world who work in diverse areas but all similar to my field of research. Feedback from professors was also very positive for my project. Besides the talks and poster presentations, the conference organized several dinners and guided visits downtown to promote interaction between scientists. It has been a great experience and I recommend it to everyone who works in microbial control. The conference was very successful for me. I could exchange ideas with people from different places and making some new friends while we visited San Diego organized by the meeting.



Aderonke Sofoluwe (UNIGE)

International Gap Junction Conference (IGJC), Glasgow (UK), 29 July - 2 August 2017

The intercellular communication field is a close knitted community of experts in connexin and pannexin research and the biennial International Gap Junction Conference (IGJC) is a great forum for sharing and exchanging knowledge. It was therefore a great opportunity to attend the July 29th to August 2nd, 2017 conference in Glasgow, United Kingdom.

It was truly an international experience with 220 delegates from 24 countries. The sessions during the five-day programme looked in depth into the roles of connexin and pannexin channels in tissue function and diseases. Specific categories in the well-organised programme included vascular physiology, channel structure and trafficking, neuro-excitation, mutations, cancer, interacting proteins, channel gating and signalling, heart, nervous system, cell growth, infection and inflammation, inflammatory diseases, translational and therapeutics. It was interesting to note that intercellular communication plays a significant role in a plethora of biological processes and maintaining homeostasis. The sessions were spread throughout the five-day programme with two interactive poster sessions of more than 100 presenters. This created a forum for scientific discussion and interactions with prominent scientists, young upcoming scientists, PhD and MSc students.

I was very interested in the infection and inflammation sessions as my PhD project looks at the role of intercellular communication in host-pathogen interactions. It was also a great privilege to be selected from the abstracts to give a short talk on my project, so I had the opportunity to not only listen to top quality presentations on prevailing research but to also present my results in front of experts in the field. My presentation was titled "Reducing NETosis by targeting Pannexin1 channels". Neutrophils are vital cells in the initial response in infection and inflammation, and are able to respond by expelling the nuclear and cytoplasmic contents, forming traps, to capture and degrade pathogens or foreign particles. This process, referred to as NETosis, can also be deleterious in certain inflammatory diseases. My work investigates the role of Pannexin1 channel in the formation of neutrophil extracellular traps and the potential of using Pannexin1 as a therapeutic target. In summary, my work shows that Pannexin1 channel modulates the kinetics of NETosis and ATP plays a role in the recruitment of neutrophils and ongoing work investigates the molecular mechanism involved. I was extremely pleased to receive positive feedback and advice from experts in the field. I met a lot of talented young scientists as well as prominent experts who were welcoming and kind when giving advice. It was a highly stimulating and engaging environment to be in and I came back motivated with fresh ideas.

I would like to thank my research supervisor Prof. Marc Chanson for my project and the opportunity to attend the conference. I also thank the IGJC organising committee for selecting my work for a short talk and the LS² Physiology section and Dr. Carolin Von Schoultz, the LS² Scientific Officer. Finally, I am extremely grateful to the LS² for the travel grant award that provided the opportunity to attend this great conference.



Byung Ho Lee, University of Geneva

Joint 19th IUPAB & 11th EBSA Congress, 16-20 July 2017, Edinburgh, Scotland

First of all, I would thank the LS² grant for making my conference travel possible. In training and current experience, I am a biologist/biochemist, however, I was very curious in the current development and status of field of biophysics. With the travel grant approved I went to the 19th IUPAB congress and 11th EBSA congress, held in Edinburgh, Scotland.

My PhD project is involved in understanding the process and regulations involved in spindle positioning during mitosis for mammalian cells. During metaphase, the spindle is positioned by proteins and complexes that generate force which are localized at the cortex. We discovered that p37, a cofactor of a Type II ATPase p97, negatively regulates the levels of the cortical NuMa (direct recruiter of dynein to the cortex) in metaphase which are regulated via phosphorylation.

The conference was very interesting, touching the broad applications of biophysical and physical approaches; from the physics of plasma membranes to the mechano-sensing of multicellular systems. I was particularly interested in how multicellular systems in tissues respond and exert force to develop and carry out its role. There was a very interesting presentation on how axon growth and directionality during brain development is regulated by the stiffness of its environment, which was tested by applying atomic force microscopy directly on the Xenopus embryo during the stages of organogenesis. In addition, research groups have demonstrated that a group of migrating cells can collectively sense the stiffness of the surface and will migrate towards the stiffer surfaces on a substrate with a stiffness gradient.

Through this conference I learnt that theoretical physics and biological questions are made compatible with the fast growing technology and computing power. Biophysical hypothesis were designed through simulations/modeling and supported with very strong biological and innovative techniques such as live atomic force microscopy, traction-force microscopy (used to quantify the forces exerted by cells onto the surface), and more.

In this conference, I presented my work in a poster form. Interestingly, my biology/biochemistry based project drew a lot of attention in the biophysical audience, where they questioned and gave a lot of input in a physics point of view. With formal and informal discussions with coffee/beers, I learnt that the different field of science are not very far apart and in fact need each other to understand fundamental processes in life.



Ivana Horvathova, FMI Basel

Eukaryotic RNA Turnover, EMBO Conference, 10 – 13 July 2017, Oxford, United Kingdom

First of all, I would like to thank LS² for supporting my travel to attend Eukaryotic RNA Turnover conference taking place in Oxford, UK. This meeting is organized every 2nd year by EMBO while changing the location. I found attending this conference especially beneficial now when I am at later stage of my PhD and I am defining what research topic I want to focus on as my next scientific career step. All of what I experienced during the conference ignited another spark of professional interest inside of me.

The conference was focused on degradation of eukaryotic RNAs of all kinds, although most of the contributions dealt with messenger RNA (mRNA) degradation, the type of RNA that gets translated into functional proteins if all the cell processes go well. Central themes included regulation of mRNA by AUrich elements, and the effect of micro RNAs on RNA decay and translation. I presented my project as an oral contribution and was given very positive feedback. The possibility to talk in front of the audience composed of many PhD students, postdocs and group leaders fostered scientific exchange and ensured me that we are on a good track with our project that deals with single-molecule imaging of mRNA turnover. We anticipate that our work is going to have valuable impact as also experts in the RNA degradation field were proposing another questions that might be addressed by our approach. Leading-edge research of high quality comprising mainly unpublished data was presented during the middle-size conference and it allowed establishing personal connections with participants and starting collaborations. I was nicely surprised how positive the attitude of participants was and how inspiring the conference appeared to be all over. What also positively surprised me was the high number of women attending and also actively contributing to this conference. It seems like women are really encouraged by the current effort to promote gender balance in decision-making positions.

Oxford is famous for its world-class university and it has been home to royalty and scholars for hundreds of years. The conference venue – Keble College - provided all in one package. Accommodation in authentic single rooms within the college was comfortable and provided possibility to benefit from the conference by giving a maximum time for interaction with the participants. Tasty dishes were served in historical college dining room, and evening networking was fostered by relaxed and friendly atmosphere inside of the college bar where not only science was discussed.

Alexandra Bondaz, University of Geneva

International C. elegans conference, Los Angeles, June 21-25

The 21st International C. elegans Conference is a well-known conference for researchers working on the nematode C. elegans. C. elegans is intensively used as a model organism for molecular and developmental biology since the 1970s. Many notable findings were done using C. elegans as a model system, such as the work on the genetics of organ development and programmed cell death (Nobel prize 2006, Sydney Brenner), or in 2006 the Nobel prize in Physiology or Medicine was awarded to Andrew Fire and Craig Mello for their discovery of RNAi interference in C. elegans. This conference allows to meet an exciting scientific community around this elegant worm.

Since 2002, the conference takes place every two years at the University of California in Los Angeles, USA. It is a wonderful location that allows to host more than 1500 attendees. A lot of areas of research are covered such as physiology, neurobiology, ecology and evolution, gene regulation, development, behavior, aging, germline biology and genomic technics. This conference is a unique opportunity to meet different scientist from different areas and meet big names such as Nobel Prizes awardees, for example Craig Mello (Nobel Prize in 2006 for its work on RNAi interference) was there. This year, Judith Kimble, a pioneer scientist for her work in the field of germline and aging gave the keynote lecture.

I started to work with C. elegans during my Master internship where I was working in a lab studying the impact of the germline on aging. I found it convenient, fast and easy to work with, that's why I decided to continue working with C. elegans for my PhD. Since 3 years, I am doing my PhD in the field of mitotic cell division and I am studying the establishment and maintenance of bipolar spindle using C. elegans embryos as model system. That's why, I was looking forward to attend this meeting to be able to meet the community and discover new technics and different topics that C. elegans offers as a model system.

What I liked about this meeting and particularly about the talks was the fact that many talks were given by post-docs and new group leaders that had just started their own lab. I think it is a great opportunity to tell the community what they are doing and to reinforce the networking. Indeed this conference offers many opportunities to learn about genetics education and career development.

I particularly liked the poster session. I had the opportunity to meet other researchers and experts in the field, some collaborators and a lot of students from well-known laboratories (Bowerman Lab, Desai lab, Strome lab, etc...). It was nice to get comments and insights about my PhD project and useful tools that we will use in the lab in a near future (such as new CRISPR/CAS-9 techniques for instance).

It was also nice to talk to sponsors and companies, such as the Cherry biotech. We are currently working with their system of temperature controller and we are in close contact with them in order to help for the development tech.

Last but not least, the C. elegans international meeting is also famous for this Worm Art Show which celebrated its 20th anniversary. Ahna Skop is taking care of the show and it was a great moment where science and art were combined: drawings, painting, microscopy images, and homemade cakes representing C. elegans showed the fantastic imagination of some of us...

For all these reasons, I would like to thank the LS² society for their generous support and for giving me the opportunity to attend this conference.



Monica Bulla, University of Geneva

Gordon Research Seminar/Gordon Research Conference: Intracellular Calcium Signaling, Lucca, Italy, 17-23 June 2017

Check out Monica's lively travel grant report attached in which she describes her poster step by step!



Fabian Dingfelder, University of Zurich

Gordon Research Conference on Membrane Protein Folding, Stonehill College, Easton, Massachusetts, June 4-9, 2017

Thanks to the LS² travel grant I had the opportunity to attend the Gordon research conferences on membrane protein folding at Stonehill College in Massachusetts. Gordon conferences are prestigious gatherings of experts in their respective fields. As I have been working on the folding mechanisms and conformational changes of a pore-forming toxin that inserts into membranes, the topic of the conference perfectly matched my research topic.

The presentations, mainly given by postdocs and group leaders, provided insight into the folding biophysics and stabilization of membrane proteins from an experimental and a computational point of view. I found the presentations to be of high quality and as a special feature of Gordon conferences speakers also presented unpublished data. Because my work focuses on biophysical aspects, I was especially curious to learn more about disease-related topics such as mutations in chloride membrane channels that can cause cystic fibrosis, or peptides that can insert into membranes of tumor cells and thus could potentially be used for therapeutic purposes.

During the poster sessions, I had the chance to present my work and had interesting discussions with other meeting attendees. Because of the limited number of participants that were all housed on-site, it was easy to network with other students and group leaders which helped to get valuable input for my research. In summary, the GRC on membrane protein folding was an excellent opportunity to get in touch with biophysical and computational investigators. I therefore acknowledge the LS² for having granted me this opportunity.



Elisabeth Graeber, ETH Zurich

International School of Crystallography – 50th course – Integrative Structural Biology Erice, Italy; 2-11 June 2017

The School of Crystallography was founded by Dorothy Hodgkin and takes place every year in the small Sicilian town Erice. This year was the 50th anniversary of the school and the chosen topic was Integral Structural Biology. The aim of the school was to provide young researchers with a review of the fundamental approaches and latest developments in the application of crystallography and hybrid methods to the structure and function of biological macromolecules and complexes. Overall it was a very well organised workshop with many expert speakers. The 120 participants had been selected based on the relevance of their research and based on their nationality, which provided a nice international atmosphere with participants from all over the world.

The school consisted of 30 talks and 3 workshops. The main topics covered were X-ray crystallography and EM of both soluble and membrane proteins as well a large complexes, nucleic acids and viruses with a focus on integrative structural biology. The speakers highlighted the importance of tackling scientific questions by using a range of techniques, which makes collaborations increasingly more important. Especially the complementarity of X-ray and EM was shown in numerous examples. Furthermore there was much time to interact with the speakers and discuss topics in details. All participants had a chance to present their own research at one of the two poster sessions, which I found very rewarding. Also, a few students had been selected to give talks in the breaking news and rising star sessions. I presented a poster and had some interesting discussions with the other participants and some of the speakers. The workshops gave introductions into software used by structural biologist like COOT, RELION and EVfold.

In the interactive closing session, we tried to assess the future challenges in the field of structural biology. It was found that in general the main challenges are access to facilities and knowledge of how to use a technique in the best way. Synchrotrons for example are set up very user friendly, but the same support is still lacking for EM facilities.

I can highly recommend the school of crystallography to any student doing structural biology and I am very grateful that LS² gave me the possibility to attend this year's school by awarding me a travel grant.



Julie Calonne, University of Fribourg

European Congress on Obesity (ECO2017) Porto, 17-20 May 2017

I would like first of all thanks all the board of the LS² section Physiology who has agreed to approve my application. It allows me to present my results and to share with many scientists.

In fact, during my session poster I could discuss with several persons, I could share my experience, and it was really interesting. All the talks was pertinent and interesting but I really learn in which it was relative to Body Composition, Obesity, Protein Metabolism, because of course it exactly my research field but particularly because there were huge scientists like Pr Stubbs, Pr Boirie, Pr Bosy-Westphal, and many others.

Pr Boirie talk's was so interesting for me because I work in collaboration with him. And he is a well-known scientist in the protein metabolism field. One chapter on my thesis work is based on protein metabolism in the rat model of catch up growth. In fact, when rats are food restricted, then refed we can observe an increased in the fat mass and a decreased in the lean body mass. We would like to understand what are the mechanisms implied in this phenomenon and for that we work in collaboration with Pr Boirie in Clermond-Ferrand (France).

I learn also many tools on Human research because I have started since few months research on Human and it's really different from animal research. The Human care is completely different from animal care, and methods are also different. There were many talks and posters on all the recommendations for the interview (that it better to do, that we have do to avoid,...). Of course in Fribourg I learn lot of things with my supervisor and with my colleagues but in my opinion it's really important to see, to know what is done in the other laboratories, to talk with other people in order to avoid to remain in our own little world. So thanks again a lot to allow to PhD Student to participle to worldwide conferences.

To conclude, this congress was well organized, Portuguese people are really nice and the place where the conference took place was beautiful.



Maharani Retna Duhita, University of Fribourg

European Congress on Obesity (ECO2017) Porto, 17-20 May 2017

Since my research is about metabolic and cardiovascular responses to dietary protein level: impact on thermogenesis and satiety, I attended the 24th European Congress on Obesity 2017. ECO 2017, the 24th European Congress on Obesity took place between 17-20 May in Porto, Portugal. This vibrant meeting brought together colleagues from every area of obesity research, prevention, and management; with participants including clinicians, researchers, industry representatives, experts and key opinion leaders in the field of obesity and its co-morbidities and representatives of patient groups. ECO 2017 was organized by EASO, a federation of professional membership associations from 32 European countries. It is the voice of the European obesity community and has official links with the World Health Organisation (WHO).

My abstract titled "Impact on menstrual cycle phase and oral contraceptive use on the greater thermic effect of high versus normal protein meal" was selected by the international scientific committee for for oral presentation in the session "Management and Intervention – Oral Session 3 : Treatment Interventions and Outcomes". In addition to my oral presentation, I spent time attending many other conference events. In particular, on the first day of conference (17th May), I attended the teaching course in the morning and after lunch time we had oral session about metabolic outcomes. That evening, we had the opening ceremony, which was an excellent opportunity to gather together, interact, and exchange my findings and views with other researchers. During the second day (18th May), I attended the oral session about energy balance in the morning, and after lunch time we had poster session with topic: Basic and Experimental Science, Health Behaviour and Environment. On this occasion, there were several topics relevant with my research, and I was able to directly interact with members of research groups from all over the world. On the third day (19th May), I gave my oral presentation. It was very successful and well-attended and received by academic researchers and experts. After finish presenting my work, I attended a symposium about functional body composition, obesity, cardiometabolic, and health: beyond the adipocentric view. This session was particularly interesting and there was a great informal discussion with the experts at the end. For the last day (20th May), we had EASO award plenary session in the morning and closing plenary session in the afternoon.

To summarize, this conference was an excellent opportunity to not only present my work, but also to meet and network with others. Consequently, I now have a number of academic and professional contacts from different countries who have relevant research topics and similar research interest to me, and who I hope to collaborate and interact with again in the future.

Lingzi Li, University of Geneva

Joint Meeting EASD - Islet Study Group and Beta Cell Workshop, Dresden, 7-10 May 2017

The Beta Cell Workshop is a meeting of the research leaders and young rising professionals in the field of islet biology with an intense program for three and half days. The meeting covered a wide range of topics, including beta cell development, beta cell mass and function in diabetes, genetics and epigenetics of diabetes, beta cell interaction with immune system, and clinical advances for diabetes diagnosis and treatment. The seminars were delivered by the top lab leaders in the world and they were presenting and debating the most up-to-date research findings.

Besides the seminars, poster sessions were organized in two evenings, where young researchers had the opportunities to present their ongoing work in the lab. I had the opportunity to present a poster on my PhD project about using metabolomics to find early biomarkers for pre-diabetes. A lot of people came to my poster and I received many questions and advices during my presentation. Because of this, I had a lot of new ideas about my project and also got in touch with people who do similar work as mine. As I am in my last year of the PhD study, I am also looking for a postdoc position to continue my research career. I was also discussing about the postdoc applications with the people who came to my poster, which has provided me some new perspectives.

What I like the most about this meeting is the interaction with the research leaders and young researchers during the poster sessions and lunch/coffee breaks. I had a feeling that by exchanging our latest scientific findings and ideas, the field is leaping forward.

Finally, I would like to thank LS² society for its generous support for me to attend this amazing and inspiring meeting in Dresden!



Nina Odermatt, EPFL Lausanne

ASM Meeting on Tuberculosis New York USA, 1-4 April 2017

I would like to express my sincere thanks to the Life Sciences Switzerland committee for allowing me to travel to New York to participate in this great conference!

The American Society for Microbiology (ASM) Conference on Tuberculosis: Past, Present and Future was the second ASM Tuberculosis conference, more than ten years after the first edition. The program committee consisted of William R. Jacobs Jr, K. Heran Darwin and Stewart Cole, all playing key roles in tuberculosis research, and motivated to bring together leading scientists from the field to exchange scientific knowledge about tuberculosis research. Unusual for a conference of that scope, not only the well-known and established scientists, but also PhD students and junior researchers were given a chance to share their results orally or during the poster session. Starting on Saturday afternoon with the opening Keynote Session, two and a half days packed with 39 exciting talks followed, including two poster sessions with a total of 109 posters present. The focus of this ASM conference was on the microbiology of Mycobacterium tuberculosis (Mtb). Only the co-sponsor Qiagen, but no other industry related exhibitions were present. Sessions were grouped into five groups; physiology of mycobacteria I, systems analysis, location and structures, host pathogen interface and physiology of mycobacteria II. Many talks focused on the famous Type VII ESX-1 secretion system of Mtb, responsible for virulence factor secretion. But also other secretion systems, the SecYEG pathway, RNA metabolism, nitrogen uptake and transcriptional analysis were discussed. One talk of particular interest for my project by Keith Derbyshire presented the complete RNA-sequencing profile of Mtb, the first time together with the ribosomal sequencing profile. From this data, he could map new transcriptional (TSS) and translational start sites, which are now available for the public. In Mtb, the TSS is often mis-annotated and leads to downstream problems when working with an affected gene, as it was the case for my gene of interest. During the poster session, I was talking to a PhD student who measured the expression profile in a synchronized Mtb culture, a very difficult experiment, and we had an interesting discussion about some of my genes of interest. I was selected for a talk that consisted of a 15-minute presentation, followed by 5 minutes questions and answers. This was my very first oral presentation at such a big meeting; and although not having any experience in giving talks, I could profit a lot from it. I presented the main topic of my PhD; the characterization of the mycobacterial integration host factor (mIHF) and I got several questions after my talk. Further, I was engaged in very interesting follow up discussions during the breaks and got some good ideas on further experiments to do with the mIHF protein. There were no social activities organized and only lunch was provided, but not dinner. Therefore, we had to organize among ourselves and we formed various groups during the breaks. I had the chance to interact with other PhD students and postdocs, mainly from the USA, not only discussing our projects and science, but also comparing the different PhD programs between the US and various countries in Europe, as well as the different possibilities for a future academic career. It was a very good opportunity for networking and starting some small collaborations, which have the potential to become a deeper work relationship. I also was speaking with several group leaders from different laboratories and could ask them more specifically about certain projects they plan to do, with the intention of finding a postdoctoral position. Overall, I was able to profit immensely from the ASM Conference on Tuberculosis, particularly as I was selected to give a talk, which helped me a lot to get into contact with the other conference participants, discussing my project and gathering ideas for the future of my academic career.



Anika Kötemann, ETH Zurich

Proteomics Forum Conference Potsdam, 2-4 April 2017

The LS² travel grant gave me in april 2017 the opportunity to attend my first international conference, the Proteomics Forum in Potsdam. Already in advance, the diverse scientific program of the Proteomics Forum promised to create an inspiring environment, and I should not get disappointed. It was fascinating to see many great scientists that I only knew from their publications, talking about their current research. Also several young scientists were given the opportunity to present their work, so that one could get a broad overview of the future directions in our field. Since my project was selected for a poster presentation at the conference, I was particularly excited about the great interest and enthusiasm regarding my PhD project very encouraging for the future work. Discussing science (as well as the life of a scientist) with people at different career stages, from other PhD students over company employees and professors, was extremely stimulating for me. I knew only very few people personally before I came to Potsdam, and it was great to catch up with them again, but I also met a lot of new people.

In conclusion, I found attending the Proteomics Forum to be a full success, considering the excellent scientific input and the many interesting interactions I had, and I am very glad that I was given this great opportunity.

Maik Müller, ETH Zurich

US HUPO 13th Annual Conference, San Diego, USA, 19-22 March 2017

Thanks to the LS² Travel Grant I was able to attend this year's US HUPO conference in San Diego, California. The US HUPO is the American subsection of the worldwide Human Proteome Organization (HUPO), a consortium of proteomics research partners, that aims to improve our understanding of the human proteome. At its annual conference, US resident and international top scientists spearheading the field of proteomics come together to present and discuss recent advances and future perspectives. The opportunity to attend the meeting is therefore a valuable opportunity to feel the pulse of current proteomics research.

My PhD project focuses on the development and application of an advanced chemoproteomic technology to study functional protein interactions in living cells. Attending the many interesting talks and poster sessions allowed me to put my research into the context of overall protein research. I thereby had the opportunity to meet the current leaders of the field and to connect to my peers in related scientific areas. In many fruitful discussions, I gathered new insights and ideas on how to further improve the biochemical, instrumental and bioinformatical aspects of my technology. In this regard, we were able to establish international collaborations e.g. with an outstanding bioinformatics group in Michigan. Together, we aim to examine unusual protein modifications and how they can be exploited to detect direct protein-protein interactions in cells.

Taken together, attending the international US HUPO conference in San Diego allowed me to experience the cutting edge of proteomics research, expand my scientific network and establish partnerships that improve my PhD project from a conceptional as well as technological point of view. I am therefore highly grateful for the LS² Travel Grant.



Christina Pickel, University of Zurich

Keystone Symposium on Adaptations to Hypoxia in Physiology and Disease, Whistler Canada, 5-9 Mar 2017

I was awarded with an LS² travel grant for attending the Keystone Symposium on "Adaptations to Hypoxia in Physiology and Disease", which took place in Whistler, British Columbia, Canada from March 5th to March 8th 2017. This conference is organised every two years and is the most important meeting in the field of hypoxia research, bringing together its leading scientists from all over the world. Moreover, the conference was held as a joint conference with the Keystone Symposium on "Tumor Metabolism: Mechanisms and Targets" this year. This provided a great opportunity to acquire knowledge about a further research field, especially as metabolism is also directly regulated in an oxygen-dependent manner.

During the conference, there were sessions of oral presentations by senior PIs as well as young group leaders and PhD students in the mornings and afternoons, and workshops on specific topics therebetween. During these presentations, we heard about recently published and unpublished data on topics such as hypoxic influences on tumour and tissue metabolism, homeostasis and inflammation, physiological responses to hypoxia and the fundamental processes of oxygen sensing.

In addition, poster sessions took place after a common dinner with the participants and allowed for great discussions on mainly unpublished data. In the second poster session, I presented my data, which I obtained during the first 2.5 years of my PhD, working on the analysis of the molecular interactions between the oxygen-sensing hydroxylase factor inhibiting HIF (FIH) and the deubiquitinase ovarian tumour domain containing, ubiquitin aldehyde binding protein 1 (OTUB1). The general interest in my data was great and the discussions at the poster were very fruitful and constructive. During the two-hour poster session and even later, I received suggestions and feedback from researchers about specific techniques, but we also extensively discussed ideas for future experiments. Moreover, we were able to make contacts for potential future collaborations with group leaders from different universities. In addition, we established a collaboration based on the discussions that took place at my poster.

Attending this meeting not only gave me a great opportunity to present my research project and to get feedback on it but I also got to know important as well as newly established researchers in the field and could speak to potential future employees. Furthermore, I got an overview on the ongoing projects in other labs which I could consider for a postdoc. In addition, speaking to PhD students from different research groups gave me an impression about working in other international groups. My project will greatly benefit from the feedback I got and I hope that I can personally profit from this great experience of presenting my data to an international audience. Therefore, I am grateful to LS² for supporting my participation at the meeting.

Franziska Zosel, University of Zurich

Biophysical Society 61st Annual Meeting New Orleans, 11-15 Feb 2017

With over 7000 attendants, the annual Biophysical Society (BPS) meeting is the largest gathering of biophysicists in the world. I have been doing biophysical research since my undergraduate studies, but so far never had the chance to participate in this meeting. The kind support of LS² finally allowed me to present my data on the 61st annual meeting, which was held in New Orleans, USA.

The meeting started off with the so-called "Subgroup Saturday", where the thematic subgroups of the BPS each hold scientific panels. As I am investigating the interaction of intrinsically disordered proteins (IDPs), the IDP subgroup meeting was ideally suited to catch up with the latest results in the field. Furthermore, during the meeting and the following dinner, I had the chance to meet PIs and students from the field and discuss my findings. Fortuitously, these interactions proved to be extremely relevant for a current problem in my research, which could be resolved thanks to the input of my peers.

The meeting continued for four days filled with parallel talk sessions in the morning and afternoon and a poster session during lunchtime. I tried to attend as many talks as possible, and could obtain a very broad overview of current topics in protein folding and dynamics, intrinsically disordered proteins, as well as single-molecule fluorescence. Unfortunately, the broad scope of the meeting limited in-depth discussions after the talks as well as the willingness of attendants to share unpublished results.

My poster was scheduled for the second-to-last session, and was well-visited and received. During the poster session, I could discuss the interpretation of my findings with fellow researchers, which definitely improved my line of argumentation in communicating my research.

In summary, I can recommend the BPS meeting to anyone who wants to get a broad overview on current trends in biophysics (without expecting to learn novel, groundbreaking findings). The meeting really shines because of its tremendous networking opportunities— you will never find a larger number of biophysicists gathered in one place. Thus, for getting to know new people in the field and obtaining input for your research from unexpected sources, this is the right meeting.

Beatrice Bianchi, University of Bern

Biophysical Society 61st Annual Meeting New Orleans, 11-15 February 2017

The Biophysical Society Meeting (BSM) is an outstanding opportunity for scientists in the biophysical field to present their data. It takes place once per year and in 2017 it took place in New Orleans, Louisiana, on 11-15 February.

Even if the BSM is a very big meeting, with around 7000 people attending and more than 100 talks, I had the opportunity to share my results with other scientists from all over the world, and to be updated about the cutting-edge techniques and projects ongoing.

During the conference I had the chance to attend several interesting talks about membrane protein biophysics, molecular chaperones, and ion channel physiology, which helped me to better understand the molecular mechanisms of membrane proteins and their involvement in human diseases.

In this meeting, I presented a poster titled "Rescue of TRPM4 loss-of-expression mutants with novel and highly-specific chemical chaperones": in this work, a loss-of-expression TRPM4 mutant, A432T, is specifically rescued using a newly-developed chemical compound named 487. These findings could provide new avenues for the development of therapeutics for cardiac conduction disorders with TRPM4 involvement.

Beside the intellectual gain, this meeting is a great opportunity to meet and network with other PhD students and postdocs and to share personal and professional experiences, and it paved the way for future collaborations. Moreover, a whole session of the meeting was dedicated to career options and jobs postings, inside and outside academia.

I really would like to thank LS² for the travel grant, which gave me the chance to attend this amazing meeting!

